Readers who wish to inquire about books and journals published by us can check our website: www.francoangeli.it and sign up on the home page for the service "Notify" to receive e-mail alerts on the news.
AVIS in the Italian transfusion system

The White Paper of the Association: analyses and prospects

by Vincenzo Saturni and Giorgio Fiorentini

Contributions Francesca Calò and Alessia Anzivino

FRANCOANGELI
# Table of contents

**Introduction, by Vincenzo Saturni**

1. The legislation at European, national and regional level,
   by Alessia Anzivino, Francesca Calò
   - 1.1. Introduction
   - 1.2. Blood system: the European legislation
   - 1.3. Blood system: the national legislation
   - 1.4. The future legislative prospects
   - 1.5. Conclusions

2. Research objectives and methodology, by Alessia Anzivino
   - 2.1. Introduction
   - 2.2. Research objectives
   - 2.3. Stages of research
   - 2.4. The research approach
   - 2.5. Research design and research tools
     - 2.5.1. The sampling
     - 2.5.2. Questionnaire
     - 2.5.3. Semi-structured interviews
     - 2.5.4. Focus groups
     - 2.5.5. Key informants
   - 2.6. The data collected
   - 2.7. Conclusions

3. The blood system in Italy, by Francesca Calò, Giorgio Fiorentini
   - 3.1. Introduction
   - 3.2. Some data of the Italian blood system
   - 3.3. Definition of the Italian transfusion system
     - 3.3.1. Stage 1 of the Italian transfusion system: from raising awareness to collection
3.3.2. Stage 2: The processing of blood components and the manufacturing of labile blood products » 61
3.3.3. Stage 2b: The processing of plasma derivatives » 62
3.3.4. Stage 3: The distribution of blood components and plasma derivatives » 63
3.4. Self-sufficiency in Italy: the situation » 63
3.5. The four levels of the SWOT analysis » 68
  3.5.1. The global SWOT analysis of the system » 69
  3.5.2. SWOT analysis of the overall association level » 71
  3.5.3. The SWOT analysis in health associations » 73
  3.5.4. SWOT analysis and assessment of donors » 77
3.6. Conclusions » 78

4. The Association, numbers, organizational models and donors, by Francesca Calò, Giorgio Fiorentini » 79
  4.1. Introduction » 79
  4.2. Italian Association of Voluntary Blood Donors: the story » 80
  4.3. Avis: numbers and trends of donors » 82
  4.4. The role of Associations / Federations within the transfusion system » 96
  4.5. The organizational models in the area » 101
  4.6. The indicators of performance, effectiveness and territorial proximity » 108
    4.6.1. Indicators of effectiveness » 114
    4.6.2. Performance indicators » 120
    4.6.3. Indicators of territorial proximity » 128
  4.7. The satisfaction of donors » 129
  4.8. Conclusions » 137

5. Avis and the stakeholders of the Italian blood system, by Francesca Calò, Giorgio Fiorentini » 138
  5.1. Introduction » 138
  5.2. The players of the Italian transfusion system » 139
  5.3. The degree of collaboration with stakeholders » 150
  5.4. The degree of collaboration with stakeholders and the indicators of effectiveness, performance and proximity » 158
    5.4.1. Indicators of effectiveness » 159
    5.4.2. Performance indicators » 164
    5.4.3. Indicators of proximity » 165
  5.5. Conclusions » 169

6. The organizational models of Avis, by Francesca Calò » 171
  6.1. Introduction » 171
  6.2. Organizational models and composition of donors » 172
6.2.1. Young donors and donors under 25 » 174
6.2.2. The origins of donors » 175
6.2.3. The gender composition of donors » 176
6.2.4. Concluding remarks on the description of donors » 177
6.3. Organizational models and indicators of effectiveness » 178
   6.3.1. Variation in the number of donors » 179
   6.3.2. Variations in whole blood and plasma donations » 179
   6.3.3. The overall donation index » 180
   6.3.4. The whole blood and plasma donation index » 181
   6.3.5. The inclusion and penetration rate in the area » 182
   6.3.6. The quality of donors: ineligibility, temporary suspension and permanent suspension » 184
   6.3.7. The degree of collaboration with stakeholders » 185
6.4. Organizational models and performance indicators » 189
   6.4.1. The efficiency of the call » 189
   6.4.2. Average monthly and daily donations » 190
   6.4.3. The relationship between donors, total members, cooperating members and employees » 191
   6.4.4. The average number of donations in collection centres » 193
   6.4.5. The breakdown of revenue in 2010 and 2011 » 195
   6.4.6. The breakdown of costs in 2010 and 2011 » 199
   6.4.7. The incidence of reclassified business » 205
   6.4.8. Income indicators and indicators of company soundness » 206
6.5. Organizational models and indicators of territorial proximity » 211
   6.5.1. The average number of events in 2010 and 2011 » 211
   6.5.2. The average number of participants for each event » 212
   6.5.3. The rate of attractiveness of events » 213
   6.5.4. The average number of partnerships in the years 2010 and 2011 » 214
   6.5.5. Variations of collaborators » 215
6.6. Organizational models and satisfaction of donors » 215
6.7. Conclusions » 219

7. The social marketing of AVIS, by Giorgio Fiorentini, Alessia Anzivino » 221
   7.1. Introduction » 221
   7.2. Social marketing: conceptual bases » 222
   7.3. Social marketing and blood donation » 230
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3.1</td>
<td>The purpose of effectiveness</td>
<td>p. 230</td>
</tr>
<tr>
<td>7.3.2</td>
<td>The purpose of legitimization</td>
<td>» 233</td>
</tr>
<tr>
<td>7.3.3</td>
<td>Marketing levers and blood donation</td>
<td>» 234</td>
</tr>
<tr>
<td>7.4</td>
<td>The reasons for blood donation in literature</td>
<td>» 237</td>
</tr>
<tr>
<td>7.5</td>
<td>Analysis of the marketing tools used to attract new donors</td>
<td>» 241</td>
</tr>
<tr>
<td>7.6</td>
<td>The content analysis in marketing and retention</td>
<td>» 250</td>
</tr>
<tr>
<td>7.7</td>
<td>Donors and the choice to become donors</td>
<td>» 253</td>
</tr>
<tr>
<td>7.8</td>
<td>Best practices for awareness raising</td>
<td>» 256</td>
</tr>
<tr>
<td>7.9</td>
<td>The tools for donor retention</td>
<td>» 260</td>
</tr>
<tr>
<td>7.10</td>
<td>Conclusions</td>
<td>» 269</td>
</tr>
<tr>
<td>8.</td>
<td>The management of the organization, by Giorgio Fiorentini, Alessia Anzivino</td>
<td>» 271</td>
</tr>
<tr>
<td>8.1</td>
<td>Introduction</td>
<td>» 271</td>
</tr>
<tr>
<td>8.2</td>
<td>The cooperating members</td>
<td>» 272</td>
</tr>
<tr>
<td>8.2.1</td>
<td>The semi-structured interviews</td>
<td>» 272</td>
</tr>
<tr>
<td>8.2.2</td>
<td>The survey conducted on donors</td>
<td>» 273</td>
</tr>
<tr>
<td>8.2.3</td>
<td>Focus groups</td>
<td>» 280</td>
</tr>
<tr>
<td>8.3</td>
<td>Conclusions</td>
<td>» 282</td>
</tr>
<tr>
<td>9.1</td>
<td>Introduction</td>
<td>» 285</td>
</tr>
<tr>
<td>9.2</td>
<td>The future prospects of the transfusion system: the point of view of the Association</td>
<td>» 286</td>
</tr>
<tr>
<td>9.2.1</td>
<td>The point of view of the association’s Presidents</td>
<td>» 286</td>
</tr>
<tr>
<td>9.2.2</td>
<td>The point of view of physicians</td>
<td>» 289</td>
</tr>
<tr>
<td>9.3</td>
<td>The future prospects of the transfusion system: the point of view of key informants</td>
<td>» 291</td>
</tr>
<tr>
<td>9.4</td>
<td>The conclusions of the White Paper</td>
<td>» 293</td>
</tr>
<tr>
<td>Appendix</td>
<td>The main regulations at regional level</td>
<td>» 302</td>
</tr>
<tr>
<td>Annexes</td>
<td></td>
<td>» 321</td>
</tr>
<tr>
<td>Bibliography</td>
<td></td>
<td>» 332</td>
</tr>
</tbody>
</table>
Introduction
by Vincenzo Saturni

"Vittorio Formentano understood well in advance the "good" spirit of the twentieth century: solidarity as the enemy of indifference, volunteering as an instrument to change the society, the primacy of the value of human life over any difference in race, political beliefs and religion."

from: "80 years of Avis. A great Italian story."

Avis (Italian Association of Blood Volunteers) is probably one of the first blood volunteering associations in the world and one of the most numerous in Italy.

Starting from these assumptions, we have always committed to giving the greatest and best contribution, in a proactive way, to the Italian transfusion system, finding effective organizational solutions to face the changes that have taken place during all these decades.

The strategic objective of any modern transfusion system is to have access to whole blood, labile blood components, plasma-derived medicinal products - through "contract manufacturing" – coming from regular, voluntary, non-remunerated, responsible, associated donors, and whose full and correct use for the good of the patient transfused is guaranteed, together with sufficient quantity, highest possible quality, therapeutic efficacy and safety, in an equitable way (all patients have the same rights to receive transfusion therapy when necessary) and sustainability.

Starting from these assumptions, it is easy to understand that the organization of such an articulate, varied and complex Transfusion system as the Italian one is not possible without a joint, global and, above all, shared project, involving all the parties who contribute to its realization, and in particular:

• central and local Institutions;
• Regions, with their co-ordination and planning structures;
• Healthcare units/ Hospitals with their transfusion facilities;
• Associations of blood donors.

It is clear that each of these subjects (to which others, moreover, are to be added, as we will see in the various chapters of this paper, from patients to plasma manufacturing companies) must work with the others, and do not compete with them nor oppose to them, and must safeguard the peculiarities of the Associations to prevent them from becoming mere subjects being outsourced a service.

Efforts for the future are being made throughout the country with the participation of political forces, scientific societies and citizens, and such efforts are aimed at a strong rationalization of Transfusion services, through a process of standardization of facilities.

The Italian transfusion system, which is extremely complex both for the number of facilities and for the extension of the hospital network, has had to look for organizational solutions which could guarantee the delivery of efficient and effective services on its territory, and to set specific objectives. In particular: ensuring consistency in the levels of assistance throughout the country, promoting quality approaches, using resources in an optimal way by focusing on the economic sustainability of the regional blood transfusion system, decentralizing blood sampling activities and centralizing specialized activities.

Against this background, the Transfusion System is to be considered, in all respects and especially in its regional branches being duly supported by specific Plans, a "structure of supra-corporate and supra-regional interest", which needs to have funds and plans going beyond the logics of the individual Health units/Hospitals also involved in the supply of the service itself.

Our system has many strong points:
The legislation emphasizes the strategic role of the Associations of donors and of the related Federations in pursuing the objectives of the blood system, entrusts them the tasks of promotion (which is also entrusted to other subjects), of the collection of blood and blood components in Blood Collection Units under the technical responsibility of the relevant Transfusion Service and, on an exclusive basis, of the call to donors for donation, and also guarantees institutional forms of participation (from Hospital Committees for the Appropriate Use of Blood, to the National Blood Centre and the Permanent Technical Committee for Transfusion Services, to regional branches);

- the fact of donation being absolutely free of charge;
- its inclusion among the Essential Levels of Care (LEA) of transfusion medicine, which guarantees equal treatment among donors and transfusion recipients;
- the pursuit of self-sufficiency in terms of safety and quality of blood components and plasma derivatives.

And possible critical points:

- it is essential to find joint forms of involvement of young people in the issue of donation, given the forecast on the demographic trend of our population;
- support must be ensured to the Associations of donors and to the related Federations by signing, adapting and respecting the contents of standard agreements;
- it is fundamental to respect the agreements between the Government, the Regions and the Autonomous Provinces of Trento and Bolzano on "The minimum structural, technological and organizational requirements for the exercise of medical activities by the corresponding Blood Transfusion Services and by Blood and blood components Collection Units", as well as the Guidelines for Accreditation. These regulations set out a process that will lead to the accreditation of all transfusion facilities, including Collection Units (CU), by 12/31/2014;
- it is essential to start and/or strengthen the activities of Regional Coordination Centers, as provided for by the Agreement of 13 October 2011, for an adequate planning.

The planning of transfusion activities is a strategic and essential tool to fully comply with the provisions of our legislation, and should focus on calls for donations, collection, types of donation, uniformity of flow throughout the year (avoiding peaks of surplus and deficiency).

But in order to be also really effective it needs to:

- be included in the health planning of each Region, with a national perspective respecting its inclusion in the LEA and with punctual financing;
- have a medium to long term vision (3-5 years), to allow for adequate investments as well as functional and sustainable organizational decisions also for the Associations and Federations of donors (e.g. adaptation of Collection Units, call management);
- be prepared by the Regional Coordination Centers, which must be duly supported or strengthened, given their essential role as a link with the National Blood Centre and therefore with the Transfusion System as a whole;
- really involve the Associations and Federations of donors in a joint planning of strategies, with constant sharing of the qualitative/quantitative information of the system.

In the case of self-sufficiency in plasma derivatives (see Box), the situation is more complex, also because of the dual origin of the raw material, which can be obtained by whole blood separation and by apheresis, since plasma derivatives are pharmaceutical products and, as such, comply with the requirements of pharmacopoeia and with the GMPs (Good Manufacturing Practices), as well as with the rules of the market.

Another objective is that of achieving self-sufficiency in specific anti-
hepatitis B immunoglobulins, since an estimated 11,000 Kg/year of "hyperimmune" plasma need to be collected to achieve this goal.

The considerable differences among the regional transfusion systems have created surpluses in some of them and deficiencies in others, similar to those occurring for labile blood components, in particular for units of red blood cells. But while a regular, agreed, planned exchange of red blood cells exists between the regions in surplus and those in deficit, which is supervised at a national level by the National Blood Centre, whose costs are paid according to national fees and regulated by the economic mechanisms of patient mobility, nothing similar happens for plasma-derived products. It is only thanks to the autonomous initiative of the Regions, upon request of professionals and Blood Volunteers, that two groupings of regions have formed over the years, in which ethical plasma-derived drugs are exchanged on the basis of fees being autonomously agreed and approved, so as to avoid tenders on the market.

**BOX - The position of Avis on self-sufficiency in plasma derivatives**

1. A guarantee is needed that governance tools will be defined for the system, starting from the adoption of exchange fees established at national level, and making reference to existing models.

2. Human plasma is a public good in ethical, health and economic terms, it is owned by the Regions, it is non-marketable and cannot be a source of profit; the "contract manufacturing" model is therefore indispensable for the transfer of donated plasma to Pharmaceutical Companies, and for the full return of plasma-derived products.

3. The classification of plasma being transferred must refer to the provisions of the European Pharmacopoeia, and allow for the improvement of the strategies aimed at enhancing donations.

4. Blood and its derivatives are an ethical, public, strategic good, resulting from a donation, and are therefore an organic product and not a pharmaceutical product; the relevant regulations must therefore remain within the provisions on cells and tissues, while pursuing the highest safety and quality.

5. For national self-sufficiency to be achieved in plasma-derived drugs, any surplus must be available for transfer or exchange between regions according to the well-established model of transfers of blood components, based on domestic fees under the coordination of the National Blood Centre, and on the national fees of any other European and extra-European country. This must be done through international cooperation agreements and initiatives in the context of humanitarian and / or scientific research projects, free of charge or upon payment of production costs only, stipulated by the State and / or by the Italian Regions, also with the active participation of organization-based volunteering.

6. The appropriateness of use of plasma-derived drugs must be another strategic element to work on by implementing effective tools for evaluation and by aiming at their inclusion among those drugs which can only be prescribed in hospitals. Hopefully, the Regions will set as a priority the use of plasma-derived drugs obtained under contract work from the plasma of Italian donors, except in case of specific therapeutic needs determined through strict clinical criteria.

7. The protection and promotion of the human ethical drug must lead to transparency in the origin of the product, which must be specified on each pack of plasma-derived drugs, so as to respect Italian donors and duly inform patients.

Efficiency in collection and subsequent processing is also important, and deserves to be carefully evaluated and considered. As for products coming from plasmapheresis and requiring a more complex and expensive practice, it is then necessary to evaluate their overall impact on the transfusion system and on self-sufficiency.

Moreover, also in accordance with the provisions of the Decrees of April 2012, we consider the following issues as a priority:
1) each Autonomous Region and Province must belong to one of the groupings of Regions, created to optimize plasma production and whose critical masses will have to allow for the best economic conditions and for continuity in drug supply. The setting of common rules of action for the different groupings is also important;

2) definition of comprehensive governance tools based on the adoption of exchange fees set at national level, also according to well-established models;

3) sharing of the bases of tender specifications and international cooperation projects with the volunteer world.

The activity of collection carried out in Collection Units (CU) is part of this context, as it represents an essential support for transfusion facilities. Indeed, it is managed in a more flexible and often cost-effective way, the approach is sometimes more empathic, and the activity is a way for Avis to fully achieve its mission, to be close to donors and to retain them. Voluntary and unpaid blood donation is based on motivations of human and social solidarity of the donor / citizen, and the Service is obliged to give them an answer intended to facilitate their practical implementation, without excessive sacrifices. It is worth pointing out that some conditions can hinder the donation activity (eg. times and days available for donation, afternoon-holidays). A system being axed on the donor and his needs also implies taking into account these current issues and rethinking the organizational models of collection centers.

Accessibility within a short time and within a short distance from the donor’s domicile is a logistic prerequisite for the territorial distribution of the CUs. It should be noted that the CUs have the historical and current merit of significantly contributing to the achievement of self-sufficiency in blood and blood derivatives in Italy.

Given the sense of responsibility being peculiar of great associations as Avis, it is anyway important to further analyze any organizational change, also in this area, which may be suggested by the findings of this paper.

Besides the collection activity, the call of donors is also strategic, and is exclusively peculiar to Associations. This issue will need to be analyzed more in detail, so that models being more efficient and functional can also be assessed.

The foregoing represents the technical method of approach to the quality system. Moreover, the association must base its evaluations on some fundamental concepts of choice which are peculiar to us and express the Avis "vision" for the future.

As confirmed by several studies carried out also on the application of the quality system to non-profit, it is important not to think that quality is guaranteed by the application of strict standards to services or by the systematic checking of the consistency between the services being provided and the protocols defined.

In our sector, especially in those cases where Avis operates the collection, being "accredited" in the relevant public system as an interlocutor of unquestionable clarity and reliability becomes strategic.

In this sense, Voluntary Associations play a strategic role.

Volunteering, in fact, is able to understand the problems and needs of the society, and tries to give human solutions to human problems, by promoting citizen participation as a civic engagement. Together with the provision of services which integrate or replace the public offer, Volunteering organizations have developed, over the decades, the ability to anticipate social needs and to provide innovative responses.

Volunteering does not just denounce and identify the needs, but rather proposes ideas and projects, identifies and tests solutions and services, helps planning social policies, creates connections, relational goods, trust relationships and cooperation among individuals and organizations, thus contributing to increase and exploit the social capital of the context it works in, because volunteering represents a school of solidarity which contributes
to educate people to human solidarity and responsible citizenship.

In this sense, it is a stimulus to participation and to the exercise of a solidarity-based citizenship, as it strives to remove the causes of economic, cultural, social, religious and political inequalities, and contributes to the enlargement, protection and use of commons goods.

Specifically, volunteering has been considered as a resource in healthcare since L. 833/1978; the same principle was then repeated and reaffirmed with Legislative Decree No. 502/92 which provides for forms of participation of citizens’ organizations in the planning, monitoring and assessment of healthcare services at a regional, corporate and district level, and by Legislative Decree No. 229/99, providing for the involvement of citizens and user associations in the assessment processes. In the social sector, Law 328/2000, which was intended to promote an "integrated system of social services and measures" based on the co-responsibility of all the forces of the Third Sector in all decisions concerning social policies, especially at a local level, has changed the operational approach of volunteering.

Such regulatory recognition stems from the fact that volunteering is considered as the author and solicitor of participatory democracy, not only because it is an alternative to institutional bodies, but because it interacts and cooperates with them.

In this sense, volunteering is a stimulus to participation and solidarity-based citizenship, which are aimed at improving the quality of life of citizens, thanks also to a broad, direct and active participation based on the principle of responsibility, and consist in playing an active role in the planning, consultation and co-design of the social policies of the area, but also in their assessment.

The challenges and targets of improvement

Avis has been working for 86 years to spread a culture of solidarity among citizens throughout the country. And since the moment of its birth, the nature of its goal has been ethical, inherent to the act of free gift, and this value is also recognized by our key stakeholders.

Indeed Avis has always identified itself with some fundamental values:
- **gratuitousness** of the gift;
- **Anonymity** of the gesture;
- attention to a **healthy and positive lifestyle**;
- **aggregation** and **socialization**;
- confidence;
- reciprocity;
- **solidarity-based citizenship** as the foundation of a civil coexistence based on participation, responsibility, cooperation;
- **Volunteering** intended as an experience that shapes and enriches people in a human, civil and cultural sense;
- **democracy** and concrete participation in the life of the association.

Such values are permeated by concrete solidarity, which represents the common denominator of our actions.

One more value, adding to the others of the association, is that of taking care of sick people, who represent the priority in our action, as well as of the members. Avis is in effect a universalist Association, as it addresses not only to members but also to non-members, and our core value is therefore to produce relational goods circulating inside and outside the Association itself.

Moreover, in recent years significant changes in both domestic and international scenarios have involved the society, individual citizens and, consequently, the world of volunteering, and Avis first of all.

In particular, the economic and financial situation that has affected all the countries and mainly the European ones, including Italy, has had significant repercussions also on the welfare state, thus causing a crisis of
values.

The troubling analyses of different research institutes show a progressive impoverishment among citizens, greater job insecurity, as well as social instability, and this certainly has consequences also on our world.

However, among the scenarios that we face, there are other elements we must not forget, such as the Italian demographic trends but also the ever more binding references to European Directives, especially to those on healthcare and transfusions (accreditation by 12/31/2014).

From a demographic point of view, changes will be significant in the coming decades and will be linked essentially to births/changed life expectations/migrations/urbanization: these factors will influence the social fabric and the healthcare sector. Given these forecasts, it is clear that the population potentially needing a transfusion support will increase, and the target population of our awareness-raising and promotion activities will decrease, with a real risk of a reduction in donors being available. We will therefore have to improve the strategies for the involvement of young people, women and new citizens, to consider possible modifications to the parameters of eligibility, to pay attention to the correct use of blood and blood derivatives.

In these 86 years of activity we have been able to achieve a widespread presence in the area, thanks also to our strong identity and to values that are recognized even outside our Association, such as the value of gift and gratuitousness per se, to our social role in developing a social capital, in prevention, in the dynamic interaction with the Institutions, and thanks to the increasing involvement of young people in the life of the association through the enhancement of our action, which is focused on the person, the patient, the donor, the Avis member.

AVIS works to reinforce the reasons that led each single person to become a donor, thus revealing the cultural, social, ethical, pedagogical value of our Association.

It is undeniable that our "prime mover" is a value, which could be defined as "instrumental", as it is specifically aimed at the achievement of a specific purpose, that is the ability to provide an effective response to a fundamental need for health, but also to support the principle of the equity of treatment.

Moreover, assuming that we currently operate with resources being guaranteed (coming almost exclusively from a single source and in a limited quantity), it is essential to rethink our organization prospectively, by including it in the general planning, but also, where possible, by diversifying the income through the interaction with subjects being unusual, but sensitive to corporate social responsibility, in projects also at a European level.

It is also necessary to pay attention to some possible difficulties inherent to the interaction with the relevant bodies, such as the risk of working as a service provider, or as one of the many companies to which services are outsourced, thus losing sight of the real prerogatives of volunteering, such as the protection of citizens and of public goods, the stimulation of public administrations through critics and proposals, the testing of new services, the education to solidarity.

We therefore believe that Avis can continue to make a significant contribution to the system, as it has all the characteristics known to be essential for the best possible interaction and real participation to the planning aspects of social policies:
- it has a large membership base and is widespread and well established in the territory, where it has created a trust relationship with the relevant Institutions and has developed networks with other volunteering organizations;
- it constantly surveys the existing needs and works on the planning and design of consequent interventions;
it shows efficiency and transparency in the management of resources;
it promotes volunteering, by disseminating the culture of solidarity, gift,
gratuitousness, with a special attention to young people, and by
communicating values. Given these remarks, it is worth stressing
however that Avis, precisely because of its peculiarities, history,
tradition, expertise, must safeguard its independence and constantly
verify that its activities are performed within a model of participation,
without running the risk of going towards an uncritical
institutionalization.

Conclusions

These premises, and the need to rethink our Association in order to
always provide timely and efficient responses to changes, have been at the
basis of the idea and of the subsequent realization of this paper: "Avis in the
transfusion system. The White Paper of the Association: analyses and
prospects". This paper is considered essential to the creation of a precise
path that anticipates future scenarios, with special, but not exclusive,
attention to the world of transfusions that we face every day, through an
analysis of the national scenario compared to the European one, of the
existing models, including association models, in relation to promotion, call
and collection.

Like any large organization, Avis periodically carries out researches in
collaboration with University Institutes, in this case Cergas (Center for
Research on Health and Social Care Management) of Bocconi University,
which help to understand the current situation, but also to anticipate future
scenarios.

The text is then based on these premises and on the awareness that the
Italian transfusion system has significant peculiarities in the international
arena, in terms of close cooperation between the different players -
organized blood volunteering, institutions, industry – but also on the
complete convergence of the objectives to be pursued - providing sick
people with adequate quantities of blood components and plasma
derivatives of the highest quality and safety derived from regular donors as
well from unpaid, anonymous, responsible and associated volunteers. The
paper examines the transfusion system in detail, with a scientific analysis
of the existing organizational models and with the identification of
indicators of efficiency, effectiveness and territorial proximity. The
research involved the processing of data obtained through the use of
questionnaires, also online, to donating members, staff members,
physicians, key informants - including those responsible for Regional
Coordination Facilities, focus groups, interviews and in-depth interviews,
and thus gave voice to the various parties involved in the system. In the
different chapters regulatory references as well as international and
national literature references were analyzed, in addition to the historical
and organizational evolution of Avis.

We are aware that Avis is not the only voluntary blood association, but
that all the existing branches, at a national or more local level, are essential
to pursue the strategic objectives of the Italian transfusion system, and their
role is so much significant that Italy ranks among the first countries in the
world in the retention of donors (over 80%). The picture described,
therefore, does not represent the whole world of Italian donors, but a part
which is anyway significant, as Avis represents over 70% of all donors and
is present in more than 40% of the municipalities. It is equally worth
stressing that the system is extremely complex and is virtuously based on
three main pillars, represented not only by blood volunteering, but also by
the Institutions and by industry professionals. It is therefore clear that the
picture being given is presented from Avis’ point of view, but it is
reinforced by the comparison made with the main key informants.
The final objective is the provision, to all the players in the system, of a reasoned analysis, of the point of view of Avis, which enables the critical reassessment and possible review for the better of the existing models.

As a conclusion to this introduction, I would like to remind you that, for a greater understanding of some of the terms included in the text, some explanations can be found in the Avis glossary, available for consultation at www.avis.it.

Lastly, heartfelt thanks are due to the Cariplo Foundation, whose significant contribution enabled the realization of this publication; to researchers Fiorentini, Calò, Anzivino, for their competence and perseverance; to the Avis branches throughout Italy and to their leaders for their valuable cooperation, to the staff of the National AVIS for having patiently supported the drafters of the paper, but also to the donors for their constant availability.

A Brief History of Avis

A Brief History of Avis

Foundation of the Association in the '20s. At that time, bloodletting for transfusion was practiced by the so-called makeshift donors - found by chance in hospital wards and corridors among relatives waiting - and by paid donors, with a price between 850 and 1000 lire (about 1.5 million lire in 2000). A luxury reserved to few people.

The first attempt to develop a voluntary association was made in the twenties in Milan by Dr. Vittorio Formentano, who pushed himself to create, for the first time in Europe, an organized group of volunteer donors, in order to obtain a donor in a timely way, to make time for prior checking on his health and ensure the gratuitousness of the donation. In 1926 the Milanese physician launched, from the pages of an afternoon newspaper, a call for the formation of a group of donors. Among the many people who read it, only 17 turned up, and gave birth to the association, also providing it with a Statute (1929), whose main points are independence from politics, no distinction of race or religion, anonymous and unpaid donation, timeliness of calls, need to comply with the preventive examinations.

In the following years, similar associations were formed throughout Italy: Ancona, Bergamo, Brescia, Turin, Naples, Cagliari, Cremona. In 1933, transfusion number 2500 is celebrated, and states that volunteers can rely on an insurance dedicated to them and on medical care free of charge, thanks to an agreement with doctors of various specializations. The following year the first issue of the official journal of the association, The gift of blood, was published with the aim of popularizing the theme of transfusion in the medical profession. Requests of information on the organization of Italian volunteers came from Argentina, Spain and France.

In 1937, in Milan, the first corporate groups were created.

After the war, all sections worked with enthusiasm to start again: the spirit of the Association was still strong and robust. In Milan, a cooperation started with the Serotherapeutic Institute for the preparation of blood serum: blood donors underwent injections to be immunized from specific infectious diseases and to thus produce a serum being effective in the treatment of those same diseases (for example tetanus).

In 1946, Formentano was elected president and the Italian headquarters was placed in Milan; the most urgent problems are also solved: obtaining the repeal of the fascist laws of 1935-37 and restoring the official name of Avis. The first goal was soon achieved, and in January of the following year, the first issue of the monthly magazine of the Milan section was published, with the title “S o S” (Sempre, ovunque, subito - always, everywhere, immediately). Moreover, a ceremony was held in via Bassini for the laying of the cornerstone of the House of Volunteers and of the Institute of Transfusion and Resuscitation, on a land provided by the City of Milan.

Then, with Law 20 February 1950 number 49, Avis was legally
recognized and its functions of transfusion management were restored, with
tasks of promotion, coordination and regulation of the activities of
provincial and municipal sections of blood volunteers. In 1950 it is
upgraded to a Non-profit organization (Presidential Decree, No. 1121) and
blood mobiles are created in the hospitals Maggiore and Policlinico of
Milan. Then, in 1955 the House of Volunteers opened and the International
Federation of Blood Donor Organizations (FIODS) was created in
Luxembourg, with the adhesion of 12 countries: Austria, Belgium, France,
Great Britain, Italy, Yugoslavia, Luxembourg, Germany, Netherlands,
Saar, United States, Switzerland.

Meanwhile the Association grows at great speed, also with the opening
of Transfusion Centers in hospitals, as this solution is considered the most
logical one: the first was born in Turin in 1948, at the Molinette Hospital.
From an organizational and technical-scientific point of view, Avis
classifies blood centers in three categories:
- first or A: from the collection, storage and distribution of "bottles" of
  stabilized blood to the preparation of plasma for freeze-drying. These
  centers also prepare diagnostic sera for internal use, and wash, clean
  and sterilize the transfusion material;
- second, or B: from the collection of blood to the preparation of plasma to
  be kept frozen (excluding freeze-drying);
- third or C: only in exceptional cases, liquid plasma is prepared, but here
  again it is possible to identify the groups and carry out the most
  common exams.

Like real "blood workshops", Avis’ blood banks offer a complete and
effective blood transfusion service and also represent an important occasion
for propaganda.

Meanwhile, other mobile blood banks come into service in Milan,
Florence and Udine.

In 1963 a battle begins for the recognition of a paid day of rest for
donors, which is confirmed by the law of 1967.

In the meantime, at the end of the 50s a plasma production unit comes
into operation, at the blood transfusion centre of via Bassini. The first
objective indicated by Formentano is the creation of a reserve of one
thousand bottles of plasma.

The time is ripe for Law 592 of 1967 (preceded by Law 329 of 1962,
which establishes the obligation to indicate the blood group on driving
licenses, and by Law 584 of 1967, which lays down the rules for the
recognition to donors of the right to a day of rest), which reorganizes the
blood transfusion service of our country, addresses the issue of blood aid
management and recognizes the function of Avis in the technical,
organizational and promotional field; it also recognizes the civic and social
function of those associations, regulated by democratic statutes, whose main
institutional activity is voluntary blood donation; it establishes Provincial
Commissions for the regulation and the development of blood transfusion,
which also include an Avis representative. Donor associations can establish
and manage, on their own or on behalf of hospitals, Collection centers,
Blood transfusion centers or Blood products manufacturing centers. But the
figure of the professional donor remains: it will take another 23 years for its
permanent cancellation from the Italian legislation.

In 1970 the new Statute is approved (by the state with Presidential Decree
No. 467 of 1974), which sets out the possibility of establishing the Regional
Avis branches.

These are the years in which communication campaigns also develop and
the new Avis logo is created: the creative Kim Varma of Mc-Cann Erickson
designs the new graphic line of the association, where the A of the word
Avis, in blue, contains a red drop.

In 1990 Law 107 establishes the gratuitousness of the donation as the
sole source of supply; the trade of blood for transfusion is punishable by
criminal and administrative penalties. Moreover, donor associations are included among the co-players of the transfusion system, like the other (technical and institutional) bodies and their active participation is thus encouraged; it also prepares a standard agreement in which, among other things, the right to call donors to donation is set forth and the management of collection units is proposed, based on the needs of the Regional Healthcare Plan.

In this scenario, the old rivalries between donor associations are almost overcome, so much that at the Inter-association Conference of Perugia in 1993, the leaders of Avis, Cri, Fidas and Fratres sign a memorandum of understanding. The text indicates some general assumptions (the common goals of solidarity, health security and blood self-sufficiency through donation, the assets of diversity of identity and history), and establishes, in the absence of a "framework of the relations between the State and voluntary associations", the creation of inter-association bodies at a regional and national level to negotiate with four partners - the Ministry of Health and Social Affairs, the Regions, the public opinion - on promotional campaigns and common initiatives, on the transfer of blood centers to public healthcare, the relationship with Regions and Local health units for the prescribed obligations on laws and for the conclusion and the fulfillment of the relevant agreements, in full application of Law 266/91.

Meanwhile, the government approves a National blood-plasma plan for the years 1994-1996, and in 1998 a report of the Italian Statistics Institute (Istat) on volunteering gives Avis the primacy as the largest association in Italy: alone, it gathers 15% of the organizations included in regional registers. In order to adapt to the new regulations, in 1998, it accepts the status of non-profit organization (Legislative Decree 460/97).

The most recent history highlights the international vocation of Avis, with the development of a strong partnership with Senegal, Morocco and Argentina, where Avis supports the creation of AVAS.

Lastly, the new Statute (approved by the Ministry of Health in 2004), and then the Implementing Regulation (revised again in 2012) are approved in 2003, and the Transfusion Law 219 is approved in 2005 (the year in which Avis exceeds one million donors, with 1,775,000 donations).
1. Introduction

The Italian transfusion system is based on a set of rules representing a legal framework organized on different regulatory levels. The difficulties in adapting and harmonizing the national legislation are clear, but at the same time, the situation has evolved over the years.

The first part of the chapter specifies, in a chronological order, the European directives issued on the matter; then, the critical points of each of them are identified in order to understand their possible effects on the legislation of the member countries.

The focus then moves on the Italian legislation; the legislative and ministerial decrees and the laws enacted are listed in chronological order. Some of them were issued as a direct transposition of EU directives, while others are national laws issued on specific themes or aimed at harmonizing the current legislation. Moreover, a focus on the prospects and future challenges of the transfusion system at the end of this excursus on the Italian legislation.

Lastly, Annex 9 provides a more local perspective; through the analysis of some of the regulations of each Italian Region, and for each of them, the current legislation will be outlined and the Regional Healthcare Plans, as well as Blood and Plasma Plans, issued during the last 10 years will be highlighted.

1.2. Blood system: the European legislation

In the last decade, the production of legislation at the Community level and, consequently, at the national level in the field of blood transfusion and related activities has increased exponentially, since the growing and progressive use of human blood for therapeutic purposes has made it increasingly important and essential to ensure quality and safety throughout all the stages of collection, testing, processing, storage and distribution. In particular, it has become more intense in the years 2005-2007, although a rising trend had already started since 2002. The increase in regulatory activity has opened a difficult and complex scenario, especially for the transposition and harmonization of Community legislation with the existing domestic legislation. The relations between regulations are becoming increasingly complex and difficult to manage.

These pages will give an overview of the European legislation, and consequently of the relevant national legislation, through its evolution over the years and the growing attention that lawmakers are paying to this issue.

1 Thanks to Roberta Bullaro for her valuable cooperation
The European directives on this issue have become more definite since 2001 with Directive 2001/83/EC.

**Directive 2001/83/EC:** this Directive has the primary objective of rationalizing all the previous legislation on the production, distribution and use of medicinal products, including those derived from plasma. In particular, in order to ensure the quality, safety and efficacy of the latter in public and private facilities, or of products imported from third countries, rules are established for:

- the authorization to the placement of new medicinal products on the market once the manufacturer has demonstrated constant homogeneity among the lots;
- the supervision of the manufacturing of blood products in terms of:
  - control of the raw material;
  - control on the intermediate product;
  - control on the finished product;
  - stability tests;
  - pharmacological and toxicological tests;
- the circulation of blood products through measures adopted by the Member States to ensure the traceability of the plasma used for manufacturing (donor identification and donation centre) and the assurance by importers of the compliance with the guarantees of security applied in the European Union.

**Directive 2002/98/EC:** as an amendment to the previous Directive 2001/83/EC, Directive 2002/98/EC has been issued, where technical requirements are defined for the activities of:

- data collection, control of blood and blood components (including plasma for fractionation);
- processing, storage and distribution of the components intended for transfusion.

Member States are therefore called upon to ensure that their blood centres comply with these requirements; they have to choose, depending on the type of their healthcare system and blood group, one or more of the tools listed below:

- designation of centres;
- authorization of centres;
- accreditation of centres;
- granting of licenses to centres.

New issues are identified that must be taken into account by Member States when giving an immunohaematological centre the possibility to operate. The main requirements that have to be assessed and which will then allow the centre to perform its activities are:

- presence of an impartial system of inspection and of measures to control the activities being carried out;
- definition of the responsibilities and minimum requirements for the appointment of a head of the centre as well as of the rest of the staff;
- ensuring of blood traceability and of a system for the notification of adverse effects and serious accidents;
- a system of quality and safety management.

This Directive therefore sets out a series of regulations on the safety and quality of blood and blood components, which can be applied to the entire
transfusion chain in the countries of the European Union (EU). It is an answer not only to the need to protect public health, but also to the proper functioning of the internal market, as it facilitates the transfer of this kind of products to EU member countries. The main objective is to draft a set of rules defining, in a clear and complete way, the entire transfusion chain.

At this stage, all the international institutions show a "proactive" behaviour aimed at ensuring a process of self-sufficiency based on trust and control.

- the definition of the origin of plasma;
- quality in processing and in the interaction between the different centres.

The purpose is to ensure the quality of the plasma used for the manufacturing of medicinal products. With this Directive, which has amended the previous Directive 2001/83/EC containing the Community code on medicinal products for human use, the European Commission wanted to simplify the procedures for the approval of plasma derivatives. The PMF is a separate document, which provides every detail on the characteristics of the entire human plasma used for the manufacturing of medicinal products.

In subsequent years, a series of directives of considerable importance has been issued at the European level.

**Directive 2004/33/EC:** it takes into account the provisions of directive 2002/98/EC, and outlines the technical requirements for the collection and processing of blood and blood components, specifying:
- the characteristics of donors and of the donation procedure;
- the conditions of storage, transport and distribution of blood and blood components;
- the quality and safety requirements for blood and blood components.

Focusing on the characteristics of donors and of the donation procedure, Directive 2004/33 / EC provides the requirements needed to a subject to be suitable for donation, and the exclusion criteria, for an exclusion which may be permanent or temporary.

As for the procedure, 3 steps are described:
- **donor identification:** the personal data that identify the donor in an unambiguous way, without any risk of confusion, and his contact data;
- **health and medical history of the donor:** resulting from a questionnaire and from an interview by qualified healthcare personnel, and including the relevant factors which may contribute to the identification and exclusion of people whose donation could present a health risk to others, such as the possibility of transmitting diseases, or a health risk to the donors themselves;
- **signature of the donor** on the appropriate questionnaire countersigned by the person in charge of assessing the medical history, and by a healthcare staff member.

Among other directives issued at a European level which have implemented Directive 2002/98/EC there are:
- **Directive 2005/61/EC:** it indicates the terms of traceability of the blood collected and of the blood components produced both in the same Member State and in a third country, as well as the essential elements of a system for the notification of adverse events and serious accidents;
- **Directive 2005/62/EC:** it lays down all the rules for the assessment and maintenance of quality applied in haematology centres;
- **Directive 2006/17/EC:** dated 8 February 2006, it implements Directive 2004/23/EC of the European Parliament and Council as regards specific technical requirements for the donation, procurement and testing of human tissues and cells. The use of human tissues and cells intended for therapeutic use, entails a risk of disease transmission and other potential adverse effects in recipients. This risk can be reduced by carefully
selecting donors, testing each donation and applying procedures for the procurement of tissues and cells in accordance with the rules and procedures established and updated on the basis of the best scientific advice available. All human tissues and cells, also including those used as raw materials for the production of medicinal products intended for use in the Community, must therefore meet the requirements in terms of quality and safety set forth by the present Directive.


- requirements for traceability;
- notification of serious adverse reactions and events and specific technical requirements for coding;
- processing;
- preservation;
- storage;
- distribution of human tissues and cells.

The present legislation, however, must not be extended to the applications of these tissues and cells on humans (by surgery, perfusion, insemination or transfer of embryos). The provisions of the Directive concerning traceability and the reporting of serious adverse reactions and events also apply to the donation, procurement and testing of human tissues and cells provided for in Directive 2006/17/EC of the Commission.

Before the excur sus on legislation at the national level, it is finally worth reminding Recommendation No. R(95)15 of the Council of Ministers to member States on the preparation, use and quality assurance of blood components updated annually. Then, the Council of Europe has made available a technical support for the implementation of this recommendation through the use of a guide which is prepared annually by the EDQM (European Directorate for the Quality of Medicines & HealthCare).²

1.3. Blood system: the national legislation

At a national level, the European legislation has been transposed and a harmonization has been performed; a series of Laws and Decrees, in fact, have been issued for the transposition of the European legislation and its implementation throughout the country.

As a direct application of Directive 2002/98/EC, **Legislative Decree No. 191/2005** has been issued, which outlines the requirements for the collection, storage, processing and distribution of the different components, and specifies:

- the modes of authorization and accreditation of Transfusion Services;
- the inspections and control measures;
- the responsibilities and the modes of selection of the manager;
- the measures of traceability of the different blood components;
- the methodology of response in the event of serious accidents;
- the requirements for the relationship with donors, the collection, storage, transport and distribution of blood.

However, this Decree-Law will be later revised by **Decree 261/2007**, which legislates on:

- the system of accreditation of Transfusion Services and donor Associations;
- the inspections carried out by the Regions;
- the responsibilities and tasks of the people in charge of the local system;

² The EDQM (European Directorate for the Quality of Medicines & HealthCare), is an organization founded in 1964, whose mission is the protection of public health through the development, implementation support and monitoring of the application of quality standards for “safe use”. EDQM standards are recognized as an international benchmark. The EDQM also develops guidelines and standards for blood transfusion and organ donation.
• the identification and selection of the donor;
• campaigns for voluntary donation;
• quality requirements.

Going on in the adaptation to European legislation, and in this case with the provisions of Directive 2004/33/EC, the Decrees of 3 March 2005 have been issued in the same year by the Ministry of Health: "Characteristics and methods for the donation of blood and blood components" and "Protocols to verify the eligibility of a donor of blood and blood components "; they define, at a national level, the protocol to ascertain the suitability of the donor, and identify the procedures for blood collection, the characteristics of the donor and the ways to manage the relationship with him.

A comparison with what was earlier said about the donation procedure at a European level, shows how the national and European legislations are aligned.

The Decree provides that each transfusion and blood collection facility should verify the will of the candidate donor to proceed to the donation of blood or blood components, thus carrying out a selection procedure that ensures his eligibility. The procedure consists of:
• ascertaining the identity of the candidate donor and filling in the questionnaire;
• assessing the general health of the candidate donor;
• assessing the physical requirements for acceptance;
• defining the judgment of eligibility for donation;
• obtaining the informed consent for the donation and processing of personal data.

Then, in October, Law No. 219/2005 has been promulgated, with the aim to ensure national self-sufficiency as a supra-corporate and supra-regional goal, also for plasma derivatives from regular, voluntary, non-remunerated donors, thus including transfusion medicine among the Essential Levels of Care (LEA), and to protect citizens in a more effective way, as well as to develop transfusion medicine through the creation of programme assessment and steering bodies.

More specifically, the goals are:
• to create an organizational model of the transfusion system to guarantee self-sufficiency;
• to define the characteristics of the donor;
• to recognize the Associations and Federations of donors;
• to activate bodies for the creation of programming and coordination activities of the transfusion system (National Blood Centre and Permanent technical advisory board);
• to regulate the manufacturing of blood products and the scheduling of import and export;
• the features for the accreditation of blood transfusion facilities;
• the provisions on quality and safety, the possible penalties. Self-sufficiency is a strategic goal for the country; it is guaranteed and ensured only by a donation being:
• voluntary;
• regular;
• responsible;
• unpaid.

It is only thanks to donation that equally appropriate care can be guaranteed to all citizens. Every year the Programme for National self-sufficiency is defined by the Ministry of Health, based on the information provided by the National Blood Centre and by the Regional Coordination Centres.

It identifies several elements, including for example: the resources, the real needs, the required production levels, the criteria for funding the system.

The years 2006 and 2007 have been intense from the point of view of legislative activity at the national level, with rules that have concerned different areas of the Italian blood system and have implemented several EU
Directive 2001/83/EC and its subsequent amending Directives have been transposed at a national level only in April 2006 with Legislative Decree 219/2006, which legislates on the Community code on medicinal products for human use (Directive 2003/94/EC) and dedicates Title X to medicinal products derived from blood and plasma. Article 136, moreover, makes reference to Article 110 of the directive, in which the Ministry of Health and the Italian Medicines Agency (AIFA) are identified as the subjects committed to take all the measures needed to develop the manufacturing and use of products derived from human blood or plasma, obtained through voluntary unpaid donations, in order to achieve community self-sufficiency.


Decree No. 208 of 6 November 2007 legislates, instead, on the quality of the system, with particular attention, for example, to the staff, the premises, the equipment and more. It rules the entire process, including the control and audit systems designed for all the operational stages, in order to verify the compliance with the standards established by this legislation. Such controls are carried out regularly by trained and competent people, operating in an independent way and according to approved procedures.

Pursuant to Law No. 219, then, several decrees have been issued, always in the same years and in the subsequent years, including:

- **Ministerial Decree of 10 November 2006**: it legislates on the presence of 3 representatives of the Associations and Federations of donors at the Steering Committee of the National Blood Centre;
- **Ministerial Decree of 18 April 2007**: It identifies the elements and principles underlying the Associations and Federations of voluntary blood donors in terms of governance, mission and participation. In order for them to be recognized as such, they have to be based, in their respective statutes, on the human and solidarity-based values of voluntary and unpaid donation of blood and blood components, they must consist of voluntary donors or by people having already been donors and base the organization and the structure of their governing bodies on the democratic principle. In addition, the Associations and Federations of voluntary blood donors, legally established and recognized, are eligible to contribute to the achievement of the institutional goals of the National Health Service;
- **Ministerial Decree of 26 April 2007**: it legislates on the establishment of the National Blood Centre (CNS), a facility dedicated primarily to the achievement of the goals of national self-sufficiency and to the support of the coordination of transfusion activities nationwide. It also regulates the establishment of the Steering Committee;
- **Ministerial Decree of 21 December 2007**: it has established the SISTRA, Information System of Blood Transfusion Services, to provide support in strategic terms for the achievement of the goals of "self-sufficiency of blood and blood derivatives, transfusion safety, homogeneity in essential levels of care and development of transfusion medicine", provided by Law 219 / 2005. With the new Information System, a continuous exchange of information exists between the Ministry of Health, the Regions and the autonomous provinces of Trento and Bolzano and the CNS, which encourages the interaction between the regional and the national level and the recording and accurate analysis of the data on blood and plasma consumption and production. The three main categories of information collected by SISTRA are the following:
  - data on the activities of individual Regions;
  - data on the compensation of blood components and plasma derivatives;
  - haemovigilance data;
- **Ministerial Decree of May 2011**: it provides for the re-establishment of the permanent technical council for the transfusion system set out by law 219 of 2005;
• **Ministerial Decree of June 2011:** it provides for the re-establishment of the permanent technical council set out by the law aforementioned for the transfusion system, and defines its responsibilities (self-sufficiency planning, consultation in regional planning, coordination of the regional blood transfusion network, monitoring, information system, activities of monitoring structures, quality management, relations with plasma processing companies);

• **Ministerial Decrees of April 2012.** The 4 Decrees include:
  1. "Standard agreement between Regions, Autonomous Provinces and manufacturers of blood products for the processing of plasma collected throughout the country".
  2. "Procedures for the submission and evaluation of applications aimed at obtaining the inclusion among the centres and the companies producing medical blood products, authorized to enter into the agreements with the Regions and the Autonomous Provinces for the processing of the plasma collected throughout the country".
  3. "Transitional procedures for the marketing of medicinal blood products obtained from the human plasma collected throughout the country".

Going on with the references to Law 219/2005, it is clear that, given the urgent need to ensure consistent quality levels on transfusions throughout the country in the current context of significant heterogeneity among the Regions, and to adapt transfusion activities to the national regulations transposing the European Directives on blood, blood components and blood products, a series of agreements have been structured within the **Standing Conference on the relations between State, Regions and the Autonomous Provinces of Trento and Bolzano.**

On 16 December 2010 an agreement has been reached which outlines:
• the minimum structural, technological and organizational requirements (quality and staff control, technology management, materials management, agreements and relations with third parties, assessment and improvement of quality, information system, scheduling of blood collection, awareness raising / information and education, donor selection, blood collection, relations with associations, processing, qualification and validation, labelling, assignment, delivery, distribution, storage and transport of blood, traceability) of the transfusion system, including Collection Units, to be complied with by 12/31/2014.

Later on, since an intervention on transfusions was deemed necessary to guarantee homogeneity in essential levels of care, the characteristics and functions of Regional Coordination Facilities have been specified within the same Conference of **13 October 2011,** trying to respect regional autonomy in the organization and planning of healthcare activities. The regional coordination centre is the technical and organizational body of the Region / Autonomous Province, working in synergy with the CNS, and supporting the planning of transfusion activities and of the coordination and control of the transfusion network.

In **July 2012,** the **Standing Conference for the relations between State, Regions and the Autonomous Provinces of Trento and Bolzano** defines, instead, the guidelines for the accreditation of Transfusion Services and Blood Collection Units, and specifies:
• the training and characteristics of the medical and nursing staff;
• the quality, safety and efficiency of blood collection;
• the qualification and efficiency of manufacturing activities;
• the rationalization of the biological qualification.

Lastly, it is worth pointing out the existence of **an interregional agreement for plasma-derived products (AIP)** created in 1998 by will of the regions Abruzzo, Emilia Romagna, Friuli Venezia Giulia, Veneto and of the Autonomous Provinces of Bolzano and Trento (joined over the past
years by 5 other Regions - Tuscany, Basilicata, Liguria, Valle d'Aosta, Umbria - for a total reference catchment area of about 19 million inhabitants). The Agreement primarily pursues the purpose of contributing to the achievement of national plasma self-sufficiency in terms of quality and quantity.

An additional "grouping" of regions has been later created with similar purposes, and includes Lombardy, Piedmont and Sardinia (for a total of about 16 million inhabitants).

The legislative context to date can be therefore summarized as in fig. 2.

### 1.4. The future legislative prospects

In a legislative context such as the one previously described, interesting and challenging scenarios are appearing, which at the same time may be critical for the various players of the Italian transfusion system.

By **31 December 2014**, the Regions, the Autonomous Provinces and all the transfusion centres, including those run by the Associations, must provide for the necessary adjustments to meet the minimum requirements in structural, technological and organizational terms, and for accreditation.

#### Fig. 2 - The legislative context

<table>
<thead>
<tr>
<th>Community directives</th>
<th>National implementing laws</th>
<th>Italian legislation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001/83 / EC</td>
<td>Legislative Decree 219/2006</td>
<td></td>
</tr>
<tr>
<td>2003/63 / EC</td>
<td>Decree 10 November 2006</td>
<td></td>
</tr>
<tr>
<td>2004/33 / EC</td>
<td>Decrees 3 March 2005</td>
<td></td>
</tr>
<tr>
<td>2005/62 / EC</td>
<td>Decree 6 November 2007 No. 208</td>
<td></td>
</tr>
<tr>
<td>2006/17 / EC</td>
<td>Decree of 10 November 2006</td>
<td></td>
</tr>
<tr>
<td>2006/86 / EC</td>
<td>Decree of 18 April 2007</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ministerial Decree of 26 April 2007</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ministerial Decree of 21 December 2007</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standing Conference on the relations between State, Regions and Autonomous Provinces Trento and Bolzano, 16 December 2010</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ministerial Decree May 2011</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ministerial Decree of June 2011</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standing Conference on the relations between State, Regions and Autonomous Provinces Trento and Bolzano 13 October 2011</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ministerial Decrees April 2012</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standing Conference on the relations between State, Regions and Autonomous Provinces Trento and Bolzano in July 2012</td>
<td></td>
</tr>
</tbody>
</table>

*Source: CERGAS data processing.*

Moreover, as of **1 January 2015**, verification visits will be scheduled
every two years in Blood Donor Services and Collection Units by those teams having at least one assessor from the national list. The Regions will be required to report periodically to the Ministry of Health and to the CNS about the results of this activity, and then the Ministry will inform the European Commission.

The ultimate goal, resulting from the accreditation process, is to further qualify the Italian transfusion system and to be able to export, at the end of this phase, the Italian plasma and its derivatives in the other EU States. This will require a significant effort by all the players of the system, which will have to interact and cooperate more than in the past. We are witnessing a real revolution of the system, but we must be very careful because this doesn’t mean just bringing about a change only in this sense. Rather, in such a critical and delicate phase as the present one, it means requesting, indirectly, also a cultural effort, and challenging a series of fundamental elements in our system. A joint effort of all the players is really needed, to turn what could be a hazard, an obstacle or an imposition into a great opportunity of growth and improvement for the system, and to make it more effective.

1.5. Conclusions

Over the years, at a European level, the legislative work on transfusions has grown in numbers, thus becoming more intense and strict, presenting opportunities and risks pertaining to the change that the system is facing. The directives issued at the Community level have been aimed at harmonizing the transfusion systems of the different European countries; in the future, with homogeneous transfusion systems, it will be possible to increasingly open the market, also giving the opportunity, to all the countries belonging to Europe, to become fully self-sufficient.

The national level has transposed nearly all the European directives, trying to conform to the EU context, although sometimes more slowly. The Italian legislative activity on transfusions has intensified especially between the years 2006 and 2007, and has produced a large quantity of rules. Now it is facing a situation of great difficulty, resulting from the accreditation of the collection facilities by December 31, 2014, imposed at a European level, which is creating many problems not only to the system but also to its institutional, public, non-profit and profit players.

As for the regional level, which will be analyzed in the annexes in terms of legislation regarding the transfusion system, the situation is quite heterogeneous and complex. An imbalance may be noticed in terms of quantity of legislation and regulatory production, precisely in relation to the number of Laws, Decrees, Agreements and Resolutions issued in some Regions rather than in others.

Moreover, most of the regions have a Regional Blood and Plasma Plan, which is relatively recent except for a few cases, and aims at supporting primarily self-sufficiency or its achievement. The diversity among Regions is closely linked to the different levels of the Regional Health Service, but it would be important to prospectively identify tools that ensure an adequate level of quality standards throughout the country, trying to break down the possible barriers related to a culture of division rather than of integration.
2.1. Introduction

The research is based on a structured methodology, aimed at verifying the hypotheses and at achieving the research objectives.

In fact, the first part outlines the objectives and underlying questions of the research, in order to go through the stages of its development. In parallel to the description of those stages, the methodological tools of research are highlighted, together with the levels of analysis addressed, and the overall "framework" of the analysis is drafted and applied to the peculiar case of the blood system in Italy.

2.2. Research objectives

The research project is the result of the idea of Avis to outline and analyze the context of the blood system in Italy and its peculiarities; this research has been developed mainly through the in-depth analysis of Avis and of the stakeholders who play an important role in the blood system in Italy.

The goal of the project is to analyze the situation of the regulatory and organizational context, as well as of the economic and social conditions, and to outline the challenges that the Association and the system itself will have to face in the coming years, in order to evaluate the possible changes that may be introduced into the Italian blood system.

In summary, the specific objectives of the research are as follows:

- **outlining the legal framework of the blood system in Italy**: the analysis starts from the evaluation of the European context and of the Directives issued in recent years, continues with the study of the Italian context, of the regulatory production at a national level and of the transposition of European directives, and ends with the analysis of the legislation at a regional level, in order to highlight the internal legal-administrative peculiarities and differences of the regional health system;

- **outlining the Italian transfusion system and the role of Avis**: through the adoption of a series of methodological tools, the research has the objective to give a complete description of the Italian transfusion system, of its strengths and weaknesses, and of the problems and challenges it will have to face. Special attention will be paid to the role of Avis and thus of Associations, through an analysis of the organizational models and of the qualitative and quantitative data of the different corporate functions that will provide a full overview of the Italian blood system. The analysis is focused in particular on the scalability of the "best practices" in different organizational functions, in an attempt to provide the context for a possible future development allowing for a solution to the problems of the blood system;

- **analyzing and investigating awareness-raising, retention and collection activities**: special attention will be given to the activities carried out by the Avis association and to the internal management and organizational ability of Associations, through a research approach based on an inductive method. The aim will be to identify the most successful tools in order to analyze the possible ways to support the goal of achieving self-sufficiency at a national level. The analysis has been
developed on the basis of a research partnership with Avis which provided the operating environment of the blood system.

2.3. Stages of research

The research included the development of three stages, which accompanied the achievement of the objectives described above:

**Stage 1: analysis of the legal framework and of the scientific literature:** Stage 1 of the research has consisted in a review of the legal regulations belonging to different institutional levels to describe the legislative context both from a chronological and geographical point of view. The description of the regulations is accompanied by a process of review of the national and international literature on the development of the blood system in Europe, on the organizational models of blood donation (in all its stages), on the models of selection and retention of donors and on the assessment of the quality of donations. The purpose of this stage is to give an overview of the transfusion system at a European level, with a specific focus on the Italian legislation.

**Stage 2: analysis of the Italian transfusion system:** Stage 2 of the research included a desk research of all the information related to the Italian transfusion system, which highlighted the useful data existing in the area and focusing mainly on those provided by the National Blood Centre. In order to analyze at best the players of the transfusion system, some key informants belonging to the system itself were interviewed, and the analysis therefore presented the problems and strengths of the system itself. The choice of the key informants was based on the need to analyze all the different institutional levels, covering all the key players of the Italian transfusion system.

The interviews and questionnaires resulted in a SWOT Analysis of the Italian transfusion system, which helped outlining the critical issues and the future challenges to be faced.

**Stage 3: the organizational models, the corporate functions and the social and economic results of Avis:** Stage 3 included interviews to a statistically significant sample of Presidents or to their delegates of:
- Avis Regional branches,
- Avis Provincial branches,
- Avis Municipal branches.

The goal of the interviews was to analyze the organization through the study of seven key issues (Annex 1):
- the governance system of the regional blood transfusion system and the relationships among the various stakeholders of the area (question 1-2);
- the organizational model for the call, collection and related awareness raising in the area (question 3, 6-8);
- the tools and investments for communication and retention towards non-donors, donating members (questions 4-5);
- the tools for selection, training and retention of cooperating members (question 6);
- the trend of change in organizational and demographic terms (questions 7-9);
- the tools of partnership with local players (question 10);
- the critical issues and the future development (questions 11-12).

Alongside the structured interview, a questionnaire was administered (Annex 2), aimed at the collection of:
- data concerning the donation in the individual Avis branches;
- data for the 2010 and 2011 budgets.

And this, in order to formulate indicators of:
- effectiveness;
- performance;
- territorial proximity.
The goal of this stage was, in fact, to collect all the data so as to prepare an in-depth analysis related to:

- organizational models of the blood system;
- outcome indicators that the Associations may use for the development of a greater awareness;
- functional tools to support the development of marketing and retention;
- the way to the achievement of the goals of self-sufficiency.

**Stage 4: Analysis of Italian donors:** in order to complete the research and give voice to the main players of the Italian transfusion system, the creation of a questionnaire dedicated to donors (Annex 3) has been considered crucial. The response rate for this survey has highlighted the presence of a high social capital in our country and the sense of belonging of donors towards the transfusion system. 15,737 questionnaires (out of 21,140) were complete and valid, and included the following information:

- gender and age;
- type of professional activities and voluntary activities carried out;
- when, where and what type of donation they choose;
- the frequency of the donation;
- the level of satisfaction and the problems encountered;
- the reasons underlying membership to an Association of voluntary blood donors;
- the underlying reasons for the presence of potential donors who have not yet donated.

Through the analysis of these data, a set of statistically relevant information on the entire world of donors has been identified, which has been important to analyze how to give more effectiveness to awareness-raising, retention and collection activities on the Italian territory.

The development of these four stages resulted in an overview of the Italian transfusion system, and guaranteed the opportunity to gather data that might support the identification and overcoming of the current challenges.

### 2.4. The research approach

In order to define the approach used for this research, it is first necessary to analyze the literature related to the methodology. The literature provides for two methods of research (Saunders et al., 2009): the deductive approach and the inductive approach.

**The deductive method of research** is based on a logical approach to research which leads to conclusions coming directly from theory. The deductive approach implies starting the research from existing theories and models to obtain new proposals that are subsequently tested through empirical studies.

**The inductive approach** implies, instead, basing the research on empirical studies that are then connected with the existing theories.

Fig. 1 shows that the method of inductive research starts with a practical approach and then links to existing theories, while the deductive method starts with a theoretical approach and then turns to a practical one.
In the research, both approaches will be used for the different topics. On one side, in fact, the literature devoted to social marketing and to factors related to donation allows for the use of a *deductive approach*, whereas for the assessment of organizational models an *inductive approach* will be used, which will lead to the assessment of the theory.

### 2.5. Research design and research tools

The research design is presented in Fig. 2, which shows the four levels of analysis of the research:

1. **exploration**: This stage included an exploratory analysis of the situation of Avis through 169 in-depth interviews and an exploratory analysis based on the examination of budgets of the Avis branches being interviewed and of the data collected through questionnaires;

2. **insights**: the data from the exploratory phase have been analyzed and completed during this stage, in which focus groups have been organized to further analyze some issues and to understand the dynamics existing within the three geographical areas being considered: North, Centre and South. Moreover, the stage of insights has involved also questionnaires dedicated to cooperating members, physicians and key informants and, lastly, structured interviews to some key experts;

3. **analysis**: the data from the first two stages have been analyzed statistically in terms of quantitative data, while a content analysis has been carried out for more qualitative data. In particular, content analysis has been used to investigate the concepts and keywords at the basis of our investigation;

4. **output**: The last stage of the research involved the drafting of the report with the data from the three previous stages; in particular, the research output is composed of 9 chapters which will analyze the issues in detail, going from a macro-vision of the blood system to the timely analysis of corporate functions.
The research output consists in a report which includes the following topics:
- analysis of the legislation at a European, national and regional level;
- objectives and methodology of the research;
- the blood system in Italy;
- the Association, numbers, organizational models and donors;
- Avis: relations with stakeholders and with the other players of the blood system;
- the organizational models of Avis and the impact on the indicators of effectiveness, performance and territorial proximity;
- marketing tools to communicate with potential new donors and marketing tools for the retention of existing donors;
- the management of the organization: cooperating members, employees and Executive Board;
- conclusions and views on the future prospects of the transfusion system.

**Fig. 3 - Sampling**

<table>
<thead>
<tr>
<th>Regions</th>
<th>Regional branches</th>
<th>Provincial branches</th>
<th>Municipal branches</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abruzzo</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>South Tyrol</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Basilicata</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Calabria</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Campania</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Emilia Romagna</td>
<td>1</td>
<td>4</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Friuli Venezia Giulia</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Lazio</td>
<td>1</td>
<td>3</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Liguria</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Lombardy</td>
<td>1</td>
<td>5</td>
<td>19</td>
<td>25</td>
</tr>
<tr>
<td>Marches</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Molise</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Piedmont</td>
<td>1</td>
<td>3</td>
<td>9</td>
<td>13</td>
</tr>
<tr>
<td>Puglia</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Sardinia</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Sicily</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>8</td>
</tr>
</tbody>
</table>
The tools used, which will be further discussed in section 2.7 have been the following:

- semi-structured interviews with a statistically significant sample of regional, provincial and municipal Avis Presidents;
- questionnaires to donating members, physicians and cooperating members;
- realization of focus groups\(^1\);
- key informant interviews\(^2\) in the form of semi-structured interviews or questionnaires;
- quantitative analysis of budgets.

### 2.5.1. The sampling

From the universe of reference composed of the presidents of regional, provincial and municipal Avis branches, a significant sample of 169 associations was extracted. Such sample is a simple random sample with a significance level of 10% and is described in fig. 3.

**Simple random sampling**: it provides that, for each draw, each element of the population has an equal chance of being selected, and therefore the choice of the sample in random sampling is left to chance.

In sampling without replacement, the probability of extraction corresponds to

\[
p = \frac{1}{N(N-1)(N-2)\cdots(N-i+1)},
\]

with \(i = 1, 2, \ldots, n\), and to

\[
p = \frac{1}{n},
\]

always constant for each unit, in case of an extraction with replacement. Further information about the kinds of sampling are provided in Box 1.

### BOX 1 - The sampling methods

In general, the methods of sampling are divided into probabilistic and non-probabilistic.

In probabilistic sampling, every unit of the population has a known and non-zero probability of being selected, and therefore of entering the sample. This type of sampling is based on an objective scheme of selection of the units, in which the probability of selection of individual elements is known and completely independent of the personal preferences of the researcher. In general, the methods of sampling are divided into probabilistic and non-probabilistic.

In non-probabilistic sampling, a set of rules and operations, which are established a priori and can be treated mathematically, is required to form the sample, and is called sampling plan. The most common probability sampling plans are: simple random sampling, which has already been mentioned above, stratified sampling, cluster sampling, two-phase or multi-phase sampling, systematic sampling.

**Stratified random sampling**: if additional information are

---

1 For the definition of the tool of the Focus Group, please refer to the next paragraphs
2 For the definition of the tool of Key Informants, please refer to the next paragraphs.
available on the structure or on certain characteristics of the population, this can be split into a finite number of groups or strata, in which units are homogeneous, according to a given criterion. Within each group, a random sample is extracted in an independent way, and the independent samples obtained are as many as the layers.

✓ **Random cluster sampling.** In cluster sampling, the elementary units of the population are grouped into subsets of contiguous units of observation of data, called clusters. From a given population a number of clusters is extracted, and all the elements belonging to the selected groups become part of the sample. Natural groups or existing groups are generally used as clusters.

✓ **Two-phase or multi-phase sampling.** In multi-phase sampling, within a given population whose elementary units are divided into groups, a random sample of groups is first selected, then a number of elementary units is extracted from the selected groups. There are two sampling levels: in the first phase groups are chosen, while in the second phase elementary units, called secondary units, are chosen.

✓ **Systematic sampling.** In systematic sampling, only the first unit of the population is drawn randomly from the population, while the others are selected automatically in accordance with a predetermined criterion.

Non-probabilistic samples are not created according to a probability law defined a priori. The selection of units is made according to specific cognitive needs, subjective criteria or peculiar characteristics, depending on the objectives of the research.

The non-probabilistic samplings most frequently used are: quota sampling, judgmental sampling and convenience sampling.

✓ **Quota sampling.** In quota sampling, the population is divided into homogeneous groups or classes according to some structural variables, such as, for example, gender, income, profession, residence; the percentage of these variables is determined on the basis of appropriate sources. The number of observations to be collected in each group, the so-called quotas, is then identified: those who collect the data (the interviewers) choose the sample within the classes to reflect the proportions chosen. The interviewer has a high, almost total arbitrariness when choosing the units to be interviewed as part of the quotas assigned, with possible problems of poor representation. In order to reduce the distortion of this sampling, quota probability samplings have also been proposed (Cicchitelli, Herzel, Montanari 1997).

✓ **judgmental sampling.** In this type of sampling, the reference units are selected only in specific areas of analysis, on the basis of preliminary information about the population surveyed (without random procedures). It is, therefore, a sampling based on the knowledge of the feature being studied, particularly suitable for small samples. The feature / criterion might consist in a judgmental layering, that is in choosing units (not randomly) from sub-populations with different characteristics, such as size and geographical location (Fattore 2005).

✓ **convenience sampling.** Convenience sampling requires that the selection of elements is based essentially on criteria of temporal convenience, economic convenience or otherwise. This methodology includes the sampling of volunteers or
privileged witnesses, used especially for surveys on sensitive topics or on small populations.

In non-probability sampling, instead, a set of rules and operations, which are established a priori and can be treated mathematically, is required to form the sample, and is called sampling plan. The most common probability sampling plans are: simple random sampling, which has already been mentioned above, stratified sampling, cluster sampling, two-phase or multi-phase sampling, stratified sampling.

2.5.2. Questionnaire

The choice of the tool for the questionnaire is first of all an answer to the need to "listen" to the different experiences of donors and of their level of satisfaction, to analyze the issues raised by the heads of regional coordination centres in relation to the transfusion system, by physicians in relation to collection activities and by cooperating members in relation to the activities of the association.

A basic choice in the design of a questionnaire concerns the format of the answers: open-ended questions and closed-ended questions. Four questionnaires were prepared within the research, and included different types of questions and analyses.

The questionnaire dedicated to donors was compiled online for a total of 15,737 valid answers.

In the research, the questionnaire for donors included 58 questions, of which 57 closed-ended questions and one open-ended question, on the following topics:
- master data;
- province of donation;
- average donations in a year;
- average aphaeresis carried out in a year;
- day in which donations / aphaereses are carried out: weekdays / holidays and any exemption from work;
- level of satisfaction;
- place of donation and willingness to donate at a greater distance;
- assessment concerning retention tools;
- analysis of the awareness-raising tools to be used to undermine the negative perception of potential donors.

The questionnaire was administered to donors through an online survey in which, out of an expected output of around 680 answers required to have a statistically significant sample, 15,737 valid answers arrived.

For the second questionnaire dedicated to physicians (Appendix 4), 80 answers arrived to its 11 questions, of which 8 closed-ended and three open-ended, on the following topics:
- province of work;
- facility they work in;
- person being responsible for the call;

3 In open-ended questions, people are free to formulate the answer and, in that case, for the quantitative analysis of data, the answers are classified according to a coding system. In the case of closed-ended questions, instead, the interviewee must choose from a closed list of possible answers. In this case, the researcher must be able to define in advance an exhaustive list of possible answers, and can directly use the data without an interpretation work. The list of closed-ended answers may include the answer "other," or an equivalent term: this broadens the possible use of this kind of answers, because some room is left for flexibility for answers that the researcher had not expected (Fattore 2005).
• source of remuneration;
• strengths and weaknesses;
• solutions to the problems encountered.

The questionnaire for cooperating members (Annex 5), for which 537 answers were received, included 21 closed-ended questions, 1 open-ended question, and concerned the following topics:
• selection mechanisms;
• training mechanisms;
• in-depth training.

Lastly, the questionnaire for the heads of the Regional Coordination Centres (Appendix 6), for which 14 answers were received, included nine open questions and was composed of the following items:
• reference regions;
• the three major problems and their causes within the regional blood system;
• the strengths and weaknesses of the activities developed by the Associations in the area;
• the three new challenges at a national and regional level;
• a proposal to improve the national blood system.

Lastly, the questionnaire submitted to the Presidents of the Avis branches interviewed, for which 100 answers were received, included 28 questions on the following topics:
• composition of donors by age, geographic origin, blood type (years 2010-2011);
• number of donations by type (years 2010-2011);
• number of members who joined, by gender and age groups (years 2011-2012);
• relations with other players in the transfusion system and possible scheduling of first checks on European directives;
• cooperating members and staff within the associations (years 2010-2011);
• number of agreements, facilities located in the area and collection days scheduled;
• donating members being temporarily or permanently suspended, and potential donors with negative first check (years 2010-2011);
• retention tools (number of calls), awareness-raising tools, number of events and articles (years 2010-2011).

2.5.3. Semi-structured interviews

The regional, provincial and municipal presidents which were selected were interviewed with the method of the individual interview4.

4 The individual interview is a very effective technique for data collection, with the basic objective of revealing the complexity of the phenomenon and with some key features:
• it is personal: in this way, in fact, it is possible to get an in-depth and holistic view of the phenomena;
• it is semi-structured: its structuring depends on the training goals of the research. In our case, given the amount of information to be collected, the interview was quite structured;
• the variable duration: in our case the interviews lasted on average two hours each. During the interviews, a process of mutual influences arises between the interviewee and the interviewer, which depend on a number of factors, including: the recognition of the difference in role, the presence of different expectations and the development of positive and negative states. The fundamental data from an in-depth interview are represented by the content of the interview itself, and in the case of the research here at issue, they have been processed in the different sections through different methods of analysis, including a content analysis ad hoc. The content of the interview consists of the motivations, opinions, behaviours, of the socio-demographic, economic, cultural, value and psychological characteristics of the interviewee. What makes the interviews peculiar is also the non-verbal communication of the interviewee, which provides information on his emotional and affective state. The other key feature of the in-depth interview is the
In the research here at issue, descriptive questions were used, in which the interviewees were asked to provide their representations of reality. There were some "wide-ranging" questions which requested a comprehensive description of a phenomenon, so as to stimulate the respondent and to start delineating the topic. Other questions were more focused on specific issues coming from more general questions, others were more illustrative. Lastly, some questions were based on the direct experience of the Avis branches that the respondents represented.

The main areas of the semi-structured interviews can be summarized as follows:

- master data;
- Avis relations with the area (with the other associations, with the institutional bodies of reference, with the Regional Coordination Centre, with the transfusion department, with the Committee for the Appropriate Use of blood);
- model of governance for the regional blood transfusion system;
- management of volunteers;
- communication and marketing campaigns and partnerships with the public or private sector;
- retention tools with donors;
- the models of governance of Avis;
- future prospects.

2.5.4. Focus groups

In addition to in-depth interviews to better analyze the organizational models of Avis and the relationships among the various players, three focus groups were organized. The three focus groups were created according to geographical areas and were extracted from a sample at a provincial level. In case the President couldn’t be present, a delegate was sent:

1. representatives of the northern regions;
2. representatives of the central regions;
3. representatives of the southern regions.

The representatives of the focus groups were divided according to Nielsen areas. Italy is generally divided into four Nielsen areas as follows:

1. AREA 1: Piedmont, Val d'Aosta, Liguria and Lombardy;
2. AREA 2: Emilia-Romagna, Tuscany, Umbria, and Marche;
3. AREA 3: Abruzzo, Molise, the Marches, and Calabria;
4. AREA 4: Sicily, Sardinia, and Basilicata.

location chosen for the interview, which influences the interview itself. In our case, the interviews were conducted at the regional branches of Avis or by telephone. As for the construction of the interview, this is fundamentally and naturally based on the definitions of the information objectives of the research, and the sequence of questions as well as the way they are put must allow not only to get information but also to better manage the relationship established.

The focus group technique requires a whole group to answer to questions together; it is possible that an individual gives his own answer, but always within a group setting (Bailey, 2006).

The key features of the focus groups are: the unit of analysis is the group and the main object of analysis is the interaction of the participants. The design of the focus groups also requires four key decisions:

- the number of groups to be organized;
- the number of participants per group;
- the characteristics of the participants to be invited;
- the style of conduct.

The focus group technique requires a whole group to answer to questions together; it is possible that an individual gives his own answer, but always within a group setting (Bailey, 2006).

The technique of focus groups consists in “guided group discussions” with the aim of providing information on a certain topic and for a given population (Ward, 1991). The focus group is generally ranked among the qualitative methods rather than among quantitative ones, and usually produces results not subject to statistical analysis.
2. AREA 2: Trentino Alto Adige, Veneto, Friuli Venezia Giulia, Emilia Romagna;
3. AREA 3: Umbria, Marche, Lazio, Campania, Sardinia;
4. AREA 4: Abruzzo, Molise, Puglia, Campania, Basilicata, Calabria and Sicily.

For the purposes of our research, areas 1 and 2 have been joined. The key topics covered during the focus groups (Appendix 8), and resulting from the fundamental points identified during the assessment of the interviews to different presidents, were:

- What are the problems faced by the Associations that are collecting blood and by those working on awareness and calls?
- What are the tools of communication and marketing you use the most with new donors, and what are the tools you use for the retention of existing donors?
- Which mechanisms do you implement for the selection and development of your volunteers and cooperating members?
- Spending review and future prospects, what are the risks for the Association?

2.5.5. Key informants

In order to be able to conduct a complete analysis of the Italian transfusion system, it was deemed crucial to carry out interviews with key-informants—industry experts (Annex 7) representing the key players of the Italian transfusion system. The interviewees, then, were:

- the Director of the National Blood Centre;
- the CEO of Kedrion SpA;
- the President of the Italian Society of Transfusion Medicine and Immunohematology;
- some Representatives of Regional Coordination Centres;
- the National Presidents of some associations;
- some physicians working within the collection facilities belonging or not to any association.

To complete the evaluation and further investigation of key informants, a questionnaire with open-ended answers was structured to assess the strengths and weaknesses of the blood system, the role of the Associations within the system and the assessment of the future challenges to be faced.

6 The technique of the "key informant" is a qualitative research method used, with success, in social research. The main advantage of this research method is the amount of data that can be obtained in a rather limited period of time.

Thanks to their knowledge, or to their role in society, key informants are able to provide detailed information on certain issues. In literature they are usually defined as "strategic informants" (Sjoberg and Nett 1968) and are classified into two types: those who demonstrate exceptional features but comply with the rules of their society, and those who have more extreme attitudes.

The characteristics of an ideal key informant are (Tremblay, 1989):

- role in the community: his formal role makes him able to answer to the questions and provide the information required by the investigator;
- knowledge: besides having access to the information the interviewer wants, the privileged witness must have a thorough understanding of the issues on which he is interviewed;
- availability: the witness must be willing to communicate his own knowledge to the interviewer and to cooperate;
- impartiality: witnesses must be objective and impartial.

37
2.6.1 The data collected

Many data were collected which allowed for some reworking. The explanation of what has been analyzed starting from various data will be presented in each chapter, but as a conclusion, for the sake of completeness, a table is provided which gives a general overview of the processing of data.

The data from qualitative interviews to the presidents of the organizations concerned the topics proposed in the first column, and the information requested are listed in the second column of Fig. 4.

Fig. 4 - The topics of the interviews

<table>
<thead>
<tr>
<th>Topics</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal details</td>
<td>Age / sex / Term of office / member of Avis since</td>
</tr>
<tr>
<td>Degree of cooperation with external</td>
<td>Non-profit partnerships and collaborations, local authorities, Transfusion</td>
</tr>
<tr>
<td>stakeholders</td>
<td>departments, Transfusion Services and Committees for appropriate use of blood</td>
</tr>
<tr>
<td>Marketing and retention tools</td>
<td>Posters/Events/calls/SMS/Social Network / Newsletter</td>
</tr>
<tr>
<td>Fund raising</td>
<td>Public Administration / Profit / Non-Profit / Private</td>
</tr>
<tr>
<td>Relationship with cooperating members</td>
<td>Selection / Training and retention</td>
</tr>
<tr>
<td>Organizational models</td>
<td>Responsibility for awareness, call, collection and Convention</td>
</tr>
<tr>
<td>Changes to organizational models</td>
<td>Presence of models of centralization and social and economic impacts</td>
</tr>
<tr>
<td>Future prospects</td>
<td>What happens with respect to spending review and minimum requirements</td>
</tr>
</tbody>
</table>

From the data collected through questionnaires, the following indicators were calculated:
- indicators of effectiveness;
- performance indicators;
- indicators of territorial proximity.

All indicators were then correlated with some specific items:
- performance indicators that have been developed, as shown later herein, taking account of budgetary data;
- the indicators of territorial proximity were analyzed as a whole, but also to understand the tools for awareness-raising among new donors and retention of existing donors.

The questionnaire dedicated to donating members, and aiming at making their voice be heard for the assessment and analysis of the donation process, has allowed to collect the data highlighted in fig. 5.

The questionnaire given to cooperating members and physicians allowed for the collection of data that could highlight the issues mentioned in fig. 6.

Lastly, the interviews with stakeholders and key informants collected the data shown in fig. 7.

Fig. 5 - The data requested in the questionnaire dedicated to physicians and donating members

<table>
<thead>
<tr>
<th>Data collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal data (Years / Work / Volunteering)</td>
</tr>
<tr>
<td>Province of donation</td>
</tr>
<tr>
<td>Frequency of the donation</td>
</tr>
</tbody>
</table>
Plasma donation

Frequency of plasma donation

When you go to donate

Exemption from work

Level of satisfaction of the donation process

Facility for donation

Issues

Distance from donation

Assessment of retention tools

What “frightens” potential donors

Fig. 6 - The topics of the questionnaires to physicians and voluntary cooperating members

<table>
<thead>
<tr>
<th>Data collected from cooperating members</th>
<th>Data collected on doctors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selection mechanisms</td>
<td>Province of work</td>
</tr>
<tr>
<td>Training</td>
<td>Type of facility they work in</td>
</tr>
<tr>
<td>What future training</td>
<td>Which organizational model</td>
</tr>
<tr>
<td></td>
<td>Employer</td>
</tr>
<tr>
<td></td>
<td>Strengths blood system</td>
</tr>
<tr>
<td></td>
<td>Points of weakness</td>
</tr>
<tr>
<td></td>
<td>Which solutions</td>
</tr>
</tbody>
</table>

Fig. 7 - The topics of the interviews with key informants

<table>
<thead>
<tr>
<th>Data of the key informant</th>
</tr>
</thead>
<tbody>
<tr>
<td>The problems of the blood system</td>
</tr>
<tr>
<td>The problems of the blood system and of associations</td>
</tr>
<tr>
<td>How to overcome problems</td>
</tr>
<tr>
<td>What are the challenges ahead</td>
</tr>
<tr>
<td>What are the solutions</td>
</tr>
</tbody>
</table>

2.7. Conclusions

The purpose of this section is to provide a general and methodological overview of the research report which will be presented starting from Chapter 3 onwards. In the research, both the deductive approach and the inductive approach have been used, based on the study of the organization and legislation of the transfusion system, of the models for the management of the blood system, of the results in terms of effectiveness, performance and territorial proximity, of the tools used for the retention of donors and of the social marketing tools used to attract new donors.

The multiple research tools which were used made it possible to collect a significant number of data, ensuring an overview of the Italian transfusion system and the achievement of the objectives of the research project, that is to outline the challenges that the Avis association and the transfusion system will face in the next few years, and to consider the possible changes to be made to the Italian blood system.
3.1. Introduction

The Italian blood system, with its functional and service value, faces infrastructural challenges and critical issues, and dynamically organizes itself to increase its level of operational effectiveness. The chapter highlights the dynamic stages making up the Italian blood system by:

- analyzing the basic players that are part of the system;
- raising awareness on the responsibilities;
- identifying the processes involved in the different stages.

After an overall description, each part of the transfusion system is analyzed in detail, to identify its peculiarities and fully outline the process that characterizes the Italian blood system, by taking into account activities, players and responsibilities.

It is not only through the blood system, taken from the point of view of the process, that the basic concept of "where we are" in Italy in our way to self-sufficiency is explained here, but also through an analysis of the data published by the National Blood Centre, of the demand, consumption and production of plasma derivatives and blood components. This is intended to complete an assessment related to questions on the ranking of the Italian system, to its gaps and to the possible prospects for growth.

Therefore, in the presentation and assessment of the blood system, the analysis focuses particularly on the strengths, weaknesses, opportunities and threats (SWOT analysis) that can be identified today, starting from the analysis carried out by the players themselves.

All of this is done, as said before, through a qualitative study of the interviews and questionnaires completed by experts ("key informants") representing the protagonists of the blood system.

The four levels of analysis of the SWOT analysis¹ are:

- global system level;
- overall association level;
- association health level;
- donor level.

Starting from the SWOT analysis, it is possible to understand the challenges that the Italian transfusion system will face in the coming years.

In fact, the analysis of the problems helps identifying the future prospects, and the aim of this analysis, which is referred to in the last chapter, is to outline the solutions that the different players can adopt in order to:

- improve the Italian transfusion system;
- achieve complete self-sufficiency, in qualitative and quantitative terms, within the Regions, within the country as a whole and with

---

¹ The SWOT analysis is a strategic planning tool used to evaluate the strengths, weaknesses, opportunities and threats of a company. It is also used in any other situation in which an organization or an individual must make a decision to achieve a goal. The analysis can cover the internal or external environment of an organization.
3.2. Some data on the Italian blood system

Blood is a cornerstone for health services at an international, national and regional level, as it represents a basic option for the development of the essential levels of care (LEA). Self-sufficiency at a regional, national and European level will certainly represent a major challenge in the coming years, given the aging population and the increasing life expectancy. These factors generate:

- a trend of increasing demand for components related to blood;
- a trend of decreasing supply.

In fact it is possible, on the one hand, to identify a growing demand for blood components (red blood cells, platelets and plasma) and plasma derivatives (products derived from plasma processing) (fig. 1) and therefore a consequent need for increasing production. On the other hand, however, it is possible to identify a prospective reduction in the possible future responses to this growing demand.

At the Italian level, an evaluation of the future number of possible blood donors suggests a prospective decrease, resulting from a decrease in the birth rate (Fig. 2), especially in the age group between 5 and 19 years.

It is interesting to note that this trend may be reversed thanks to the presence of a high immigration rate, as already suggested by the population between 0 and 5 years (which shows a trend reversal compared to past years).

Fig. 1

Production of red blood cells and plasma

Consumption of red blood cells


This means that, if some methods are found for the integration and

\[ \text{For the sake of simplicity, Fig. 1 considers the production of red blood cells and plasma.} \]
symmetry of communication with foreign donors, the negative trend of decreasing donations may be reversed.

In order to analyze and understand the Italian blood system, it is necessary to start from the latest data on the number of donors in our country (CNS, 2011). In Italy there are a total of **1,722,503 donors**³, of which **1,482,920** are members of the Associations or Federations of Voluntary blood donors and **1,218,673 donors are members of Avis (excluding donors in Switzerland)** (fig. 3)⁴.

**Fig. 2 - Italian population by age groups**

![Italian population by age groups](image)

**AREA OF DONATION**

![Area of donation](image)

Source: Istat Population In Italy, 2011.

The average donation index is equivalent to 1.7⁵, that is, each donor should donate on average 1.7 times a year⁶.

In order to provide a first overview, some common trends in the variation of the type of donors can be highlighted.


⁴ National AVIS, regional data on the presence of donors in 2011.

⁵ Processing by CERGAS of AVIS National data and regional data on the presence of donors 2011.

⁶ A study about donors and their characteristics can be identified in chapters 4 and 5.
Increase in the number of donors over the years. The trend of growth of donors between 2010 and 2011 is positive; that is, the number of new donors is always higher than the number of donors who, for different reasons (threshold limit of age, health or other reasons) do not donate any more. It is then clear that the increased demand for blood components is being met, and that at this stage it is possible to face the generational shift and the ageing of the population although, prospectively, the difficulties stemming from a reduced blood supply are emerging.

Increase in female donors especially among the young age group population, which ensures their increased presence in the volunteering sector. This trend has a controversial effect: on one side, the female population certainly contributes, with the typical characteristics of female volunteering, to the transfusion system and to the association, although it may lead to a decrease in the amount of donations due to the health limitations existing for female donation.

Increase in the number of donors who decide to start a process of plasmapheresis, although, as we will see in the next paragraphs, the concept of self-sufficiency from plasmapheresis is still far to come. Particularly loyal donors have greater willingness to donate by apheresis, and thus give the opportunity to increase the supply of plasma.

### 3.3. Definition of the Italian transfusion system

A first definition of the Italian transfusion system requires to be aware that the blood system or blood transfusion system in Italy is a composite and public system, that involves the resources of the different players of the area, thus creating a complex and mixed system which links Public Administration (at different institutional levels), non-profit players (Associations and Federations of donors) and profit players (pharmaceutical companies that manage the processing of plasma through "contract work"), and a model that will allow, in the future, to meet the needs in an effective and efficient way, also through networking and coordination, and by enabling the synergy between the different processes and activities.

In fact, the Italian blood system is divided into 4 stages involving the interaction between different players and the creation of a synergistic process at various institutional levels (Fig. 4).
It is deemed important to focus on the individual stages to highlight what are the activities in each of them and who are the players involved.

3.3.1. Stage 1 of the Italian transfusion system: from raising awareness to collection

The first stage of the Italian transfusion system is characterized by a high involvement of Associations and Federations of blood donors, as it includes all the activities dedicated to:

- awareness raising;
- retention;
- communication;
- collection of the donation.

This first stage consists of all the processes required to get to the donor, to involve him, to create attention and raise awareness. Three key activities implemented in this first stage (and that will be the specific focus of analysis in the next chapters) can be then identified:

1. **Awareness-raising activities on the territory**: the Associations and Federations of donors organize communication campaigns, events and "marketing" activities in the area, through new media dedicated to the dissemination of the importance of donation in the population and, though an awareness-raising process, gives the opportunity in the area to gather new donors, who are encouraged to have a healthy lifestyle and decide to start a path of donation.

2. **Retention activities and call activities**: the Associations and Federations of donors use a number of tools to retain existing donors, thus encouraging the growth of a continuous and non-sporadic donation, so as to maintain a high qualitative standard of self-sufficiency. This stage of retention develops through tools for the involvement of donors (such as newsletters, social media, dedicated events) and through programming tools such as calls (telephone, SMS, postcard) which allow for a donation being consistent with the needs of the area;
3. **Collection activities**: the first two activities described pertain primarily to Associations or Federations of donors, while the collection activity is under the responsibility of the Italian NHS and may fall within the operational responsibility of the Associations / Federations on the basis of specific agreements, and under the technical supervision of the relevant Transfusion Service. This means that collection activities may be carried out in Blood Transfusion Services, Collection Units and bloodmobiles.

The donor is the main player of the three stages, in that the whole process is designed to actively involve him, so as to share it with him and to ensure continuity during the time of his donation (Fig. 5), following him throughout his career, before, during and after donation. Fig. 5 therefore shows the main stages that support the donor from his identification to his donation.

**The first stage of awareness raising** includes, as described above, all the awareness-raising activities in the area, which aim on the one hand at informing and educating people on the importance of the blood system, on the other hand at attracting new donors and retaining existing donors. Awareness-raising activities in the area include the creation of:

- cultural and scientific events (activities related to blood donation, to health, educational events);
- sporting events (activities related to the sponsoring of sporting activities in the area such as sports tournaments);
- events in schools (educational events involving students from primary schools up to secondary schools and universities).

![Fig. 5 - The meeting with the donor](source)

Source: CERGAS.

- sporting events (activities related to the sponsoring of sporting activities in the area such as sports tournaments);
- events in schools (educational events involving students from primary schools up to secondary schools and universities).

**The second stage** is the assessment of eligibility, through discussion with the physician and examination, with simultaneous donation in case the first donation is not deferred, or with the sole execution of the preliminary examinations, in case the first donation is deferred. In both cases the procedures are designed to establish the eligibility of the donor and the type of donation, whole blood or apheresis.

In case of the first donation being deferred, the selection procedure represents the first step required to activate a process of regular and ongoing donation. In fact, the assessment of eligibility is followed by the call to make the first donation.

---

7 All awareness-raising activities will be analyzed in detail in chapter 7, given their specific importance in attracting new donors.
In both cases of donation, during each new and subsequent donation by the same donor, the procedure for eligibility is activated as required by the Ministerial Decree.

There are two main types of donation:
1. **whole blood** donation has a duration of about 5-8 minutes for a maximum volume of blood taken equal to 450 cubic centimeters +/- 10%. The minimum interval between two donations is 90 days, and within a year, up to a maximum of 4 times for men and 2 times for women of childbearing age;
2. **apheresis** is performed using cell separators that allow to obtain, from the donor's blood, only the useful blood component or components (plasma = plasmapheresis, platelets = platelethpheresis, multiple: plasma + platelets = plasmapiastrinoapheresis; 2 units of red blood cells) and to return the rest to the donor himself. This donation is inherently more complex than the donation of whole blood and is different in that it has the following characteristics:
   - the presence of the process only within collection sites equipped with the necessary tools;
   - duration longer than the collection of whole blood, as it ranges between 35 minutes and 50 minutes or more;
   - the interval between two consecutive donations can be reduced to only 14 days for plasma donation.

Although the requirements for the donor in apheresis are similar to those for the donor of whole blood, this type of donation is important for the data that will be later highlighted on the objective of self-sufficiency.

3.3.2. Stage 2: The processing of blood components and the manufacturing of labile blood products

The second stage involves the splitting of the blood used for the production of blood components by the Blood Transfusion Service. In recent years, thanks also to the creation of the Departments of Transfusion Medicine, blood processing centers were rationalized, and their initial reduction will be increased with a view to accreditation. To date, there are 318 Transfusion Services (Data from SISTRA 2011), but in the coming years, we can assume they will be concentrated as a result of further rationalization.

At this stage, Blood Transfusion Services carry out blood fractionation for the production of blood components which are intended directly for the treatment of the sick, in addition to a part of the plasma sent to the industry for the production of plasma derivatives (stage 3).

The blood components obtained in this phase are:
- various types of red cell concentrates;
- different types of platelet concentrates;
- fresh frozen plasma.

---

3.3.3. Stage 2b: the production of plasma derivatives

Stage 2b of the process includes the processing of plasma for the manufacturing of blood products. The Italian system is based on the method of contract manufacturing. To date, the plasma produced through the fractioning procedure managed by the Transfusion systems, or through apheresis (stage two), is entrusted to a single Italian company, the Kedrion SpA, which processes and creates the finished products, which will be returned to the National Health Service on the basis of appropriate agreements. The products activated in the process remain the property of the Regions, which pay the processing activated within the company.

Under Law 219/2005 Article 15, some features have been defined for possible companies that, in addition to Kedrion SpA, may stipulate agreements with the Regions on the basis of well-defined characteristics, and in particular:

- company size;
- supported technology;
- presence of plants in the European Union;
- presence of plants complying with national and European regulations.

Blood products must be obtained from plasma collected exclusively on the Italian territory, as required by law.

Given the above Decree, the Ministry of Health was to proceed to the authorization of the centers and companies that could enter into agreements with the different regions; the non-implementation of the legislative decree led, in 2011, to other regulations that have set out the necessary location of the companies in the European countries in which voluntary and unpaid donation is possible.

In 2012, a procedure was opened for the assessment of companies that could participate in the stipulation of the agreements with the Regions, as outlined in the legal part described above and concerning the Ministerial Decrees of April 2012. This will obviously lead to a possible change in the existing monopoly and to the integration of new market players, which are considered, as emphasized by Dr. Paolo Marcucci, CEO of Kedrion SpA, as an opportunity and an advantage in terms of culture, know-how and experience\(^\text{11}\), and underline the need to achieve the concept of self-sufficiency within plasma collection processes.

The companies dealing with plasma derivatives mainly provide the following products:

- albumin;
- polyvalent immunoglobulins;
- antithrombin III;
- factor VIII;
- Factor IX;
- prothrombin complex concentrate.

3.3.4. Stage 3: the distribution of blood components and plasma derivatives

As for the third stage of distribution of blood components and plasma derivatives, it is interesting to note that in the case of the latter, a dual market emerges, deriving from their non-self-sufficiency (paragraph 3.4).

Three are the players belonging to the market of blood products:

1. the company in charge of processing for third parties that was described in the previous stage;
2. the Regions entering into agreements with the manufacturers;
3. the companies that provide, to the regional health system, the volume of

\(^{11}\) Source: Telephone interview with the CEO of Kedrion SpA.
plasma-derived products needed to meet the demand that is not met by processing for third parties.
This means that, in addition to products derived from Italian plasma working for third parties, there is a supply of products coming from the commercial circuit and required to satisfy the need.

3.4. Self-sufficiency in Italy: the situation

In order to analyze in detail the Italian transfusion system and the production and consumption reached in 2012, data can be collected from the 2012 Programme of self-sufficiency, which identifies, under Decree 219/2005, the historical consumption of blood components, the needs and levels of production of red blood cells and plasma being required.

In the period 2008-2011, the achievement of national self-sufficiency has been guaranteed for all labile blood components for clinical use.

Fig. 6 – Programme for the production and consumption of red blood cells units 2011 and 2012

<table>
<thead>
<tr>
<th>Autonomous regions and provinces</th>
<th>Production in 2011</th>
<th>Consumption in 2011</th>
<th>Production in 2012</th>
<th>Consumption in 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valle d’Aosta</td>
<td>7,071</td>
<td>5,788</td>
<td>7,400</td>
<td>6,100</td>
</tr>
<tr>
<td>Piedmont</td>
<td>234,049</td>
<td>200,497</td>
<td>236,297</td>
<td>206,500</td>
</tr>
<tr>
<td>Liguria</td>
<td>75,274</td>
<td>75,481</td>
<td>72,000</td>
<td>71,300</td>
</tr>
<tr>
<td>Lombardy</td>
<td>485,862</td>
<td>463,563</td>
<td>480,000</td>
<td>468,500</td>
</tr>
<tr>
<td>Trentino AP</td>
<td>21,516</td>
<td>21,230</td>
<td>22,000</td>
<td>21,950</td>
</tr>
<tr>
<td>Bolzano AP</td>
<td>25,279</td>
<td>24,524</td>
<td>25,200</td>
<td>24,790</td>
</tr>
<tr>
<td>Friuli V. Giulia</td>
<td>73,451</td>
<td>65,926</td>
<td>73,000</td>
<td>66,950</td>
</tr>
<tr>
<td>Veneto</td>
<td>258,546</td>
<td>243,687</td>
<td>258,546</td>
<td>243,834</td>
</tr>
<tr>
<td>Emilia</td>
<td>252,341</td>
<td>246,397</td>
<td>251,000</td>
<td>246,500</td>
</tr>
<tr>
<td>Tuscany</td>
<td>180,442</td>
<td>179,677</td>
<td>182,000</td>
<td>184,100</td>
</tr>
<tr>
<td>Umbria</td>
<td>44,171</td>
<td>44,293</td>
<td>44,500</td>
<td>44,000</td>
</tr>
<tr>
<td>Marches</td>
<td>76,580</td>
<td>77,080</td>
<td>78,020</td>
<td>77,163</td>
</tr>
<tr>
<td>Lazio</td>
<td>195,451</td>
<td>219,958</td>
<td>200,000</td>
<td>219,300</td>
</tr>
<tr>
<td>Sardinia</td>
<td>71,771</td>
<td>115,342</td>
<td>76,800</td>
<td>115,460</td>
</tr>
<tr>
<td>Abruzzo</td>
<td>51,888</td>
<td>52,085</td>
<td>52,800</td>
<td>53,000</td>
</tr>
<tr>
<td>Campania</td>
<td>149,799</td>
<td>149,159</td>
<td>150,000</td>
<td>146,500</td>
</tr>
<tr>
<td>Molise</td>
<td>13,669</td>
<td>13,236</td>
<td>14,500</td>
<td>14,070</td>
</tr>
<tr>
<td>Puglia</td>
<td>155,866</td>
<td>149,800</td>
<td>156,000</td>
<td>152,900</td>
</tr>
<tr>
<td>Basilicata</td>
<td>26,696</td>
<td>22,807</td>
<td>28,000</td>
<td>23,360</td>
</tr>
<tr>
<td>Calabria</td>
<td>64,639</td>
<td>64,370</td>
<td>69,544</td>
<td>64,700</td>
</tr>
<tr>
<td>Sicily</td>
<td>186,891</td>
<td>191,971</td>
<td>188,727</td>
<td>189,932</td>
</tr>
<tr>
<td>S.T. Armed Forces</td>
<td>1,885</td>
<td>783</td>
<td>2,800</td>
<td>1,120</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2,653,137</td>
<td>2,627,654</td>
<td>2,669,134</td>
<td>2,642,029</td>
</tr>
</tbody>
</table>


(red blood cells, plasma and platelets)\textsuperscript{12}, while at the regional level there is

still a certain lack of homogeneity in terms of self-sufficiency. The maintaining of self-sufficiency has been guaranteed by the possibility of interregional exchange between Regions with surplus production and Regions with insufficient production. The situation of plasma derivatives production, instead, is quite different, as there is a high variability at a regional level, and an extreme quantitative and qualitative heterogeneity.

Fig. 7 - Programme for sending plasma to pharmaceutical processing for the production of plasma-derived medicinal products 2010 2011 and 2012

<table>
<thead>
<tr>
<th>Regions and Autonomous Provinces</th>
<th>Plasma kg 2010</th>
<th>Plasma kg 2011</th>
<th>Programme 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valle d'Aosta</td>
<td>2,832</td>
<td>2,908</td>
<td>2,900</td>
</tr>
<tr>
<td>Piedmont</td>
<td>71,682</td>
<td>69,736</td>
<td>72,000</td>
</tr>
<tr>
<td>Liguria</td>
<td>21,378</td>
<td>19,862</td>
<td>21,000</td>
</tr>
<tr>
<td>Lombardy</td>
<td>141,756</td>
<td>142,766</td>
<td>142,000</td>
</tr>
<tr>
<td>Trentino AP</td>
<td>6,384</td>
<td>6,752</td>
<td>7,000</td>
</tr>
<tr>
<td>Bolzano AP</td>
<td>6,762</td>
<td>7,808</td>
<td>7,300</td>
</tr>
<tr>
<td>Friuli Venezia Giulia</td>
<td>27,840</td>
<td>27,915</td>
<td>27,500</td>
</tr>
<tr>
<td>Veneto</td>
<td>83,583</td>
<td>85,658</td>
<td>86,359</td>
</tr>
<tr>
<td>Emilia Romagna</td>
<td>79,530</td>
<td>81,331</td>
<td>79,000</td>
</tr>
<tr>
<td>Tuscany</td>
<td>67,346</td>
<td>69,512</td>
<td>72,000</td>
</tr>
<tr>
<td>Umbria</td>
<td>8,526</td>
<td>8,964</td>
<td>9,100</td>
</tr>
<tr>
<td>Marches</td>
<td>28,801</td>
<td>26,938</td>
<td>31,000</td>
</tr>
<tr>
<td>Lazio</td>
<td>26,050</td>
<td>29,141</td>
<td>31,000</td>
</tr>
<tr>
<td>Sardinia</td>
<td>11,971</td>
<td>13,082</td>
<td>13,556</td>
</tr>
<tr>
<td>Abruzzo</td>
<td>14,999</td>
<td>16,267</td>
<td>17,400</td>
</tr>
<tr>
<td>Campania</td>
<td>20,705</td>
<td>20,787</td>
<td>20,000</td>
</tr>
<tr>
<td>Molise</td>
<td>3,125</td>
<td>3,193</td>
<td>3,150</td>
</tr>
<tr>
<td>Puglia</td>
<td>34,091</td>
<td>34,461</td>
<td>35,000</td>
</tr>
<tr>
<td>Basilicata</td>
<td>6,542</td>
<td>6,492</td>
<td>6,500</td>
</tr>
<tr>
<td>Calabria</td>
<td>13,076</td>
<td>12,868</td>
<td>15,000</td>
</tr>
<tr>
<td>Sicily</td>
<td>43,838</td>
<td>43,088</td>
<td>50,000</td>
</tr>
<tr>
<td>S.T Armed Forces</td>
<td>291</td>
<td>509</td>
<td>600</td>
</tr>
<tr>
<td>ITALY</td>
<td>721,108</td>
<td>729,307</td>
<td>749,365</td>
</tr>
</tbody>
</table>


For the sake of completeness of the information and of the analysis of demand, the data on the production and consumption of red cell units in 2011 and 2012 (CNS, Programme for Self-Sufficiency 2012) are shown above.

As shown by the table, the variation rate in the production of red blood cells between 2011 and 2012 is 0.5% on a national scale, while the variation of consumption is 0.5%, with the same percentage of unused units (1.8-1.9% of the units of red blood cells). This suggests the presence of a national self-sufficiency which can be ensured only through a correct redistribution of interregional surpluses.
Such distribution needs a high level of integration among the different regional systems which often differ in quantitative and qualitative levels. Self-sufficiency, in fact, must be not only quantitative, but also qualitative, as the Director of the National Blood Centre, Dr. Giuliano Grazzini, points out. "Self-sufficiency cannot be separated from a qualitative path. Moreover, self-sufficiency must be achieved in terms of standardization of products" within the different local bodies. Considering, instead, the table on plasma-derived products (Fig. 7), it is possible to say that this is not the case of the collection of plasma to be sent to companies for contract manufacturing. In fact, our country is far from achieving self-sufficiency. The variation in production between 2008 and 2011 has corresponded to a 20% increase in plasma to be sent to companies, but a considerable imbalance appears between the Regions in which it is possible to collect products for contract manufacturing, and those having a low level of self-sufficiency of plasma, as the ones in Southern Italy, because of the poor management of the collection in some cases.

Fig. 8 – Demand of plasma derivatives

![Graph showing demand of plasma derivatives](image.png)

Source: ISTISAN Report 12/53.

When considering the data on the consumption of the major "plasma-derived drugs" (fig. 8), instead, it can be noted that it is necessary to operate in this field in order to achieve future self-sufficiency, especially because some plasma-derived drugs are key to giving an answer to different types of diseases, and in particular to rare diseases.

The graph below (fig. 9) shows the assessment of theoretical self-sufficiency and real self-sufficiency, which links the theoretical offer to the demand of the Italian NHS and the actual supply for all plasma-derived drugs.

---

13 Source: Interview with the Director of the National Blood Centre.
14 In the ISTISAN report, theoretical and real self-sufficiency are defined: "Theoretical self-sufficiency, in this document, means the ratio between actual supply and Italian NHS demand. Real self-sufficiency indicates, instead, the percentage ratio between actual supply and Italian NHS demand". P. 18, ISTISAN Report.
It is worth stressing that we are at a crossroads and in a time of organizational change which influences the three stages of the blood system and which will have to lead to:

- on the one hand, a reorganization resulting from the required applicability of European Directives;
- on the other hand, an improvement to achieve self-sufficiency from a qualitative and quantitative point of view in terms of blood components (qualitative self-sufficiency) and plasma derivatives (qualitative and quantitative self-sufficiency).

The vision on the level of self-sufficiency is also deemed important, as well as the identification of the rules and ideas coming from the World Health Organization (WHO), which evaluates the entire European system (fig. 10).

### Fig. 10 - Screenshot on Europe - The rules of the WHO

<table>
<thead>
<tr>
<th>90% of people currently eligible for donation do not donate blood</th>
<th>Blood donations have a short life, this is why it is necessary to encourage regular donation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Due to a decrease in blood availability and an increase in the age of the population, the age limit for donation is becoming more flexible. The standard limit for donation is 18-65, but in some European countries it is 17-70</td>
<td>Regular donors are individuals who donate at least twice a year regularly. There is evidence that they are the safest donors. They have the possibility to get a health check at every donation and demonstrate to have a healthy lifestyle</td>
</tr>
<tr>
<td>The prevalence of markers of infection in blood can range from 0.001% to 7.5%, depending on the category of donors</td>
<td>It is statistically proven that donating a unit of whole blood can save up to three lives, through the separation and the separate use of its components. Achieving 100% of voluntary, unpaid donations has been the most important progress in the field over the last 50 years.</td>
</tr>
<tr>
<td>30 countries of the European area have reached more than 90% of voluntary unpaid donations, and 27 of them have reached 99-100%.</td>
<td>The average number of donations among the European regions varies between 6 to 67.6 per 1000 inhabitants, Denmark has the highest rate of...</td>
</tr>
</tbody>
</table>
It is estimated that, in order to be self-sufficient, a country should maintain a minimum average of 20 to 25 donors per 1000 inhabitants. The national needs depend on the epidemiological rate of the population and on the technology available.

Donating blood regularly produces a benefit to the donor's health.

Source: Fact sheets World health Organization.

3.5. The four levels of the SWOT analysis

In the context of an evaluation and presentation of the Italian blood system, the analysis therefore focuses particularly on the strengths, weaknesses, opportunities and threats that can be found today within the system, starting from the analysis carried out by the players themselves (SWOT Analysis)\(^\text{15}\).

Through a qualitative study of the interviews and questionnaires completed by experts (key informants) belonging to the blood system, that is, the heads of the Regional Coordination Facilities \((n = 14)\), the Director of the National Blood Centre, the President of the Italian Society of Transfusion Medicine and Immunohaematology, the CEO of Kedrion SpA, the physicians operating within Collection Units and Transfusion Services, the donating members belonging to AVIS and operating within the branches of the association or the Transfusion Services, it was possible to identify different and specific SWOT Analyses that can be applied to the following four levels of operation of the system, which were already anticipated in the introduction to this chapter:

- **global level**: the blood system in all its components, that is, the blood system in its systemic complexity, through an analysis of the questionnaires and interviews with the key informants being at the centre of the system;
- **overall association level**: a focus on the part of the blood system being related to the Associations or Federations of donors through an analysis of the questionnaires and interviews to key informants outside the Associations concentrating primarily on the activities of the Associations at a local level;
- **association collection level**: focus on Collection Units through an analysis of the questionnaires of physicians working within the system (both inside and outside the Association);
- **donor level**: focus on the assessment by donors through an analysis of the questionnaires submitted to donors, with special attention to the results arising from the problems encountered in their processes of donation.

3.5.1. The global SWOT analysis of the system

The global SWOT analysis has a special feature highlighting "the degree of change and challenge" that the blood system and its players are facing. In fact, as Fig. 12 shows, there is a greater focus on the weaknesses and problems of the blood system rather than on its strengths. This statement indicates a good level of maturity of the players of the blood system, who reflect on the potential challenges to be faced in order to enhance the strengths. It is also worth pointing out that, although few strong points exist, this is not because they are lacking, but because there is a need to focus more on the future challenges. It is worth reminding that the

\(^{15}\) Humphrey, Albert (December 2005). "SWOT Analysis for Management Consulting." SRI Alumni Newsletter (SRI International)
assessment of SWOT comes from interviews and thoughts of the key informants, who are full protagonists of the system.

The strengths suggest that the structure of the Italian system began to change in 2005, starting well ahead of schedule and achieving a reorganization of the system in 2015. This has certainly led to the possibility of activating a series of requirements that will support accreditation from the European point of view.

Fig. 11 - SWOT Analysis of the blood system

<table>
<thead>
<tr>
<th>Strengths of the Blood System</th>
<th>Weaknesses of the Blood System</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Policy Planning activated in advance that allowed to take into consideration the self-sufficiency process.</td>
<td>• Fragmentation within the blood system (low concentration of Transfusion Services, Associations, Validation and processing centers) that will lead to a much-needed reorganization.</td>
</tr>
<tr>
<td>• Composite system with different players who will have to find joint synergies to start an effective and efficient reorganization.</td>
<td>• Poor planning and control for the assessment of the needs related to the demand for blood.</td>
</tr>
<tr>
<td></td>
<td>• Difficulties in the adaptation to minimum requirements (both from the qualitative and temporal point of view).</td>
</tr>
<tr>
<td></td>
<td>• Resistance to change and to reorganization (problem of organizational culture).</td>
</tr>
<tr>
<td></td>
<td>• Lack of coordination between different institutional levels, players of the blood system, Associations.</td>
</tr>
<tr>
<td></td>
<td>• Poor attention to the quality of products related to self-sufficiency (too much focus on quantity, and activation of a qualitative heterogeneity).</td>
</tr>
</tbody>
</table>

Opportunities

• Necessary achievement of the accreditation and fulfilling of the new minimum requirements.

Threats

• Spending review and economic crisis within public bodies.
• Differences resulting from the different healthcare levels within the Regions (unevenness of productivity and efficiency).
• Poor attention by decision-makers to the institutional bodies related to the blood system.
• Lack of a school for the specialization in transfusion medicine.

Source: CERGAS.

Accreditation is a controversial issue: on the one hand, it is seen as an opportunity of an effective and efficient reorganization for the management of self-sufficiency, on the other hand, however, it is seen as an organizational constraint and as a financial investment that will risk to undermine the composition of the system and the steps needed to achieve self-sufficiency. This is certainly a critical issue and a challenge for the future of the Italian transfusion system, which will have to counterbalance a reduction of economic resources, endemic consequence of the economic crisis, with a necessary improvement and a reorganization of the system resulting from legal obligations.

As for internal weaknesses, instead, it is possible to highlight the following critical issues that must be addressed in order to start an effective and efficient process of change.

• **The fragmentation within the different stages** of the blood system does not guarantee the achievement of qualitative and quantitative self-sufficiency; such fragmentation leads to increased difficulties of integration between the different players, to a poor planning and to a poor control that could ensure greater effectiveness and efficiency.
• **The organizational resistance to change** coming from a culture in which accepting an organizational change is hardly considered. This could lead to a different balance and to a different allocation of resources, and therefore also of responsibilities.

• **The difficulty in adapting to minimum requirements** which reminds of the need to strike a balance between potential economic difficulties and requirements deriving from European Directives. This weakness is closely linked with the need to be able to achieve a high level of homogenous quality of self-sufficiency in the area.

Alongside these weaknesses, it is necessary to point out the threats coming from outside and which could undermine the process of change that will need to be implemented in the coming years.

The first threat comes precisely from the current economic situation, which involves a drastic downsizing of resources and a need for a spending review and a reprogramming of the services. It will be difficult to activate structural changes to obtain accreditation, and it will be difficult to think about maintaining the same size and coverage of the current system.

The second threat comes from the diversity of health systems, which is certainly reflected in the management of the regional blood transfusion systems, and emphasizes the presence of highly critical elements from the point of view of transfusions in the Regions having the greatest healthcare problems.

The third threat, very important, is the low level of attention by policy makers, which resulted, in some situations, in the failure to set up the institutional bodies needed for the proper functioning of the system (such as the Committee for the Appropriate Use of Blood or the only partial support, in some Regions, to the activities of the Regional Coordination Facility).

Lastly, the fourth external weakness lies in the fact that the transfusion system is not considered as a subject of specialization per se, and this reduces the impact of this discipline.

### 3.5.2. SWOT analysis at the overall association level

The SWOT analysis at the association level, as shown in Fig. 12, includes the same threats and opportunities expressed by the overall system, since, as already emphasized, the Associations and Federations of donors are fully

**Fig. 12 – SWOT Analysis of the overall association system**

<table>
<thead>
<tr>
<th>Strengths of the Associations</th>
<th>Weaknesses of the Associations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Territorial coverage: widespread presence throughout the territory, allowing for greater awareness and greater attraction of donors.</td>
<td>Poor planning and control for the assessment of the needs related to the demand for blood (failure to respond to emergencies or limited programming).</td>
</tr>
<tr>
<td>Integration between Associations and transfusion systems at both programming and information system level.</td>
<td>Excessive focus on collection, limited attention to awareness-raising and call activities.</td>
</tr>
<tr>
<td>Particular attention to an awareness-raising activity in the area being effective also for retention.</td>
<td>Lack of coordination and integration among the Associations and between the Associations and the transfusion systems (some Regions).</td>
</tr>
<tr>
<td>Attention to the structuring of an effective call dedicated to donors.</td>
<td>High fragmentation in the area and in particular for the collection system.</td>
</tr>
<tr>
<td>Ethical and cultural mediators.</td>
<td>Resistance to change and to reorganization (organizational culture)</td>
</tr>
<tr>
<td>Important bodies for the “social and political” control of the area.</td>
<td>Few incentives to training.</td>
</tr>
<tr>
<td></td>
<td>Need for modernization of the call in terms of effectiveness and efficiency.</td>
</tr>
</tbody>
</table>
### Opportunities

- Policy Planning activated in advance and allowing to take into consideration the process of self-sufficiency.
- Composite system among different players who will have to find joint synergies in order to enable an effective and efficient reorganization.
- Necessary achievement of the accreditation and fulfilling of the new minimum requirements.

### Threats

- Spending review and economic crisis within public bodies.
- Difference due to different levels of healthcare in the Regions.
- Poor attention by institutional decision-makers to institutional bodies related to the blood system.

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Policy Planning activated in advance and allowing to take into consideration the process of self-sufficiency.</td>
<td>• Spending review and economic crisis within public bodies.</td>
</tr>
<tr>
<td>• Composite system among different players who will have to find joint synergies in order to enable an effective and efficient reorganization.</td>
<td>• Difference due to different levels of healthcare in the Regions.</td>
</tr>
<tr>
<td>• Necessary achievement of the accreditation and fulfilling of the new minimum requirements.</td>
<td>• Poor attention by institutional decision-makers to institutional bodies related to the blood system.</td>
</tr>
</tbody>
</table>

Source: CERGAS.

integrated (from a legislative and organizational point of view) in the blood system. In this case, it is worth noting that the vision of the strengths and weaknesses of the Associations / Federations comes from players and factors not belonging to them, but participating in a crucial way to the blood system\(^\text{16}\).

The strengths of the Associations / Federations identified by players not belonging to non-profit organizations provide interesting perspectives of analysis. Throughout the area, in fact, the strength is represented by their extensive coverage, which guarantees an important and widespread awareness.

The issues related to the ethics resulting from the role of non-profit within the blood system, are also generally relevant and shared. Associations are considered as "ethical and cultural mediators" having a significant strength from a political, organizational and social point of view, and ensuring a process of ethical gift.

Many differences can instead be noted in the evaluation, as a strength or weakness, of the activities of the Associations in terms of awareness, marketing and retention. In fact, it is possible to point out that in some areas the call is considered to be extremely effective and preparatory to an organization being integrated with the activities of the Blood Transfusion Service, while in other geographical areas the call is identified as a non-effective tool, since the tools being used are not very innovative and do not support donor retention.

Besides the lack of innovation or the ineffectiveness of the call, in some areas an excessive attention to collection, often distracting from awareness-raising and retention activities, and a poor integration with the other players in the system are identified as criticalities. Also in the case of the Associations / Federations, there is little willingness to change and a resistance to reorganization, with a high presence of territorial fragmentation that has an economic weight, especially in terms of collection. Finally, the poor incentive to training for local voluntary resources not activated within nonprofit organization is also identified as a problem.

### 3.5.3. The SWOT analysis in health associations

In addition to the assessment resulting from players outside the Association, it was considered essential to submit a questionnaire to physicians working within Collection Units (various types) and / or within donor services, in order to identify the strengths and weaknesses they saw within their workplace or volunteering environments.

As you can see in Fig. 13, the strength found within most of the

---

\(^{16}\) The analysis resulting from the interviews to the Associations will instead be presented in the next chapters, which will include a more thorough analysis of associations.
Collection Units is the availability and professionalism of volunteers and non-volunteers, both in the organization of activities to support the donation and in the conduct of donation. It is then possible to state that all the activities dedicated to the integration of the donor are considered as a major strength of the Associations.

Two more strong points outlined by physicians correspond to the ability of internal organizational integration, among volunteers and employees, between the Executive Board and donors, whose effectiveness consists of awareness-raising activities and of the ability to actively integrate with the different players of the blood system.

**Fig. 13 - The strengths**

The strengths outlined by physicians for the activities of the association mainly carried out in the collection sites can be therefore summarized as follows:

- availability and professionalism of volunteers and non-volunteers in the activities of donation and support to donation: the donor is "put at the center" and integrated in a process of enhancement of the donation;
- organizational integration among the heads of the different activities carried out within a Collection Unit: the organization is supported and integrated among managers, physicians and volunteers, and this guarantees an efficient and effective unity;
- cooperation with players of the blood system and in particular with the hospitals and their Transfusion Services for the development of effective and efficient activities;
- effective awareness-raising on the territory through the marketing and cultural awareness-raising projects started by the Associations in the area.

When considering the weaknesses identified in the Association, it is possible to notice a greater variability of answers, and thus to identify different issues that are reported in their entirety in Fig. 14. However, it is deemed important to focus on cross-cutting criticalities and weaknesses identified by several physicians (fig. 15). As shown by Fig. 15, one of the most critical points, also identified as a strong point, is represented by the integration with the different players of the blood system.
**Fig. 14 - Weaknesses**

<table>
<thead>
<tr>
<th>Weak points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor cooperation with players of the blood system</td>
</tr>
<tr>
<td>Difficulty in programming</td>
</tr>
<tr>
<td>Turnover of staff</td>
</tr>
<tr>
<td>Resistance to change</td>
</tr>
<tr>
<td>Difficulties in adapting to accreditation</td>
</tr>
<tr>
<td>Physical distance from the donor</td>
</tr>
<tr>
<td>Lack of staff training</td>
</tr>
<tr>
<td>Lack of innovative facilities (spaces and technologies)</td>
</tr>
<tr>
<td>Lack of education and awareness</td>
</tr>
<tr>
<td>Demographic difficulties</td>
</tr>
<tr>
<td>No criticalities</td>
</tr>
<tr>
<td>Ineffective call</td>
</tr>
<tr>
<td>Fragmentation</td>
</tr>
<tr>
<td>Lack of internal organizational integration</td>
</tr>
<tr>
<td>Shortage of staff and funds</td>
</tr>
<tr>
<td>Difficulties in finding young people</td>
</tr>
<tr>
<td>Bureaucratization of the activity</td>
</tr>
</tbody>
</table>

Source: CERGAS - Questionnaire for doctors.

In fact, a consideration needs to be made on this issue, given the relationships that are established within hospitals; the failure to create integration activities is a weakness that needs to be revised to turn integration into a strength. Other important weaknesses are the result of a lack of innovative facilities, being appropriate both from the point of view of physical space and of technologies and computers, which is closely linked to the lack of funds and staff, as well as to the difficulties in obtaining the accreditation. Weaknesses are also present in the internal...

**Fig. 15 - Weaknesses**

Source: CERGAS – Questionnaires for doctors.
organization, because of a resistance to change, of poor education and of difficulties in finding young people.

The weaknesses outlined by physicians, and related to the activities of the association mainly carried out in collection centres, are as follows (Fig. 15):

- poor cooperation and integration with other players of the blood system, and in particular with hospitals and related Transfusion Services for the development of efficient and effective activities: this means that in some Collection units there is no functional integration with the Blood Transfusion Service and such situation undermines the activity of targeted blood collection; this can certainly represent a very important problem, because only through the synergy between the different players is it possible to find processes of effectiveness and efficiency;

- low organizational integration among the heads of the different activities carried out in a Collection Unit: this criticality includes difficulties in finding young people, shortage of staff, and high resistance to change. The first critical situation, that is, the generational shift, implies the risk of a non-continuity of the Association. Support is crucial and important during the generational shift, so that this can guarantee the possibility of future growth and can have an impact on an organizational culture which turns out to be adverse to change. Another criticality comes from understaffing, which is closely linked to the economic crisis;

- difficulties related to facilities, to the achievement of the accreditation and to the implementation of innovative activities: these difficulties stem from the lack of staff, from a resistance to change, but above all from the shortage of funds in the area, so these problems are likely to undermine the change process necessary for 2014, and thus encourage all players in the area to consider how to implement the activities that lead to accreditation without the possibility of substantial economic investments.

3.5.4. SWOT analysis and assessment of donors

As a final assessment of the strengths and weaknesses being present in the blood system, it was deemed important to include a part of the analyses resulting from the questionnaires completed by the donating members of Avis, in which the identification of possible problems from the point of view of the donation was required

It is particularly interesting to examine the results arising from the identification of any problems encountered in the donation. Only 4% of those surveyed identified problems related to donation, and this suggests that donors do not encounter particular weaknesses in the process of donation and in their relationship with the Association. Within that 4% it is anyway possible to indicate the critical issues, which are summarized in figure 16 and listed by preference.

**Fig. 16 - Issues and problems**

<table>
<thead>
<tr>
<th>Critical issues and problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long queues</td>
</tr>
<tr>
<td>Little attention to donors</td>
</tr>
<tr>
<td>Slowness in selection</td>
</tr>
<tr>
<td>Rigid schedules</td>
</tr>
<tr>
<td>Difficulties with physicians / nurses</td>
</tr>
</tbody>
</table>

17 See Chapter 2 for an introduction to the sampling of donating members.
Lastly, it is worth noting the lack of significance of these data, given the low number of answers from those who presented problems with the donation. It is therefore deemed particularly interesting and significant that the criticalities and weaknesses identified by experts within the system do not impact on the assessment of donors.

3.6. Conclusions

This chapter provides a general analysis on the Italian transfusion system. Undoubtedly, many steps forward have been made in the last decade, both in terms of self-sufficiency of blood products and from the point of view of the development of policies linked to the transfusion system. It is important, however, to develop the awareness of being in a moment of deep change of the system, a change imposed by European regulations, by the attempt to achieve a self-sufficiency being not only quantitative, but also qualitative. Therefore, the process that the players in the three process steps identified have to face is a challenging one, that will experience major changes in the coming years.

Alongside the opportunity and effort linked to the implementation of the accreditation standards, there are significant factors representing a future challenge, on the one hand the economic crisis leading to the need to start the process of rationalization and improvement of efficiency, while continuing to seek a high quality standard, on the other hand, the demographic change that, because of the ageing of the population and the collapse of birth rates, will lead to a change in the demand and supply of blood.

To address these challenges and to be able to achieve qualitative and quantitative self-sufficiency both of blood components and of plasma derivatives, it is important to fully invest in the strengths of the system, while limiting and monitoring the critical weak points. It will therefore be important, on the one hand, to protect the ability to raise awareness, integrate, support the donor in his experience, but it will be equally important to invest in the limitation of integration problems among the different players of the transfusion system, to limit resistance to change, fragmentation and the difficulty being detected in programming.

The role of integration among the different players at different institutional levels becomes therefore important, because only through the identification of synergistic processes will it be possible to protect the achievement of a qualitative and quantitative self-sufficiency based on ethical and cultural values linked to the concept of donation.

The next chapters will provide an analysis of one of the main players within the blood system, Avis. The player influences and integrates policy decisions within different levels of government. Then, starting from an analysis of strengths and weaknesses of this player, it will be possible to highlight, study and analyze the characteristics, the functions and the corporate organization of such a diverse and multi-level player.
4.1. Introduction

As one of the key players of the Italian transfusion system from an economic, social and corporate point of view, AVIS (Italian Association of Voluntary Blood Donors) gives a representation of the global structure of the system. The chapter introduces and comments the Avis world and retraces the history of the organization, the data related to donation and the impact on the territory from an economic and social point of view.

The first part outlines the history of Avis and its overall magnitude (for example the number of donors belonging to the Association, the management variables and the roles acquired), focusing on the roles that the Associations and Federations of volunteers play at a national, regional and local level within the Italian transfusion system. This highlights the central role that Associations play in the stages outlined in the previous chapters and within the institutional levels that will be described in these pages.

The second part of this chapter defines the six organizational models that can be found in the area, identifies the peculiarities and differences existing within them, and describes the significant differences between these models in terms of the challenges and opportunities they present, thus showing a basic heterogeneity of the transfusion system.

Alongside this analysis a focus is provided on the indicators of effectiveness, performance and territorial proximity that were created for the Associations to guarantee the opportunity to analyze the social impact (indicators of effectiveness), the economic impact (performance indicators) and their widespread enhancement throughout the country (indicators of territorial proximity).

Finally, the last part is dedicated to donors belonging to AVIS and to the analysis of:

- the evaluations on the donation process,
- the perceptions towards the process stages that involve them,
- the underlying reasons for belonging to the Association.

Starting from a significant sample of answers, it will therefore be possible to consider the characteristics, attitudes and perceptions of donors belonging to AVIS, not only with respect to the association but also with respect to the blood system in general, since the sample can be generalized for all donors.

The goal of the chapter is to give a comprehensive evaluation of the Association, of the roles it plays within the different institutional levels and through this analysis, to identify basic scenarios and topics that will need to be addressed in the coming years to guarantee continuity and solidity to the Association.

4.2. Italian Association of Voluntary Blood Donors: the story

The Italian Association of Voluntary Blood Donors (AVIS) is a non-
profit social organization (NPO), that is, "a voluntary, non-partisan, non-religious, non-profit association, that does not discriminate against gender, race, language, nationality, religion, political ideology1"... And is made up of those who make voluntary, unpaid, periodical and anonymous blood donations and of municipal, provincial, regional Associations - and / or equivalent - they belong to2.

These are the first two fundamental articles of the Statute of National AVIS approved on May 17, 2003 and providing the identity and mission of the Association through the description of the identity of Avis and of those who are part of it; the story of Avis however, dates back to about 85 years ago, when in 1926 Dr. Vittorio Formentano launched, on the Corriere della Sera in Milan, a call to form a group of volunteers for the free donation of blood. In those years, in fact, blood was provided upon payment and was a luxury that only a few families could afford; the concept of an essential level of care, which now permeates the transfusion system, was still far to come. 17 people responded to the invitation and gathered in 1927, thus creating the first Italian Association of Blood Volunteers. On this occasion the objectives of the future association were outlined:

- meeting the growing need for blood of different blood groups;
- having donors being available and controlled;
- fighting to eliminate the sale of blood.

The Association was officially founded in Milan in 1929 and the founder dedicated his life to build and spread a system of blood donation being organized, reliable and controlled, replacing the paid one and creating the first step for the implementation of an organized model. Leaving aside the analytical and anecdotal story, after the fascist period, Avis was recognized by the State with Law no. 49 in 19503. On May 24, 1953, the first bloodmobile was inaugurated in Florence, in front of the cathedral of Santa Maria del Fiore. In 1954, in Florence, Avis inaugurated the first Transfusion Center of Tuscany, which then became "qualified" as a regional center for blood transfusion. The first week of the donation was held in Rome in 1955 and 2 bloodmobiles were present, one from Milan and the other from Florence. The ‘70s represent the moment of greatest expansion for the Association, in which the regional offices were created and the provincial and municipal offices proliferated. In 1970 a new statute of the Association was then issued, which stated the possibility to establish Regional Avis with the task of coordinating the local units, in collaboration with the National Association.

The Statute was amended again in 2003 and some significant changes were made. The Statute of 2003 defines the mission of the association and the goals it seeks to achieve (Fig. 1).

**Fig. 1 - Article 2 Section 3 National AVIS Statute**

**Article 2 - Paragraph 3**

| Supporting the health needs of citizens by favouring the achievement of self-sufficiency in blood and blood derivatives at a national level, of the highest possible levels of transfusion safety, and the promotion of the appropriate use of blood. |
| Protecting the right to health of donors and of those who need to undergo transfusion therapy. |
| Promoting health information and education of citizens. |

1 Art. 2 par. 1 National AVIS Statute
2 Art. 1 National AVIS Statute
Promoting an effective dissemination of their members throughout the country, with particular reference to deficient areas and to the association and healthcare activities recognized to them, such as the collection of blood and blood components.

Encouraging the development of voluntary, regular, associated, unpaid, anonymous and conscious donation at a European and international level.

Promoting the development of volunteering and associations.

Promoting and participating in international cooperation programs.

Moreover, the Statute outlines the activities which can be carried out by local Associations and governing bodies, as well as their essential characteristics and the activities to be pursued (for further information related to governance bodies, see section 4.4).

The Regulation updated in 2012, instead, contains provisions on the rights and obligations of members, on the methods of participation to the life of the association, on the functioning and competencies of the governing bodies and on the rules for the election.

It is therefore possible to infer that the Association created by a doctor 86 years ago is today a key player in the pursuit of self-sufficiency through its call to donation, a player whose work is based on the ethical concept of gift which also permeates it, a player which pursues an activity of awareness-raising, promotion of volunteering and activation of a widespread health education throughout the Italian country.

4.3. AVIS: numbers and trends of donors

AVIS is today present throughout the country with a well-articulated structure, divided into 3,227 municipal offices, 124 provincial offices, 22 Regional offices and the National AVIS.

AVIS can be joined for free both by those who donate their blood regularly, voluntarily and anonymously and by those who are not eligible for donation, but cooperate for free in all promotional and retention activities. AVIS is an Association of volunteers and donors and its managers play the role of volunteers. Within the Associations it is therefore possible to identify, from a strictly operational point of view, the following key subjects:

- Donating members (as per the Statute): they are donors belonging to AVIS and representing the central hub of voluntary, regular, anonymous and unpaid donation; They belong to the Association and most of the activities carried out by the Associations in terms of retention and inclusion are dedicated to them;
- Cooperating members: part of the members can be former donors or people who were not qualified as eligible to donate; This does not exclude them from being part of the Association, as they can decide to invest time and expertise in raising awareness on the territory and increasing the effectiveness of retention tools such as the organization of events, the management of offices, the organization of the call, thus creating an active volunteering to support the organizations;
- Association managers: each Association has an executive board, whose members are all volunteers, which manages and administers the activities structured by the Associations, thus ensuring the continuity of the same organizations.
In the next chapters of the paper, for ease of understanding and clarity, the following terminology will be used:

- members: those who represent the totality of the members;
- Avis donors: Avis members who make donations.
In 2011, AVIS had within its Associations 1,219,705 total donors, 1,218,673 of which in Italy (there is also a Swiss seat), which is equivalent to 71% of total donors on the Italian territory (Fig. 3); donors belonging to other Associations / Federations make up for 15% of the donors, while the remaining 14% is not a donor member but is a direct donor within blood transfusion services.

Fig. 3 - Donors and Associations / Federations (2011 data)

Source: CNS and AVIS data.

Fig. 4 - The penetration rates in the area (2011 data)

<table>
<thead>
<tr>
<th>Region</th>
<th>Avis donors</th>
<th>Resident population 18-65</th>
<th>Penetration rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basilicata</td>
<td>21,682</td>
<td>370,975</td>
<td>5.84%</td>
</tr>
<tr>
<td>Umbria</td>
<td>29,839</td>
<td>548,373</td>
<td>5.44%</td>
</tr>
<tr>
<td>Emilia Romagna</td>
<td>147,743</td>
<td>2,719,981</td>
<td>5.43%</td>
</tr>
<tr>
<td>Trentino Alto Adige</td>
<td>34,433</td>
<td>649,308</td>
<td>5.30%</td>
</tr>
<tr>
<td>Marches</td>
<td>50,882</td>
<td>960,527</td>
<td>5.30%</td>
</tr>
<tr>
<td>Valle d'Aosta</td>
<td>3,944</td>
<td>80,103</td>
<td>4.92%</td>
</tr>
<tr>
<td>Piedmont</td>
<td>115,024</td>
<td>2,718,825</td>
<td>4.23%</td>
</tr>
<tr>
<td>Lombardy</td>
<td>251,656</td>
<td>6,168,161</td>
<td>4.08%</td>
</tr>
<tr>
<td>Molise</td>
<td>8,100</td>
<td>199,205</td>
<td>4.07%</td>
</tr>
<tr>
<td>Veneto</td>
<td>124,692</td>
<td>3,096,278</td>
<td>4.03%</td>
</tr>
<tr>
<td>Tuscany</td>
<td>75,645</td>
<td>2,285,680</td>
<td>3.31%</td>
</tr>
<tr>
<td>Calabria</td>
<td>33,879</td>
<td>1,264,965</td>
<td>2.68%</td>
</tr>
<tr>
<td>Sardinia</td>
<td>28,586</td>
<td>1,083,594</td>
<td>2.64%</td>
</tr>
<tr>
<td>Sicily</td>
<td>70,215</td>
<td>3,200,458</td>
<td>2.19%</td>
</tr>
<tr>
<td>Abruzzo</td>
<td>17,842</td>
<td>832,213</td>
<td>2.14%</td>
</tr>
<tr>
<td>Puglia</td>
<td>55,017</td>
<td>2,605,800</td>
<td>2.11%</td>
</tr>
<tr>
<td>Liguria</td>
<td>19,638</td>
<td>944,912</td>
<td>2.08%</td>
</tr>
<tr>
<td>Lazio</td>
<td>63,057</td>
<td>3,545,123</td>
<td>1.78%</td>
</tr>
<tr>
<td>Campania</td>
<td>57,626</td>
<td>3,742,795</td>
<td>1.54%</td>
</tr>
<tr>
<td>Friuli Venezia Giulia</td>
<td>9,173</td>
<td>761,045</td>
<td>1.21%</td>
</tr>
</tbody>
</table>

Source: CERGAS Istat Data and National AVIS data.
Given that Avis donors correspond to 71% of total donors, it can be noted that the regions with greater presence of donors compared to the working population (the population eligible for donation, that is, people 18-65 years old) are Basilicata, Umbria, Emilia Romagna, Trentino Alto Adige and Marche with a penetration rate of more than 5%, while the regions with the lowest percentage of penetration are Lazio, Campania and Friuli Venezia Giulia with a penetration of less than 2%. The percentages of penetration are shown by fig. 4, which provides an overview of the number of Avis donors in the area and an assessment of the penetration of the Associations in the different regions.

When taking into account the members, instead, the percentages remain unchanged while maintaining a similar degree of penetration in the area (fig. 5).

**Fig. 5 - The percentage of penetration of members in the area**

<table>
<thead>
<tr>
<th>Region</th>
<th>Avis Members</th>
<th>Resident Population 18-65</th>
<th>Penetration rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basilicata</td>
<td>22,229</td>
<td>370,975</td>
<td>5.99%</td>
</tr>
<tr>
<td>Umbria</td>
<td>31,015</td>
<td>548,373</td>
<td>5.66%</td>
</tr>
<tr>
<td>Emilia Romagna</td>
<td>152,333</td>
<td>2,719,981</td>
<td>5.60%</td>
</tr>
<tr>
<td>Valle d'Aosta</td>
<td>4,395</td>
<td>80,103</td>
<td>5.49%</td>
</tr>
<tr>
<td>Marches</td>
<td>52,173</td>
<td>960,527</td>
<td>5.43%</td>
</tr>
<tr>
<td>Trentino Alto Adige</td>
<td>34,930</td>
<td>649,308</td>
<td>5.38%</td>
</tr>
<tr>
<td>Piedmont</td>
<td>119,255</td>
<td>2,718,825</td>
<td>4.39%</td>
</tr>
<tr>
<td>Molise</td>
<td>8,657</td>
<td>199,205</td>
<td>4.35%</td>
</tr>
<tr>
<td>Veneto</td>
<td>131,483</td>
<td>3,096,278</td>
<td>4.25%</td>
</tr>
<tr>
<td>Lombardy</td>
<td>260,687</td>
<td>6,168,161</td>
<td>4.23%</td>
</tr>
<tr>
<td>Tuscany</td>
<td>78,121</td>
<td>2,285,680</td>
<td>3.42%</td>
</tr>
<tr>
<td>Sardinia</td>
<td>29,729</td>
<td>1,083,594</td>
<td>2.74%</td>
</tr>
<tr>
<td>Calabria</td>
<td>34,001</td>
<td>1,264,965</td>
<td>2.69%</td>
</tr>
<tr>
<td>Liguria</td>
<td>21,838</td>
<td>944,912</td>
<td>2.31%</td>
</tr>
<tr>
<td>Abruzzo</td>
<td>18,425</td>
<td>832,213</td>
<td>2.21%</td>
</tr>
<tr>
<td>Sicily</td>
<td>70,215</td>
<td>3,200,458</td>
<td>2.19%</td>
</tr>
<tr>
<td>Puglia</td>
<td>56,154</td>
<td>2,605,800</td>
<td>2.15%</td>
</tr>
<tr>
<td>Lazio</td>
<td>64738</td>
<td>3,545,123</td>
<td>1.83%</td>
</tr>
<tr>
<td>Campania</td>
<td>57,830</td>
<td>3,742,795</td>
<td>1.55%</td>
</tr>
<tr>
<td>Friuli Venezia Giulia</td>
<td>9,294</td>
<td>761,045</td>
<td>1.22%</td>
</tr>
</tbody>
</table>

Source: CERGAS Istat Data and National AVIS data.

If we look at the figures related to the penetration on the territory for the population as a whole, it is possible to underline that all Italian regions are below the European average of 4% penetration, and this stresses the need for the country to increase awareness in order to attract potential donors (Fig. 6).
Fig. 6 - The percentages of penetration in the area of Avis donors

<table>
<thead>
<tr>
<th>Region</th>
<th>Avis donors</th>
<th>Resident Population 0-100</th>
<th>Penetration rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basilicata</td>
<td>21,682</td>
<td>577,562</td>
<td>3.75%</td>
</tr>
<tr>
<td>Emilia Romagna</td>
<td>147,743</td>
<td>4,341,240</td>
<td>3.40%</td>
</tr>
<tr>
<td>Umbria</td>
<td>29,839</td>
<td>883,215</td>
<td>3.38%</td>
</tr>
<tr>
<td>Trentino Alto Adige</td>
<td>34,433</td>
<td>1,029,585</td>
<td>3.34%</td>
</tr>
<tr>
<td>Marches</td>
<td>50,882</td>
<td>1,540,688</td>
<td>3.30%</td>
</tr>
<tr>
<td>Valle d'Aosta</td>
<td>3,944</td>
<td>126,620</td>
<td>3.11%</td>
</tr>
<tr>
<td>Piedmont</td>
<td>115,024</td>
<td>4,357,663</td>
<td>2.64%</td>
</tr>
<tr>
<td>Lombardy</td>
<td>251,656</td>
<td>9,700,881</td>
<td>2.59%</td>
</tr>
<tr>
<td>Molise</td>
<td>8,100</td>
<td>313,145</td>
<td>2.59%</td>
</tr>
<tr>
<td>Veneto</td>
<td>124,692</td>
<td>4,853,657</td>
<td>2.57%</td>
</tr>
<tr>
<td>Tuscany</td>
<td>75,645</td>
<td>3,667,780</td>
<td>2.06%</td>
</tr>
<tr>
<td>Sardinia</td>
<td>28,586</td>
<td>1,637,846</td>
<td>1.75%</td>
</tr>
<tr>
<td>Calabria</td>
<td>33,879</td>
<td>1,958,418</td>
<td>1.73%</td>
</tr>
<tr>
<td>Sicily</td>
<td>70,215</td>
<td>4,999,854</td>
<td>1.40%</td>
</tr>
<tr>
<td>Abruzzo</td>
<td>17,842</td>
<td>1,306,416</td>
<td>1.37%</td>
</tr>
<tr>
<td>Puglia</td>
<td>55,017</td>
<td>4,050,072</td>
<td>1.36%</td>
</tr>
<tr>
<td>Liguria</td>
<td>19,638</td>
<td>1,567,339</td>
<td>1.25%</td>
</tr>
<tr>
<td>Lazio</td>
<td>63,057</td>
<td>5,500,022</td>
<td>1.15%</td>
</tr>
<tr>
<td>Campania</td>
<td>57,626</td>
<td>5,764,424</td>
<td>1.00%</td>
</tr>
</tbody>
</table>

Source: CERGAS Istat data and National AVIS data.

Based on the number of organizations belonging to Avis being active on the territory in order to have a significant overview of data, it was decided to select a significant sample of organizations to be analyzed through structured interviews with presidents, questionnaires for data collection, and budgets of the last two years⁴ (Fig. 7).

Fig. 7- Sampling for the analysis of organizations

<table>
<thead>
<tr>
<th>Regions</th>
<th>Regional Offices</th>
<th>Provincial offices</th>
<th>Municipal offices</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abruzzo</td>
<td>2</td>
<td>3</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>South Tyrol</td>
<td>-</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Basilicata</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Calabria</td>
<td>2</td>
<td>4</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Campania</td>
<td>4</td>
<td>2</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Emilia Romagna</td>
<td>4</td>
<td>10</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Friuli Venezia Giulia</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Lazio</td>
<td>3</td>
<td>6</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Liguria</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Lombardy</td>
<td>5</td>
<td>19</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Marches</td>
<td>2</td>
<td>4</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Molise</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Piedmont</td>
<td>3</td>
<td>9</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Puglia</td>
<td>2</td>
<td>4</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Sardinia</td>
<td>3</td>
<td>4</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

⁴ For further information on the sampling and on the data collected, please refer to section two on methodology
Starting from the data collected, an overview of the types of Avis donors existing in the area was obtained through an analysis of the following variables:

- **the composition of donors by age**: it is important to analyze the composition of donors by age on the Italian territory to evaluate prospectively, on the basis of the trends identified in paragraph 3, the prospects of the generational shift, in order to identify how the supply and inclusion of donors can continue;

- **the composition of donors by geographical area**: it is important to analyze the origin of donors as this allows to understand how to meet the needs of a population that is changing in terms of geographical origin and that will therefore require more and more uncommon blood groups;

- **the composition of donors by gender**: it is important to analyze the composition of donors by gender, as this provides the opportunity to identify the changes, from a demographic point of view, in blood supply (by law, women can donate whole blood up to a maximum of two times per year) and in the composition of the governing bodies of the Associations;

- **the composition by blood type**: it is important to analyze the composition of the blood type in order to determine whether it is possible or not to give a quick and effective answer to the needs arising from the rarest blood groups;

- **trends concerning the composition by age, gender and origin of new donors (years 2010-2011-2012)**: it is important to identify the prospective trend of new donors in order to understand, as pointed out above, what are the challenges and opportunities for the future.

As shown by Fig. 8, it is possible, on the basis of the data received, to make a realistic estimate of the composition of donors by age; at a national level, there is an average prevalence of donors between 36 and 45 years (27% of the population), 50% of donors is anyway within the age group between 36 and 55 (Fig. 8).

**Fig. 8 – Composition of donors by age (2011 data)**

![Composition of donors by age (2011 data)](image_url)

Source: CERGAS.
As for the composition of donors by geographical origin, 97% of donors are of Italian nationality, while only a very small percentage corresponds to foreign donors from European and extra-European countries (Fig. 9).

An analysis of the gender composition of donors shows that male donors account for about 67% while 33% are women (fig. 10) and this is also reflected in a gender gap within the Executive Boards of the Associations which include mainly male members. **Fig. 9 - Composition of donors by origin (2011 data)**

![Fig 9 Composition of donors by origin](source: Cergas processings)

Source: CERGAS.

**Fig. 10 - Composition of donors by gender (data 2011)**

![Fig 10 Composition of donors by gender](Men Donors 67% Women Donors 33%)

Source: CERGAS.

Lastly, the composition related to the blood type clearly shows that the percentages reflect on one hand the epidemiological conditions of the population (blood group A+ is the largest one), on the other hand, the needs arising from blood demand, where group 0 is particularly important given its specific characteristics (Fig. 11).

In light of the results observed, it is important to analyze the most significant trends of change related to the composition of donors in recent years, in order to identify:
• the composition by age and therefore the trend related to demographic change;
In order to analyze the demographic change, it is particularly interesting to assess the prospects of the new donors who have joined the Association in 2011 and 2012.

First of all, there was an average decrease in the number of donors who joined in 2012 by about 40%, a reduction which may depend on the partial prospective data, since the rate of entry of donors decreases during the summer. On this basis, the variation in the number of donors between 2010 and 2011 is positive and equal to 3%, and will be further explained in paragraph 4.6.

As shown by Fig. 12, the trend of new young donors under 25 is growing, while the participation of donors above 25 is decreasing. This is particularly interesting as it shows that the population of young donors is growing, and such growth is critical to the continuity and the achievement of self-sufficiency.

A comparison of these data with the composition of donors in the years 2010 and 2011 (Fig. 13), shows that an ongoing trend reversal in the composition of donors. The new donors of 2011 and 2012 are mainly young people under 25, and this changes and reverses the age groups that were typical of the previous years. This finding is particularly interesting because all the awareness-raising activities carried out by the Association in the area obtain positive results in the attraction of very young donors. However, it is important to assess the ability to attract young people with continuity, and to involve them over time.
The analysis of the data related to the composition of new donors by gender clearly shows, once again, a trend reversal with respect to the composition of donors until today. As shown by Fig. 14, in fact, the percentage of women out of the total new donors grows over time, thus highlighting the greater presence of women in the transfusion system.
This trend is further confirmed by a comparison between the years 2010 and 2012, which shows a prospective increase in the percentage of women among total donors by 42% (2010-2012); it is therefore possible to assume that in the trends of future donation, the total percentage of female donors could be the same as that of males in the transfusion system (Fig. 15).

These indicators can also be analyzed within the different regional branches in order to understand if territorial homogeneity exists or if the difference in health and cultural peculiarities of different regions among regions has an impact on the characteristics of the donors themselves. Through an evaluation of the regional areas, defined by the aggregation "Nielsen areas", it was therefore possible to apply the set of indicators described above and in particular those concerning the composition by age.
and gender. However, it is first worth saying that the data provided by geographical area were not sufficient and comprehensive enough to significantly generalize the results that will be discussed. However, some macro-differences and macro-trends have been certainly identified in the different geographical areas.

The regional areas divided according to the aggregation "Nielsen areas" are as follows:

- area 1: Piedmont, Val d'Aosta, Liguria and Lombardy;
- area 2: Trentino Alto Adige, Veneto Friuli Venezia Giulia and Emilia-Romagna;
- area 3: Tuscany, Umbria, Marche, Lazio and Sardinia;
- area 4: Abruzzo, Molise, Puglia, Campania, Basilicata, Calabria, Sicily.

In terms of the composition of donors by age group, there is not a significant difference between the different areas; it is interesting to highlight, however, that area 1 (Piedmont, Val d'Aosta, Liguria and Lombardy) has a high percentage of donors from 36 to 45 years, higher than in other areas, and has a lower level of donors between 56 and 65. Moreover, the area with the highest percentage of young people is area 4 (Abruzzo, Molise, Puglia, Campania, Basilicata, Calabria, Sicily), followed by area 3 (Tuscany, Umbria, Marche, Lazio and Sardinia) (fig. 16). It is worth stressing, however, that except for these differences, it is not possible to identify a significant heterogeneity in the age composition of donors.

Similar results are also present in the case of the breakdown of donors by gender. In fact, there are no particular differences among the areas, and this confirms a homogeneity in the gender typology of the donor (Fig. 17).

Such homogeneity is again confirmed in the assessment of the variation in the composition of donors through the years. Also in this case, in fact, there is a uniform trend represented by an exponential growth of a percentage of young people who become part of the world of associations, and thus guarantee the possibility of growth in all geographical areas (fig. 18).

Fig. 16 - Age composition of donors in geographical areas (2011 data)

Source: CERGAS.
Based on the data analyzed above, the following remarks can be made:

- The age composition of donors and the variation in the composition of new donors highlights the growth of a percentage of young people who join the Association, and thus change prospectively the composition of the age groups existing until today; it is interesting to note that one of the critical points highlighted in the SWOT Analysis being considered was the lack and difficulty of youth integration. Probably, on the one hand, young people decide to donate and therefore awareness raising within this target is well-structured, but on the other hand, the retention of this target is necessary to make these donors become not sporadic, but permanent and available for donation over time. The challenge based anyway on the positive result of awareness raising, is therefore to include young donors in a process of retention also ensuring the possibility of a future generational change in the management of the association.

- The composition of gender and the change in the composition of newcomers show a growing inclusion of women in the transfusion system. On the one hand, of course, this growth will have to be monitored, since health characteristics make women have a lower index of donation, but on the other hand, the inclusion of women among cooperating members will allow for the exploitation of all the strengths brought by the female population to the world of
volunteering (efficiency, effectiveness and fund raising skills). Particular attention should be given to young female donors so that, even after the birth of their children, they can be again an integral part of the Association and active donors.

- The origin of donors is another very interesting issue since, according to the data on demographic change in the country, the incidence of foreign children is increasing, and will alter the prospects of donor supply; it will therefore be important to find solutions aimed at raising awareness and at supporting donations in relation to the different geographical origins, so as to guarantee the final mission of the Association. To date, anyway, donations from foreign donors are extremely rare.

- As said before, the composition of blood donors by type reflects, instead, the epidemiology of donors and the need to collect blood types with peculiar characteristics including, sometimes, their rarity; it is certainly important to highlight the need to retain and continue to enhance the inclusion of donors having a blood type which is particularly common and hence risking not to be called for whole blood donation; it may therefore be important to retain these donors e.g. for plasma donation, in order to guarantee its continuity.

4.4. The role of the Associations / Federations within the transfusion system

Given the quantitative context outlined in the previous paragraph, it is important to note that the Associations / Federations of donors, and AVIS in particular, have a crucial importance in the transfusion system as they cover 71% of the total donors (if we only consider AVIS) and 86% of total donors (if we take into consideration all the Associations / Federations).

It is worth stressing that the Associations / Federations of donors play a positive role not only in the first phase of the transfusion system, as explained in the previous chapter, but also within the three institutional levels that characterize the transfusion system as part of the healthcare system:

- national level;
- regional level;
- local level/ Local Health Units.

At a national level, the Associations / Federations have the following roles.

- They influence the decisions on the policy and development of the transfusion system, supporting the National Blood Centre and other bodies involved in the assessment of the development of the Italian blood system.

- They influence and promote policies on the attraction of new donors through awareness-raising events, planning of promotional campaigns at a national and local level; an example comes from the National / World Day of Blood Donors, in which all the Associations and Institutions together create awareness-raising events on to improve the process of donor selection, thus encouraging regular, voluntary, unpaid, responsible, anonymous and associated donation.

- They actively participate in the national planning for the achievement of national self-sufficiency in blood components and plasma.

5 The issue of the drop-out of women after childbirth has been highlighted in the focus group held in Milan with the Provincial Presidents belonging to the regions of Areas 1 and 2.
derivatives.

- They participate in the promotion of ongoing education dedicated to donors in order to raise awareness on the importance to pursue a healthy lifestyle without risks for health and donation.
- They promote campaigns for the appropriate use of blood in order to limit an uncontrolled and inappropriate use of the different components, including plasma derivatives.
- They promote scientific and epidemiological research aimed at developing knowledge and progress.
- They participate in the development of third sector policies, with particular reference to the world of associations and the volunteering, represent the Association within the industry bodies provided for at an institutional level and cooperate within the coordination bodies of the association.

At a regional level, on the basis of the differences within the regional blood system, the Associations carry out the following institutional activities:

- they improve and influence the regional planning related to the multiple regional needs and coordinated with the national planning;
- they implement quality procedures, in view of the future accreditation;
- they participate in regional committees in order to encourage appropriateness in the optimal use of blood components and plasma derivatives;
- they support the regional coordination and supervision of the collection activities in the area;
- they support possible regional tests and research projects to promote the use of resources in the structuring of blood collection activities, of the promotion of donation, of the call for donation.

Lastly, at a local level, that is, at the level of activities related to the relevant Local Health Units and Transfusion Services, the Associations carry out the following activities:

- they support the identification of blood donation policies at a local and territorial level;
- they promote consultation on the adequacy of the resources allocated for collection activities and for the creation of agreements that can regulate the relationship between Public Administration and Associations;
- they manage Collection units in the area (supported by the technical control of Transfusion Services);
- they participate in local planning for the collection of blood and plasma, in coordination with national and regional programs and with the activities of the association for call and retention;
- they serve in committees within the Healthcare Units to support the proper use of blood and plasma derivatives.

It is therefore possible to describe the importance of the Associations / Federations of donors, on the one hand to support the coverage of the area, on the other hand to guarantee consultation on programmes and planning within the different institutional levels, and participation in joint campaigns for awareness and promotion of gift and donation, as well as to actively influence the creation of local and national policies being consistent with the needs of the Italian blood system.

For any action to be taken on multiple vertical levels (institutional levels resulting from a concept of vertical subsidiarity) and on multiple horizontal levels (stages of development related to the value chain of the system), a governance needs to be identified, as well as an organizational structure that enables the development and maintenance of the various activities described.
The Italian Association of Voluntary Blood Donors is in fact structured as a network with vertical and horizontal relationships, as an Association of Members and Associations (second-level Association), and guarantees the development and interconnection of different levels of membership, from the national to the municipal one, as shown by Fig. 19, thus developing a network system ("the diamond of the Avis organization") with connections between the different entities.

**Fig. 19 - Membership structure of Avis**

Source: CERGAS.

Therefore, the goal of maintaining four different institutional levels allows for the reconciliation, at a national, regional and local level, of all the functions and activities that Avis carries out in the area. Each association has its own statute, budget and the possibility to build relationships at different levels with the Public Administration and with different players in the area. Every level of the association interacts with the Public Administration corresponding to the same institutional level (Ministries, in particular those of Health and Social Policies, Departments, mainly for Health or Welfare at a regional, provincial and municipal level). The relations established consist in the active coordination in the area in order to maintain a balance between the necessary local peculiarity and specificity, and the importance of providing uniform quality and effectiveness in the area. For this reason, every municipal Avis has a provincial Avis of reference, every provincial Avis belongs to a regional Avis, and the overall coordination is carried out at the national level, as everyone identifies in a memorandum of association.

The relations between the different Avis branches are also expressed through the economic relations between the different institutional levels (linked to the contributions for the activities of the association); such flows move from the local to the national level (with some possibilities of contributions from provincial offices to municipal offices) and through the governance relationships for the conduct of the Association at the national level.

The economic flows between the different Associations depend on the institutional level to which the Agreement between the Avis offices and the local hospitals belong to. In all Regions, a regional agreement is often the result of a top-down approach and therefore it is sometimes modified locally; the Agreement determines the reimbursements for the activities of collection and for those related to the association. The economic flow related to the coordination and institutional activities is structured on the basis of how the Health System manages the reimbursement.

The governance relations developing between the different institutional levels depend both on the management organization of the Association at a national level, and on the electoral system governed by the Statute.
The organigram of Avis includes the following bodies:

- **General Meeting of Members**: it includes the legal representatives of the branches of the Association (at the regional, provincial and municipal level) and the delegates of the natural persons appointed by regional assemblies and their equivalents. The Meeting is convened at least once a year for the approval of the balance sheet and budget and for all decisions being considered vital for the Association in terms of policies for growth and future strategies, as well as for the elections of other bodies;

- **National Council**: it is composed of at least one director of each Regional Avis (22) for a maximum of 45 members (the other 23 are chosen with the D’Hondt method), elected by the General Assembly among the candidates appointed by regional assemblies as prescribed in their respective statutes. It has powers of ordinary and extraordinary administration except for those entrusted by law or by the applicable Statute to the General Assembly, the Executive Committee or the President;

- **Executive Committee**: it is elected from among the members of the National Council and is responsible for drawing up plans for the budget and the balance sheet to be submitted for approval to the General Assembly of Members through the National Council. It also resolves on all the matters delegated to it by the National Council, and implements its deliberations; it deals with ordinary administration and replaces the National Council, in urgent decisions for the management of the Association;

- **President**: he is appointed within the National Council and is the legal representative of the Association, he follows and supports the execution and implementation of the resolutions of the Executive Committee; in case of absence of the President, the Acting Deputy President shall take over the functions of the President;

- **Board of Auditors**: it is composed of three full members and two alternates appointed by the General Assembly. It monitors and evaluates the balance sheets of the association;

- **National Board of Arbitrators**: it acts as a judge in case of disputes.
between National AVIS and individual members, between individual members and territorial associations, and acts as a court of appeal between individual members or between corporate members belonging to the same Region;

- **National Jury:** it acts as a judge and arbitrator in any dispute between local branches belonging to different Regions or between local branches and National AVIS;

- **Council of the Presidents of Regional Avis and equivalents:** this is where shared political guidelines are applied to regional branches, with agreed methods of implementation of the programmes and activities of collective interest;

- **National Medical Committee:** it consists of the health directors of the Regional Avis branches, of the doctors being part of the National Council and of possible external experts. It provides health information and cooperates with Scientific Societies and Institutions for the development of the transfusion system;

- **Avis National Council of Youth:** its objective is to create projects in the area dedicated to young people, with the aim of stimulating an awareness being more focused on youth.

It therefore follows that since the year of foundation of the Association, an organizational-corporate structure has emerged, which is necessary to the continuation of the activities at a national, regional and local level, so as to support and implement all the activities of the association. This complexity is reflected in the structure of the governance bodies, which must keep a balance between the necessary representativeness of donors, the ethical nature of the gift and the complexity of managing a structure being extended in the area, to guarantee the functionality of the transfusion system.

The governance model presented is then reflected at the local level in the implementation of organizational models that can effectively and efficiently manage the activities of the various associations.

### 4.5 The organizational models in the area

The organizational models of the Association are based mainly on a substantial difference between branches that deal primarily with association collection and branches that are mainly involved in association activities, which means awareness raising in the area, retention dedicated to donors, call for donation.

As shown by the focus groups, the challenges ahead will be particularly important for those branches that are mainly involved in collection, since the European Directives will have a strong impact especially on the requirements dedicated to the stage of health relationship with the donor.

A first difference in the levels of organization is based, therefore, on the difference between branches that are mainly involved in activities of the association (awareness-raising and retention / call) and branches that deal mainly with collection. Considering the analyzed sample of 169 interviews, it is possible to see that the proportion of Associations that carry out collection activities in addition to association activities is 34% of the entire national territory (Fig. 21).

---

6 Focus Group with the presidents of the Provincial Avis selected randomly, one per region; breakdown of focus groups by: Northern Regions (Nielsen regions Area 1 and Area 2), Central Regions (Nielsen regions area 3) Southern Regions (Nielsen regions Area 4).
Given this difference, it is possible to notice that the responsibility of collection may fall operationally on two levels (except for the region Basilicata where it belongs to the regional level):

- **provincial level:** the collection takes place at the provincial level with a local coordination and is organized with Collection Units in the area, through organizational branches or bloodmobiles, while municipal offices in the area are mainly involved in raising awareness and activating tools for calls and retention;

- **municipal level:** the collection takes place at the municipal level through Collection Units, but also through organizational branches or bloodmobiles, as well as through tools for the retention of donors and for regional awareness raising.

Based on the interviews carried out, it is therefore possible to notice that, on the national territory, collection at the provincial level is 23% of the total collection activity while collection at the municipal level is 77% of the total activity (fig. 22).

An evaluation of the types of facilities in which donors can donate allows to identify four different facilities:

- **Transfusion Services:** the collection is carried out within the local health units, and is sometimes managed in collaboration with the Associations / Federations of donors;

- **Collection Units:** managed by the Associations / Federations of donors;

- **Organizational branches:** collection centres managed by the Associations / Federations, but also by Blood Transfusion Services on the territory, which "depend" on Collection Units, are usually not continuous in time and do not always have a fixed and stable location;

- **Bloodmobile:** mobile means of collecting blood and plasma that can be managed by the local health units or by Associations / Federations.

The percentage of the presence of each of these facilities varies between Regions. Based on the 169 structured interviews in the area and on
the data collected in the questionnaire, it is possible to identify a breakdown percentage as shown in Fig. 23.

**Fig. 23 - Donors and Associations / Federations**

It is important to remember, however, that the landscape of the percentage taxonomy of the facilities is likely to change by 31 December 2014 because, by this date, the minimum requirements for accreditation will have to be reached, and the necessary changes in the facilities used for collection will have to be evaluated in a different way.

Given these remarks, six different organizational models for awareness raising, call and collection in the area can be identified:

1. **Mixed association model:** this model includes all the organizations that have implemented awareness-raising and retention on the territory, managed by the Municipal offices at the local level, while collection is managed by the provincial offices in collaboration with the Blood Transfusion Services; collection may occur in Collection Units and any organizational branch or Bloodmobiles managed by Avis or in organizational branches or bloodmobiles (fig. 24);

**Fig. 24 - The mixed association model**
2. **Decentralized association model**: in this model, awareness activities, retention and blood collection activities are managed entirely by the municipal offices of the Association; also in this case the collection can take place in Collection Units and in any organizational branches or Bloodmobiles (fig. 25).

**Fig. 25 - The Decentralized association model**

![Decentralized association model diagram](image)

3. **Centralized association model**: in this model, blood collection and retention activities are managed entirely by the provincial offices of the Association, while awareness-raising activities are managed at the local level; also in this case collection can take place in Collection units and any organizational branches or Bloodmobiles (fig. 26).

**Fig. 26 - The decentralized association model**

![Centralized association model diagram](image)

4. **Decentralized public model**: in this model, public awareness and call are managed by the municipal offices, while collection is managed entirely or almost entirely by public bodies; in this case, collection may occur within local health units or in any of their organizational branches or Bloodmobiles. (fig. 27)
5. **Mixed public model**: in this model awareness and retention are managed by the provincial branches that operate in the area and support the municipal branches, while collection is managed almost entirely within public facilities; in this case the collection may be performed in local healthcare units or in any of their organizational branches or in Bloodmobiles (fig. 28).

6. **Centralized public model**: in this model awareness raising is carried out through local Avis branches, while retention and collection are managed for the most part within public facilities supported by local facilities; in this case, collection may be carried out within local health units or in any of their organizational branches or in Bloodmobiles (fig. 29).
By taking therefore as a reference the selected sample of experiences and organizations, and excluding the Regional Avis branches, it appears that 52% of the experiences involve a decentralized public model in which the local Avis branches deal with awareness raising and call, while the activity of collection is managed entirely by the public sector, 30% of total experiences show awareness raising, retention and collection being managed by territorial Avis. For the other models proportions are much smaller, 7% of the experiences involve the third model in which Provincial Avis run the entire association activity and collection activity, 6% uses the first model that presents the sharing of responsibilities between municipal offices and provincial offices, 5% makes use of the fifth model presenting the sharing of responsibilities between provincial offices and Transfusion Services, and lastly 2% instead presents a model in which associations are mainly concentrated in awareness-raising activities (fig. 30).

The identification of the most common organizational models gives rise to several considerations. The first remark arises from the evident importance of the Associations of volunteers within the transfusion system, in fact, only 2% of them do not provide for a direct role of retention and collection by the Associations, and this confirms their central position in the process.

The second remark emphasizes instead the role of Transfusion Services, which maintain today 52% of collection facilities, thus becoming a major and critical player for the achievement of the accreditation and for the compliance with European regulations. Another player being equally important are the municipal branches dealing with collection and
representing 30% of the facilities. In this case, it is worth analyzing what kind of collection centers are used by municipalities to deal with their responsibilities, so as to highlight if part of these sites will risk failing to meet the accreditation criteria in the future.

Lastly, in order to analyze in detail the organizational models, it is important and necessary to link them to the indicators of effectiveness, performance and territorial proximity, so as to highlight the existence of any relation and link between the organizational models and the business results obtained. This analysis will be carried out in the sixth chapter to identify and analyze the results in detail. The next section, which is preparatory to the development of this consideration, will instead deal with the analysis of the indicators highlighted above, and the results at the national level will be developed.

4.6. The indicators of performance, effectiveness and territorial proximity

In order to analyze the economic and social performances, it was deemed particularly important to develop three different types of indicators that could evaluate the achievements in the area. Starting then from the literature developed on the assessment of the social impact of non-profit organizations, and in particular from the model of the “Blended Value Accounting” (Nicholls, 2009) and the "Production of welfare framework" (Kendall, Knapp, 2010), it was possible to identify some indicators which reflected the multidimensional nature of the impact, and considered both the social outcomes and the economic outcomes. The three types of indicators identified are:

- **indicators of effectiveness**: indicators of effectiveness represent the ability of the Association to achieve the goal of encouraging voluntary, repeated donation, and that of raising awareness in the area by ensuring information on the importance of blood donation;
- **performance indicators**: performance indicators want to assess the ability of the Association to use the available resources to achieve the objectives defined by the mission itself;
- **indicators of territorial proximity**: indicators of territorial proximity want to identify the ability of the Association to enter the territory and to be close to the evaluation and the need of donors and people who want to become donors.

The indicators of **effectiveness** identified above are intended to analyze in detail the ability of the Association to penetrate into the territory, to encourage a regular donation, to attract consistent targets for donation and to create a close relationship with the other players of the transfusion system. The indicators created are the following:

**Fig. 31 - The indicators of effectiveness**

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variation in the number of donors</td>
<td>This indicator analyzes the ability of the Association to attract donors and to maintain a positive turnover, or to increase the number of donors present.</td>
</tr>
<tr>
<td>(2010-2011)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variation in the number of donations (2010-2011)</th>
<th>This indicator analyzes the variation in the number of donations by type of donation in order to evaluate the ability of the Association to attract regular and not temporary donors.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avis donors / members</td>
<td>This indicator analyzes the activities of the members of the Association, that is, the percentage of members who donate out of the total members.</td>
</tr>
<tr>
<td>Index of donation (2010-2011)</td>
<td>This indicator analyzes the average donation activity among donors, that is, it demonstrates the ability of the Association to promote and organize an effective programming to which a good response from donor partners is expected.</td>
</tr>
<tr>
<td>Members / Active population and out of the total population</td>
<td>This indicator shows the penetration of the Association in the area and the attractiveness of potential donors</td>
</tr>
<tr>
<td>Variation in the number of ineligible donors (percentage compared to the total number of donors)</td>
<td>This indicator shows the possibilities to reach targets being suitable for the donation process.</td>
</tr>
<tr>
<td>Variation in the number of temporarily suspended donors (percentage compared to the total number of donors)</td>
<td>This indicator shows the ability of inclusion of those donors who were unable to donate for a certain period of time for different reasons.</td>
</tr>
<tr>
<td>Number of representatives within the other players making up the transfusion system</td>
<td>This indicator highlights the degree of collaboration with the Public Administration within its institutional levels.</td>
</tr>
<tr>
<td>Degree of collaboration with the Public Administration</td>
<td>This indicator shows the perceived degree of cooperation with external stakeholders and in particular with Blood Transfusion Services and Public Administration.</td>
</tr>
</tbody>
</table>

Source: CERGAS.

Alongside the indicators of effectiveness, performance indicators were identified and divided into two types:

- indicators measuring the processes of operational efficiency, that is, the ability to make the best use of resources to achieve objectives;
- indicators measuring the efficiency and economic solidity, that is, the ability of Associations to persist over time thanks to their economic solidity.

The indicators measuring the processes of operational efficiency are as follows:
Fig. 32 - Performance indicators

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of donations / Number of calls</td>
<td>This indicator analyzes the efficiency of the call, that is, the ability to attract donors using the right number of calls.</td>
</tr>
<tr>
<td>Number of donations / Number of donations planned</td>
<td>This indicator analyzes the ability to respect the programming defined in collaboration with the blood transfusion service and with the bodies assessing self-sufficiency.</td>
</tr>
<tr>
<td>Average monthly donations / Average daily donations</td>
<td>This indicator analyzes the average monthly and daily activity of the Associations, by identifying how many donations are made monthly and daily or are planned in the event of non-management of the Collection Unit</td>
</tr>
<tr>
<td>Number of Avis donors and members / Number of cooperating members</td>
<td>This indicator underlines the ratio between the number of Avis donors and the number of cooperating members to identify the degree of attention that a donor can receive.</td>
</tr>
<tr>
<td>Number of Avis donors and members / Number of staff people</td>
<td>This indicator underlines the ratio between the number of donating members and the number of employees, to identify the degree of attention that a donor can receive.</td>
</tr>
<tr>
<td>Number of cooperating members / Number of staff people</td>
<td>This indicator highlights the ratio between cooperating members and staff people in order to express the impact of volunteering within the Association.</td>
</tr>
<tr>
<td>Number of donations / Number of collection sites in the area</td>
<td>This indicator highlights the average number of donations taking into account the number of facilities in the area (Collection Units, organizational branches).</td>
</tr>
</tbody>
</table>

Source: CERGAS.

The indicators measuring economic efficiency and business solidity are the result of the reclassification of financial statements; the balance sheet has been reclassified according to the principle of liquidity and solvency as shown in Fig. 33.

Fig. 33 - The reclassification of the balance sheet

<table>
<thead>
<tr>
<th>Reclassification of the balance sheet</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current assets</td>
<td>They contain all the immediate liquidity, deferred liquidity and assets.</td>
</tr>
<tr>
<td>Consolidated assets</td>
<td>It includes all fixed assets such as tangible, intangible and financial assets.</td>
</tr>
</tbody>
</table>
Current liabilities | It includes all debts having a maturity below 12 months.
---|---
Consolidated liabilities | It includes all debts having a maturity over 12 months.
Net assets | It includes share capital, reserves, profit / loss or the financial year.

Source: CERGAS.

The profit and loss account, instead, provided for the reclassification according to the criterion of operating destination as highlighted in Fig. 34.

### Fig. 34 - The reclassification of the profit and loss account

<table>
<thead>
<tr>
<th>Reclassification of the balance sheet</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core business</td>
<td>It is the difference between the income and expenses of the core business (i.e. those items relating to the &quot;core&quot; business)</td>
</tr>
<tr>
<td>Non-core business</td>
<td>It is the difference between the income and expenses of the non-core business (i.e. those items of income and expense that are not part of the &quot;core&quot; business).</td>
</tr>
<tr>
<td>Financing activities</td>
<td>It results from the difference between financial income and expenses.</td>
</tr>
<tr>
<td>Tax management</td>
<td>It refers to the management of taxes for the year.</td>
</tr>
<tr>
<td>Operating profit or loss</td>
<td>It represents the profit or loss for the year of reference.</td>
</tr>
</tbody>
</table>

Source: CERGAS.

Starting from the reclassification of financial statements, revenues and expenses in the profit and loss account and assets and liabilities in the balance sheet have been adjusted. Revenues in the profit and loss account therefore provided for the reclassification under the following items:

- **income from transfusion activities**: this item includes the income from the typical activity of the Association, that is, blood collection or association activity and from public facilities;
- **contributions and fundraising**: this item contains contributions from public and private bodies; It includes for example donations, legacies, non-refundable grants, any membership fees, etc.;
- **other revenues**: this item contains various items of income and that are not directly related to the core business. They are represented for example by the use of other funds, reimbursements;
- **clearing accounts**: this item refers to reimbursements for transfusion activities which, on the one hand, constitute revenue for the higher-level Avis being a part to the agreement and, on the other hand, represent expenses for it in favour of other Avis branches to which it will have, in turn, to grant the reimbursement;
- **reimbursement of transport costs**: This item contains the mileage reimbursement resulting from a specific project in schools that has

---

8 Private facilities shown in the financial statements of some Associations of the Region Lombardy are an integral part of the Italian NHS and are treated as public facilities.
provided revenues to ensure transportation of donors at the donation site, donors who are transported to Avis branches and invited to donation.

The costs in the profit and loss account are reclassified under the following items:

- **costs from membership fees.** They represent allowances paid to other Avis branches or other Associations. The item is divided internally into shares to National, Regional, Provincial AVIS branches and others;
- **contributions to other Avis branches or to other non-profit players** These are contributions to other players in the area, in addition to membership fees;
- **personnel costs:** they include all the costs related to employees, and therefore also the contributions to social security funds;
- **health costs:** They include all the costs incurred to ensure the collection activity and the protection of the health of donors, such as expenses for non-employees, for any medical supplies and for refreshment;
- **marketing and retention costs:** they include all the costs incurred by Avis to start marketing and retention campaigns;
- **institutional costs:** they contain all the expenses related to the 'institutional activities of the Association, such as attendance in meetings, assemblies and institutional events;
- **overheads:** They represent all general expenses incurred by the Association such as utilities, rentals, insurance costs;
- **depreciations and provisions:** they include all the costs related to depreciations and provisions resulting from the investments of the Association.
- **clearing accounts:** this item includes the reimbursements for transfusion activities which represent, on the one hand, the revenue for the higher-level Avis being a part to the agreement and, on the other hand, outputs in favour of other Avis branches to which it will have to grant the reimbursement. Based on the reclassification of financial statements it is therefore possible to determine the following indicators:

### Fig. 35 - Performance indicators

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Each item of revenue / Number of donations</td>
<td>This indicator analyzes the revenue items having the highest impact at a unit level</td>
</tr>
<tr>
<td>Each item of expense / number of donations</td>
<td>This indicator analyzes the cost items having the highest impact at a unit level</td>
</tr>
<tr>
<td>Composition of revenue items/ Total Revenue</td>
<td>This indicator analyzes the revenue items having the highest impact at the overall level</td>
</tr>
<tr>
<td>Composition of the cost items / Total costs</td>
<td>This indicator analyzes the cost items having the highest impact at the overall level</td>
</tr>
<tr>
<td>Change in previous indicators in years 2010-2011</td>
<td>This indicator analyzes the presence of changes in the financial statements of Associations by providing the opportunity to identify the underlying causes</td>
</tr>
</tbody>
</table>

---

9 An example of contributions to other non-profit players are the contributions donated to Telethon resulting from supplementary fundraising
Reclassified businesses/ Number of donations

This indicator shows the impact of core business and non-core business at a unit level.

ROE - Return on Equity

This indicator provides the evaluation of the prospective return on equity.

ROI - Return on investment

This indicator provides the evaluation of the prospective return on investment.

Total debt ratio

This indicator provides the assessment of the ability to fulfill commitments in the short and medium term.

Source: CERGAS.

The latest indicators identified, and deriving from the very nature of an Association as Avis, are the indicators of territorial proximity; these indicators they want to analyze the ability of the Association to be close to the culture and to the needs of the area (fig. 36).

**Fig. 36 - Indicators of territorial proximity**

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of participants / Number of events</td>
<td>This indicator shows the ability of the Association to create attractive events in the area</td>
</tr>
<tr>
<td>Number of new Avis donors / Number of events</td>
<td>This indicator shows the ability to attract new donors through the use of events</td>
</tr>
<tr>
<td>Number of new Avis donors / Number of partnerships</td>
<td>This indicator shows the ability to attract new donors through the creation of partnerships in the area</td>
</tr>
<tr>
<td>Variation in number of cooperators members</td>
<td>This indicator shows the ability to attract new employees who engage to make the Association grow</td>
</tr>
<tr>
<td>Variation in the number of articles published</td>
<td>This indicator shows the ability to publish newspaper articles, thus providing greater visibility to the Association</td>
</tr>
</tbody>
</table>

Source: CERGAS.

By analyzing the data collected through the questionnaires drawn up by the Presidents being interviewed, results have been identified at a national level which significantly represent the situation of the Association.

**4.6.1. Indicators of effectiveness**

Indicators of effectiveness show the following results:

<table>
<thead>
<tr>
<th>Name of Indicator</th>
<th>Formula</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variation in number of Avis donors (average trend 2010-2011)</td>
<td>Avis Donors 2011 - Avis Donors 2010</td>
<td>Positive variation of 3%</td>
</tr>
<tr>
<td></td>
<td>Avis Donors 2010</td>
<td></td>
</tr>
</tbody>
</table>

The positive variation in the number of donating members in 2010-2011 highlights the ability of Associations to maintain a positive replacement rate for donations, and therefore to include and attract new donors.

10 Non-profit associations are prohibited from distribution of profits, it is anyway interesting to assess the ability of the Association to generate possible income.
donors every year so as to replace those members being temporarily or permanently suspended or having reached the maximum age limit. As for the range of variation of the indicator, this range goes from 12% up to a positive trend of +33%. It is important, however, to underline that it is the trend between 2011 and 2012 the one to be assessed, because to date, the analysis on the trend of prospective new members shows a negative result, with a reduction in attraction in the area.

<table>
<thead>
<tr>
<th>Name of Indicator</th>
<th>Formula</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variation in number of donations of whole blood</td>
<td>Whole blood donations 2011 - Whole blood donations 2010 Avis Donors 2010</td>
<td>Positive variation of 2.2%</td>
</tr>
</tbody>
</table>

The positive variation in donations of whole blood approximately equals the change in the number of donors. This result probably identifies the ability to attract new donors being available for whole blood donation, but not having a positive feedback resulting from the more frequent donations of regular donors. It seems easier to attract new donors rather than to increase the frequency of donation of existing donors and thus to increase loyalty.

<table>
<thead>
<tr>
<th>Name Indicator</th>
<th>Formula</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variation in number of plasma donations (Average trend 2010-2011)</td>
<td>2011 plasma donations - plasma donors 2010 Avis Donors 2010</td>
<td>Positive variation of 0.8%</td>
</tr>
</tbody>
</table>

The positive variation in plasma donations is significantly lower than the change in whole blood donations; it is crucial to identify methods for the attraction of donors to this type of donation, since Italy is far from self-sufficiency in plasma derivatives. It is therefore necessary to make hypotheses on retention tools, so as to raise awareness among donors already taking part in plasma donation and to underline the importance of this choice. It is also important to stress, however, that to date, not all facilities can guarantee plasma collection, and other problems exist in organizational and economic terms. Such situation may have an impact on the result of this indicator.

<table>
<thead>
<tr>
<th>Name Indicator</th>
<th>Formula</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of donors out of the total members of the Association</td>
<td>Donors Total of members</td>
<td>Year 2010: 95% Year 2011: 96%</td>
</tr>
</tbody>
</table>

The percentage of donors out of all members is around 95% and is constant over the two years; it is interesting to note that some Associations (n = 6) showed to have more donating members than total members in the Association, so it is important to consider whether these results derive from a misunderstanding of the terms used or from the fact that a sporadic donation is encouraged, which does not necessarily require the subscription to the Association.
The overall index of donation does not require a variation between the year 2010 and the year 2011, and this shows, as noted before, an encouragement of regular donation being continuous over time. Considering the sole whole blood donation, the index of donation that fully expresses the potential of the donation should be on average between 2 and 4, as men have the opportunity to donate up to four times a year and women up to twice a year. It is interesting to split this indicator into index of whole blood donation and index of plasma donation, in order to assess what is the preference for the two types of donation on the Italian territory, while considering the local, organizational, economic issues connected to it.

The indicator helps in part to explain the partial self-sufficiency in plasma derivatives; whereas donors can donate plasma every 15 days, the index of this donation in the area is less than 0.50 for each donor, which means an average of less than one donation per year. It is therefore important, given also the importance of plasma outlined in the previous section, to encourage this type of donation, by supporting in particular the retained donors who are usually more likely than new potential donors to change the type of donation from whole blood to plasma. It is also worth reminding, however, the potential distance of plasma collection sites, as such distance may discourage plasma donation or make it unlikely also by loyal donors.

The average penetration in the area highlights the ability of Associations to "catch" the potential supply of donation. As already identified in Chapter 3, there is a high variability of penetration in the different Regions, but the total national ability stands at 3.5%. It is very important to analyze what are the marketing and awareness tools needed to increase the attractiveness of donors having a safe and healthy lifestyle, in order to increase the degree of penetration in the area.
<table>
<thead>
<tr>
<th>Name Indicator</th>
<th>Formula</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Penetration of the territory</strong></td>
<td>Number of Avis Members / Resident population</td>
<td>2.31%</td>
</tr>
</tbody>
</table>

Considering the ability of the Association to involve the area in the activation of the social capital, penetration appears lower than the European level which stands at 4%; it would therefore important to develop awareness-raising activities supporting the integration within the association's activities also of volunteers who cannot donate for different reasons (eligibility, age, etc.). In this way, one of the objectives of the Association would be achieved through the growth of social capital in the area.

<table>
<thead>
<tr>
<th>Name Indicator</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ability to attract the 'right' donors</strong></td>
<td>Potential donors with negative eligibility check / Avis donors</td>
</tr>
</tbody>
</table>

This indicator shows the ability of the Association to attract people having the right features for donation; it is particularly significant that only 2.5% of total donors is represented by donors with negative eligibility check.

The trend of variation over the years of this indicator for the years 2010-2011 increased by 12%, thus showing a presence of potentially ineligible donors. Probably, the management also of donations not being deferred, but managed within spot events, has an impact on the attraction of the right donor.

<table>
<thead>
<tr>
<th>Name Indicator</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Temporary suspension of donors</strong></td>
<td>Donors with temporary suspension / Avis Members</td>
</tr>
</tbody>
</table>

Donors with temporary suspension represent a significant percentage of members and the trend over time is prospectively increasing because the variation is 18% annually. It is therefore important to analyze the possible activities to be implemented in order to guarantee the reintegration of temporarily suspended members, so that they can get back into the process of donation instead of leaving it permanently.

<table>
<thead>
<tr>
<th>Name Indicator</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Permanent suspension of donors</strong></td>
<td>Donors with permanent suspension / Members</td>
</tr>
</tbody>
</table>

Donors with permanent suspension account for 6% of total members; it is very important to involve as staff members those donors being permanently suspended for health reasons, so that the members being more interested in the life of the association can, with their activity of organizational volunteering, still have a positive impact on the transfusion system. The variation in 2010-2011 is 4%, and therefore represents another point of analysis in order to evaluate how to create a membership being not based only on blood donation.
As for the indicators related to the integration of the Associations within the transfusion system, instead, degrees of collaboration can be highlighted with different players in the territory. Based on the qualitative interviews performed, it was possible to determine the following degrees of integration in the system:

<table>
<thead>
<tr>
<th>Degree of cooperation with other Associations</th>
<th>Degree of cooperation with other public administrations</th>
<th>Degree of cooperation with Transfusion Services</th>
<th>Degree of cooperation with the committees for the Appropriate Use of Blood</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>Average</td>
<td>Average</td>
<td>Medium / Low</td>
</tr>
</tbody>
</table>

At the national level it is possible to identify a degree of collaboration and integration with the stakeholders of the average blood system, which is however biased in the territory and includes relationships of different intensity with the various stakeholders.

Partnership is in fact medium / high with local Associations, non-profit Associations dealing with activities in line with Avis mission and non-profit Associations operating in other sectors, and it is medium with the relevant Public Administrations, such as the local Departments or the Transfusion Services, while it is medium-low within the Committee for the Good Use of Blood.

This level of cooperation is also confirmed by the indicator related to the average of persons belonging to the Association and officially participating in meetings, as well as to the players of the transfusion system. As shown by the indicator below, in fact, each Association has on average 3 people within the bodies of the players of the transfusion system.

<table>
<thead>
<tr>
<th>Name Indicator</th>
<th>Formula</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partners within the players of the transfusion system</td>
<td>Total of partners belonging to the bodies of the players of the transfusion system</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Total sample Associations</td>
<td></td>
</tr>
</tbody>
</table>

4.6.2. Performance indicators

Performance indicators are divided into indicators of:
- operational efficiency
- economic efficiency and stability.

They show the following results:

<table>
<thead>
<tr>
<th>Name Indicator</th>
<th>Formula</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency of the call</td>
<td>Total donations</td>
<td>0.87 or 1.79 with two outliers</td>
</tr>
<tr>
<td></td>
<td>Total Calls</td>
<td></td>
</tr>
</tbody>
</table>

The efficiency of the call stands at a ratio of 0.87, which means that two calls are necessary to attract a donor. It is worth paying attention to this result, as the efficiency of the call is not just the ability to attract donors, but to stabilize a planned number which can meet the needs in terms of type of donation (blood or plasma or other aphereses) and type of blood
group. It is therefore essential to assume a fair call that reflects the needs of the territory in order not to increase the percentage of non-use of blood. The two areas, very small (active resident population between 3,000 and 5,000 inhabitants) and with a few days of annual collection, have instead a very high percentage. The indicator shows, in this specific case, a particularly interesting result; each call made in the area attracts almost two donors. The consideration on the result shows an ability to “spread the word” which guarantees the attraction, with a single call, of multiple donors.

<table>
<thead>
<tr>
<th>Name Indicator</th>
<th>Formula</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compliance with the programme</td>
<td>Total donations</td>
<td>98%</td>
</tr>
<tr>
<td></td>
<td>Total donations planned</td>
<td></td>
</tr>
</tbody>
</table>

On average, 98% of donations planned are respected, which means that the programme is actually followed; this is a very positive indicator that allows the players of the transfusion system to assess periodically (e.g. quarterly) the objectives being pursued with respect to annual schedules, and to be report to the other players for the assessment of the achievement of self-sufficiency.

<table>
<thead>
<tr>
<th>Name Indicator</th>
<th>Formula</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average monthly amount of donations</td>
<td>Total donations</td>
<td>2,214</td>
</tr>
<tr>
<td></td>
<td>Total months</td>
<td></td>
</tr>
</tbody>
</table>

The indicator quantifies how many donations are made on average on a monthly basis, assuming that the different collection sites have a similar average opening every month (fictitious indicator). This indicator can be applied in every branch managing the collection for a monthly evaluation of the changes occurred and for a hypothesis on the underlying causes of the variations. For a more in-depth analysis of the indicator, donations need to be divided by type of donation. Through such evaluation it is also possible to calculate the quantities of whole blood, plasma, platelets or other blood components collected. The distribution by blood groups would also deserve further analyses.

<table>
<thead>
<tr>
<th>Name Indicator</th>
<th>Formula</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>The average amount of donations of whole blood</td>
<td>Total whole blood donations</td>
<td>1,811</td>
</tr>
<tr>
<td></td>
<td>Total months</td>
<td></td>
</tr>
<tr>
<td>The average amount of plasma donations per month</td>
<td>Total plasma donations</td>
<td>301</td>
</tr>
<tr>
<td></td>
<td>Total months</td>
<td></td>
</tr>
<tr>
<td>The average monthly amount of donations of platelets</td>
<td>Total platelet donations</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Total months</td>
<td></td>
</tr>
<tr>
<td>The average monthly amount of donations</td>
<td>Total donations through other apheresis</td>
<td>72</td>
</tr>
</tbody>
</table>
Starting from these indicators, it is possible to identify the big difference existing between the number of whole blood donations and the number of other donations; this expresses the need to improve, as required, the diversification of the collection, particularly for plasma donations, and to invest in a retention process for the diversified donation.

Considering daily donations, through an analysis of the average of days of donation identified in the interviews it is possible to predict the following results in terms of donations made and quantity collected.

<table>
<thead>
<tr>
<th>Type of donation</th>
<th>Potential daily donations made</th>
<th>Amount collected (ml)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole blood</td>
<td>82</td>
<td>36,920</td>
</tr>
<tr>
<td>Plasma</td>
<td>14</td>
<td>8,185</td>
</tr>
<tr>
<td>Platelets</td>
<td>1</td>
<td>650</td>
</tr>
<tr>
<td>Other apheresis</td>
<td>3</td>
<td>1,956</td>
</tr>
</tbody>
</table>

Considering then 264 days of total average annual donation for all the different players in the area involved in collection, it is possible to calculate that for every day of donations, 100 donations of different types are made. But it is important to consider that this figure is a national average; the actual collection situations are extremely polarized, which means that there are not only big differences in the number of days of donation (in the interviews, the gap is very wide: from a total of 8 days of donation in the area to 1200 days involving multiple players and branches), but also including different types of collection; plasma collection, for example, is not extensively present in all the branches and has different opening times. It is interesting to note, however, what is the average of daily donations at a national level, so as to identify then donation times and enhance the process occurring within the various collection sites.

Considering, instead, the efficiency criteria at an organizational level, indicators can be identified which evaluate the attention paid to the donor, and the enhancement of a process of inclusion within the organizations to promote the cause of donation itself.

<table>
<thead>
<tr>
<th>Name Indicator</th>
<th>Formula</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship between donors / members and partners</td>
<td>Total donors/members: Total number of cooperating members</td>
<td>Members: 91; Donors: 90</td>
</tr>
</tbody>
</table>

This indicator can be read in two ways: first, it identifies the degree of care that can be provided to members through the attention of the cooperating members who decide to work for some hours for free, the second identifies the ability of the Associations to turn members into volunteers who decide to participate actively in the life of the Association. In fact, it is possible to see on the one hand that each cooperating member "manages" on average 90 donors and 91 members, which is a particularly large number depending, however, on the hours of active volunteer work actually spent by cooperating members for the Association. On the other hand, 1% of the members works in the Association to support the creation of events, awareness-raising campaigns and to support retention. In order to check this data, it is also possible to highlight the average attendance by 15 members of the Executive Board of the Association for every municipal and provincial office (regional offices are excluded, since in executive boards there may be representatives of the local levels and they hardly
manage donors directly), and the relationship between these two figures gives a different result, that is 25 donors for every person of the Executive Council. It would therefore be important to analyze the underlying reasons for this difference in results to understand if there is actually a problem in the evaluation of the performance of managers in the Executive Boards by the Presidents of the different Avis. It is important to stress that each volunteer from 25 to 91 donors to manage over time, to support and retain.

This enhancement can also be seen in the relationship between members and staff and in the relationship between volunteers and staff.

### Name Indicator: Donors / members and staff ratio

<table>
<thead>
<tr>
<th>Formula</th>
<th>Result</th>
</tr>
</thead>
</table>
| Total donors/members | Members: 2,429
| Donors: 2,425 |
| Total staff |

Every person being an employee of the Association should manage 2,425 donating members and 2,429 members; it is therefore clear that active volunteering within the Association has a fundamental role in guaranteeing attention to donors and an ability to manage the activities of the association.

### Name Indicator: Cooperating members / staff ratio

<table>
<thead>
<tr>
<th>Formula</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number cooperating members</td>
<td>32</td>
</tr>
<tr>
<td>Total staff</td>
<td></td>
</tr>
</tbody>
</table>

On average, therefore, for each person being employed by the Association, there are 32 volunteers who support the Association in carrying out activities being essential to the continuity of the donation. The last indicator shows what is the average of donors being present within the total collection sites surveyed, and highlights the number of donors existing and the number of donations made on average.

### Name Indicator: Number of donors in the facilities of the territory

<table>
<thead>
<tr>
<th>Formula</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total donors</td>
<td>507</td>
</tr>
<tr>
<td>Number of collection sites</td>
<td></td>
</tr>
</tbody>
</table>

Therefore, each collection site manages on the territory an average of about 500 donating members, providing the opportunity to make 895 donations every year. This shows that 4 donations are managed on average every day (using the number of total collection days) and highlights the future need to consider how to manage the collection and how to succeed in structuring models of efficiency in this direction. Also in this case the indicator is extremely polarized, as some collection sites attract many donors, while others are less attractive, thus managing fewer days or using mobile and temporary facilities. This indicator seems to contradict the indicator previously shown; actually, it provides a more accurate assessment, not of the operational capacity, but of the average of actual donations if all the donation centres being analyzed were always open.

The second type of efficiency indicators, namely indicators of economic efficiency and business solidity, are based on the reclassification of financial statements of 2010 and 2011 obtained by the different Associations in the area. It is worth pointing out that in the evaluation of these indicators the regional offices have been excluded, in order not to
affect the results; moreover, it was chosen to give, in this section, give the overall results at the national level, while Chapter 6 will provide a focus on the differences between the Associations mainly dealing with collection and those mainly involved in activities of the Association. Lastly, the financial statements received (n = 46) do not allow for a significant generalization of the results, although they are important to identify the trend of the Association. The first indicators evaluate the average revenue per item for each donation made, the percentage composition of income and the variations between the years 2010 and 2011 (Fig. 37).

In 2011 the largest percentage of items of revenue resulted from contributions for transfusion activities covered by agreements with:

- public facilities (43%);
- the remaining percentage of clearing accounts (21%);
- contributions from private sources (13%);
- contributions from other Avis levels (7%).

### Fig. 37 – Revenue indicators

<table>
<thead>
<tr>
<th>Revenue items</th>
<th>2010</th>
<th>2011</th>
<th>Variation years 2010-2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Revenue items / Total Donations</td>
<td>Percentage composition of income</td>
<td>Revenue items / Total Donations</td>
</tr>
<tr>
<td>Proceeds from transfusion activities</td>
<td>€ 4.94</td>
<td>48%</td>
<td>€ 4.74</td>
</tr>
<tr>
<td>Proceeds from Avis</td>
<td>€ 1.46</td>
<td>14%</td>
<td>€ 1.08</td>
</tr>
<tr>
<td>Clearing accounts</td>
<td>€ 1.47</td>
<td>14%</td>
<td>€ 2.23</td>
</tr>
<tr>
<td>Other contributions from public sources</td>
<td>€ 0.47</td>
<td>5%</td>
<td>€ 0.70</td>
</tr>
<tr>
<td>Other contributions from private sources</td>
<td>€ 1.55</td>
<td>15%</td>
<td>€ 1.35</td>
</tr>
<tr>
<td>Contributions for reimbursement of transport costs</td>
<td>€ 0.03</td>
<td>0%</td>
<td>€ 0.04</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>€ 0.44</td>
<td>4%</td>
<td>€ 0.53</td>
</tr>
</tbody>
</table>

Source: CERGAS.

The variation between the two years shows a decrease in contributions from public facilities, private funds and other Avis branches, and an increase in contributions from other public sources, clearing accounts and contributions to the reimbursement of expenses for organized trips in projects dedicated to schools. It is therefore interesting to highlight a decrease in contributions by Local Health Units, probably in a context of economic crisis and non-alignment of the agreements with the rates of the Italian Statistics Institute, but also the ability of the Association to find new ways to have anyway a positive variation in its revenues.

### Name Indicator Formula Result

<table>
<thead>
<tr>
<th>Name Indicator</th>
<th>Formula</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income variations (2010-2011)</td>
<td>Total income in 2011 - Total income in 2010</td>
<td>2%</td>
</tr>
</tbody>
</table>

By taking into account the average costs of each item for each donation made, the percentage of costs composition and the variations between the years 2010 and 2011, it is possible to obtain the results presented in Fig. 38.
An analysis of the year 2011 shows that the costs with the highest incidence are those arising from:
- clearing accounts (21%);
- overheads (19%);
- personnel (14%).

The variation between the two years shows a dramatic decrease in almost all expenses, except for health care expenses, institutional and representation costs and marketing costs. This is an interesting finding because it highlights the investment by the Association in terms of marketing and health care costs, with a reduction of total costs by 13%. Obviously, well aware of the crisis period, a rationalization of some of the costs was deemed necessary, even by pushing on the integration of volunteers.

The variation in total expenses implies an average decrease in the total expenses of the Associations by 13%.
An evaluation of the impact of the different managements of a company, even a non-profit company, can help identify some important considerations on the incidence and variation between the different years (Fig. 39). The ability of the Association to have an active core business is certainly positive, although the prospective trend is declining, and financing activities are positive as well; the incidence of non-core business is instead interesting, because in 2010 it was a positive item in terms of impact, while in 2011 it has decreased to the extent that the costs of non-core business were no longer covered. It could therefore be important to assume an analysis of the reasons behind this result in order to limit the reduction of resources.

<table>
<thead>
<tr>
<th>Name Indicator</th>
<th>Formula</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variation in expenses (2010-2011)</td>
<td>Total expenses 2011 - Total expenses 2010</td>
<td>13%</td>
</tr>
<tr>
<td></td>
<td>Total expenses in 2010</td>
<td></td>
</tr>
</tbody>
</table>

Lastly, it was decided to assume the calculation of the solidity indexes of the Associations, which are usually calculated in profit companies. The results are very positive; as specified in the following table, they show in fact a solid capacity of the Associations not only to meet its financial commitments in the short and long term, but also to develop return indicators being fairly positive, although well aware of the non-distribution of profits. The only point of attention is the ratio between liabilities in the medium to long term and equity, as the average debt capital is significantly higher in percentage than equity. The figure is not shown because it cannot be considered significant for the few Associations that provided sufficient material to develop the calculation.

<table>
<thead>
<tr>
<th>Name Indicator</th>
<th>Formula</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average ROE</td>
<td>Profit for the year (2011)</td>
<td>18%</td>
</tr>
<tr>
<td></td>
<td>Equity (2011)</td>
<td></td>
</tr>
<tr>
<td>Average ROI</td>
<td>Profit for the year (2011)</td>
<td>(-2%)</td>
</tr>
<tr>
<td></td>
<td>Liabilities on medium / long term + Equity</td>
<td></td>
</tr>
</tbody>
</table>

4.6.3. Indicators of territorial proximity

The last indicators to be evaluated are the indicators of territorial proximity. Below are the general results of the indicators that will be further analyzed in section 7.
<table>
<thead>
<tr>
<th>Name Indicator</th>
<th>Formula</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicator of marketing and attraction in the area: events</td>
<td>Number of participants per event</td>
<td>2010: 154, 2011: 177</td>
</tr>
<tr>
<td></td>
<td>Number of events</td>
<td></td>
</tr>
<tr>
<td>Indicator of marketing and attraction in the area: change events and participants</td>
<td>Number of participants per event (2011) - Number of participants per event (2011) / Number of events</td>
<td>15%</td>
</tr>
<tr>
<td></td>
<td>Number events past year</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number partnership past year</td>
<td></td>
</tr>
<tr>
<td>Variation of cooperating members</td>
<td>Cooperating members 2011 - Cooperating members 2012 / Cooperating members 2010</td>
<td>14.25%</td>
</tr>
<tr>
<td>Variation of items</td>
<td>Items 2011 - Items 2012 / Items 2010</td>
<td>25.32%</td>
</tr>
</tbody>
</table>

### 4.7. The satisfaction of donors

This overview of the peculiarities of the Italian transfusion system and of the role of the Associations in the system itself, cannot be concluded while ignoring the role and the assessment of donors, the central players in the system itself who guarantee the continuity of all the players involved. It was deemed important to give voice to the experience of these donors, through the distribution of a questionnaire on the Italian territory, which obtained an unexpected response rate and enhances the strength of relationship and inclusion that the system of gift encourages. Indeed, 15,737 questionnaires were collected and validated, and this proves that donors create social capital, which is encouraged in the area by the transfusion system.

Starting with the master data, in Fig. 40 it is possible to identify the percentage of donor composition. This confirms the above data and emphasizes a prevailing percentage of male donors, but it is worth reminding the increasing trend of women in recent years.

**Fig. 40 - Gender composition of donating members**

![Gender Composition Pie Chart]

It was considered important to analyze the presence of other volunteering activities, so as to understand whether blood donation was the only activity carried out or other activities were present to support the community. As shown in FIG. 41, 80% of donors do not carry out any voluntary activity.
The remaining 20% instead dedicates a part of their lives to volunteering activities in the area, mainly to emergency management, to prevention support and protection of the sick and to a section devoted to young people. Lastly, a percentage indicated sports and protection of the environment as main volunteering activities (fig. 42).

Considering the monthly participation to further volunteering activities, 62% dedicates 3 to 6 days or more per month to continuing volunteer activities, as shown in Fig. 43.
If we consider the professional activity, 65% of donors are employees, 11% are freelancers and 8% are students. Pensioners, unemployed people and entrepreneurs each represent 4% of the sample donors (Fig. 44).

The type of job is particularly interesting if considered from the point of view of the days in which the donation is made (holidays or weekdays). Fig. 40 shows that 74% of donors decide to donate on workdays. 64% benefits from the work day. An important consideration is the evaluation of the reasons behind the day in which to donate to understand whether it depends on the opening hours of the collection site or on personal choices. 70% of donors perform this gesture of solidarity on working days; 99% of
donors who use the day exemption are employees.

**Fig. 45 – When donations are made**

Day for donation

Looking instead at the composition by age, even in this case there is confirmation of the significance of donor responses, as they closely mirror the framework outlined above (Fig. 46). It is important to remind that the percentage of young people is prospectively growing; but it is worth being aware of the possible future trouble being closely linked to the demographic trend.

**Fig. 46 - Breakdown by age**

Through an analysis of the data on their experience as donors, instead, it is possible to identify, as a first element, the degree of retention existing on the territory, based on the timing related to the last donation. 73% of donors who answered had donated for the last time in a period going from the previous week to the six months preceding the completion of the questionnaire. 18% pointed out that their donation had occurred in a period going from the 6 previous months to the previous year, while 6% had not donated since more than a year. This finding is particularly interesting because it shows that 73% of donors are regular donors who donate frequently (Fig. 47).
An analysis of the type of donation from donors, clearly shows that women donate more plasma than men, in fact, as shown in next figure, 37% of women donate plasma, while 21% of men do.

The estimated difference in the frequency of donation between men and women is based primarily on health constraints related to donation; 4% of women donate up to four times because probably they are no longer in childbearing age (and therefore can donate 4 times) and is in optimal health, compared to 31% of men. It is interesting to note that 18% of women only donates once, compared to 5% of men. This figure shows a difference between the two genders, and emphasizes the greater willingness of men to donate periodically (Fig. 49).
Fig. 49 - The frequency of donation

An evaluation of the frequency of plasma donation shows that women have a higher preference for plasmapheresis, in Fig. 50, in fact, 87% of women donated from 2 to more than 4 times, compared with 84% of men. 13% of women only donate plasma once per year, compared to 16% of men (fig. 50).

Fig. 50 - The frequency of plasma donation
It is also important to assess which are the places where donors donate more; as it is possible to deduct from Fig. 46, the majority of donors donated in bloodmobiles and to a much lesser extent in association offices and in hospitals. This highlights the high coverage obtained through the use of the bloodmobile to reach the donor, and points out that about 50% of donors donate at Avis branches and 50% in Transfusion Services, thus respecting the analysis conducted above on the organizational models existing in the area.

**Fig. 51 – Donation centres**

Considering the problems encountered in the process of donation, it is surprising to highlight that only 4% of donors found problems, as outlined in section 3, which suggests a very good level of quality for all the players involved (Fig. 52).

**Fig. 52 - The problems of donation**

The level of satisfaction in the donation process is very high, 68% of donors feel very satisfied, 27% fairly satisfied and only 1% feels little or not at all satisfied. This is a very positive for the quality of the process to donors who feel for 95% very or fairly satisfied with the process they are involved in.
In order to complete the analysis on the place of donation of donors, it was deemed essential to analyze the distance in kilometers between the donors’ house and the donation centre, and to ask about any willingness to donate in more distant places. 48% of donors donate at a maximum distance of 5 km, 26% within 10 km, 22% within 30 kilometers. 90% of donors declare to be willing to donate within a greater distance, thus showing loyalty to donation, and showing the possibility to avoid a rate of donation reduction resulting from possible increases in the distance of the place where collection is usually performed.

The latter figure, which is particularly interesting, results from the analysis of the key factors explaining why donors continue to donate and be part of Associations and in particular of Avis. The values and feelings inherent to the donation are the most important element for continued membership in the blood system, followed by the awareness-raising events and projects in schools and the institutional campaigns, the call and the sense of belonging. The ultimate reason for donors is that of making anyway an ethical gift based on the values of sociality and care for others, which seems to be the major driver for the continuity of the Italian blood system.
4.8. Conclusions

This part of the analysis raises several considerations in the fields of the Italian transfusion system and in particular on the role of the Associations / Federations of donors.

In this chapter, in fact, it was possible to note the importance of the associations within the different institutional levels and how this influential role depends on the importance of the activities that are created on the territory. In particular, the research focused on Avis, describing how in the course of history, the Association has become a real non-profit organization, and how it can also be assessed in terms of social and economic impact and be analyzed in terms of organizational models.

Starting from the considerations related to the organizational models, it was possible to identify differences at a national and regional level in how responsibilities are managed, and this highlighted a lack of homogeneity of models, but the prevalence of two of them in particular, one that provides for collection activities and public activities of retention and awareness managed locally, and one that provides for the full decentralization of the local Associations.

Given these models, performance indicators built on the activities of associations were applied, indicators that show a high coverage in the territory, a capability of design and alignment with planning, but also only an average level of integration with other stakeholders, a controversial results concerning the effectiveness of the call and a problem in plasma collection. The indicators show the solidity of the Associations, since despite the presence of a very strong economic contraction, they are starting an intense process of rationalization.

Lastly, one of the most important results is provided by the questionnaire of donors, which promotes the Italian transfusion system despite all its difficulties, considering it very satisfying and enhancing all its strengths. With regard to donors again, finally, their composition is changing in terms of age groups and percentage of women, so the Associations and the system in general will have to be able to seize this change in order to manage it and turn it into a strength that will ensure the continuity of the system itself.
5.1. Introduction

The relations between the stakeholders of the Italian transfusion system, put the associations at the centre of the framework, thus creating added value to the system. Thanks to the assessment of the synergies developed among the different players, it is possible to understand the impact of the degree of relationship established on the value being generated and quantified, through indicators of effectiveness, performance and territorial proximity.

The first part of the chapter provides an overview of the main players of the Italian transfusion system, identifies the type of relationship that is structured with the Associations / Federations of donors and then develops a complete analysis of the stakeholders.

The second part, instead, is more focused on the analysis of the degrees of cooperation identified in the interviews with the Avis Presidents. This means taking into account any relationships between the degree of partnership being structured and the organizational models existing in the area, in order to highlight the correlation between the organizational models and the intensity of the relationship with the stakeholders.

The final part, on the contrary, shows whether or not a correlation exists between the degree of partnership started in the area and the achievement of results in terms of indicators of efficacy, performance and territorial proximity, in order to analyze how the intense relationship between the different stakeholders can impact on the indicators defined and analyzed at the national level.

The objectives of the chapter are, on one side, to assess the relationships existing between the stakeholders, and how important it can be to develop these relationships, on the other, to analyze the reasons underlying the intensity of these relations, that is, to understand if they depend on the structured organizational models and what is the 'impact that may be generated through the synergies between the different players.

5.2. The players of the Italian transfusion system

The Italian transfusion system involves many players which, thanks to the necessary relationships and integrations that need to be structured among them, can be considered as stakeholders expressing the need to generate social and economic utility and to be up to the personal and institutional role represented and played within the transfusion system.

In order to identify all the stakeholders in the blood system, the Associations / Federations of donors have been placed at the centre of analysis, although it can be noted that each identified player can be a key protagonist of the model for the evaluation of the relationships within the blood system.

The importance of meeting the needs of the various stakeholders is vital to achieve better performances supporting a positive social impact and
economic sustainability (Freeman 1984; Donaldson, Preston 1995; Argandona 1998; Gibson 2000; Ruf et al. 2001).

The framework for the identification and assessment of the stakeholders of non-profit companies results from the theories developed for profit companies; these models can be applied to the analysis of non-profit and public organizations reaching a greater impact thanks to the ability to reduce conflicts arising from the objective of pursuing the common and public interest. For further information concerning the theory of stakeholders and the literature related to non-profit organizations please see Box 1 and Box 2.

### BOX 1 - The theory of stakeholders

The opening of the governance to the outside is described, from the theoretical point of view, in the interpretation of the social and institutional responsibility of an organization based on stakeholders; in this view, each stakeholder group has the right not be treated as a means oriented toward some goals, but must participate in the determination of the future of the company” [Freeman, 1984]. This implies for the government of the organization to be open to different stakeholder categories, such as donors, members, staff, unions, investors, public administration, suppliers, environmentalists, professionals and other organized pressure and interest groups.

Ultimately, it became clear that the social environment plays a critical role in the survival of the organization and that the consent of the stakeholders is to enable the pursuit of an economic balance [Chirieleison, 2002]. This means that the organizations have to try and reconcile the different social issues raised by the various stakeholders, although sometimes they are in contrast; in this way the role of the management changes, and must not only try to maximize the return on tangible and intangible investments, but must also give an answer to the various needs of each stakeholder category, and become a sort of mediator of social issues.

Once the importance of all the categories of stakeholders in the governance of the organization has been emphasized, it is necessary to take into account the fact that each stakeholder assumes a different importance: it would be incorrect to recognize to all stakeholders the same powers to influence the government of the organization; this is because the interests they have in the organization itself are different in nature, and because the role they play towards it is different. It is therefore necessary to distinguish between at least two large categories of stakeholders [Chirieleison, 2002]:

**primary stakeholders:** this category includes all those subjects having relationships of a contractual nature with the organization, which could not survive without them; these subjects, however, are also strongly linked to the organization as they essentially depend on it for the satisfaction of their expectations of wealth;

**secondary stakeholders:** this category includes all those people who do not have relationships of a contractual nature with the organization; these subjects only have influential relations with the organization, and are not necessary to its survival (mass media, communities, local governments, state); ultimately, they represent all those people suffering the external effects produced by the activity of the organization, whether positive or negative.

Obviously, it is not possible to draw a clear line between these categories, because a subject may effectively hold a position being common to both of them: the state can be a financier, a supplier may be part of the community concerned by the activity of the organization, etc. Moreover, it is worth noting that, since each organization operates in different contexts, it is not
possible to identify universal primary and secondary stakeholders; in particular, this division is closely linked to the type of productive activity put in place by the organization.

In order to implement a theoretical approach of this kind, the organization needs to be rethought under many of its aspects. There needs to be a real change in the organizational culture, the work of the management must itself change because managers must internalize the social issues raised by the various stakeholders, and must consider them in their decision making processes in order to develop a socially sustainable strategy. To this end, much work needs to be done in order to establish with the stakeholders a sort of lasting partnership enabling a constructive exchange of ideas and projects that may lead to a general improvement in the quality of life of today's society and of future generations.

BOX 2 - The definition of non-profit organizations

From now on the term non-profit company or social enterprise will be used to name the nonprofit organization in its operational functionality. Avis is a non-profit organization, but also a non-profit company. Avis is a non-profit company which performs some operational functions to achieve the ultimate goal of blood donation as a common good being imperative for the country.

The non-profit company is the tool that expresses and supports social entrepreneurship; it pursues the "sacredness" and the "purity" of social goals through a coordinated, integrated management oriented to cost-effectiveness to maintain acceptable levels of efficiency and to have a sustainable life cycle.\(1\)

In this view, the system social enterprise is an operational tool of the economic body - non-profit organization in a sense of "virtual social enterprise" (which tends to the relative maximization of the virtual economic and meta-economic profit seen as a "solidarity-oriented profit"; it is distributed as a virtual return on the investments made without a bi-unique and mutual correspondence with the solidarity investor). Any return on investment stratification is not linked to the investor and does not identify him, but is distributed in terms of advantage on the demand for operating result of the non-profit organization.

With G. Zappa, the father of business economics, the company is seen as a complex reality in which everything is coordinated to achieve a single purpose: the satisfaction of human needs. Zappa developed a classification of companies, which was then accepted and repeated in all studies of business administration, and made a distinction based on the type of business conducted, between production companies, supply companies or consumer companies and composed companies.

The business theory assumption of the "social enterprise" states that non-profit companies are intended as the economic order of "economic and social bodies"- non-profit organizations, and as a system of operations guided by economic criteria, including entrepreneurship.

Indeed, the "body" is intended as a "complex of elements and factors, of and personal and material energies and resources". It is long-lasting and dynamic (...)."As a complex, it is governed by its own laws, also of

\(1\) "All human companies must have structures being consistent with human dignity and thus be aimed at facilitating the achievement of its ultimate goals. Companies with primary economic purposes pursued directly or through their associations, must include among its purposes also the contribution to the 'orderly economic development and social progress'"(Masini C, 1979).
different nature (physical, sociological, economic, religious, etc.) and in a multi-faceted combination” (C. Masini).

The company is the economic order (that is, the system of economic events) of all the "bodies" in which the economic activity takes place, and is the object of business economics (G. Airoldi, G. Brunetti, V. Coda)\(^2\).

Therefore, 'non-profit' companies act as a private organized economic activity organized and have in them the operational tools to achieve the social and ideal goals of common and collective good in the absence of profit purposes. It is apparent that the economic / social body – not-for-profit organization "turns into a company" through the concrete fact of its being ontologically a non-profit private company.

A further contribution to the conceptualization of the social enterprise was given by Elio Borgonovi, whose definition clearly shows the economic and management peculiarities as well as the social purposes of nonprofit organizations, and of the third sector in particular.

For the author, in fact, the non-profit social enterprise is a system that:

- comes into operation because some person or some group of people, autonomously decides [...] to work on solving a problem being in the general interest of the community in which he lives (this is what the "public" purpose consists in) and does that in order to make those activities economically sustainable;
- it is able to "transform" individual values (human solidarity, altruism, dedication, etc.) into economic values (real economically sustainable activities) and social values (response to needs deemed relevant by the community of reference);
- it is a tool for the society of today to "enhance" the contribution that the individual motivations of a human, ethical, religious nature can make to the solution of the general problems of the society: this is because the element of technical, organizational, economic rationality adds to individual values.

At the basis of this definition there is the basic principle of business studies, namely the concept of body that:

- evokes the fact that the forms of association of people's lives are influenced in their dynamics by different players, both economic and non-economic.

The four major Associations / Federations are gathered in a Committee of Italian Voluntary Blood Associations (CIVIS) that aims at giving them voice in order to have a greater impact at the institutional level in protecting the pursuit of self-sufficiency. The Associations / Federations therefore manage their own relationships at the political-institutional level, with the common goal of having a greater impact in the area.

The four major Associations / Federations are\(^3\):


\(^3\) COORDINATION C.I.V.I.S. (AVIS - CRI - FIDAS - FRATRES) – NATIONAL REGULATIONS.

ART. 1 - It is created in Rome between blood volunteering organizations operating throughout the country, the Inter-association Committee of Italian Blood Volunteering - CIVIS, already established and founded in Perugia in 1995, between the AVIS, FIDAS, and FRATRES Blood donors of CRI. Temporarily the seat of CIVIS is established from time to time at the national headquarters of the spokesman referred to in the following art. 8 of these Regulations.

ART. 2-11 CIVIS is non-profit an inter-association voluntary committee, with a democratic structure and organization. The members are committed to pursue shared goals through ethical behaviour.

ART. 3 – Italian self-sufficiency in transfusion is an element of strategic importance for the support to health services based on the associated, voluntary, responsible, regular and unpaid donation. For this purpose, the CIVIS has the task of coordinating and representing the needs of the various associations and / or federations, operating on the national territory, in order to represent a unique interlocutor with the institutions, so as to better pursue its goals.
AVIS: Italian Voluntary Blood Donor Association, a brief history is available in chapter 4 and in the introduction; Italian Red Cross (CRI): it carries out activities to raise awareness on donations since 1971, 3% of its members in the area are active donors, further details are available in Box 3; Italian Federation of Blood Donor Associations (FIDAS): in 2011 it had 460,000 registered members, of which 262,000 regular donors, further details are available in Box 4; National Association of Blood Donor Groups "Fratres": the Fratres, which is active particularly in Tuscany, had 110,388 active donors in 2012 in the area, further details are available in Box 5.

BOX 3 - The Italian Red Cross (C.R.I.)

The history: The Italian Association of the Red Cross (ItRC) is a non-profit public equivalent body with international prerogatives, whose purpose is to provide health and social assistance in peacetime as well as in wartime. It is a body of high relief, placed under the High Patronage of the President of the Republic, and subject to the oversight of the Ministry of Health and the jurisdiction of the Ministries of the Economy and of Defence, each for its own field of competence. The ItRC is part of the International Red Cross Movement. In its international efforts, it coordinates itself with the International Committee of the Red Cross in conflict zones, and with the International Federation of Red Cross and Red Crescent Societies for other operations. Founded in Milan on June 15, 1864 to act in favour of war wounded and sick, since 1866 it has been present in all the conflicts in which Italy was involved. After World War II, the I.R.C. was first classified as a semi-public body, to become in 1980 a private body of public interest. In 2013 Francesco Rocca was elected president. Until 2013 the I.R.C. was organized into components. The component of Blood Donors began raising awareness on regular blood donation in 1971, also acting in private and public companies.

BOX 4 - Italian Federation of Blood Donor Association (FIDAS)

The history: FIDAS is a federation of associations of voluntary blood donors. It coordinates at the national level all the socio-political and human initiatives of Italian voluntary blood donors and ensures a qualified contribution to them. It works on legislative, scientific and healthcare events concerning donors and the transfusion service, but also keeps up-to-date and provides information on any news related to them. It was created in 1959 in Turin with a deed signed by Cesare Rotta of the Blood Donor Association of Piedmont, Giovanni Faleschini of the Friuli Association, Giobatta Ottonello of the Liguria Association, Domingo Rodino from Cairo Montenotte and Luigi Marenco from Ovada. The initiative was launched by Professor Dogliotti who, immediately after the war, founded the Provincial group of Turin and created the Piedmont Association. Professor Cesare Rotta was the first National President of the Federation. The current president of the Federation is Aldo Ozino Caligaris, elected for the years 2012-16. The statute is based on highly liberal principles with regard to the autonomy and independence of each association, however it imposes to member associations the acceptance of those moral conditions being inseparable from the humanitarian principles promoted by blood donating members belonging to the associations themselves.

4 Source: www.cri.it
5 Source: www.fidas.it.
BOX 5 - National Association of Groups of Blood Donors "FRATRES"6

The history: the FRATRES is an association of Christian inspiration that believes in the importance of the donation as a gesture of solidarity and generosity. It was created with the aim of inviting people to anonymous, free, periodic and responsible donation of blood, bone marrow and organs. The National Association of Blood Donor Groups "Fratres" of the Misericordie of Italy has its origins in the National Confederation of the Misericordie of Italy and was founded in Lucca on June 19, 1971. The Association was declared a non-profit organization with a decree of the Ministry of Health of 11 October 1994.

At the national level, the association is governed by the National Council, consisting of 15 members elected by the assembly of all the Fratres Groups of Italy. The current president of the association is Luigi Cardini.

It is therefore possible to determine the following types of stakeholders:

primary stakeholders: stakeholders directly involved in the evaluation of the output, who therefore receive a positive and negative impact from the process in which they are stakeholders, as they are directly involved in the relationships with the main actor;

secondary stakeholders: stakeholders who are not directly involved in the impact generated but have in any case a specific interest in the process concerned.

From FIG. 1 it is possible to identify the players of the Italian transfusion system divided in primary stakeholders and secondary stakeholders.

**Fig. 1 - The stakeholders of the Italian transfusion system – Centrality of the Associations**

*6 Source: www.fratres.org.*
The main stakeholder, namely the set of the Associations / Federations of donors, is made up of four large Associations or Federations joined by other associations, developed at a local level within hospitals, which manage, as said before, a very important stage of the transfusion system and are included in the different institutional levels.

As for primary stakeholders, patients and their families come first, since the ultimate goal of achieving self-sufficiency is not only quantitative, that is, to give patients the possibility to obtain blood components or plasma-derived drugs, but also qualitative, that is, to ensure safe transfusions to support the possibility of recovery and a positive impact in the course of diseases.

The second primary stakeholder is represented by donors: although donors are the central focus of the Associations / Federations of donors, they are also an important stakeholder for the impact they receive from the process of blood donation and for the role they play within the system. It is important to create opportunities for inclusion, awareness-raising, retention and special attention to donors or to those representing the volunteer part within the organization, because they are the main actor that guarantees, through the ethical values of gift, the continuity of the system.

The third primary stakeholder is represented by the Blood Transfusion Services and by the Departments of Transfusion Medicine of the area, as the responsibility for the relationship with the Associations / Federations in the area is based on meeting these players. They are primary stakeholders because they represent the actor with the highest level of cooperation and contact with the Associations / Federations, since on the one hand the players are those who stipulate agreements and regional agreements, on the other hand they activate the processes of blood collection and processing.

The fourth primary stakeholder is represented by the technical planning bodies, that is, the National Blood Centre and the corresponding Regional Coordination Facilities. As specified in Section 1, the National Blood Centre is part of the Ministry of Health, it represents the most important body for the planning and the analysis of the evolution of the transfusion system at a national and regional level. For an additional focus on the National Blood Centre, see Box 6 which describes the history and the activities of the Centre in the area.

<table>
<thead>
<tr>
<th>BOX 6 - National Blood Centre</th>
</tr>
</thead>
<tbody>
<tr>
<td>The National Blood Centre (CNS) was established with a Decree of the Minister of Health of 26 April 2007 and began its term on Aug. 10, 2007. The functions assigned to the CNS are very complex from a quantitative and qualitative point of view (see Art. 12, paragraph 4, of Law 219/2005); they include: the support of regional and national programming, the functions of supervision and control, the promotion of education and scientific research in the specific field. It operates according to governance principles, that is, according to the principles of a participation government, because of the need to respect the organizational autonomy of the region. The CNS is assigned the following tasks: to promote voluntary, conscious, unpaid, and periodic blood donation, as well as the scientific and sociological research connected to it; to promote scientific research in the fields of safety, self-sufficiency and technological development; to provide support to the programming of transfusion activities nationwide and carry out activities of monitoring and verification of the targets set by the program itself and by the applicable provisions of law;</td>
</tr>
</tbody>
</table>

Source: National Blood Centre
to detect the annual regional needs for blood and blood products for the achievement of self-sufficiency;
to provide guidance to the Ministry of Health and to the Regions about the annual programme of national self-sufficiency;
to provide technical support for inter-regional coordination;
to provide advice and support in the planning and organization of transfusion activities at the regional level;
to provide guidance to the Ministry of Health and to the Regions about the unit price for the sale of units of blood, blood components and plasma-derived drugs produced under agreement, between Local Health Units and between Regions;
to issue guidelines on the quality and safety of blood and blood products, also as an implementation of EU directives;
to ensure the coordination of the information system of the Transfusion Services;
to define and implement the proposal to the Ministry of Health of the national program for blood monitoring;
to conduct studies and research on the quality and appropriateness of the transfusion services, on the related costs, as well as on the acquisition of goods and services in the field of blood transfusion, in order to prepare evaluations on the effectiveness and efficiency of the services provided;
to promote training programs;
to perform controls on diagnostic methods;
to promote and organize external quality controls on the procedures and diagnostic methods in the field of blood transfusion;
to exercise control over blood-derived pharmaceuticals based on the criteria and conditions determined in accordance with national and EU regulations;
to provide for inspections and controls on manufacturers of plasma-derived products, also upon request of the Regions.

The fifth primary stakeholder is represented by the local facilities dealing with coordination at a regional level and with the reception of blood components and plasma derivatives. It is worth highlighting, on the one hand, the Regional Coordination Facilities and, on the other hand, the Health Units and Hospitals, including the Committees for the Appropriate Use of Blood (Box 7), which are the final intermediaries to reach the patient. These players are crucial to the coordination of regional planning and to assess the achievement of self-sufficiency; moreover, they assess the rate of appropriateness of the use of blood both in terms of blood components and of plasma derivatives.

**BOX 7 - Committee for the Appropriate Use of Blood**

The Committee for the Appropriate Use of Blood was established by Ministerial Decree 1 September 1995 Official Gazette no. 240 of 13/10/1995 and subsequent integrations. The Committee for the Appropriate Use of Blood is responsible for: determining the standards and procedures for the use of blood; defining the maximum demand of blood by type of intervention (MSBOS); promoting the practice of autologous blood transfusion (autologous transfusion); involving, at the organizational level, the operating units for the diagnosis and treatment of blood saving programs, blood components and plasma derivatives;

---

8 Source: Ministerial Decree of September 1, 1995
helping in the pursuit of self-sufficiency of blood, blood components and plasma derivatives;
defining safety and verification controls;
carrying out the evaluation of transfusion practice in individual departments (audit - doctor);
encouraging the computerization of the hospital system of donation and transfusion;
establishing partnerships with the representatives for transfusion activities of private nursing homes.
The committee normally meets every three months and each meeting must be recorded in minutes to be kept at the health directorate. On an annual basis, the results of the evaluation on the use of blood, duly illustrated and commented, are examined in a special meeting with all of the clinicians of the hospital departments concerned with transfusion activities, on the basis of comparative elements concerning the same hospital, to other hospitals and to the data of scientific literature. During the annual meeting, organizational issues related to blood donation are also discussed, the objectives are defined and the programmes of activities are updated. Committee members also include representatives of blood donors and patients.

Lastly, the last primary stakeholder is represented by the pharmaceutical industry, that is, at present, by Kedrion SpA (Box 8), which is the only company managing the processing of plasma for third parties; the quality of the collected plasma has an impact on the processing by the company itself, which has to process plasma on behalf of the Regions to create plasma-derived medicinal products.

**BOX 8 - Kedrion**

Kedrion was established in 2001, it is a biopharmaceutical company specializing in the development, production, marketing and distribution of plasma. This company is the result of a process of rationalization and enhancement of the activities of other companies already operating in the sector, and has thus gained a wealth of expertise which guarantee to the company an important role in Italy, in Europe and in the world. The company is characterized and distinguished by a strong focus on the international arena and by the careful management of its local areas. Product quality, continuous commitment to research and development, substantial industrial capacity, consolidated presence on the national and international markets, are the main factors of competitiveness for the Company.

It is today the Italian company of reference of the National Health Service for the production of plasma-derived medicinal products; moreover, its skills serve the strategic partnerships with healthcare bodies of other countries.
Kedrion believes in the importance of social responsibility as a guiding value for the activities of the company, and of transparency and completeness of information as peculiar to the relations with stakeholders. It is essential that confidence in the company and within it be continually fueled by competent, honest and conscious actions, and that attention and respect for people turn into concrete safety and quality of products and processes.

Through an analysis of secondary stakeholders, instead, it is possible

9 Source: www.kedrion.com
to identify as crucial the political bodies at a national, regional and local level.

Since the transfusion system is part of the essential levels of care and blood is a central component of healthcare activities, it is possible to identify the importance of the system at the level of political decisions, and in particular for the Ministry of Health, for the Standing Conference for the relations between the State and the Regions and the Autonomous Provinces. Other Ministries (Welfare, Education, Integration), the National Association of Municipalities (ANCI) / Federsanità, European Union bodies dealing with health and social policies, also are secondary stakeholders of Avis, which cooperates with them to develop social and health policies and to fully implement its mission. Since the health system is controlled by regions, the importance of the blood system is reflected at the regional level, and involves the Departments of Health / Healthcare /Social policies of the Regions, which represent the most influential and important Departments at a local level. Within the regional blood transfusion system, in fact, the Councillor for Health and / or his delegate are represented within the bodies of territorial planning (Regional Coordination facilities) and directly appoint the managers. Lastly, the transfusion system also has an impact within local governments and especially within the Departments of Welfare, as donation is one of the major indicators for the identification of social capital in the area.

The second secondary stakeholder is represented by the pharmaceutical industry, dealing with the market share that cannot be covered by the processing of plasma for third parties, and then selling to health facilities a part of drugs which would be otherwise impossible to obtain in other ways.

Lastly, the last secondary stakeholder is represented by the representative bodies of the third sector, the Associations / Federations being within the Third Sector Forum; this is an atypical actor, but has managed to create a very high level of inclusion which generates a certainly positive social capital on the territory.

5.3. The degree of collaboration with stakeholders

Chapter 4 contained an evaluation, at the national level, of the degree of collaboration between the Avis association and some stakeholders, both primary and secondary, considered very important for their direct role towards the Associations. Moreover, in the same chapter it was possible, through an analysis of the questionnaire dedicated to donating members, to know the level of satisfaction of the donating stakeholder towards the donation process.

Therefore, going back to the indicators related to the integration of the Associations within the transfusion system, different degrees of partnership can be identified with different players in the area. Based on the qualitative interviews carried out, it was possible to determine, at a national level, the following degrees of integration in the system:

Fig. 2- The degree of collaboration between AVIS and local players

<table>
<thead>
<tr>
<th>Degree of partnership with other Associations</th>
<th>Degree of partnership with other Public Administrations</th>
<th>Degree of partnership with Transfusion Services</th>
<th>Degree of partnership with the Committees for the Appropriate Use of Blood</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium/high</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium / Low</td>
</tr>
</tbody>
</table>

Source: CERGAS.
At a national level it is possible to notice an average degree of cooperation and integration with the stakeholders of the blood system, but this degree can be polarized within the area, within the organizational models identified and in the relationships with the different stakeholders. The first analysis to be made is an assessment of the average degree of collaboration existing within the offices of the association mainly dealing with blood collection and within the offices of the association mainly dealing with awareness and retention activities in the area. As shown in Fig. 3, the average degree of cooperation existing within the offices mainly involved in blood collection and donor collection does not differ significantly.

**Fig. 3- Degree of relationship with stakeholders in the Associations**

![Bar chart showing degree of relationship with different stakeholders.](source: CERGAS)

Two data are interesting: the intensity of the relationship with the Blood Transfusion Services is higher in case retention activity prevails over collection activity; the degree of partnership with the Committee for the Appropriate Use of Blood, which shows a controversial result.

The first one can be read as a necessary integration resulting from the management of the programming of the donation, and therefore from the planned management of the call activity.

The second one, instead, presents a controversial analysis. If the Association dealing mainly with retention rather than collection has more frequent relationships with the Committee for the Appropriate Use of Blood, it is worth evaluating whether this depends on the underlying reasons for the existence of the Committee (that is, reducing the incorrect use of blood) or on the will of the Public Administration to have no interference from the Associations dealing with collection on the decisions on appropriateness.

A second element of evaluation is based on the analysis of the degree of cooperation with the other players in case the Associations deal, in their activities (for awareness, retention and / or collection), with plasmapheresis. As shown by FIG. 4, the degree of cooperation is higher in case of activities for raising awareness on plasma or for collecting it, and this is easily explained by the importance of achieving greater awareness and penetration of the territory related in the issue of plasma.
Lastly, it is important to assess what is the difference in the relationship between the organizational models identified and the degree of cooperation established with the different players in the territory.

It is worth reminding that six models have been identified, with the following characteristics.

1. **Mixed association model**: this model includes all the organizations that have implemented awareness and retention activities in the area, managed by the municipal offices at a local level, while collection is managed by the provincial offices in collaboration with the Blood Transfusion Services; collection may be carried out in Collection Units and in any organizational facilities or bloodmobiles.

2. **Decentralized association model**: in this model, awareness, retention and blood collection activities are managed entirely by the municipal offices of the Association; also in this case, collection can take place in Collection Units and in any organizational facilities or bloodmobiles managed by Avis.

3. **Centralized association model**: in this model, retention and blood collection activities are managed entirely by the provincial offices of the Association, while awareness activities are managed at the local level; also in this case, the collection can take place in Collection Units and in any organizational facilities or bloodmobiles.

4. **Decentralized public model**: in this public model, awareness and call are managed by the municipal offices, while collection is run entirely or almost entirely by public facilities; in this case, collection may occur within Hospitals or in any of their organizational facilities or bloodmobiles.

5. **Mixed public model**: in this model, awareness and retention are handled by the provincial offices operating in the area as a support to municipal offices, while collection is managed almost entirely within public facilities; in this case, collection may occur within Hospitals or any of their organizational facilities or bloodmobiles.

6. **Centralized public model**: in this model, awareness raising is performed through local Avis branches, while retention and collection are handled for the most part within public facilities supported by local facilities; in this case, collection may occur in hospitals or in any of their organizational facilities or bloodmobiles.

Given the relations developed by Avis with other non-profit Associations located in an area corresponding to the above models, it is possible to identify the results presented in Fig. 5. It clearly appears, in fact, that the degree of cooperation is medium-high in the first three models, whereas in those models in which the public manages both collection and
other activities, the relationships with other Associations are of medium intensity. This can be explained by the less central role of the Associations, however it could be interesting, in a view to raising awareness, to intensify the relationship with other non-profit organizations in order to increase potential donors and create local synergies.

Fig. 5 - Relations with other Associations and organizational models

![Diagram showing level of collaboration among different organizational models.]

Given the relations with the Public Administrations of reference it is possible to detect a heterogeneous degree of relationship among the different levels (Fig. 6). The highest degree of cooperation is that of the models in which the provincial branches are responsible for the activity of awareness and collection, while there is a medium degree of integration in case the activity of awareness-raising is run both at a provincial or municipal level, and the public or municipal facility manage the collection activity.

Fig. 6 - Relations with the Public Administration of reference

![Diagram showing level of collaboration with relevant public administration.]

By analyzing the relations with transfusion systems, it is possible to see in fig. 7 the results coming from the different organizational models. The highest cooperation level is achieved by the model in which public facilities run as main players the process of collection and retention, while the association facilities deal with awareness. The lowest levels of integration exist instead in case collection is managed by the provincial facilities, while awareness and retention are managed by the provincial and municipal facilities, and in case public facilities manage collection and municipal facilities manage calls (medium intensity). The first case relating
to less intense partnership may derive from the fact that the public is completely replaced in the first stage of the transfusion system, and this leads perhaps to a disconnection between the different players, while for the second case it could result from the difficult relationship between the two players, which are in two different areas from a geographical point of view.

Fig. 7 - Relations with the Blood Transfusion Services

By studying the relationships between the Committee for the Appropriate Use of Blood and the Associations within organizational models existing in the area, it is possible to infer, as outlined in Fig. 8, that the relations with the lowest degree of collaboration occur in those areas in which the system is operated mainly by the public service and in the territories in which the management is entirely carried out at the local level (provincial or municipal). The first case depends on the little interference that the Associations may have within the Committee and on the choices concerning the good use of blood, while in the second case there is probably a disconnection between the public player and the Association. This theory is not supported by the higher degree of cooperation within the territories in which collection takes place at the provincial level rather than at the municipal level.

Fig. 8 - Relations with the Committee for the Appropriate Use of Blood
As a conclusion to this paragraph, it is interesting to provide a general analysis of the different organizational models, and the assessment of the synergies existing between the Associations and the players of the system within the different organizational models at a local level. As shown by Fig. 9, in the association model that provides of collection and retention at the provincial level there is a high cooperation and synergy with the other Associations and with the players of the Public Administration of reference. This is probably due to the ability to interact with the non-profit Associations of different areas and with the Public Administrations interested in the ability to manage a transfusion system being entirely in the controlled by the Association. The highest degree of cooperation with Transfusion Services is present in those models where public facilities work to activate collection in the area. The highest degree of collaboration with the Committee for the Appropriate Use of Blood is instead present in the organizational model in which collection is managed by public facilities and association activities are managed by local structures, as well as in the models in which collection is run by provincial branches. In this case, the underlying reasons are evident in the model itself, since a good integration is needed between Transfusion Services and local areas, and it is also important to evaluate the role of the Associations within the Committees in case collection is structured at the provincial level.

Fig. 9 - Organizational models and stakeholders

Lastly, it can be assumed, by analyzing the average degree of partnership within the different organizational models, that the different relationships with the different stakeholders assume the same degree of importance (fig. 10).
The two models having the highest degree of cooperation are the mixed association model and the mixed public model, which represent therefore the two models having the greatest synergy among the various stakeholders analyzed and the associations.

5.4. The degree of collaboration with stakeholders and the indicators of effectiveness, performance and proximity

The last part of the chapter is devoted to the evaluation of the present relationship between the degree of collaboration among the stakeholders of the area and the indicators of effectiveness, performance and proximity identified in the previous chapter.

In order to start this analysis the different Associations have been divided into the following different clusters identifying the average degree of relationship on the territory:

- clusters with high degree of collaboration: the average number of collaborations started with the different players identified above is equivalent to 3;
- clusters with a medium/high degree of collaboration: the average number of collaborations started with the different players identified above is between 2.99 and 2.5;
- clusters with medium degree of collaboration: the average number of collaborations started with the different players identified above is between 2.49 and 2;
- clusters with medium-low degree of collaboration: the average number of collaborations started with the different players identified above is between 1.99 and 1.
Given this structure, the percentage of Associations that are included in the cluster is shown in fig. 11. The majority of Associations is part of the cluster of medium partnership, followed by the clusters of medium-low and medium-high partnership.

The analysis has also included the Associations at the regional level which had not been included in the previous analysis to avoid any influence on the data; in this case, their inclusion has been considered useful and interesting in order to provide a comprehensive analysis of the relationships with stakeholders.

A further remark concerns the indicators of performance. Given the low significance resulting from the low number of budgets attributable to each cluster, it was deemed important to only assess the indicators of operational efficiency rather than those related to economic soundness and sustainability, in order to avoid affecting the results.

Lastly, an initial assessment of the impact that the level of cooperation has on the issues of effectiveness, performance and territorial proximity is given by the number of information provided by the different clusters. In fact, the clusters with lower degrees of relationship have provided much less data, and this is obviously clear in some indicators which for this reason were not calculated.

5.4.1. Indicators of effectiveness

The first results on indicators of effectiveness can be found in Fig. 12, which highlights the heterogeneity of the variation of donors and of whole blood and plasma donation.
The interesting and significant results of this analysis are the presence of a high variation in plasma donation in clusters having a high degree of cooperation and a good response in terms of efficiency even in the model with a low level of cooperation. It is also interesting to point out that the lowest indicators are found in the medium cluster; this suggests, therefore, that the awareness-raising activities performed in the area and the ability of the Associations to attract new donors are not related to the degree of relationship in the area, except in the case of plasma donation. It can therefore be inferred that, in order to increase plasma donation, it could be important to create close relationships in the area, thus establishing synergies which can support the attention of donors to this type of donation.

The relationship between AVIS donors and total members, which measures the ability to attract social capital on the territory in the form of new donors willing to donate, but also willing to be actively part of the Association in case they cannot donate, presents a good level of homogeneity in all clusters both in the year 2010 and in the year 2011 (Fig. 13).
The only substantial difference occurs in the "high" cluster, in which there is a low rate of donation compared to the totality of the members; it could be interesting to investigate the underlying reasons for this, which can be identified, on the one hand, in the ability of the Association to include non-donating volunteers, that is, cooperating members who cannot donate, and on the other hand, in the difficulties in retaining donors for a donation being continuous over time. However, given the high degree of partnership that is established in the area, it may be assumed that the underlying reasons mainly fall within the first hypothesis rather than within the second one.

From an analysis of the donation index (Fig. 14) it appears that this index is very similar both in 2010 and in 2011; the first three clusters guarantee a higher donation index compared to the last two clusters. Obviously, the degree of relationship with the various players in the area guarantees a higher degree of loyalty to donation.

**Fig. 14 - The indices of donation**

![Bar chart showing donation indices](chart.png)

An analysis of the indexes of donations by type of donation in 2011, suggests that the index of donations by type of donation does not imply a close relationship between the degree of cooperation in the area and the frequency of donation by type (Fig. 15). It is however interesting to note that in the "high" cluster, the index of plasma donation is greater than in the other clusters, and this may be interesting to say once again that the degree of cooperation has an impact on plasmapheresis.

The indicators related to the degree of penetration in the area and the ability to include also members being ineligible for donation have significant results with respect to the levels of cooperation started by the Associations (fig. 16). Penetration rates in the area are positive and high in the medium / high and medium cluster, and this shows that a medium / high degree of collaboration allows for greater penetration of the territory, providing the opportunity to attract more potential donors. The "high" cluster, however, does not guarantee high penetration rates, thus highlighting that the relationship between the two indicators is not certain.
By analyzing the problems related to the condition of donors (ineligibility, temporary suspension, permanent suspension) it is possible to infer that there is no relationship between the degree of cooperation in the area and the indicators of ineligibility, temporary and permanent suspension (fig. 17).
The last measure of effectiveness related to the average number of people belonging to the Association and being present in the various institutional and programming bodies, reflects the degree of partnership in the area, which means that given a medium to high degree of collaboration, there is a similar average of people within the different bodies, and this average decreases with the decrease of the degree of partnership (fig. 18).

5.4.2. Performance indicators

The performance indicators analyzed are those related to operational efficiency, first of all the one related to the call, which is important also in relation to the assessments made in the previous chapter (Fig. 19).
The graph shows a good efficiency of the call (almost 1:1) at all the levels of partnership highlighted. However, an abnormal result is present for the cluster of low cooperation. This anomaly depends on the presence of small Associations which guarantee a higher attendance on predefined days using word of mouth and posters as a call to donation. It is however possible to highlight that excluding this case, the degree of cooperation with the stakeholders on the territory has an impact on the efficiency of the call.

The average of donations per month and consequently the average of donations per day, instead, are closely correlated with the degree of cooperation in the area (Fig. 20). In fact, when the degree of cooperation decreases, the average donations made also decrease, thus identifying as vital, to ensure an efficiency criterion, the presence of a high degree of cooperation among the different institutional players.

The indicator for the identification of the relationship between collaborators and donors, and between employees and donors, shows a result which is not significant in the relation with the degrees of cooperation, although it is interesting to notice that in case of a low relationship, there is a low number of employees. The indicator for cooperating members, however, cannot be taken as an absolute value, since part of the Associations has not included managers among cooperating members.
5.4.3. Indicators of proximity

The first indicator of territorial proximity analyzes the average number of events and number of participants per event, as shown in Fig. 22. This indicator does not present a clear correlation with the degree of cooperation in the area, but it is possible to infer the presence of a relationship between the two indicators. The highest average number of participants corresponds to a cluster of medium and high collaboration between stakeholders; this result is particularly different from others. In addition, the lowest average attendance is present in the indicator corresponding to the cluster with low collaboration, and this shows that most likely, without a high level of collaboration with other stakeholders, it will be difficult to organize attractive events in the area and to organize an adequate number of events.

The ability to attract new members, instead, unlike the previous indicator, is not related to the cluster of collaboration in the area (Fig. 23). In fact, the heterogeneity of the results shows no correlation between the two indicators. The ability to attract through events will depend on the quality of the events being organized, which does not depend on the degree of collaboration established in the area. It is interesting, however, to notice that the organizations with a high degree of co-operation have attracted a large number of donors with many local events.
A similar reasoning can be made also within the indicator related to the partnership, intended as the number of partnerships and number of new members per partnership. Also in this case, in fact, it is probably not possible to show a relationship between the degree of cooperation and the partnerships. However, considering the "high" cluster and the "low" cluster, it is clear that the presence of a collaboration in the area makes it possible to obtain higher results not much in terms of partnership creation, but in terms of attraction of new donors (Fig. 24).
The indicator of the variation in the items is not related in any way to the degree of cooperation in the area as is apparent from Fig. 25.

The last indicator evaluating the variation in the presence of cooperating members within the Association, does not present, instead, a significant result in terms of correlation; as one can see, the variation in the number of cooperating members does not result in an incremental variation in the level of cooperation.

The results presented in figure. 27 can be summarized by pointing out the issues on which the degree of collaboration between different stakeholders has a particularly positive impact.
### Fig. 27 - The impact of the degree of cooperation

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Issues</th>
<th>Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effectiveness</td>
<td>Variation in the number of donors</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Variation in the number of whole blood donations</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Variation in the number of plasma donations</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total donation index</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Whole blood donation index</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plasma donation index</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Index of penetration in the area</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Suspensions and ineligibility of donors</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of representatives in institutional bodies</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Efficiency of the call</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Efficiency</td>
<td>Average monthly donations</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The ratio between cooperating members / staff and donors</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Territorial proximity</td>
<td>Participants and number of events</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Attraction through events</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Partnerships</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Attraction through partnerships</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Variation in the number of items</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Variation in cooperating members</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

### 5.5. Conclusions

The objective of this overview for the definition of stakeholders and of the relationships established between them within the area was to highlight the articulation and complexity of the transfusion system and to assess the impact of the synergies that are activated on the territory. Many are the stakeholders of the Italian transfusion system, since the system which is being analyzed has to meet, by its very nature, a general interest of the community. Stakeholders include primary and secondary players of the system, handling, in their complexity, the added value that can and must be created.

Based on the identification of some key stakeholders for the donation process in its primary stage, as described above, some analyses have been carried out to assess the differences existing between the different organizational models and the different association activities in terms of cooperation in the area.

Through an assessment of the activities carried out by the Association, it is possible to conclude that there is a particular difference in terms of cooperation in the area between collection activities and association activities, except in terms of intensity of the relationship with the Committee for the Appropriate Use of blood.
The association model including the collection and the call / awareness at the provincial level provides for a high cooperation and synergy with the other Associations and with the players of the Public Administration of reference.

The highest degree of collaboration with the Committee for the Appropriate Use of Blood is instead present in the organizational model providing for the collection by the public facilities and the association activities by the local facilities and in the models which include the collection by provincial facilities. In this case, the underlying reasons appear clearly in the model itself, since a good integration is necessary between Transfusion Services and local bodies, and it is important to evaluate the role of the Associations within the Committees in case the collection is structured at the provincial level.

The two models having the highest degree of cooperation are the mixed association model and the public mixed model, which therefore represent the two models with the greatest synergy between the various stakeholders analyzed and the Associations.

Lastly, given the impact that can be created on the indicators of effectiveness, performance and territorial proximity, it is possible to infer that the greatest impact occurs in terms of effectiveness, since the creation of synergies can lead to an increase in:
- the number of plasma donations;
- the total index of donation;
- the index of plasma donation.

An average impact is found with regard to the indices of performance, which could be examined through the assessment of the results in terms of economic soundness; lastly, a residual impact remains on the indicators of territorial proximity, and this means that a high degree of synergy with local players does not necessarily identify an approach to donors and potential donors.
6.1. Introduction

The organizational models identified in the area are the basis for the assessment of what may be the future prospects of continuity of the Italian transfusion system. It is therefore important to assess the impact that the different organizational models provide for on the indicators of effectiveness, performance and territorial proximity.

The first part of the chapter provides a complete overview with a detailed description of the organizational models existing in the area and of their representation in terms of:

- donors;
- type of donation;
- future trends.

The second part focuses more on the results in terms of effectiveness, efficiency and territorial proximity. Through an analysis of each indicator, the differences will be evaluated in order to identify the positive sides and the problems of the models.

Lastly, the presence of correlations between the organizational models and the assessment of donors will be analyzed in relation to the donation process developed.

Therefore, the goals of the chapter are:

- to evaluate the relationships existing between the organizational models and present and future situation of donors in terms of stable structure and future trends;
- to identify the social and economic impacts generated by the organizational models in terms of effectiveness, efficiency and territorial proximity;
- to identify the marketing and retention tools most used by the different branches.

6.2. Organizational models and composition of donors

As already pointed out in chapter 4, six different organizational models have been identified which provide for different responsibilities in terms of awareness raising, call and collection in the area.

It is worth reminding that six models have been identified, with the following characteristics:

1. **Mixed association model**: this model includes all the branches that have implemented awareness and retention activities in the area, managed by the municipal branches at a local level, while collection is managed by the provincial offices in collaboration with the Blood Transfusion Services; collection may be carried out in Collection Units and in any organizational facilities or bloodmobiles.

2. **Decentralized association model**: in this model, awareness, retention and blood collection activities are managed entirely by the municipal offices of the Association; also in this case, collection can take place in Collection Units and in any organizational facilities or bloodmobiles operated by Avis.
3. **Centralized association model:** in this model, retention and blood collection activities are managed entirely by the provincial offices of the Association, while awareness activities are managed at the local level; also in this case, the collection can take place in Collection Units and in any organizational facilities or bloodmobiles.

4. **Decentralized public model:** in this public model, awareness and call are managed by the municipal offices, while collection is run entirely or almost entirely by public facilities; in this case, collection may occur within Hospitals or in any of their organizational facilities or bloodmobiles.

5. **Mixed public model:** in this model, awareness and retention are handled by the provincial offices operating in the area as a support to municipal offices, while collection is managed almost entirely within public facilities; in this case, collection may occur within Hospitals or in any of their organizational facilities or bloodmobiles.

6. **Centralized public model:** in this model, awareness raising is performed through local Avis branches, while retention and collection are handled for the most part within public facilities supported by local facilities; in this case, collection may occur in hospitals or in any of their organizational facilities or bloodmobiles.

Taking then as a reference the selected sample of experiences and organizations and excluding the Regional Avis branches, it is possible to infer that 52% of the experiences involve a decentralized public model in which the local Avis branches deal with awareness-raising and call, while the collection activity is managed entirely by the public sector, 30% of the experiences include the total management of awareness, call and retention by local Avis branches. The other models show much smaller proportions, 7% of the experiences makes use of the third model in which provincial Avis operate the whole association and collection activities, 6% uses the first model in which the responsibilities are divided between municipal branches and provincial branches, 5% uses the fifth model, which includes the sharing of responsibilities between provincial branches and Transfusion Services, and finally 2% present instead a model that provides for the involvement of the associations mainly in awareness-raising activities (fig. 1).

**Fig. 1 - The organizational models in AVIS branches (Interviews with Presidents)**

![Graph showing the percentage of each organizational model: 52% Decentralized Public, 30% Decentralized Membership, 7% Centralized Public, 6% Centralized Membership, 3% Shared Public, 2% Centralized Public.]

Source: CERGAS.

In order to have a comprehensive overview of the organizational models, it was deemed essential to analyze the following data:

- **the composition of donors by age:** it is important to analyze the composition of donors by age on the Italian territory to evaluate prospectively, on the basis of the trends identified, the prospects of the generation change, in order to identify how the supply and inclusion of donors can continue and how this relates to the organizational models; in particular, the percentage of young donors present in 2011 will be
evaluated, together with the percentage of young new members in the years 2011 and 2012;

- **the composition of donors by geographical area**: it is important to analyze the origin of donors, as this allows to understand how to meet the needs of a population that is changing increasingly in terms of geographical origin. This will therefore entail a demand for uncommon blood groups; in particular, the percentage of Italian donors will be evaluated, and hypotheses may be made on the number of foreign donors being present in the area;

- **the composition of donors by gender**: it is important to analyze the composition of donors by gender, as this provides the opportunity to identify the changes, from a demographic point of view, both in the quantity blood supply (by law, women can donate whole blood up to a maximum of two times per year) and in the composition of the Associations; in particular, the percentage of donors in 2011 will be evaluated, as well as the percentage of female new members in the years 2011 and 2012.

6.2.1.1 Young donors and donors under 25

An analysis of the average attendance of young people within different organizational models, shows that the mixed association model has the highest percentage of donors under 25, followed by the decentralized association model and by the decentralized public model. Lower results are instead obtained within the other existing models (fig. 2).

**Fig. 2 - Donors under 25 in the organizational models**

![Graph showing the percentage of donors under 25 in different organizational models.](source: CERGAS)

It is therefore clear that the models presenting awareness and retention in the area implemented at the local level have a higher percentage of attraction of young donors; in terms of awareness and penetration, physical proximity therefore attracts a larger number of young donors, who can ensure the continuity of the Associations. It is then necessary, for other association levels, to identify tools that can attract young donors making it possible to provide continuity to the different branches.

An analysis of the trend of the percentage of young people who joined in 2011 and 2012 (fig. 3) shows that besides the mixed association model, also the centralized association model and the mixed public model have the highest rates of attraction of young people belonging to new donors. This means that the Associations belonging to these models have identified the tools that can be put in place to attract young donors. In particular, it is interesting to highlight that the last two models which presented a rate of composition of older donors have identified the problem and have clearly activated the most significant attraction tools towards the 18-25 years target.
6.2.2. The origins of donors

As for the origin of donors out of the total of Italian donors, a slight difference exists, with respect to the previous graph, between the various organizational models. The percentage of Italian donors is 98% within the decentralized public model and 97% in centralized association models. The differences are not significant enough to identify the underlying reasons for the higher attraction of foreign donors.

6.2.3. The gender composition of donors

Through the analysis of the trend related to gender, which has proved to be important for the continuity and the characteristics of the organization and for the willingness to donate plasma, it is possible to identify a greater presence of women in mixed association models and in centralized public models. The centralized association model and the mixed public model are instead below average, with a percentage of women under 30% (Fig. 5). Maybe the presence of women does not depend on particular reasons underlying the organizational models, although obviously the presence of women is greater in those organizational models which provide for larger collection sites, where it is therefore very likely to have the possibility to donate plasma. In fact, as stated in chapter 4, an analysis of the questionnaires completed by donors highlighted the greater willingness of women to donate plasma.
These remarks can be confirmed also in the evaluation of the future female trend; excluding 2012, because of the lack of data for the evaluation of the mixed public model, it is anyway possible to analyze 2011. In fact, this year, the mixed association model and the centralized public model show a high percentage of women among donors. The mixed public model always includes, instead, a low percentage of female donors. Others stand above average, with a major variation in gender composition.

6.2.4. Concluding remarks on the description of donors

From the analysis of the composition of donors in the different organizational models, the summary remarks set out in fig. 7 emerge.

All the organizational models have implemented a series of tools for the attraction of young donors. Indeed, the average percentage trend of young donors joining is growing in all the models analyzed; this highlights the importance given by the Associations to raising awareness in population groups which can provide continuity to the transfusion system.

Through the origin of donors it is possible to highlight that three organizational models being very different from each other (the mixed association model, the decentralized association model and the centralized public model) manage to attract a higher proportion of foreign donors, thus highlighting their ability to integrate within the Italian transfusion system.

Lastly, it is possible to highlight that the trend of investment in the attraction of the female gender is very high in all models (the evidence of a lower average in the trend for the years 2011 and 2012 results from the lack
of data in the last two models); the only organizational model that does not present a positive trend relating to gender is the mixed public model, so it could be interesting to understand which organizational mechanisms are not being used by the branches belonging to this model.

**Fig. 7 - Organizational models and composition of donors**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixed association</td>
<td></td>
<td>up</td>
<td>up</td>
<td></td>
<td></td>
<td>up</td>
<td>up</td>
</tr>
<tr>
<td>Decentralized Association Model</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centralized Association Model</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decentralized Public Model</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mixed Public Model</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ND</td>
</tr>
<tr>
<td>Model Public International Central</td>
<td></td>
<td>down</td>
<td>down</td>
<td></td>
<td></td>
<td>ND</td>
<td>ND</td>
</tr>
</tbody>
</table>

Legend:

- The indicator of the organizational model is higher than the national average.
- The indicator of the organizational model is lower than the national average.
- The indicator of the organizational model is the same as the national average.

ND: The data are not sufficient for evaluation.

Source: CERGAS.

**6.3. Organizational models and indicators of effectiveness**

A second important analysis to determine the impact that organizational models have in the area starts from the analysis of the impact of organizational models on the indicators of effectiveness. The indicators of effectiveness taken into account and highlighted in Chapter 4 are the following:

- variation in the number of donors between 2010 and 2011;
- variation in the number of donations of whole blood and plasma;
- total donation index, plasma donation index and whole blood donation index;
- the relationship between Avis donors and total members for the assessment of the ability of inclusion of former donors or of persons who are ineligible for donation;
- penetration in the area and ability to attract active donors;
- ability to involve and attract the ideal donor;
- degree of collaboration with the various stakeholders in the area;
- number of representatives in different institutional bodies, which means ability to interact with the institutional players of the
transfusion system.

6.3.1. Variation in the number of donors

This indicator is related to models which provide for an activity with high territorial proximity, and supported in particular by local Associations (Fig. 8). In fact, the mixed association model and the decentralized association model have a slightly higher variation than the average of the number of donors in the area. The centralized association model and the mixed public model, instead, provide for a much smaller increase, perhaps linked to the greater distance from the territory of reference. It is important to remember, however, that the assessment of the variation in the number of donors must be accompanied by the evaluation of the quality of donors and of the type of donation being promoted.

Fig. 8 - Organizational models and variation of donors (2010-2011)

![Graph showing variation in donors]

Source: CERGAS.

6.3.2. Variations in whole blood and plasma donations

By considering, therefore, the variation in whole blood and plasma donations (Fig. 9 and Fig. 10), it is possible to note that the first two models, which provided for the ability of variation in donors, provide for different results in the variation of donations. The mixed association model has in fact a variation of whole blood donations being equivalent to the variation of donors, but also a drastic drop in plasma donations which have sharply decreased in 2011 by 15%. This result can highlight, on the one hand, the ability to raise awareness in the area, but on the other hand also the difficulty in increasing a continuous donation over time and to thus transform retained donors from whole blood donors to plasma donors. This difficulty can result from the lack of facilities making it possible to collect plasma in the area. A similar result is present within the decentralized associative model, although the decrease in plasma donations is significantly lower than in the first case and stands at about 1%. Considering the centralized association model, instead, it is possible to highlight that, given the increase in donors by 1%, there is an equivalent increase in whole blood donations and an increase by 20% of plasma donations. This could emphasize the ability of this organizational model to put in place retention tools encouraging the transition from whole blood donation to plasma donation.
6.3.3. The overall donation index

To conclude the overview resulting from the types of donations and donors, it is essential to consider the existing loyalty to a continuous donation over time. It is therefore important to identify the overall donation index in 2010 and 2011 and then analyze in detail the differences in the specific donation indices. Through an analysis of the overall donation index (Fig. 11), it is possible to find that the highest index is present within the centralized association model and the mixed public model. The presence of provincial structures highlights the ability to retain the donor and create tools that support continuity over time. This confirms therefore the previous analysis, which provided for a high variation in plasma donations. Moreover, it is possible to identify a result above the national average even in the case of the mixed association model. Finally, due to lack of data, it was not possible to measure the result achieved by the centralized public model.

Source: CERGAS.
6.3.4. The whole blood and plasma donation index

By analyzing the indicators related to the donation of whole blood, it is possible to find out that the models having a higher donation index are the centralized association model and the mixed association model (Fig. 12). The organizational models presenting a centralized collection centre at the provincial level thus guarantee the presence of a higher blood donation index, even in the presence of a possible physical distance from the donor.

Fig. 12 - The organizational models and the whole blood donation index

Source: CERGAS.

This is in contrast with the analysis of the plasma donation index (fig. 13); first of all, it is possible to highlight the low rate of donation permeating all the organizational models, and thus highlighting a general problem essentially linked to plasma collection; it is interesting to note that the result is above average and is increasing for those models that provide for the territorial proximity of the Associations, thus identifying the importance of proximity to the donor for awareness and retention activities. The result achieved by the centralized association model is particularly interesting, since, given an increase in plasma donations, provides for, on the one hand, a lower donation index, but on the other hand an increase between 2010 and 2011. This emphasizes therefore the increase in the retention ability related to this type of donation; however, the variation in plasma donation cannot be explained only with an increase in the donation index, but also with the ability to attract donors who decide to carry out this type of donation and with the presence of facilities for plasma collection.
6.3.5. The inclusion and penetration rate in the area

Through an analysis of the relationship between Avis donors and total members, that is, the possibility to have a percentage of members who cannot donate anymore, but decide to maintain the link with the Association, it is possible to highlight a high percentage of donors out of the total members. This ensures, on the one hand, the continuity of the association based on donors and, on the other hand, leaves room for the inclusion of a part of the population that does not have the possibility to donate (fig. 14).

A further result of inclusion is visible in the indicator measuring the penetration in the area in terms of enrollments to the Association (fig. 15). The models providing for a greater involvement of the population are those providing for a presence throughout the territory, through local Associations managing the retention and awareness activities. Local Associations thus become a reference point in the area to encourage active volunteering activities.
A similar result can also be seen by evaluating the penetration within the population being eligible for donation, as shown in Fig. 16. The evidence found in the decentralized public model is particularly positive, with an average of penetration in the area being not too far from the final target identified by the European Union as optimal for the penetration in the area (about 10%). Lower results are obtained in the case of a centralized public model, and this is probably due to the distance of local health units from the local population.

**6.3.6. The quality of donors: ineligibility, temporary suspension and permanent suspension**

Together with the penetration in the area, it is important to assess the quality of donors being attracted and the ability to maintain their presence and their donation over time. By analyzing Fig. 17, although there are not enough data to evaluate three models, it is possible to see that the organizational model having the highest percentage of potential donors with negative check is the centralized association model, while the decentralized association model has the lowest percentage. In order to
assess the underlying reasons for these results it is necessary to analyze the processes of inclusion and attraction of new donors, and their capacity to attract the right population target, especially because the change between the years 2010 and 2011 provided for an average increase of unsuitable donors by 15%.

Fig. 17 - The organizational models and the ability to attract the "right" donors

National Average (2011)

Source: CERGAS.

By analyzing the percentages of donors being under temporary and permanent suspension (Fig. 18), it is possible to find out that the centralized public model has a high rate of members with temporary suspension; after an initial donation, donors decide not to pursue the path; however, it is not possible to confirm this hypothesis by analyzing the data on permanent suspension, since the information collected does not represent a significant value. The two models that provide for a role of the Associations at the local level have a high rate of temporary suspensions and also the highest rate of permanent suspensions. Therefore, contrary to what was stated before, the two models on the one hand, are able to select the ideal donor but, on the other hand, cannot prospectively ensure the continuity of the donation over time, whereas the centralized association model, despite the difficulties of initial selection, guarantees the continuity of the donation.
6.3.7. The degree of collaboration with stakeholders

The last indicator of effectiveness considered shows the perceived degree of collaboration with external stakeholders. For the sake of completeness, the final remarks and the reference picture developed in Chapter 5 (Fig. 19) are herein reproduced. As one can see, the association model providing for collection and retention at the provincial level provides for a strong cooperation and synergy with the other Associations and with the players of the Public Administration of reference. This is probably due to the ability to interact with the non-profit Associations of different areas and with the Public Administrations being interested in the ability to manage a transfusion system, in the first part of its career (blood collection), fully managed by the Association. The highest cooperation level with the Transfusion Services is present in models where public facilities deal with collection activation in the area. The highest degree of collaboration with the Committee for the Appropriate Use of Blood is instead present in the organizational model that provides for collection by public facilities and association activities by local offices and in models that provide for the collection by provincial branches. In this case, the underlying reasons are evident in the model itself, because there needs to be a good integration between Transfusion Services and local branches, and it is important to evaluate the role of the Associations within Committees, in case the collection is structured at the provincial level.
Lastly, it is possible to analyze the average degree of cooperation within the different organizational models, assuming that the different relationships with the various stakeholders to assume the same degree of importance (fig. 20).

Source: CERGAS.

Fig. 20 - The average degree of cooperation within the organizational models

Source: CERGAS.
The two models having the highest degree of cooperation are the mixed association model and the mixed public model, which then represent the two models with greatest synergy between the various stakeholders analyzed and the Associations.

Therefore, studying the relationship between the indicators of effectiveness and the different organizational models, the following summary remarks are highlighted, and can be summarized in Fig. 21:

- considering the variation in donors, donations and in the retention started with the aim of ensuring a continuous and not sporadic donation, it is possible to emphasize that the mixed association model shows the best results in terms of effectiveness related to the awareness of the area, which is visible in the increase in donors and in the changes in whole blood donations, as well as in terms of effectiveness related to loyalty, which is visible in the presence of a donation index above average. However, a gap exists in terms of variations in plasma donations, because although retention and awareness raising are being performed, there is no increase in this type of donation. It is therefore necessary to identify the underlying reasons for that, and to understand whether the cause is the lack of a collection centre being sufficiently close to allow people to go and donate, or a problem related to the methods of retention activated in the area. Similar results, although of smaller magnitude, can be found also within the decentralized association model. The centralized association model, instead, shows results above average in terms of increased donation indices and therefore a positive impact of retention activities; similar results are present in the mixed public model, which however has not obtained a significant variation in plasma donations; lastly, the centralized public model shows average results for awareness raising and retention, while it was not possible to make hypotheses on the results of the centralized public model because of a lack of data;

- by analyzing the ability of inclusion and penetration in the area, it is possible to see a particularly good result for the mixed association model, that is, a penetration into the active territory and on the population being higher than average, and a very high percentage of inclusion of donors; however, positive results also emerge in all the models presented, except in the centralized public model, which provides for a penetration in the area being lower than average, perhaps because of the possible distance of Transfusion Services from the population;

- considering the ability to attract eligible donors being willing to provide continuous donation over time, good results can be highlighted, obtained by the decentralized public model and by the decentralized association model. Probably, the antennas in the area of local Associations guarantee the ability to attract the right people, an ability which becomes more difficult to express in case of a great distance from the places of origin of the donor;

- Lastly, as already explained very well in chapter 5, the two models ensuring greater synergy with the territory are the mixed public model and the mixed association model, and this is probably because of the ability of the provincial Associations to actively interact with the various local stakeholders.
### Fig. 21 - Organizational models and indicators of effectiveness

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Mixed association model</th>
<th>Decentralized association model</th>
<th>Centralized association model</th>
<th>Decentralized public Model</th>
<th>Mixed public Model</th>
<th>Centralized public model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variation in Donors (2010-2011)</td>
<td>↑</td>
<td>↑</td>
<td>About</td>
<td>↑</td>
<td>About</td>
<td>↑</td>
</tr>
<tr>
<td>Variation in whole blood donations (2010-2011)</td>
<td>↑</td>
<td>↑</td>
<td>↓</td>
<td>↓</td>
<td></td>
<td>ND</td>
</tr>
<tr>
<td>Variation in Plasma donations (2010-2011)</td>
<td>↓</td>
<td>↓</td>
<td>↑</td>
<td>↑</td>
<td></td>
<td>ND</td>
</tr>
<tr>
<td>total donation index (Year 2010)</td>
<td>↑</td>
<td>↓</td>
<td>↑</td>
<td>↑</td>
<td></td>
<td>ND</td>
</tr>
<tr>
<td>total donation index (Year 2011)</td>
<td>↑</td>
<td>↓</td>
<td>↑</td>
<td>↑</td>
<td></td>
<td>ND</td>
</tr>
<tr>
<td>blood donation index (Year 2010)</td>
<td>↑</td>
<td>↓</td>
<td>↑</td>
<td>↑</td>
<td></td>
<td>ND</td>
</tr>
<tr>
<td>blood donation index (Year 2011)</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td></td>
<td>ND</td>
</tr>
<tr>
<td>plasma donation index (Year 2010)</td>
<td>↓</td>
<td>↓</td>
<td>↑</td>
<td>↑</td>
<td></td>
<td>ND</td>
</tr>
<tr>
<td>plasma donation index (Year 2011)</td>
<td>↓</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td></td>
<td>ND</td>
</tr>
<tr>
<td>Total donors / members (Year 2011)</td>
<td>↑</td>
<td>↓</td>
<td>↑</td>
<td>↑</td>
<td></td>
<td>ND</td>
</tr>
<tr>
<td>Total Members/Total population (Year 2011)</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td></td>
<td>↑</td>
</tr>
<tr>
<td>Donors / Active Population (Year 2011)</td>
<td>↓</td>
<td>↑</td>
<td>↓</td>
<td>↑</td>
<td></td>
<td>↑</td>
</tr>
<tr>
<td>Potential ineligible donors / Total donors (Year 2011)</td>
<td>↓</td>
<td>↓</td>
<td>↑</td>
<td>↑</td>
<td></td>
<td>ND</td>
</tr>
<tr>
<td>Permanently suspended donors / total Donors</td>
<td>↓</td>
<td>↑</td>
<td>↓</td>
<td>↑</td>
<td></td>
<td>↑</td>
</tr>
</tbody>
</table>
6.4. Organizational models and performance indicators

A third important analysis to determine the impact of organizational models on the territory starts from the analysis of the impact of organizational models on performance indicators. The performance indicators taken into account and highlighted in Chapter 4 are divided into indicators of organizational efficiency and indicators of economic performance and business solidity.

The indicators of organizational performance are:
- efficiency of the call in the area;
- respect of the programming structured with institutional actors;
- average monthly donations and average daily donations, assuming the continuous opening of collection centers;
- assessment of the average donors, cooperating members and staff to be managed;
- relationship between cooperating members and staff;
- average number of donations for each collection centre.

The indicators of economic efficiency and business solidity are:
- average income and costs for each donation;
- enhancement of the composition of income;
- enhancement of the composition of costs;
- variations in the various items between the years 2010 and 2011;
- average percentage of existing reclassified business for each donation;
- enhancement of the ROE (Return on Equity);
- enhancement of the ROI (Return on Investment).

6.4.1. The efficiency of the call

As for the efficiency of the call, positive results have to be highlighted in the organizational models having a strong relationship with the area, determined by the presence and the management of calls by local Associations (Fig. 22). Moreover, in the decentralized public model, which is actually small in size, it seems that after a single call two people donate, thus starting in a word-of-mouth effect that allows to attract more donors with a single call. It is important to remember, however, that this result can be controversial, since the self-sufficiency which is being sought is not only quantitative but also qualitative. Minor results or little data are found in the other models, and this shows that the distance from the donor implies a further effort in terms of efficiency and dissemination of information on the territory. For the indicator related to the assistance to programming, the
results are not particularly attractive, since all the models slavishly adapt themselves to the needs identified in the area.

**Fig. 22 - The organizational models and the efficiency of the call**

![Graph showing organizational models and efficiency](image)

Source: CERGAS.

**6.4.2. Average monthly and daily donations**

The indicator related to the average monthly donations and the average daily donations is instead more interesting. As shown in Fig. 23, the model providing for a greater number of average monthly donations is the centralized association model, followed by the decentralized public model. The result can be easily understood, given the fact that the public or provincial collection facilities are larger in size than local structures, thus ensuring the possibility of having a greater number of donations in the territory. Assuming an equal fictitious number of annual opening days for all models (n = 300), although it is clear that there is a variability of opening between big collection units and small organizational facilities, the result is the same commented above (fig. 24). The two models with a higher average number of donations have on average between 60 and 75 donations on one day, which then correspond to about 10 donations per hour\(^1\), considering the possibility of simultaneous activities being carried out in RUs and in the related organizational structures operating on the same day and at the same times.

**Fig. 23 - The organizational models and the average monthly donations**

![Graph showing organizational models and average monthly donations](image)

Source: CERGAS.

\(^1\) The data reflects an average, and does not consider the different times for the different types of donation. It would be important to measure the time of donation within the different organizational models and for the different types of donation.
6.4.3. The relationship between donors, total members, cooperating members and employees

In the relationship between the number of donors and the number of staff members, a difficulty appears in data analysis, because most likely the cooperating members did not include all the representatives of the Boards of the Associations, whose average ratio is around 90 to 1, as explained in chapter 4. By analyzing the data provided, it is possible to identify a high ratio, that is, a probability for each employee to be "responsible for" and to "manage" many donors in the case of the centralized association model and of the centralized public model (Fig. 25). Always according to the same concept, each employee "will be responsible for" and "manage" 707 to 712 donors, in other cases it is possible to manage fewer members. It is important to highlight the need for all models to find effective ways of "management" of such a large number of donors, through the identification of tools allowing to follow the path and the history of the donation over time. A similar remark can also be made on the relationship between full members and cooperating members, highlighting also in this case a very high ratio (fig. 26).
Another indicator being particularly interesting is the one analyzing the relationship between staff members and the paid staff in branches. Looking at FIG. 27, it is possible to highlight that the centralized association model and the mixed public model provide for a ratio being lower than average. This is, on the one hand, because they apparently "run" and attract fewer employees, on the other hand probably because they have adopted a policy of hiring and therefore of recruitment of staff to encourage the continuity of the Association. Looking at the average number of employees, this remark is particularly true for the centralized association model, which provides for 21 employees on average, compared to an average of two to three employees in the other models. The centralized association model therefore provides for these results since it has decided to hire staff to carry out activities which in other offices are carried out by volunteers. As for the mixed public model, instead, the number of volunteers and the number of employees is below the average of the other organizational models.
6.4.4. The average number of donations in collection centers

The last indicator developed in the set related to operating efficiency is the indicator of the average number of donations in every collection centre identified in the area. As shown in Fig. 28, the average donations per collection centre are higher within the mixed association model and the centralized association model; this may be the result of the reduction in the organizational branches in the area, a reduction due to the centralization in larger collection facilities which allow for an increase in the average number of donations.

**Fig. 28 - The organizational models and the average number of donations in collection centers**

Source: CERGAS.

By studying the relationship between the indicators of operational efficiency and the different organizational models, the following summary remarks can be therefore highlighted, and represented as in Fig. 29:

- the efficiency of the call in all organizational models having sufficient data is high, the highest indicator is within the decentralized public model which was described before as being very close to the local area and therefore to the ability to attract new donors and to retain existing donors;
- the analysis of the average monthly donations and daily donations identifies the centralized association model as the model being able to reach a greater number of donations, followed by the mixed public model; this is also reflected in the average number of donations enabled in collection sites, since the centralized models are probably larger and can attract a greater number of donations;
- By analyzing the relationship between employees, donors, full members and employees it is possible to identify the ability of the mixed association model to concentrate the number of total donors that each volunteer is "responsible for", thanks to a high number of employees who support the management activities of the Association; the decentralized association model, too, has to manage a smaller number of volunteers, and thus uses retention tools being easier to replicate and maintain. The other models, lastly, have a high number of donors to "manage" for each volunteer, and highlight the need to find ways of ensuring an efficient and effective management.
### Fig. 29- Organizational models and performance indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Mixed Association Model</th>
<th>Decentralized association model</th>
<th>Centralized Association model</th>
<th>Decentralized Public Model</th>
<th>Mixed Public Model</th>
<th>Centralized Public Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency of the call</td>
<td>↓</td>
<td>↓</td>
<td>↑</td>
<td>ND</td>
<td>ND</td>
<td></td>
</tr>
<tr>
<td>Average monthly donations</td>
<td>↓</td>
<td>↓</td>
<td>↑</td>
<td>↑</td>
<td>ND</td>
<td></td>
</tr>
<tr>
<td>Average daily donations</td>
<td>↓</td>
<td>↓</td>
<td>↑</td>
<td>↑</td>
<td>ND</td>
<td></td>
</tr>
<tr>
<td>Donors / Cooperating members</td>
<td>↓</td>
<td>↓</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td></td>
</tr>
<tr>
<td>Total members / Cooperating members</td>
<td>↓</td>
<td>↓</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td></td>
</tr>
<tr>
<td>Cooperating members / Employees</td>
<td>↑</td>
<td>ND</td>
<td>↑</td>
<td>↓</td>
<td>ND</td>
<td></td>
</tr>
<tr>
<td>Average donations in collection sites</td>
<td>↑</td>
<td>↓</td>
<td>↑</td>
<td>↓</td>
<td>ND</td>
<td></td>
</tr>
</tbody>
</table>

The indicator of the organizational model is higher than the national average.

The indicator of the organizational model is lower than the national average.

ND: The data are not sufficient for evaluation.

Source: CERGAS.

The second part of the paragraph takes into consideration the indicators of economic efficiency and business solidity; as already stated in Chapter 4, it is worth reminding that the financial statements collected are not sufficient for a meaningful assessment, but can support the analysis and provide an assessment of the trends. The analysis will therefore focus on the mixed association model, the decentralized association model, the centralized association model and the decentralized public model. Because of the small quantity of budgets collected, the last two models will not be analyzed. Lastly, there will be a vertical focus on the Associations mainly involved in collection and on the Associations mainly dealing with raising awareness in the area, to assess the impact that the two activities have on the strength of the Associations themselves.
6.4.5. The breakdown of revenue in 2010 and 2011

Through an analysis of the breakdown of revenue in 2010 (fig. 30) it is possible to highlight, as can be easily inferred, that the highest revenue in percentage for all the four models is represented by the proceeds of public hospitals for transfusion activities. In absolute terms, these revenues are higher in models providing for a structured collection at the provincial level. It is also interesting to analyze the percentage of revenues from other Avis branches and the structured clearing accounts; an analysis of the two items together shows similar results for the centralized association model.

Fig. 30 - The breakdown of revenue in the organizational models (year 2010)

<table>
<thead>
<tr>
<th>Revenue items</th>
<th>Mixed association model</th>
<th>Decentralized association model</th>
<th>Centralized Association model</th>
<th>Decentralized public model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Revenue items/Total Donations</td>
<td>Percentage breakdown of revenue</td>
<td>Revenue items/Total Donations</td>
<td>Percentage breakdown of revenue</td>
</tr>
<tr>
<td>Proceeds from transfusion activities</td>
<td>€ 42.44</td>
<td>68%</td>
<td>€ 12.57</td>
<td>89%</td>
</tr>
<tr>
<td>Proceeds from Avis</td>
<td>€ 6.58</td>
<td>10%</td>
<td>€ 0.00</td>
<td>0%</td>
</tr>
<tr>
<td>Clearing accounts</td>
<td>€ 3.54</td>
<td>6%</td>
<td>€ 0.75</td>
<td>5%</td>
</tr>
<tr>
<td>Other contributions from public sources</td>
<td>€ 0.81</td>
<td>1%</td>
<td>€ 0.31</td>
<td>2%</td>
</tr>
<tr>
<td>Other contributions from private sources</td>
<td>€ 9.24</td>
<td>15%</td>
<td>€ 0.37</td>
<td>3%</td>
</tr>
<tr>
<td>Contributions for reimbursement of transport costs</td>
<td>€ 0.00</td>
<td>0%</td>
<td>€ 0.06</td>
<td>0%</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>€ 0.17</td>
<td>0%</td>
<td>€ 0.16</td>
<td>1%</td>
</tr>
</tbody>
</table>

Source: CERGAS.
Fig. 31 - The breakdown of revenue in the organizational models (year 2011)

<table>
<thead>
<tr>
<th>Revenue items</th>
<th>Mixed Association model</th>
<th>Decentralized association model</th>
<th>Centralized association model</th>
<th>Decentralized Public Model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Revenue items total</td>
<td>Percentage composition of revenue</td>
<td>Revenue items total</td>
<td>Percentage composition of revenue</td>
</tr>
<tr>
<td>Proceeds of transfusion activities</td>
<td>€ 36.87</td>
<td>71%</td>
<td>€ 7.50</td>
<td>78%</td>
</tr>
<tr>
<td>Income from Avis</td>
<td>€ 5.00</td>
<td>10%</td>
<td>€ 0.00</td>
<td>0%</td>
</tr>
<tr>
<td>Clearing accounts</td>
<td>€ 2.21</td>
<td>4%</td>
<td>€ 0.75</td>
<td>8%</td>
</tr>
<tr>
<td>other contributions from public sources</td>
<td>€ 7.03</td>
<td>14%</td>
<td>€ 0.11</td>
<td>1%</td>
</tr>
<tr>
<td>other contributions from private sources</td>
<td>€ 0.46</td>
<td>1%</td>
<td>€ 1.04</td>
<td>11%</td>
</tr>
<tr>
<td>Contributions for reimbursement of transport costs</td>
<td>€ 0.00</td>
<td>0%</td>
<td>€ 0.00</td>
<td>0%</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>€ 0.27</td>
<td>1%</td>
<td>€ 0.25</td>
<td>3%</td>
</tr>
</tbody>
</table>

Source: CERGAS
### VARIATION REVENUE YEARS 2010-2011

<table>
<thead>
<tr>
<th>Revenue items</th>
<th>Mixed Association model</th>
<th>Decentralized association model</th>
<th>Centralized association model</th>
<th>Decentralized Public Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proceeds of transfusion</td>
<td>-13%</td>
<td>-40%</td>
<td>15%</td>
<td>0%</td>
</tr>
<tr>
<td>Income from Avis</td>
<td>-24%</td>
<td>0%</td>
<td>-1%</td>
<td>4%</td>
</tr>
<tr>
<td>Clearing account</td>
<td>-38%</td>
<td>0%</td>
<td>0%</td>
<td>-55%</td>
</tr>
<tr>
<td>other contributions from public sources</td>
<td>768%</td>
<td>-65%</td>
<td>-36%</td>
<td>41%</td>
</tr>
<tr>
<td>other contributions from private</td>
<td>-95%</td>
<td>181%</td>
<td>393%</td>
<td>-4%</td>
</tr>
<tr>
<td>Contributions for reimbursement of transport costs</td>
<td>0%</td>
<td>-100%</td>
<td>0%</td>
<td>57%</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>59%</td>
<td>56%</td>
<td>111%</td>
<td>19%</td>
</tr>
<tr>
<td>TOTAL VARIATION</td>
<td>-17%</td>
<td>-32%</td>
<td>18%</td>
<td>-7%</td>
</tr>
</tbody>
</table>

Source: CERGAS.

### 6.4.6. The breakdown of costs in 2010 and 2011

Considering the composition of costs in 2010 (Fig. 32), it is possible to highlight that the contributions to membership fees at the national, regional and local level have no significant impact on the composition of costs in any of the four models. The model in which the overall impact is higher is the decentralized public model, which provides for 5% of the total costs devoted to the other levels of membership. This varies in case clearing accounts are considered, as they provide for an economic balance between the different Associations concerned. In fact, when adding clearing accounts, the impact on costs becomes higher and varies from 1% (centralized association model) to 14% of the decentralized public model.

Looking, instead, at the costs resulting from contributions to other non-profit organizations, which is the fund-raising that the Association carries out in the area in partnership with other organizations (an example is a project in collaboration with Telethon), it is possible to highlight that in the mixed association model and in the centralized association model there is a high percentage of costs related to the support of these projects with other Associations dealing working to have a social purpose in the area. This is probably a way to achieve a higher local awareness, through the creation of active partnerships that can support the involvement of new donors.

By analyzing the costs directly related to the donation process, that is to "health" costs, personnel costs and non-health expenses for gifts (e.g. refreshments) it is possible to see that the centralized association model provides for a higher proportion of dedicated costs than the other models (37%). This is because the management is totally at the central association level, and therefore there are a series of "health" costs for collection and staff that other models do not have. The number is quite high also in the decentralized public model, which provides for average personnel and health costs. The percentage is instead very low for decentralized association models, which probably provide for a non-continuous collection or with centres that do not require staff throughout the year.
### Fig. 33 - The breakdown of costs in organizational models (year 2010)

**COST-YEAR 2010**

<table>
<thead>
<tr>
<th>Cost items</th>
<th>Mixed model</th>
<th>Association model</th>
<th>Decentralized association model</th>
<th>Centralized model</th>
<th>association</th>
<th>Decentralized Public Model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cost items / Total Donations</td>
<td>Percentage composition of costs</td>
<td>Cost items / Total Donations</td>
<td>Percentage composition</td>
<td>Cost items / Total Donations</td>
<td>Percentage composition</td>
</tr>
<tr>
<td>Expenses for National AVIS membership</td>
<td>€ 0.15</td>
<td>0%</td>
<td>€ 0.03</td>
<td>0%</td>
<td>€ 0.17</td>
<td>0%</td>
</tr>
<tr>
<td>Expenses for Regional AVIS membership</td>
<td>€ 0.15</td>
<td>0%</td>
<td>€ 0.02</td>
<td>0%</td>
<td>€ 0.33</td>
<td>1%</td>
</tr>
<tr>
<td>Expenses for Provincial AVIS membership</td>
<td>€ 0.33</td>
<td>1%</td>
<td>€ 0.06</td>
<td>1%</td>
<td>€ 0.00</td>
<td>0%</td>
</tr>
<tr>
<td>Expenses for membership fees vs. contributio ns vs. other (non-profit)</td>
<td>€ 9.65</td>
<td>16%</td>
<td>€ 0.13</td>
<td>1%</td>
<td>€ 9.23</td>
<td>17%</td>
</tr>
<tr>
<td>Clearing accounts</td>
<td>€ 3.54</td>
<td>6%</td>
<td>€ 0.75</td>
<td>7%</td>
<td>€ 0.00</td>
<td>0%</td>
</tr>
<tr>
<td>Personnel costs</td>
<td>€ 10.34</td>
<td>17%</td>
<td>€ 0.00</td>
<td>0%</td>
<td>€ 12.66</td>
<td>23%</td>
</tr>
<tr>
<td>Expenses for donations &quot;health&quot; expenses</td>
<td>€ 0.00</td>
<td>0%</td>
<td>€ 0.00</td>
<td>0%</td>
<td>€ 0.31</td>
<td>1%</td>
</tr>
<tr>
<td>Mkrg costs</td>
<td>€ 2.16</td>
<td>4%</td>
<td>€ 1.38</td>
<td>14%</td>
<td>€ 1.02</td>
<td>2%</td>
</tr>
<tr>
<td>Retention</td>
<td>€ 2.62</td>
<td>4%</td>
<td>€ 0.95</td>
<td>9%</td>
<td>€ 3.08</td>
<td>6%</td>
</tr>
<tr>
<td>Institutional costs</td>
<td>€ 0.57</td>
<td>1%</td>
<td>€ 0.19</td>
<td>2%</td>
<td>€ 1.73</td>
<td>3%</td>
</tr>
<tr>
<td>Overheads</td>
<td>€ 28.27</td>
<td>47%</td>
<td>€ 4.73</td>
<td>47%</td>
<td>€ 16.62</td>
<td>30%</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>€ 0.00</td>
<td>0%</td>
<td>€ 0.00</td>
<td>0%</td>
<td>€ 0.00</td>
<td>0%</td>
</tr>
<tr>
<td>Depreciation and</td>
<td>€ 0.10</td>
<td>0%</td>
<td>€ 1.56</td>
<td>16%</td>
<td>€ 2.64</td>
<td>5%</td>
</tr>
</tbody>
</table>
Considering the costs of marketing and retention it is possible to notice a particular investment to develop managerial tools in the decentralized association model and in the decentralized public model; it is interesting to highlight that the percentage of costs invested for marketing and retention is approximately the same, it can then be inferred that the organization models deciding to invest in awareness-raising tools will also invest in retention tools. Taking the indicators of effectiveness identified before, it is possible to highlight that the models investing in marketing and retention can achieve an increase in donors and an increase in eligible donors, who can ensure continuity in their donation.

The institutional costs do not represent a high proportion of cost, which means that the life of the association is not to be considered as a significant source of cost; different remarks can be made, instead, for overheads, which account for almost half the structured costs. The fixed costs arising from centres and facilities clearly represent a very high percentage of all the costs incurred. Lastly, depreciation and provisions highlight the underlying investment in new healthcare and non-healthcare machinery, made in particular by the Associations belonging to the decentralized association model and to the decentralized public model.

It is interesting to analyze the composition of costs in 2011 because they present some significant differences with respect to the previous year; taking into account the costs of membership fees at the various levels, it is possible to identify a percentage reduction in all models, a reduction which also emerges by analyzing and adding the necessary clearing accounts. Considering instead the support to projects in partnership with other Associations, the results are similar to the previous year, but there is an increase in the mixed association model. With such increase, the support reaches nearly 50% of the costs incurred by the Association. It is worth reminding that these contributions are donated through the activation of fundraising campaigns linked to other non-profit organizations in the area. An example of these projects is the collaboration with Telethon, that has allowed, on the one hand, to raise funds for their Foundation and, on the other hand, to raise awareness on donation. These remarks can probably be linked to the economic crisis, and therefore to a rationalization implemented by the entire Association to be able to ensure continuity to the areas that may be in major difficulty.

By analyzing the costs dedicated to donation intended as "health" costs, personnel costs and costs directly linked to donation itself, it is possible to see how the centralized association model also in 2011 does not invest in this sense, and thus outlines the presence of Associations mainly involved in awareness raising and retention, not in direct collection.

An analysis of the costs of marketing and retention provides the same vision and strategy proposed in the previous year, in which the models that invest in marketing invest in retention. The decentralized public model and the decentralized association model therefore invest specifically on attention to donors, while the mixed association model assumes a smaller investment in percentage. Interestingly, however, a possible marketing cost is represented by the cost item related to the support to other non-profit organizations. One can then think that the organizations within the mixed association models decide to invest more in a concept of partnership to structure awareness raising in the area.

The remaining costs are unchanged compared with 2011, and show a reduction in the overall overheads, thus highlighting the need for rationalization in response to the decline in revenue identified in the previous remarks.
The analysis of the total cost trend (Fig. 35), shows an increase in costs being particularly significant within the mixed association model; this stems primarily from the average increase in deprecations, probably caused by large investments made during the year 2011 (it is assumed, in view of the accreditation) and by an average increase in contributions towards non-profit Associations. Excluding these two items, all the other costs seem to decline, thus highlighting the attention to a rationalization of expenses. The model providing for a higher reduction of costs is the decentralized public model, which thanks to the reduction of all costs except for contributions to other Avis branches and expenses for general membership fees, has managed to reduce the final costs between 2010 and 2011 by 52%. The other two models, however, do not change significantly the impact of their costs, but increase the costs relating to "health" costs and overheads for the decentralized association model, and increase institutional costs and contributions to other Avis branches for the centralized association model.

**Fig. 34 - The breakdown of costs in organizational costs** (Year 2011)

<table>
<thead>
<tr>
<th>Cost items</th>
<th>Mixed Association</th>
<th>Decentralized association</th>
<th>Centralized association model</th>
<th>Decentralized</th>
<th>Mixed Association</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs of membership fees</td>
<td>€ 0.00</td>
<td>0%</td>
<td>€ 0.01</td>
<td>0%</td>
<td>€ 0.21</td>
</tr>
<tr>
<td>Expenses for National AVIS membership</td>
<td>€ 0.11</td>
<td>0%</td>
<td>€ 0.03</td>
<td>0%</td>
<td>€ 0.17</td>
</tr>
<tr>
<td>Expenses for Regional AVIS membership</td>
<td>€ 0.11</td>
<td>0%</td>
<td>€ 0.02</td>
<td>0%</td>
<td>€ 0.41</td>
</tr>
<tr>
<td>Expenses for Provincial AVIS membership</td>
<td>€ 0.25</td>
<td>0%</td>
<td>€ 0.06</td>
<td>1%</td>
<td>€ 0.00</td>
</tr>
<tr>
<td>Expenses for membership fees vs. others</td>
<td>€ 0.00</td>
<td>0%</td>
<td>€ 0.00</td>
<td>0%</td>
<td>€ 0.00</td>
</tr>
<tr>
<td>Contributions vs. other (non-</td>
<td>€ 43.02</td>
<td>47%</td>
<td>€ 0.12</td>
<td>1%</td>
<td>€ 9.35</td>
</tr>
<tr>
<td>Clearing</td>
<td>€ 2.77</td>
<td>3%</td>
<td>€ 0.75</td>
<td>7%</td>
<td>€ 0.00</td>
</tr>
<tr>
<td>Personnel costs</td>
<td>€ 8.64</td>
<td>10%</td>
<td>€ 0.00</td>
<td>0%</td>
<td>€ 12.27</td>
</tr>
<tr>
<td>Expenses for &quot;health&quot;</td>
<td>€ 1.34</td>
<td>1%</td>
<td>€ 0.30</td>
<td>3%</td>
<td>€ 7.41</td>
</tr>
<tr>
<td>Mktg costs</td>
<td>€ 1.39</td>
<td>2%</td>
<td>€ 1.29</td>
<td>13%</td>
<td>€ 1.03</td>
</tr>
<tr>
<td>Retention costs</td>
<td>€ 2.16</td>
<td>2%</td>
<td>€ 0.94</td>
<td>9%</td>
<td>€ 3.43</td>
</tr>
<tr>
<td>Institutional</td>
<td>€ 0.47</td>
<td>1%</td>
<td>€ 0.14</td>
<td>1%</td>
<td>€ 3.47</td>
</tr>
<tr>
<td>Overheads</td>
<td>€ 20.94</td>
<td>23%</td>
<td>€ 5.56</td>
<td>55%</td>
<td>€ 17.54</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>€ 0.00</td>
<td>0%</td>
<td>€ 0.00</td>
<td>0%</td>
<td>€ 0.00</td>
</tr>
<tr>
<td>Depreciation and Provisions</td>
<td>€ 9.26</td>
<td>10%</td>
<td>€ 0.96</td>
<td>9%</td>
<td>€ 2.79</td>
</tr>
</tbody>
</table>
Fig. 35 - The cost varies in organizational models (years 2010-2011)

<table>
<thead>
<tr>
<th>Revenue items</th>
<th>Mixed Association model</th>
<th>Decentralized association model</th>
<th>Centralized association model</th>
<th>Decentralized Public Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs of membership fees</td>
<td>Variation Years 2010-2011</td>
<td>Variation Years 2010-2011</td>
<td>Variation Years 2010-2011</td>
<td>Variation Years 2010-2011</td>
</tr>
<tr>
<td>Costs of membership fees</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>31%</td>
</tr>
<tr>
<td>Expenses for National AVIS membership fees</td>
<td>-27%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Expenses for Regional AVIS membership fees to Avis Regional</td>
<td>-27%</td>
<td>0%</td>
<td>24%</td>
<td>-22%</td>
</tr>
<tr>
<td>Expenses for Provincial AVIS membership fees to Avis Provincial</td>
<td>-24%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Expenses for membership fees vs. others</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>460%</td>
</tr>
<tr>
<td>Contributions vs. other (non-profit)</td>
<td>346%</td>
<td>-8%</td>
<td>1%</td>
<td>3%</td>
</tr>
<tr>
<td>Clearing accounts</td>
<td>-22%</td>
<td>0%</td>
<td>0%</td>
<td>-1%</td>
</tr>
<tr>
<td>Personnel costs</td>
<td>-16%</td>
<td>0%</td>
<td>-3%</td>
<td>-2%</td>
</tr>
<tr>
<td>Expenses for donations</td>
<td>0%</td>
<td>0%</td>
<td>-10%</td>
<td>-21%</td>
</tr>
<tr>
<td>&quot;health&quot; expenses</td>
<td>-20%</td>
<td>25%</td>
<td>3%</td>
<td>-20%</td>
</tr>
<tr>
<td>Mkgt costs</td>
<td>-36%</td>
<td>-7%</td>
<td>1%</td>
<td>8%</td>
</tr>
<tr>
<td>Retention costs</td>
<td>-18%</td>
<td>-1%</td>
<td>11%</td>
<td>-11%</td>
</tr>
<tr>
<td>Institutional costs</td>
<td>-18%</td>
<td>-26%</td>
<td>101%</td>
<td>-45%</td>
</tr>
<tr>
<td>Overheads</td>
<td>-26%</td>
<td>18%</td>
<td>6%</td>
<td>1%</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Depreciation and Provisions</td>
<td>9160%</td>
<td>-38%</td>
<td>6%</td>
<td>0%</td>
</tr>
<tr>
<td>TOTAL VARIATION</td>
<td>52%</td>
<td>1%</td>
<td>6%</td>
<td>-6%</td>
</tr>
</tbody>
</table>

Source: CERGAS
6.4.7. The incidence of reclassified business

Through an evaluation of the impact of the different businesses relating to an office, it is possible to identify important effects on the incidence and variation between the different years (Fig. 36). The ability of the Association to have an active core business in models in which it increases (mixed association model, centralized association model and decentralized association model) is certainly positive.

Fig. 36 - Economic reclassification in the different organizational models (2010-2011)

<table>
<thead>
<tr>
<th>Reclassification 2011</th>
<th>Mixed Association model</th>
<th>Decentralized association model</th>
<th>Centralized association model</th>
<th>Decentralized Public Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core business</td>
<td>€ 40,242.00</td>
<td>- € 255.00</td>
<td>€ 55,023.00</td>
<td>€ 7,864.00</td>
</tr>
<tr>
<td>Non-core business</td>
<td>€ 725.00</td>
<td>€ 288.00</td>
<td>- € 4,847.00</td>
<td>- € 1,449.00</td>
</tr>
<tr>
<td>Financing activities</td>
<td>€ 428.00</td>
<td>€ 4.14</td>
<td>€ 7,480.00</td>
<td>€ 770.00</td>
</tr>
<tr>
<td>Tax Management</td>
<td>€ 0.00</td>
<td>€ 108.00</td>
<td>- € 66,871.00</td>
<td>- € 378.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variation Years 2010-2011</th>
<th>Mixed Association model</th>
<th>Decentralized association model</th>
<th>Centralized association model</th>
<th>Decentralized Public Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variation Core business</td>
<td>112.83%</td>
<td>-101.41%</td>
<td>-73.16%</td>
<td>-622.87%</td>
</tr>
<tr>
<td>Variation Non-core business</td>
<td>-105.84%</td>
<td>2.13%</td>
<td>-1,818.79%</td>
<td>-146.50%</td>
</tr>
<tr>
<td>Financing activities Variation</td>
<td>61.51%</td>
<td>-87.72%</td>
<td>80.41%</td>
<td>24.19%</td>
</tr>
<tr>
<td>Tax Management Variation</td>
<td>0.00%</td>
<td>0.00%</td>
<td>43.44%</td>
<td>-5.74%</td>
</tr>
</tbody>
</table>

Source: CERGAS.
Problems exist instead from the point of view of the decentralized association model, which shows a negative impact of the core business. However, attention should be paid by all models to these results, since the prospective trend is declining, except in the case of mixed association model. Financing activities are positive in all models, providing for a positive trend over time in almost all of them, while several remarks may be made with respect to non-core business. In fact, non-core business provides for a net decrease compared to 2010, and could no longer cover management costs in the centralized association model and in the decentralized public model. It could therefore be important to assume an analysis of the reasons for this result in order to limit the decline in resources. Lastly, the tax administration shows some results to be examined, as there is a big difference between the organizational models.

6.4.8. Income indicators and indicators of company soundness

Lastly, considering the indicators of company soundness and the evaluation of results for the year 2011, it is possible to see that the mixed association model allows for a positive result and shows income solidity; similar results are provided also for other models, which have however, as can be seen in Fig. 37, some peculiarities related to the profit for the year or the indices proposed. The decentralized association model provides for good indicators of continuity and stability in light of a budget balance, the centralized association model, given a loss in 2011, continues to provide for positive indicators and thus the ability to meet its obligations in the short and medium term, whereas the decentralized public model, given a budget balance, provides for lower indicators, which need special attention in order to ensure business continuity.

Fig. 37 - The tax indicators (Year 2011)

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Variation Years 2010-2011</th>
<th>Variation Years 2010-2011</th>
<th>Variation Years 2010-2011</th>
<th>Variation Years 2010-2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income for the year 2011</td>
<td>35078</td>
<td>-71.17</td>
<td>-7,051</td>
<td>75.21</td>
</tr>
<tr>
<td>ROE</td>
<td>44%</td>
<td>20%</td>
<td>90%</td>
<td>-6%</td>
</tr>
<tr>
<td>ROI</td>
<td>2%</td>
<td>8%</td>
<td>3%</td>
<td>-9%</td>
</tr>
</tbody>
</table>

Source: CERGAS.
So, starting from the relationship between the indicators of economic efficiency and solidity of the company and the different organizational models, the following summary remarks may be made:

• the breakdown of revenue within the different organizational models reflects the activities carried out by the various associations; between 2010 and 2011 there was a decline in revenue, except in the case of the centralized association model, whose results have increased. This decrease depends on a variation in income related to transfusion activities, but it is important to emphasize that there is increasing attention to private fund raising channels that can ensure a method to safeguard economic sustainability;

• given the cost structure it is possible to see a decrease, over the years, of the costs related to the membership to the Association. Indeed, the clearing accounts decrease, as well as the contributions given to other Avis branches, in all the organizational models; special attention is devoted to the marketing and fund-raising tools that can be applied in the creation of partnerships with non-profit organizations (mixed association model), thus ensuring the continued investment in attracting new donors and in retaining existing donors. The cost of investment related to the donation remains unchanged, and highlights the differences in the type of activity being put in place (collection or awareness and retention);

• an analysis of the reclassification highlights the capacity of all the organizational models to have a positive result in operations, while some problems exist in non-core business, which has experienced a particularly negative variation between 2010 and 2011. It is therefore necessary to find the tools to reduce the cost and increase the return resulting from the non-core business;

• lastly, given the indicators of corporate soundness or corporate income, it is possible to identify fairly positive indicators for all models, which highlight, however, a progressive downward trend over time of the results obtained, a reduction which will have to be supported by the implementation of activities ensuring economic sustainability over time. In particular, the mixed association model is the one whose indicators, together with the profit for the year, show corporate soundness and continuity. More critical is instead the condition of the Associations being part of the decentralized public model, since their indicators of corporate soundness are much lower.

In order to complete the analysis on performance indicators, it was deemed essential to focus on the differences between the Associations mainly dealing with awareness-raising activities and the Associations mainly carrying out retention and awareness-raising activities (Box 1).
It was deemed important to structure a focus for the in-depth analysis of the difference, in terms of indicators of economic efficiency, among the Associations mainly involved in raising awareness and the Associations carrying out mainly awareness-raising and retention activities. With this purpose, the composition of revenues and costs is analyzed for each donation in 2011, as well as the enhancement of corporate soundness indicators, including the reclassification by business. As shown in Fig. 38, the quantitative values of budgets are, as expected, very different in absolute values, but it is interesting to notice that the percentages of the composition with respect to the total remain almost unchanged both in terms of proceeds from transfusion activities and in terms of the association’s relations with the other Avis. It is interesting to note that the proceeds from private and public fund-raising are much greater in terms of percentage composition for the Associations that are mainly involved in raising awareness and retention, and this indicates a greater capacity of this type of Associations to bind to a region and use fundraising tools.

**Fig. 38 - The breakdown of revenue**

<table>
<thead>
<tr>
<th>Revenue items</th>
<th>&quot;awareness and retention&quot; Associations</th>
<th>&quot;collection&quot; Associations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Revenue items / Total</td>
<td>percentage Composition Of revenue</td>
</tr>
<tr>
<td>Proceeds from transfusion activities</td>
<td>€ 0.09</td>
<td>1%</td>
</tr>
<tr>
<td>Proceeds from transfusion activities</td>
<td>€ 2.93</td>
<td>46%</td>
</tr>
<tr>
<td>Proceeds from clearing account</td>
<td>€ 0.48</td>
<td>7%</td>
</tr>
<tr>
<td>Other contributions</td>
<td>€ 0.73</td>
<td>12%</td>
</tr>
<tr>
<td>Other contributions</td>
<td>€ 0.24</td>
<td>4%</td>
</tr>
<tr>
<td>Contributions for</td>
<td>€ 1.01</td>
<td>16%</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>€ 0.11</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>€ 0.76</td>
<td>12%</td>
</tr>
</tbody>
</table>

Source: CERGAS.
By considering the costs, instead, it is possible to highlight some substantial similarities and differences. From an analysis of the costs resulting from the participation in the Avis network, that is, of the expenses related to membership fees, it is possible to note that, in absolute terms, the costs of the Associations mainly involved in collection are higher compared to the other ones, although as a percentage on the composition of costs these differences are cancelled, which means that the incidence on costs is greater in those Associations mainly dealing with awareness and retention. The analysis of the clearing accounts leads to the same kind of consideration. The contributions devoted to other non-profit organizations are higher in the Associations mainly dealing with collection, and probably focusing more on retention activities. This result can be explained by evaluating the contributions made to other non-profit Associations as a tool to raise awareness in the area and a way to attract new donors. This remark can be confirmed by the analysis of the marketing and retention costs of the Associations dealing with awareness and retention. In fact, given a lower expense resulting from donations to non-profit organizations, there is a higher cost of marketing activities. For all the other costs, the percentages are similar between the two types of Association, however it is important to emphasize that deprecations are also similar, which means that awareness-raising and retention Associations have probably invested in real estate properties to be used as offices.

Fig. 39 - The breakdown of costs (Year 2011)

<table>
<thead>
<tr>
<th>Reclassification 2011</th>
<th>&quot;Awareness and retention&quot; Associations</th>
<th>&quot;collection&quot; Associations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost items</td>
<td>Cost items / percentage Composition</td>
<td>Cost items / percentage Composition</td>
</tr>
<tr>
<td>Costs of membership fees</td>
<td>€ 0.20 3%</td>
<td>€ 0.00 0%</td>
</tr>
<tr>
<td>Costs of membership fees</td>
<td>€ 0.05 1%</td>
<td>€ 0.17 0%</td>
</tr>
<tr>
<td>Costs of membership fees</td>
<td>€ 0.05 1%</td>
<td>€ 0.35 0%</td>
</tr>
<tr>
<td>Costs of membership fees</td>
<td>€ 0.03 0%</td>
<td>€ 0.11 0%</td>
</tr>
<tr>
<td>Expenses for membership fees</td>
<td>€ 0.00 0%</td>
<td>€ 0.00 0%</td>
</tr>
<tr>
<td>Contributions vs. others (non-</td>
<td>€ 0.19 3%</td>
<td>€ 8.76 12%</td>
</tr>
</tbody>
</table>
Reclassification 2011

<table>
<thead>
<tr>
<th>Cost items</th>
<th>&quot;awareness and retention&quot; Associations</th>
<th>&quot;collection&quot; Associations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cost items / Total</td>
<td>percentage Composition</td>
</tr>
<tr>
<td>Clearing</td>
<td>€ 0.73</td>
<td>12%</td>
</tr>
<tr>
<td>Personnel costs</td>
<td>€ 0.55</td>
<td>9%</td>
</tr>
<tr>
<td>Expenses for &quot;health&quot;</td>
<td>€ 0.09</td>
<td>2%</td>
</tr>
<tr>
<td>mktg Charges retention</td>
<td>€ 1.27</td>
<td>21%</td>
</tr>
<tr>
<td>Institutional</td>
<td>€ 0.13</td>
<td>2%</td>
</tr>
<tr>
<td>Overheads</td>
<td>€ 1.29</td>
<td>22%</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>€ 0.00</td>
<td>0%</td>
</tr>
<tr>
<td>Depreciations and Provisions</td>
<td>€ 0.39</td>
<td>6%</td>
</tr>
</tbody>
</table>

Source: CERGAS.

By analyzing the differences within the reclassification by business it is possible to highlight the presence of a core business which enables to predict a long-term sustainability of the activity. Non-core business instead provided in both cases for a negative variation between 2010 and 2011, which has led to a negative valuation of the reclassification. Financial management is rather positive for both types of association, whereas tax management reflects the different amount of activity provided for by the two methods of organization.

Fig. 40 - Reclassification of management (Year 2011)

<table>
<thead>
<tr>
<th>Reclassification 2011</th>
<th>&quot;awareness and retention&quot; Associations</th>
<th>&quot;collection&quot; Associations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core business</td>
<td>€ 6,676.00</td>
<td>€ 28,005.00</td>
</tr>
<tr>
<td>Non-core business</td>
<td>- € 1,227.00</td>
<td>- € 1,452.00</td>
</tr>
<tr>
<td>Financing activities</td>
<td>€ 385.43</td>
<td>€ 3,278.00</td>
</tr>
<tr>
<td>Tax Management</td>
<td>- € 280.93</td>
<td>- € 20,378.00</td>
</tr>
</tbody>
</table>

Source: CERGAS

Lastly, it is important to point out that the profit for the year was positive in both types of association, with different absolute values resulting from the different activity structured. It is worth highlighting, however, that in the case of Associations mainly dealing with collection, profit decreased between 2010 and 2011 by about 60%, a reduction which has not occurred in the case of Associations mainly dealing with awareness raising and retention. It is therefore necessary, for both types of Association, to start a careful analysis of their revenues and costs, especially for the Associations mainly involved in collection, in order to identify the possible sustainability channels to be activated to ensure continuity over time. It was considered important to structure a focus for an in-depth analysis of the difference, in terms of indicators of economic efficiency, between the Associations dealing with collection and the Associations carrying out awareness-raising and retention activities.
For this reason, the composition of revenues and costs is analyzed for each donation in 2011, as well as the enhancement of corporate soundness indicators, including the reclassification by business.

### 6.5. Organizational models and indicators of territorial proximity

A fourth important analysis to determine the impact of organizational models on the territory starts from the assessment of the impact of organizational models on the indicators of territorial proximity.

The indicators of territorial proximity considered and highlighted in chapter 4 and chapter 7, are as follows:

- the average number of events for each organizational model in the years 2010 and 2011;
- the average attendance per event in 2010 and 2011;
- the rate of attractiveness of the events organized in the years 2010, 2011 and 2012;
- the average number of partnerships in the years 2010 and 2011;
- the variation of the cooperating members over the years.

The missing indicator, that is, the variation of the articles published, was not analyzed because the data only allowed the evaluation of decentralized models (public and mixed), and highlighted for both of them an increase in the number of articles published between 2010 and 2011.

#### 6.5.1. The average number of events in 2010 and 2011

By analyzing the first indicator it is possible to identify the average number of events developed within the different organizational models; because of a lack of data, it is not possible to identify the results for the centralized public model (Fig. 41). It can be inferred that all the organizational models have provided for a larger number of events between 2010 and 2011, except for the decentralized association model, which has experienced a small reduction of structured events. It is also worth pointing out that almost all organizational models provide for a similar average of events, except for the centralized association model, with a slightly lower average, and the mixed association model, whose average is even lower.

---

**Fig. 41 - The average number of events (2010-2011)**

<table>
<thead>
<tr>
<th>Model</th>
<th>Average number of events (2010)</th>
<th>Average number of events (2011)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared Membership</td>
<td>4.25</td>
<td>4.25</td>
</tr>
<tr>
<td>Decentralized</td>
<td>10.9</td>
<td>9.6</td>
</tr>
<tr>
<td>Membership Pattern</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centralized</td>
<td>6.8</td>
<td>7.6</td>
</tr>
<tr>
<td>Membership Pattern</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decentralized</td>
<td>8.8</td>
<td>11</td>
</tr>
<tr>
<td>Public Pattern</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shared Public Pattern</td>
<td>8.6</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: CERGAS.
6.5.2. The average number of participants for each event

Analyzing instead the average number of participants for each event, it is possible to highlight that each year, the number of attendants remains constant or increases, and this shows the ability of the Association to attract more and more people to its events. It is also interesting to point out that the two models organizing events that on average attract the greatest number of people are the decentralized association model and the mixed public model. All the organizational models, however, have on average 100 participants (Fig. 42). It is clear, therefore, that all the organizational models manage to attract a certain number of people to their events, but it is worth noting that the organization models that can support the creation of a greater number of events will have the opportunity to raise the awareness of a greater number of people on average.

The two models that in absolute terms can reach most of the population through the creation of events are the decentralized association model and the mixed public model (the latter in the year 2011), as they guarantee the organization of events that attract a high number of participants.

Fig. 42 - The average number of participants per event

![Diagram showing the average number of participants per event for different organizational models.](source: CERGAS)

6.5.3. The rate of attractiveness of events

It is particularly interesting to analyze the relationship between the new members of the organization who joined it in the years after the events, and events organized. As shown in FIG. 43, it is possible to identify, in parallel to an increase in events (except in the mixed association model) and an increase in the number of people reached, a decrease in the average newcomers per event. Compared to the new members of the year 2011, there has been a decrease in newcomers in 2012, which is then reflected in this indicator. Given that one of the most effective tools to attract new donors is the event\(^2\), it is possible to see a decline in the rate of attractiveness of events in almost all the organizational models, except for the decentralized association model and the centralized association model. It is therefore important to consider this decrease in new donors, and the probable reduction of attractiveness of the events, to protect the Associations from a possible deviation from the final target identified. The ultimate goal is not only to attract many people but also to convert these people to a healthy lifestyle in which they can donate and create social capital and social cohesion.

\(^2\) For more details, see chapter 7.
6.5.4. The average number of partnerships in the years 2010 and 2011

By analyzing the number of structured partnerships in the area and using the data collected, it is possible to define an average of structured partnerships with players of the public and private world, of private profit and private non-profit organizations. As shown by Fig. 44, the decentralized public model together with the decentralized association models represent the models being most capable to establish partnerships in the area. This must result from the ability to be very close to local branches and therefore to establish a very high degree of collaboration with the area. Probably, given the costs of contributions to other non-profit organizations, the mixed association model also has the ability to establish meaningful partnerships in the area, even if the data provided in this regard have not been sufficient to start an evaluation.

6.5.5 Variations of collaborators

Lastly, the analysis of the variation in collaborators over the years provides further confirmation of the positive results arising from decentralized models, and highlights the ability to attract an increasing percentage of cooperating members. Such ability allows for more willingness for territorial proximity (Fig. 45). The smallest percentage of variation is present in the mixed association model, which therefore shows again the difficulty to enter into an area using attraction and awareness raising tools.
The territorial proximity of the two decentralized models becomes again clear, as mentioned above, in their ability to publish each year a greater number of articles, which allows to introduce the Association in the area.

From this analysis it is possible to identify how the decentralized association model and the decentralized public model are able to deal effectively on the area, managing a number of tools to ensure an adequate coverage. But it is important to identify new ways of organizing events, so as to turn participants into donors while guaranteeing a greater attractiveness of new donors.

6.6. Organizational models and satisfaction of donors

To conclude the chapter it was deemed crucial to analyze the questionnaires received from donors belonging to the different organizational models, in order to study the current level of satisfaction, the ability to feel part of the Association and the fundamental factors which guarantee the permanence in Avis.

The first analysis comes from factors deemed critical by donors to continue to belong to the Association; the results, shown in FIG. 46, highlight the unity of the organization, in fact all the donors identify as major and very important factors the values inherent to the gift, followed by institutional campaigns, events in schools and a sense of belonging. This result shows, however, the ability of the Association within the different organizational models to keep as fundamental the same factors, while considering the profound value of the gift as the key and fundamental element and highlighting the high social capital represented by its donors.
Fig. 46 - The factors of belonging to Avis

Source: CERGAS.

Taking into account the experience of the donation, it may be noticed that all the models have a high percentage of donors who claim to have lived a very satisfying experience (fig. 46) and a very low percentage claiming to have had an unsatisfactory experience (Fig. 47).

Donors appreciate, in particular, the mixed association model, which has the highest rate of maximum satisfaction from donors, but they express an extremely positive opinion towards all the organizational models.

Indeed, the donors who express a negative opinion on the process of donation represent a minimum percentage, thus showing the extreme capacity of all the Associations to ensure a satisfying experience.

Fig. 47 - The very high level of satisfaction

Source: CERGAS.
A similar and extremely positive result is also reflected in the detection of potential problems related to the donation process, as shown in Fig. 49. In general, every Association should analyze the problems and difficulties encountered each year by donors, so as to decrease the presence of factors that could alienate donors from the Association and from the opportunity to donate their own blood continuously.

Attention to donors is critical, because as shown by Fig. 50 and as already stated in these remarks, donors are loyal, feel as their own the factors of belonging of the gift, they feel part of the Association in any organizational model, from the closest to the farthest one.

Donors are willing to travel a long distance to donate, regardless of their distance from the place of collection, and this is true for each of the organizational models presented. Donors would continue to donate if they had to travel more to fulfill their duty as volunteers.
Donors emerge in all organizational models as loyal, loyal to their donation process, willing to follow the Association if the same were to move elsewhere. This is extremely important to highlight the retention rate which is present on the territory, and is extremely important because it may allow for a series of activities and tools which ensure plasma donation and a greater overall index of commitment and continuity over time.

6.7. Conclusions

This chapter wanted to provide a study of the results and differences that the different organizational models show in terms of effectiveness, efficiency and territorial proximity. It is interesting to point out that donors, who represent the glue of the Association, have the same prime factors of belonging to the Association, and showing a profound unity from a geographical, social and cultural point of view. Starting therefore from the awareness of this unity it was possible to identify the differences and problems raised by the various organizational models.

By analyzing the general view of the composition of donors it is possible to find a shared assessment in the attraction of young donors and special attention to the female gender, which is considered important for the Association itself; more attention should instead be paid to possible foreign donors, because in the future they will ensure a major catchment for membership sustainability.

Considering performance indicators, instead, the mixed association model has the best results in terms of awareness of the area, although a problem seems to exists in the variation in plasma donations and therefore in the retention of the area. The centralized association model, on the contrary, can reach higher retention and also achieves a positive result in the variation of plasma donation. All the models except for the centralized public model, have a very high rate of inclusion in the area, which then allows to have a penetration rate among the active population that guarantees long-term continuity. The decentralized public model and the decentralized association model add the ability to attract the "right" donors, significantly reducing the rate of ineligible donation. Lastly, the mixed public model and the mixed association model are the ones that provide for a rate of greater integration with the stakeholders.
Through an analysis of performance indicator, it is possible to find efficiency in the call in all the organizational models and in particular in the decentralized public model, which demonstrates once again the proximity to the local population.

Given the average number of monthly donations by collection unit, the centralized association model ensures a high number of monthly and daily donations, and probably shows larger guarantee of continuity. Analyzing the relationship between co-workers, donors and full members, the mixed association model can guarantee, thanks to its high inclusion, an easier management of donors, as well as the decentralized association model, thus presenting retention tools that can be easily replicated.

The indicators of economic efficiency and solidity of the company have good results for all organizational models, even if it requires a focus on decentralized public model in terms of the soundness of the company. All organizational models must, however, pay particular attention to non-core business that is becoming increasingly important for the development of a donation service.

The above considerations are confirmed in terms of territorial proximity by the presence of very strong decentralized models and of the mixed model, which despite a smaller exploitation of the event channel, manages to attract new donors over time. The partnership channel becomes therefore more important to be able to reach the area.

Lastly, the results are very positive in the evaluation of donors who appreciate their expertise in all organizational models, but attention should be paid to problems, particularly on the part of the centralized association model, so that the number of members claiming to have experienced an unsatisfactory process does not increase.
7.1. Introduction

The Associations and Federations of blood donors, in their varied structure, play a fundamental role in the following activities:

- Awareness raising and retention of the assets of existing donors;
- management of the changing dynamics of the Association (e.g. the generational shift based on the demographic evolution of donors);
- attraction of new donors;
- promotion of a healthy lifestyle through the enhancement of a continuous donation over time.

For these reasons, the Associations make use of marketing tools, in a sort of unavoidable social entrepreneurship, designed to achieve objectives corresponding to:

- raising awareness in the population and areas intended as a group of citizens in a vision of community, of structural capital (institutional arrangements, public bodies, private organizations, etc.) and of social capital (culture, values, behaviours);
- attracting new donors by creating and managing marketing tools that develop segments of new donors from a quantitative and qualitative point of view;
- retention of existing donors using tools that promote continuous and not sporadic donation over time, and thus ensuring a really high-quality lifestyle of the population.

The first part of the chapter analyzes the main literature concerning social marketing at an international level, by identifying the relationships existing between the level of satisfaction of donors and social marketing campaigns, and the reasons behind the behaviour of people towards donation.

The second part of the chapter is devoted to the analysis of the tools used by Avis, which is representative, albeit not fully comprehensive, of the integrated system of blood donations, raises awareness in the territory to attract new donors and retains existing donors. The analysis conducted on a sample of reference, which has been the subject of in-depth interviews\(^1\), can be generalized to the whole Avis association, since the sample analyzed is random and significant, and therefore generalizable\(^2\).

The third part, instead, shows the correlations between the tools used by Avis to communicate with potential new donors and existing donors,

---

1 The talks are the basis of interviews in research. Qualitative research helps understanding the meaning of the experiences of the people, discovering the world in which they live, their relationship with the product or service being studied and then giving a detailed explanation. The basis must be a specialized fieldwork requiring professionalism and attention.

Open-ended questions, which are the basis of in-depth interviews, represent real tools to detect the "levels of emotion" of the participants, the primary source of information. People freely express their views on the subject under investigation, the way they have organized their world, the thoughts about what happened to them, the experiences and the first impressions.

2 For further information on the sample see the chapter on methodology.
and some key indicators such as the donation indices of blood and plasma and the indicators of territorial proximity.

The chapter also mentions some examples of marketing tools that are used every year to retain donors, gathered from in-depth interviews. Some of them can be considered as best practice, provided the relationship with the subjectivity of context.

7.2. Social marketing: conceptual bases

Each organization is set up specifically to obtain certain institutional and mission results in terms of internal organization at the corporate level and in terms of external organization, in the creation of relationships with the territory – community of reference. All the social companies-enterprises, non-profit, profit, public, work within an environment of collaborative competition. In order to maintain its role, in this context, an organization must be able to:

- attract sufficient resources to pursue their company objective;
- convert these resources (merely potential condition) in real and tangible products-services;
- distribute these products-services to target audiences.

In non-profit organization, in principle, these three actions are carried out in the name of volunteering by the people involved. The organization does not resort to binding actions to attract resources nor to convert them or distribute them. It relies primarily on offering opportunities and on the exchange, between the various stakeholders, of values representing a sufficient incentive to obtain the necessary cooperation. The offer of a certain "value" (intangible value, valuable, meta-economic) to someone in exchange for another value is therefore assumed.

All this is effectively summarized in the definition of marketing that applies to both profit companies and non-profit organizations:

"Marketing consists in the analysis, planning, implementation and control of carefully formulated programs aimed at voluntary exchanges of values with target markets in order to achieve the objectives of the organization. It mainly seeks to adjust the supply from the..."

3 In a non-profit "social enterprise" like Avis, external mutuality prevails, which is expressed in the implementation of horizontal subsidiarity. It creates the "collaborative competition" and is part of the increasingly significant integration process between public and private, not so much in a possible withdrawal of the State to the benefit of several private operators, but in the best combination of regulatory capacity of the State and productive capacity of the Private represented by social enterprises. The collaborative competition between the State and social enterprises sees in subsidiarity a social-economic principle that corresponds to a process: to achieve concrete results, it needs sequential and synchronic operational options, able to develop a quality of the services provided that is often more effective compared to that of companies providing traditional private for-profit and public services. The two-way relationship between the companies of the subsidiary supply chain described above allows for the reconstruction, within a corporate-like interaction, of the production process of public utility or market services. In corporate subsidiarity, a strategic coherence is activated in which the "partnership" strategies between the public and private sectors and between private and private are reconciled. The combinations of the factors of production and consumption are reconciled in it, while a model of coordination of economic operations has been agreed "ex ante" and the man and the shared "wealth" are its vital elements. See Pezzani And The collaborative competition: to rebuild the social and economic capital, Bocconi University Press, 2011.

4 Starting from the exchanges seen in this light, a professional marketing operator within non-profit companies is an individual particularly devoted to understanding, planning. He has a remarkable ability of identification and understanding of the critical-needs of the user-customer, in the effective communication of its offer and in its presentation in the most appropriate way and place.

organization to the needs and desires of the target market, and aims at the effective use of the techniques of pricing, communication and distribution to inform, motivate and serve the market ”(Kotler, 1998).

From this definition several concepts may be deducted:

1. Marketing is seen as a directional-managerial process consisting in a variety of distinct, but correlated activities (such as analysis, planning, implementation, monitoring). In a more macroeconomic sense, it can be seen as a complex social process, in which the material needs of a society are identified and analyzed in an effort to give the most effective and satisfactory response possible;

2. in order to be efficient and effective, marketing should be implemented through programs carefully formulated in advance, not through merely random actions. It is a laborious and planned process and precedes any action of sale, resulting in plans and programs thoroughly formulated in view of a target to be reached. The target is understood, in this sense, as that segment of the population whose behaviour or awareness are to be changed;

3. marketing aims at achieving "voluntary exchanges of values". The declared purpose is to get an answer, but not by any means whatsoever. The marketing operator aims at providing the market with benefits being attractive enough to automatically trigger a voluntary exchange with its target audience;

4. marketing is a "selection of one or more target markets", not a thoughtless attempt to conquer all the markets indiscriminately with just one supply. Marketing means strategy, and as such requires a thorough feasibility study prior to any action;

5. the purpose of marketing is to achieve, through a great variety of levers, the goal of its own organization. In the classic business world, this purpose can be largely approximated by the generic term of "profit". In the non-profit world, instead, the primary objective is seen as having to do with public interest, and as such is not easily identifiable until the particular situation in which the organization operates has been analyzed;

6. effective marketing is addressed to the "customer" user, not to the supplier (non-self). Marketing aims at making an offer in terms of needs and aspirations of the target market, rather than in terms of personal tastes of the supplier. It starts from a fundamental assumption, namely that any action intended to impose to the market a product / service that does not adequately meet the tastes or needs of the target audience, is bound to fail miserably;

7. marketing uses, dosing them in the right proportion, a variety of market tools (or levers), which can often be referred to the term marketing mix (or "optimal combination of endogenous market factors "). Too often the public naively links the term marketing to only one of these tools (usually advertising), without considering all the other factors, as they would deserve.

The concept of Social Marketing was introduced by P. Kotler and G. Zaltman in 1971, in the *Journal of Marketing*6, in a paper whose main purpose was to show how the methods of traditional commercial marketing could be compatible with the achievement of social and health objectives as well as with the mission of nonprofit organizations.

Later, in 1989, the definition of P. Kotler and E. Roberto7 conceived social marketing as:

"The design, execution and control of programmes designed to facilitate the

---

acceptance of an idea or a social practice in one or more groups of designated users. Social marketing uses concepts such as market segmentation, market research, product development and testing, direct communication, benefits, exchange incentives and theories to maximize the response of designated users."

Another definition of social marketing of major importance is that of A. Andreansen of 1994, which states that:

"Social marketing is the application of commercial marketing techniques to the analysis, planning, implementation and evaluation of programs designed to influence the behaviour of the target audience in order to improve the welfare of individuals and society."

The definition of E. W. Maibach (2002) clarifies the specific success of the marketing strategy, stating that:

"The success of a social marketing strategy is determined by its contribution to the welfare of the relevant public or of the whole society."

This specific type of marketing uses some strategy and technical options of commercial marketing to try and influence the positive behaviours of a particular group of people.

The levers used by social marketing are often the traditional ones and, specifically, product, price, distribution channels and communication (Fig. 1).

---

8 Social marketing is the creation, design, implementation and monitoring of programs aimed at increasing the acceptability of a cause, a social idea or a behaviour (for example that of donation). It uses the concepts relating to "stakeholders", to facilitation, to incentives and to the exchange theory to maximize the potential or actual interaction.

Social marketing can be described as a short-term and long-term conceptual and instrumental approach to (economic and metaeconomic) exchange aimed at satisfying an individual and institutional need to reach a social wealth that provides useful and interesting for the consumer and the marketer; the company conducts research and co-definition of the needs of customers / users and of the environment of reference to work more consistently than the processes of social and economic maintenance and development with mutual and socio – economic benefit.

Megamarketing: it is marketing that companies adopt when company policies include social problems and issues that are "absorbed" in the virtuous dynamics of approach to the market (the traditional 4Ps are joined by power management and public relations.

"Societal Marketing" refers to the marketing activity in relation to its effects on both the consumer and the society as a whole. This attention to the social responsibilities of the company that go beyond the time of sale, either towards the consumer (problems with product quality, reliability and safety) and towards the community (protection of health, environment, energy saving , correct information in advertising), can be traced back to the early 70s, coinciding with the emergence of new individual and social values oriented to the protection of collective well-being and to a better quality of life (which does not necessarily coincide with the increase in product consumption). The affirmation of these values has imposed to companies the need to adapt to the new social context, so as to ensure to themselves, together with social acceptability, greater guarantees of success and survival in the long run.


These four tools are the basis for the actions of social marketing, as they are used as levers to reduce, on the one hand, the barriers to individuals in the adoption of a desired behaviour, and on the other hand, to increase the benefits that could make them more willing to adopt a new and positive behaviour.

Commercial marketing and social marketing differ in terms of: **product**, as in commercial marketing products consist of goods or services, while social marketing concerns the production of ideas and behaviours. The type of offer of social marketing includes ideas, attitudes, values and behaviours that can sometimes be associated to products serving as a tool to convey a certain idea, attitude or behaviour; the idea in this case is the fulcrum of the action of social marketing and the product is only a vehicle that determines an increased possibility of a certain idea or behaviour to be adopted.

The idea may therefore be associated to a tangible product or to a service offered to facilitate the abandonment of a certain behaviour and the adoption of another one.

In social marketing the definition of a product can be given as follows:
The fundamental difference between commercial and social marketing is found in the definition of three different product types having different ranges of action:

- **augmented product**: It consists of services related to the achievement of desired behaviours in order to promote the attraction of behaviours. An example of augmented product related to blood donation consists of the marketing tools used by the Associations to attract new donors, such as "print media" (leaflets or posters) or those used for the retention of existing donors, such as customized call and newsletter;

- **actual product**: It consists of the desired behaviours, and the definition of this type of product involves an initial comparison with similar products. With reference to the specific case of donation, it corresponds to the behaviour of people who choose to donate blood or plasma;

- **core product**: It consists of the benefits that recipients can draw from the desired behaviour. An example of this type of product is linked to the satisfaction that donors feel in having made a gesture of solidarity and altruism towards those who are in need and receive donated blood.

The main aim of social marketing is to change individual or group behaviours; not in order to generate profits, but to create benefits for the target group or for the society as a whole.

The idea may be therefore associated to a tangible product or service offered to facilitate the abandonment of a certain behaviour and the adoption of another one, that is, in the specific case of blood donation, the decision to become a donor.

Looking at the differences between commercial marketing and social marketing, other distinctions may also be made, including those related to purposes, competition, timing, sustainability, marketing costs and target.

a. **Purpose**: In commercial marketing, the main purpose is to sell some products or services, while in social marketing the goal is to encourage the change of an opinion, of a social behaviour in view of achieving positive social and welfare results, and to increase awareness on certain issues.

b. **Determination of competitors, logics of competition and positioning**: in commercial marketing, competition is assessed in terms of brands and products, while in the social field, competition is defined in terms of opinions and behaviours. The concept of competition in social marketing is intended as the set of the different choices that can lead to alternative behaviours by consumers. Another difference between commercial marketing and social marketing concerns positioning: in commercial marketing it is defined as a cumulative process, in which the communicative attention is of course focused on the customer, and one continually seeks to play a key role in the competition and to play a leading role with respect to other competitors. Starting from the assumption of an overcrowded market,
the strategies to get a good ranking can be summarized as follows:

- trying to have a leadership role over competitors;
- competing with position leaders through the recognition and the study of the positioning of competitors;
- correctly analyzing the potential markets to enter into and the need for differentiation from competitors; analysis of competitors and of strategies for the differentiation from market leaders, and recognition of the possibilities of failure of one’s own strategy;
- trying to differentiate one’s strategies from those of market leaders;
- paying the utmost attention to the identification of the name and branding.

In social marketing, instead, the positioning is defined by analyzing the definition of Kotler and Armstrong\(^\text{11}\) as the “way the product is defined by consumers with important attributes - the place the product has in the minds of consumers in relation to competing products.”

A correct analysis of the strategic positioning therefore needs:

- a proper market segmentation;
- identification of the main needs of the company;
- identification of the distinctive and motivating features that can make the "social product" better than that of competitors.

In the analysis of the positioning of social marketing, in order to change collective behaviours, a thorough study of competitors is therefore needed to understand which products have already been offered, what are the needs they meet and what are the preferences of the stakeholders associated with the current behaviours. Finally, some strategies need to be implemented that can ensure that the perceived benefits are higher than those of competitors.

c. **Time visibility of the benefits:** in commercial marketing benefits are immediate or short-term, while in social marketing they become evident in the medium-long term.

d. **Sustainability:** The concept of sustainability in commercial marketing is, instead, related to short-term benefits and relates mainly to the financial sustainability of the marketing policies of the company. In social marketing actions it is important, instead, in order to achieve long-term benefits that will last over time, that programs be continually monitored and that they constantly adapt to the changes occurring in the reference target and at the environmental level.

e. **Marketing costs:** in commercial marketing, costs are mostly monetary and are connected to the budgets reserved by the company to a specific marketing campaign, intended for example for the launch of a new product; in social marketing, instead, there are not only economic costs, but also psychological and physical costs, which have a predominant importance with respect to monetary costs. These non-cash expenses, which are obviously perceived in a negative way, must be reduced in order to better meet customer needs: in the case of blood donation, an example of a non-cash charge is the wait time for the actual donation.

f. **Target:** In commercial marketing, the target is called "passive", while the target of social marketing is "active" and is characterized by a greater involvement. In social marketing, the customer represents the target audience, it is actively involved in the cause being the object of the campaign and, for example in the case of blood donation, can in fact contribute to the cause only through the act of donation. The target of commercial marketing is, instead, defined as passive.

---

because the customer is not involved in the campaigns of the companies except as the end user of the product.

Social marketing deals with different topics of special importance for public interest, including, for example, blood donation, organ donation, volunteering, physical activity, pollution, alcohol, energy saving, selective waste collection.

Taking Kotler's definition of social marketing:

"Social marketing is by principle the form of marketing being most oriented to consumers and to the market as a whole”.

It is important, for the purposes of this research, to apply the concept of social marketing to blood donation, in order to highlight what tools can be set up to attract new donors.

7.3. Social marketing and blood donation

Social marketing applied to an organization like Avis aims at achieving the following basic goals:
- purposes of efficacy,
- purposes of legitimacy.

7.3.1. The purpose of effectiveness

The activity of Avis legitimates itself not only by being consistent with the mission of altruism and solidarity, but also by addressing the demand for a donation being made within a relationship of virtuous exchange with the society. The exchange is based on the encounter between supply, represented by the opportunity of blood donation and of an integrated information/communication, and demand, connected to the satisfaction of the need of the gift.

The structural environment is becoming more and more dynamic, and for example, the educational information/communication being offered is necessary to make the activities of public utility service for the Italian NHS more effective.

The marketing approach increases the functionality of Avis and makes it more effective, becoming part of the mandate of the mission of the organization, since it is increasingly essential to have an active relation, to know and assess the varied demand of the population in order to create an appropriate supply (marketing of knowledge).

The orientation to the demand is one of the complex variables that need to be managed; for this reason, it is essential to know, manage and adjust (to the extent necessary for the "common good") the quantitative and qualitative level, the timing and characteristics, the accessibility to the supply and all those components that the demand for different services poses as a precondition to achieve a high level of satisfaction of the collective and personal dimension.

Together with the "first-level and proactive knowledge marketing", with respect to the evolution of the demand, the "knowledge marketing for demand monitoring" also exists, in a context in which the service being offered has developed, lasts over time and is approaching the stage of

---

12 The focus of social marketing is the concept of "exchange value", which means that consumers will choose a behavior that makes the benefits exceed the costs incurred, in the case of blood donation, for example, the non-cash charge of waiting for make a donation, it must be less than the benefit that one gets the donor, in terms of personal satisfaction and solidarity with the patient's final act that will benefit from the donation.
maturity.

There may be different types of demand for donation:

- insufficient demand,
- irregular demand,
- excessive demand.

The presence of an insufficient demand, compared to the level of skills developed by Avis, generates an under-utilization of the organization, resulting in a waste of resources. The demand may be insufficient for several reasons.

First of all, the level of information reached is not good enough to turn the service being offered into assets for the population segments it was intended for. In this case, it is necessary to reset the marketing strategy and to activate operational tools, among which the information / communication tool is the most important one, so as to eliminate any weak points (message, tool, location or time of communication and so on). This would allow to reach those segments of potential demand that have not yet experienced the service.

A second reason may be related to the overestimation of demand or to a misunderstanding in expectations. In this case it is necessary to reformulate the strategic plan, starting from a detailed quantitative and qualitative analysis of users' needs.

A third reason may arise from the presence of an insufficient quality of the service that caused the dismissal of donors. In this case it does not seem useful to focus on "restorative" communication but, rather, it is necessary to reconsider and "revise" the service and then resume a diffusion campaign as if it was a new service.

The demand may also be latent, considering that some levels of use of the services offered by Avis indicate dystonias with the essential objectives of the Italian National Health System, and therefore it is necessary to find technical ways to make this demand emerge, since it is consistent and fundamental for the achievement of higher levels of well-being, quality of life and common good.

The second type of demand is the irregular one. A demand can be defined irregular when its rhythm is temporal and not in synchronous with the physiological-organizational rhythm of Avis supply.

In case of a potential static and fixed ability of Avis to provide opportunities for donation, at least in the short term, and of a seasonal or irregular demand, it is important to analyze how to influence such demand in order to decrease peak periods and fill in depression periods (such as during the summer months).

Possible actions in this case are:

- establishing a persuasive / deterrent communication, aimed at new behaviours of donors, which highlights the advantages that can be obtained by using the service in times of lower operational intensity, in particular the reduction of psychological and time costs, thanks to the absence of barriers to the use (for example, queues at collection centers or difficulties in making an appointment). This enhances the quality of the service, thanks to the increased attention and availability of the resources being offered (front-office, practicability of the layout, time spent);
- supporting the creation of reservation systems, already existing in some areas, which allow to transfer the demand in less crowded periods, when the demand is less intense;
- creating a package of services in addition to the "basic" service, to be offered to users who decide to use the service in periods of low flow (incentives to have an increasingly high % of call efficacy);
- creating differential advantages by offering additional services in periods of low demand, which of course should be attractive to a certain group of users and have an almost null cost for the citizen /
customer (this means leveraging the unused capacity of other services being offered, creating valuable integrations and synergies).

Lastly, the excessive demand, which is detected when exceeding systematically, or anyway for very long periods, the level of supply of donation opportunities expressed by Avis. The intuitive solution is to increase the supply if and to an extent compatible with the available resources (such as human resources, economic and financial resources).

However, it is often necessary to verify whether or not the demand for donation is excessive, and whether or not it is real and "appropriate" compared to the needs; if that is not the case, it is necessary to eliminate the excess of "inappropriate" demand, also by activating demarketing actions. This is the case of the "harmful" demand, when the demand is considered excessive in relation to some undesirable qualities associated to the supply (for example in the case of the supply of particular types of blood groups that cannot be aligned with the planning).

The tools being used can be: an intense and powerful communication action persuading demand segments to check whether the demand for services is really necessary and whether there are no alternative supplies to call upon. These actions have a negative impact on the image of Avis in case there are no conclusive arguments about the decreased levels of demand.

In case it is decided to manage the demand in excess, one of the following actions may be taken:

- development of complementary services, in addition to those concerned, to allow for a better management of the excessive demand. In this way, the non-monetary costs incurred by users may be reduced, for example with respect to the opportunity cost referred to the waiting time;
- communication actions intended to involve the user in the process of service production, in order to simplify delivery (co-producer of the service);
- actions of citizens' involvement in providing additional service. Recruitment of volunteers in times of exceeding demand, in order to increase the supply capacity of the Association.

7.3.2. The purpose of legitimization

The legitimization of Avis, once the needs of the population are known, is no longer based only on the consistency of the activity with the principles of the mission and with the structure of its institutional role, but also on the contract of use of the donation opportunities being offered and representing a relationship of "convenience of values" and satisfaction, as well as of utility, sometimes mutual, between Avis and the donors.

Therefore, legitimization is no longer just a formal consistency with the principles of Avis, but an ability to provide adequate services, having in them all the quantitative and qualitative characteristics required by the level of development of the segments that make up the society.

The transition from a virtual to a real legitimization is achieved through a relationship based on the ability to interpret and forecast the needs and services connected to the evolution of the institutional framework.

In a context of "revolution of increasing expectations", the population expects from Avis the satisfaction of the need / demand for donation not only in quantitative terms, but also in qualitative terms; this happens, as mentioned before, through a growing and progressive cultural stratification of the citizen, who has understood his role as a citizen member of Avis vs. client of Avis.

This results in a conception of Avis that redesigns its portfolio of services in the face not only of the evolution of the bureaucratic -
administrative and libertarian structure imposed by its binding institutional role, but also of the interpretation ability and of the "feedback" that it is able to activate. The function of cognitive marketing of Avis is thus created, and is the basis for the analysis of the macro-variables characterizing the catchment area / market.

The definition of the nature of macro-variables is based on the representation of subsystems which can be summarized as: economic subsystem; socio-cultural subsystem; technological subsystem; demographic subsystem; political subsystem; natural subsystem.

In this sense, the four levers of the marketing mix defined above may be declined, in the case of blood donation, as follows:

**Fig. 4 - The levers of social marketing and blood donation**

7.3.3. Marketing levers and blood donation

Within this specific area, the four levers of the marketing mix can be so explained:

- **product/service:** it is represented by the voluntary and active donation of blood and/or plasma;
- **price:** it is represented by the time spent and the share of "sacrifice" made for the voluntary donation of blood and/or plasma;
- **distribution/location:** it is the representation of the place/time of service (opening hours of collection centers, collection days, accessibility of the place, etc.) as a framework for donation;
- **communication:** it is represented by the communication techniques that are put in place to attract new donors and retain existing donors.

In literature, there are several contributions related to the importance of social marketing in this field: in 1997 K. Newman and T. Pyne have stated that, in order to build a base of loyal donors and to retain donors over time, a social marketing strategy is essential, and have stressed that "donor satisfaction" is of fundamental importance to ensure the retention of donors. According to Newman and Pyne, the critical factors to meet the demand for blood donation are:

- the continuous acquisition of new donors;
- the conversion of "spot" donors into loyal donors;
- the improvement of donor retention rates.

Therefore, a dual social marketing strategy seems to be necessary, aimed on the one hand to the acquisition of new donors and, on the other hand, to the retention of existing donors. In 2009, A.B. Palacio and J.D. Santana developed a model analyzing the factors that determine the susceptibility to improve the effectiveness of programs for the recruitment and retention of donors. The model is shown in the following figure:

**Fig. 5 - Model showing the willingness to donate blood**

---

14 The expression "donor satisfaction" refers to the level of satisfaction of donors.
The paper shows that it is necessary to define a communication plan that:

- determines that the objectives of the campaign are the information and education of citizens to donation;
- clarifies and makes the society perceive the real need for blood donation;
- describes the donation process in order to minimize the problems related to fear and risk perception;
- organizes ad hoc communication campaigns that appeal primarily on the desire to donate rather than on altruism, in order to stimulate the intrinsic motivation of people towards blood donation;
- stimulates the word-of-mouth, so that existing donors can act as links for the entry of new donors.

Fekr and Amenien, in a paper of 2012\textsuperscript{16}, claim that voluntary blood donation can be defined as a valuable product that can be marketed and advertised, and that by identifying specific techniques and behaviours appropriate solutions can be provided to attract more people to voluntary donation. Moreover, the authors state that the active and effective communication with donors and with qualified staff, as well as the use of appropriate spaces and equipment is crucial to attract new donors.

By focusing on the willingness of women to donate blood, the results of some studies mentioned in the paper by Fekr and Amenien are shown below.

A research conducted by Kadhir et al. in 2004\textsuperscript{17}, in Iran, on the attitude of women towards blood donation, shows that the main reasons why "donation is not made for fear" is the risk of infections, and that women generally have are not willing to donate blood. This study is in contrast with others stating instead that women appear to be more altruistic than men, and thus showing a higher willingness to donate (Rooney et al 2004, Fekr FR, Amenien M., "Effective Factors on Willingness to Donate Blood", Interdisciplinary Journal of Contemporary Research in Business, Vol. 4, Issue 7, 2012.

Simmons & Emanuele 2007, Piper & Schnepf 2008, Mesch 2009). Other studies conducted on women show that housewives and women with low levels of education are less likely to donate blood, and that the most important barriers to blood donation are:

- fear,
- lack of time,
- lack of facilitated accesses to donation,
- false negative myths about blood donation.

A study conducted in Ireland in 2007 shows that:

- the existence of mobile centers for blood donation,
- the definition of a clear timetable for donation,
- increase the level of satisfaction and loyalty of donors.

After providing a definition of social marketing, which is summarized in the table in Fig. 6, and after the presentation of some of the contributions existing at an international level in the field of social marketing and blood donation, the analysis will now focus on the examination of the main operating marketing tools used by Avis association to recruit new donors and to retain the existing ones.

**Fig. 6- Social marketing in brief**

<table>
<thead>
<tr>
<th>Social marketing</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEFINITION</td>
<td>&quot;Design, execution and control of programmes designed to facilitate the acceptance of an idea or a social practice in one or more groups of designated users. Social marketing uses concepts like market segmentation, market research, product development and testing, direct communication, benefits, incentives and theories of exchange to maximize the response of designated users&quot;</td>
</tr>
<tr>
<td>Kotler and Roberto, 1989</td>
<td></td>
</tr>
<tr>
<td>The 4Ps</td>
<td>Price, Product, Distribution, Promotion</td>
</tr>
<tr>
<td>The 4Ps in blood donation</td>
<td>Blood donation, time devoted to blood donation, place of donation, retention</td>
</tr>
<tr>
<td>Main purpose</td>
<td>To make people change their minds or change behaviour</td>
</tr>
<tr>
<td>Aims</td>
<td>Long term</td>
</tr>
</tbody>
</table>
| Social marketing and organizations dealing with blood donation | • Awareness raising of new donors  
• Retention of existing donors |

7.4. The reasons for blood donation in literature

The issue of blood donation has been studied in literature by also taking into account the meaning given to the factors influencing the decision to become a donor. The most important contribution in this regard was provided in 1971 by P. Titmuss\(^\text{18}\), who studied the relationships related to the gift in the act of blood donation. The factors leading to donation are based on altruism and on the link to the sense of the gift that people have.

Given the importance that this scientific contribution has had over the years, it was crucial to briefly examine in detail, in Box 1, which remarks were developed by the British author for the analysis of the concept of gift within the transfusion system, and in particular within the British and American transfusion systems.

**BOX 1 - The gift relationship: from human blood to social policy – R. Titmuss, by Francesca Calò**

The study carried out by Titmuss was aimed at understanding the role of altruism in modern society, a role that seeks to bring together welfare policies and choices of individuals. To do this, the author tries to compare two very different transfusion systems which provide, on the one hand, a system of voluntary donation (British system) and on the other hand a donation system with refund (American system). Titmuss takes into consideration four different sets of indicators measuring performance (economic and administrative), price, that is, the present cost for each unit of blood transfused per patient, and present quality. In all of these four criteria, the results show the transfusion system based on voluntary blood donation as the system with better results. This means, according to the author, that through a voluntary donation that does not expect a financial return, there will be greater willingness to donate, based on a system that sees in the community and in collective interest the most important objective; a system will then be implemented that transcends the individual goal to meet the interests of the community, based on the altruism of people belonging to it. The above text, with all the evolutions of the last 40 years, is still one of the main texts for the analysis of the concept of altruism and of how this intersects with the concept of the development of social and health policies.

The model which is usually used to analyze the behaviour of donors is the one built from the Theory of Planned Behaviour introduced by Ajzen in 1991, which states that the best way to predict people's behaviour is to measure their behavioural intentions. Such intentions are functions of three independent variables: attitude, subjective rules and perceived behavioural control.

In 2004 M. Giles et al. introduced, in the model defined above, a new variable, self-efficacy, which not only completes the pattern of I. Ajzen’s theory, but is also considered a significant predictor of intention and behaviour. Self-efficacy is defined as the measure of the degree to which an individual evaluates the ability to donate blood. The results of this study by Giles et al., show that self-efficacy is a key variable for the determination of the prediction of the intention being at the basis of the gesture of donation.

For regular blood donors, moreover, the levels of self-efficacy can be increased if the focus of promotional activities is on the quality of the service provided, while for those who donate for the first time, the focus will need to be on the promotion of the act of donation itself. Furthermore, self-efficacy can be increased through verbal persuasion, in the form of positive feedbacks received through word-of-mouth from acquaintances, friends or family.

In conclusion, according to this study, the recruitment of non-donors requires that the Associations study some techniques to increase the levels of self-efficacy and consider the importance of the quality of the service provided.

---


20 M. Giles, Maghsudlu M., McLenahan C, E. Cairns, "An application of the Theory of Planned Behaviour to blood donation: The Importance of Self-efficacy", Health Education Research, No 19, No. 4, 2004
Based on the awareness of an increased demand for blood and blood products, a study conducted in Australia (where there is a continuous need for blood donors) in 2008 by Robinson et al.\textsuperscript{21}, analyzes the factors that influence the choice of non-donors in relation to the first donation. Even in this case, the model being used is that of the planned behaviour in a more complex form, which includes:

- attitude,
- subjective rules,
- perceived control over behaviour,
- Descriptive rules,
- moral rules,
- anticipated regret,
- anxiety of the donation.

Descriptive standards are particularly important in the context of blood donation, since the gesture of donation can be seen as a public action, in which the decision process takes place in collaboration with other people and generates the creation of social networks that can be a vehicle for the attraction of new donors.

Moral rules are, instead, the driver of the feelings of responsibility or guilt that an individual perceives when acting a certain behaviour. In the research here at issue, normal rules are a predictor of the intentions and behaviours of donors.

The anxiety of donation is a deterrent for blood donation, and is related to the consequences of the donation, especially for those who approach blood donation for the first time.

Anticipated regret, instead, is linked to the feeling that both donors and non-donors can feel and can strengthen the intentions to donate blood, even for the first time.

The model of planned behaviour, broadened with the four factors described, is of fundamental importance to predict the intention to donate blood for the first time and to develop techniques to be used to reinforce the intention to donate. Ultimately, the study reveals that in the decision-making process of new donors, an important role is played by social and personal issues, and this new model with the four new variables is important to encourage people who have never donated to make the donation.

By taking two of the constructs of the theory of planned behaviour, that is, attitude and subjective rules, and adding altruism, fear of blood and needle and specialist knowledge, a study by K.P.H. Lemmens et al.\textsuperscript{22} of 2009 aims at understanding the reasons why non-donors do not donate. Through the analysis of two different samples, one composed of older people with a higher education degree and one made up of younger people with a lower level of education, the research results show that, in both samples, the attitude, the subjective rules, the descriptive and moral rules are the variables being most positively correlated with the intention of donating; self-efficacy, as defined above, is more important for the sample of younger people, and altruism is associated with the donation only through the mediation of moral rules. The fear of blood and the needle syndrome, too, have an indirect effect on motivation and are mediated by self-efficacy.


In conclusion, the research confirms that the anticipatory feeling related to blood donation is crucial for the decision on the act of donation, and that persuasive messages on blood donation referring to issues related to the positive feelings that blood donation generates (for example donation as a tool implemented by other people and the perception of moral obligation), increase the motivation of non-donors to the donation itself.

The theme of altruism is taken up in a paper by Boenigk et al of 2011\textsuperscript{23}, where the authors state that pure altruism is a key factor for blood donation and donor retention. The study shows that the satisfaction with the treatment has a greater impact on the satisfaction and retention of donors compared to the value of altruism. The services related to blood donation should focus on the quality of the treatment of donors in order to focus on their loyalty.

7.5. Analysis of the marketing tools used to attract new donors

The brief analysis of the literature provided above has shown the importance of social marketing in relation to the issue of blood donation, as well as the importance that marketing tools acquire in the relationship with the donor, both to make him become a donor for the first time and to retain him. Now, this section will analyze the tools that Avis uses to attract new donors.

Qualitative interviews were conducted on a significant sample of 169 regional, provincial and municipal presidents of the Italian Avis (for more details, see chapter 2 on research methodology) and, considering some specific actions of operating social marketing within the context of the blood system, the marketing tools adopted by the various territories have been identified; moreover, the marketing and retention tools which showed the largest application and effectiveness have been detected.

The taxonomy of the operating marketing tools below identifies the choices made by Avis in its branch network:

1. 84% of those surveyed say they use posters as a tool to attract new donors, as shown in Figure 7.

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{fig7.png}
\caption{Communication tool: posters}
\end{figure}

The poster is a very effective communication tool to attract new donors: usually, the poster uses the image of a testimonial and of a slogan and refers to the website of Avis or to the communication campaign. Taking for example the tuttidovremmofarlo.it campaign which is mentioned in Box 2, this communication tool is able to reach a larger number of people than the flyer. However, it implies higher costs also due to the rights of billboards.

**BOX 2 - The campaign "tuttidovremmofarlo.it"**

The campaign "tuttidovremmofarlo.it", promoted by Avis, aims at raising awareness among the citizens and at approaching them to donation, in order to recruit new donors, by explaining how is it possible to become donors in 20 seconds and 10 steps:

- STEP 1: get up from the chair
- STEP 2: leave your house
- STEP 3: Take your bike and reach the nearest collection centre
- STEP 4: Talk to the nurse
- STEP 5: Fill out the form with your data
- STEP 6: Relax during the pressure measurement and hemoglobin test to check your eligibility
- STEP 7: Play with the stress ball during withdrawal
- STEP 8: Enjoy a snack
- STEP 9: Greet the nurse
- STEP 10: Go back home knowing you have made a great gift

The website, advertised through posters, which have used the image of some testimonials, explains in simple and clear language:

- why to donate,
- who can donate,
- what are the types of donation,
- where it is possible to donate,
- some explanations on the consent form to be signed,
- some explanations on blood and the use of donated blood.

The campaign took advantage of the use of posters, the characteristics of the print campaign are:

- Title: Sleeve. The title of the campaign recalls the image of the testimonials with a shirt sleeve up, symbol of the donation just made.
- Message: We should all do it.
- Testimonials: Igor Cassina, Federica Fontana, Filippa Lagerback.
2. The leaflets (flyers-brochures), as a tool to raise awareness to attract new donors; it was found out that 83% of the Avis branches surveyed say they use this "tool". **Fig. 8 - Communication tool: leaflets**
Very often these flyers are "brochures" for awareness, inviting citizens to "get closer" to the Avis world and become blood donors; the flyer usually explains the reason for the donation and how this is done, what are the places in which it can be made and the opening hours. The flyer is one of the tools most used by the Avis branches surveyed, mainly because it can reach large numbers of people and contains detailed information; moreover, the flyer must "inspire trust" in the person who reads it, must "be clear" and can be reused over the years. The limit of the leaflet is the cost of printing, which varies depending on the circulation and on the fact that it cannot always reach the same number of people as the other communication tools, such as posters.

3. Events are another communication tool to attract new donors; as stated by the survey respondents, 92% of Avis branches organize events.

Fig. 9 - Communication tool: events

Through events, the Avis branches reach a wide number of people: they represent an opportunity to bring and retain people to donate blood. During the events free preventive tests are sometimes provided, in order to apply for accreditation with the local population and communicate the values inherent in the pursuit of well-being and healthy lifestyles suggested by Avis; the places where blood can be donated are usually shown, in order to bring more and more of the public to donate blood. The fundamental limit of the events, however, is that it is often not possible to attract the number of people expected, and the investments made for the creation and management of the event are not proportional to the participation of the people.

4. Partnership - collaboration with other agencies: 81% of the Avis interviewed declares to collaborate with other entities, regardless of their profit, non-profit and public nature.
Within the surveyed sample, claiming to make collaborations with other organizations, it is to be noted that:

- 42% work with profit companies,
- 80% collaborate with other non-profit organizations,
- 64% collaborate with the Public Administration.

Indeed, the survey carried out among donors shows that in some cases, the donor "began to donate during the donation days organized by TELECOMITALIA", so the collaborations with companies lead to the acquisition of new donors for Avis. For further information on the partnership with Telecom Italia see Box 3.

**BOX 3 - The Avis-Telecom Italia partnership**

The collaboration between Telecom Italia and Avis was established within the project "People Caring" sponsored by the Italian phone company. The programme, created in 2009, aims at improving the quality of life of the employees, through life - work reconciliation, the promotion of diversity and the support to volunteering initiatives of those working in the company.

In recent years, in order to support the volunteering activities of its employees, Telecom has embarked on increasingly closer collaborations with some donation Associations including Avis, and with the support of People Caring, the Donor Group organizes regular blood donation days with Avis, to collect blood using blood mobiles parked outside the company premises. The latest figures show that as of 30 June 2012 for the blood donors group 40 days were held in 6 cities.

The partnerships with businesses, other non-profit organizations and with the Public Administration are often successful in attracting new donors and co-designing events and initiatives: the limit of collaborations in reference to co-design is that these partnerships are not always successful.

24 The theme of collaboration between businesses and non-profit companies deserves special attention: according to a research by SDA Bocconi the reasons why non-profit organizations and companies work together are summarized in the following figure:
5. Communication via the mass media; another communication tool that has been considered as a pivot to attract new donors is the information and communication through newspapers. The “newspaper article” appears to be a useful communication tool to raise awareness among new donors: usually these articles appear in local newspapers and describe the activities of Avis and the best practices of each Avis branch, since through the narrative of events, of the simple activities of the Association, they manage to create curiosity in the readers and to draw their attention on the Association itself. The limit of newspapers lies in the limited circulation of local press, and therefore in the difficulty to reach an audience being less segmented than the one reached by posters, flyers or events. 38% of the surveyed Avis branches claim having used newspapers as a communication tool to attract new donors, while 62% claim they have not used this tool.

Fig. 11 - Communication tool: newspaper articles

The relations between the five tools of operating marketing considered to attract new donors (posters, events, flyers, partnerships, newspaper articles) and the new donors, result in the data summarized in the following table:

Fig. 12 - New members and marketing tools

<table>
<thead>
<tr>
<th>Marketing Tools</th>
<th>Flyers</th>
<th>Posters</th>
<th>Events</th>
<th>Partnerships</th>
<th>Newspapers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average new members in 2011</td>
<td>1,244 (23%)</td>
<td>1,169 (21%)</td>
<td>1,043 (19%)</td>
<td>1,250 (23%)</td>
<td>765 (14%)</td>
</tr>
<tr>
<td>Average new members in 2012</td>
<td>1,003 (25%) (Prospective 1,170)</td>
<td>900 (22%) (Prospective 1,050)</td>
<td>782 (20%) (Prospective 912)</td>
<td>890 (22%) (Prospective 1,038)</td>
<td>432 (11%) (Prospective 505)</td>
</tr>
</tbody>
</table>

The figure shows that, given the relationship between the marketing tool and the average of new members who joined in 2011 and in 2012, and given the prospective and final number of new members who joined in 2012, the flyers are, among the marketing tools considered, the ones that managed to attract for 2011 the same number of members, in percentage, as partnerships. This is due to their widespread use and to the fact that they can reach a rather high number of people.

The data in the table, in addition to showing a decline in the new donors considered, show that:
- the partnerships between Avis and businesses, other non-profit organizations and the Public Administration represents the communication tool being able to attract a good number of new members. This tool appears to be second only to leaflets, but compared
to them, it is also able to create a network between the functional partner entities to attract new donors and to create events in partnership;

• the posters, although defined by many of the respondents as an obsolete and rather expensive means of communication, are anyway able to attract a larger number of new donors than events and demonstrations, and this simply because many events are closed to non-Avis donors, as explained below;

• events are the marketing tool that least attracts new donors (19% in 2011 and 20% in 2012) compared to flyers, posters and partnerships, in percentage, considering as total the sum of the average of new members who joined Avis and use leaflets, posters, events, partnerships and newspapers as communication tools. Events result in an average increase in new members by 20%, the lowest percentage compared to the other tools, as shown by the table, except newspaper articles, and this is probably due to the fact that very often the events organized by Avis are not a prerogative of the population in general, but only of existing members;

• newspapers turn out to be the communication tool attracting the lowest number of new members for both 2011 and 2012, in reference to the number of full members at mid-year and to the number of prospective members at year-end 2012. This is because these articles often appear in newspapers with low circulation and with local and not national circulation.

Taking the proximity indicators defined in Chapter 4, they are defined in this section according to the communication tool being used; the table on the next page shows the indices based on the communication tool used. The indicators examined are the following:

• Number of participants / Number of events;
• Number of new donors / Number of events past year.

The table of the indicators is consistent with the results of previous correlations:

• 2011 shows a higher result with respect to the subsequent indicator which includes the new members, respectively 2011 and 2012, for the events of the past year, respectively 2010 and 2011. It is worth noting that the decrease in the attraction of new members is valid for all the types of communication tools considered;

Fig. 13 - The indicators of territorial proximity applied to communication tools

<table>
<thead>
<tr>
<th></th>
<th>Flyers</th>
<th>Posters</th>
<th>Events</th>
<th>Partnerships</th>
<th>Newspapers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of participants/ Number events 2010</td>
<td>147</td>
<td>124</td>
<td>159</td>
<td>152</td>
<td>160</td>
</tr>
<tr>
<td>Number of participants/ Number events 2011</td>
<td>186</td>
<td>146</td>
<td>178</td>
<td>175</td>
<td>189</td>
</tr>
<tr>
<td>Number of new members/ 2011 Number events 2010</td>
<td>128</td>
<td>109</td>
<td>107</td>
<td>127</td>
<td>62</td>
</tr>
<tr>
<td>New Members 2012 / Number events 2011</td>
<td>51</td>
<td>42</td>
<td>43</td>
<td>48</td>
<td>49</td>
</tr>
</tbody>
</table>
The data for 2012 are partial, therefore they should not be considered in an absolute sense, nor should they be considered as an alarming fact in relation to the tools considered;

The data in the table can also be considered horizontally: newspapers seem to be the most effective means of communication for the acquisition of new members in the Association and for the recruitment of the largest number of participants during the events organized; these are followed by partnerships, flyers and posters.

Considering the change in the percentage of donors related to the use of flyers, posters, events, partnerships and newspapers as means of communication, Fig. 14 shows the data of the variation in the number of members on the basis of the tools used, between 2010 and 2011.

Fig. 14 - The variation in the number of members on the basis of marketing tools

As can be seen, the percentage of variation between the number of donors of 2010 and that of 2011 is always positive. All the marketing tools have therefore a positive impact on the increase in donors, with a percentage variation in the positive trend determined by the mix of tools. This means that the communication tools used by Avis today are effective in terms of increase in the number of members.

The quantitative data of the marketing tools analyzed and used by Avis to attract new donors have then been confirmed in both the focus groups and the interviews of the survey carried out among donors.

7.6. The content analysis in marketing and retention

For the analysis of the focus groups composed of the provincial presidents a content analysis\(^\text{25}\) has been carried out, with the examination of the key words used during the focus groups. The analysis was conducted by reviewing, with a double blind control by researchers in order to eliminate any dystonias, all the recording scripts of the focus groups.

\(^{25}\) The content analysis is a research method that involves the analysis of the content of the communication.
The analysis was carried out first on all the scripts of the focus groups, then only on the question related to marketing.

As for the focus group, the keywords, which are summarized in Fig. 15, are the following.

**Fig. 15 - Content analysis, focus groups**

From the three focus groups it appears that the concept being most mentioned is that of "efficiency of the call."

Although it is a concept of fundamental importance for the retention of the donor, the efficiency of the call can be nevertheless considered also as a fundamental concept in the involvement of new donors, since after the phase of attraction of new donors, retention through an efficient call becomes extremely important to maintain donations constant over time.

A specific analysis of what resulted from the focus groups about marketing and communication, in relation to the question:

*What are the communication and marketing tools that you mainly use to attract new donors and what are the ones that you use to retain existing donors?*

provides the following keywords (in relation both to marketing and retention):

**Fig. 16 - Focus groups: marketing theme**
The "bubble graph" shows the keywords of the content analysis of the focus groups in relation to the topic of marketing and donor retention. Below are the detailed keywords obtained.

- **Efficiency of the call** (% Quote HIGH): reference is made to the efficiency of the call that seems to be the fundamental problem for the Avis branches interviewed during the focus groups. The problem is not in fact to acquire new donors, but to retain them in the long term and to study social marketing techniques that can retain them.

- **Attention to collection** (% Quote HIGH): The term refers to the general expression "attention to blood collection"; during focus groups, the term has often been mentioned in terms of:
  - efficiency of the collection;
  - days of blood collection;
  - tools for marketing and management of the call in the first case, to guarantee a growing number of eligible donors, in the second case, to handle the call as efficiently as possible.

- **Partnership with other Avis** (% HIGH quote): the concept has been one of the most mentioned during the focus groups and refers essentially, in a positive sense, to the partnerships between the various Associations and between the various levels of the Association.

- **Partnership with players of the blood system** (% HIGH quote): This term indicates the partnerships that Avis enacts every year with other voluntary associations, with public authorities and businesses.

- **Commercials** (% Quote AVERAGE): it is one of the ways in which the awareness-raising campaigns of Avis become concrete.

- **Attention to the donor** (% quote AVERAGE) it is the term cited by most Avis respondents and implies that once someone becomes a donor, Avis has the task to take care of its member to retain him and above all to ensure that he is always ready to intervene after the call.

- **Prevention and health tests** (% quote AVERAGE): the issue of prevention serves today as the pivot for the future development of Avis, since by offering additional services for prevention, such as tests for celiac disease etc., it promotes actions of donor retention.

- **Schools** (% Quote AVERAGE): the Avis branches interviewed, through their projects within the schools, manage to raise awareness in the highest number of people on the subject of blood donation.

- **Childhood Project** (% Quote AVERAGE): it was the only project specifically mentioned during the focus groups and was considered rather important because it tries to raise awareness not only among children in pre-school age, but also among parents.

- **E-book** (% Quote LOW) it is one of the most innovative campaigns for awareness created in recent years, an e-book tells the story of the relevant Avis.

- **Investments** (% Quote LOW): The term investment denounces the problem of the decision by Avis to invest a good part of its revenues in campaigns for communication and for the retention of existing donors.

- **Reporting** (% Quote LOW): this term denounces the problem of reporting on the level of awareness, among new potential donors, on Avis and blood donation.

- **Women** (% Quote LOW): The issue of women is of crucial importance since, after maternity leave, for reasons not always well specified, very often women do not begin again to be donors.

- **Communication plan** (% LOW quote): it is the plan that all Avis branches should aim at for their own communication, and that could be of fundamental importance to increase the efficiency of the call.
The content analysis related to the detailed description of the issues of marketing, resulting from the analysis of the focus groups, shows that the issue of planning the marketing strategy of the Avis branch is closely related to the issue of retention of donors after the first donations; another issue of fundamental importance is collection, that is based mainly on the care and improvement of problems in the efficiency of the call. Other important issues show that the focus must always be directed towards donors and prevention.

7.7. Donors and the choice to become donors

This section will analyze the answers of donors related to their decision to become part of Avis.

The analysis of the answers resulting from the questionnaires administered to donating members, related to the question: "How did you get to be part of Avis - What were reasons at the basis of your choice?" is represented by the following matrix (Fig. 17).

Fig. 17 - Content analysis: how donors began to donate

1. QUADRANT 1: **Word of mouth**. Word of mouth seems to be the most effective means for communicating the mission of Avis and for the involvement of new members. Indeed, one of the answers "I became part of Avis upon invitation of friends already donating. The desire to do something good for others without any compulsion or obligation", shows how the "word of mouth" is one of the variables that impact more favorably on the recruitment of new donors. This variable includes anyway a value-based trust in the Association and also a knowledge-based trust, linked to the personal knowledge between individuals. This last type of trust implies that the donor, trusting his contact, feels a greater willingness to donate and trusts the stories and experiences of the acquaintance, and this consequently generates trust in the Association. Value-based trust indicates the fiduciary relationship based on the sharing of the same values, while knowledge-based trust implies personal knowledge between two players²⁶.

²⁶ For further information on the concepts of value-based trust and knowledge based, see S. Castaldo, Trust in market relationships, EE Publishing, 2008.
2. QUADRANT 2: Event. This is the event and demonstration variable, that was not so important in the exploratory research phase for the Avis branches interviewed, as mentioned before, but that acquires a fundamental value for the donors interviewed. Most of them, in fact, considered the positive perception triggered by an event as the fundamental variable for their approach to Avis. The event in this sense includes events in schools and events with bloodmobiles in the squares. One of the phrases that best represent the value of the event is the following: "I came to know Avis through a conference organized in my school and I immediately grasped the importance of a gesture such as that of blood donation. So I felt the need to make this gesture, and I managed to instill this feeling also in other people". The event is a moment of attraction especially for new donors, in which Avis can show not only the places where the donation is made, such as, for example, the blood mobiles, but can also spread the values related to well-being and a healthy lifestyle. During these events, moreover, some prevention tests are often provided for free, and their purpose is to bring the people to a healthy lifestyle and to blood donation.

3. QUADRANT 3: Family. The other key driver for the decision to become an Avis donor is the presence of other donors in the family or a family event that has brought forth something that led to understand the importance of blood donation. Some phrases can explain exactly what this means:

"My father has been an Avis member since ever (unfortunately now he has stopped because of a lymphocytic leukemia) ... I followed his example and I joined at the completion of the 18th year of age. I am happy to help someone with this small gesture."

"Sharing the importance of blood donation, also because of problems I had in my family." The above sentences show the importance of donation as a family tradition, as a tradition transmitted from father to son, which implies not only an emotional attachment to the Association, but also to the actual gesture of donation, seen as a sign of solidarity and altruism towards others. The family in this sense is also seen as a place, not in the physical sense, where a painful event can occur which pushes the family members to become blood donors.

4. QUADRANT 4: Spontaneity. In this quadrant lies the value of the gift, the value of donation as a spontaneous act and as an act of responsibility towards others.

"Being helpful and giving a little of me to others less fortunate."

"Having a blood group that allowed me to be able to make the donation. Being free from work commitments. I had already donated in the past to people who urgently needed blood because of accidents and surgeries."

The concept of spontaneity is closely related to solidarity towards others and altruism: the gift of blood is intended as a gesture of altruism towards the less fortunate people who really need it. The spontaneity of the gesture is linked to other factors such as: awareness that one’s blood type is compatible with that of others, and availability, in terms of time, to make a donation. The variables that affect the spontaneity of the gesture are the most varied, including a sense of altruism, of fulfillment for the gesture made, the availability of time and the knowledge to be of help to others.

The four categories proposed in the grid do not want to offer a comprehensive analysis of the reasons that affect the decision of an individual to become an Avis donor, but want to point out what are the fundamental drivers of the decision.
At the basis of the categories presented remains the macro-concept of "Trust", on the one hand, and that of "Communication" on the other hand. If the first concept can be linked to all the concepts related to trust in Avis, but also to interpersonal trust among acquaintances being the active part of the word of mouth, the concept of communication can be seen as linked to the meaning of appropriate marketing techniques, that include not only the traditional media, but also the management of events and projects in certain places, such as in schools or companies.

Event management, according to the results of the content analysis, should also include the crucial role of "collection in squares" by bloodmobile, which in small areas seems to be, above all, one of the most effective means for the recruitment of new donors.

Before moving on to the best practices in the recruitment of new donors, it is important, for the purposes of the research, to understand how, from the qualitative interviews, the number of donors varies as a result of the centralization or consolidation operations that have taken place in recent years.

From the qualitative interviews carried out it appears, moreover, that in the Avis branches which experienced a process of centralization and a consequent decrease in collection centers, the consequence has been a decrease of donors during the first period, and this was mainly caused by issues concerning the distance from the new collection centre and the loss of the usual reference point where blood donations were made. The concept based on the results of this interview is linked to the themes of the retention of donors, who are loyal not only to Avis, but also to their usual place of collection.

However, some have stated that, after an initial decline in the number of donors, such number has increased, and has then reached the initial, pre-centralization values.

7.8. Best practices for awareness raising

Qualitative interviews have provided some best practices regarding the awareness-raising events of Avis; these best practices are divided into the following categories:

1. **Relationships with schools**: the macro-category includes the awareness-raising events that Avis operates in schools, whether the nursery school, primary school, college or high school. Awareness-raising activities take place in different ways: some Avis create competitions to draw a bookmark, others have created a kit called "At school with Avis", others carry out their awareness-raising activity by organizing conferences dedicated to blood donation;
   • **scholarships**: among the best practices detected by the presidents of the Avis surveyed, there are also activities related to the establishment of scholarships. These scholarships are created in most cases during events in schools or for the children of donors.

2. **Conference activities**: the conference activities organized by the Avis interviewed, and reported as best practices, mainly concern the issue of blood donation. Other fundamental issues discussed during the conferences, mentioned as best practices by the sample interviewed and concerning the awareness of donors are:
   • **prevention**: Conference activities focused on prevention are linked to the recognition, by the Avis interviewed, of prevention activities;
   • **solidarity**: Conference activities dedicated to the importance of the value of gift as a gesture of altruism and solidarity towards others.
3. **Events / demonstrations**: the events and demonstrations listed by survey respondents as best practices are of the most different types, from walking in solidarity to awareness-raising events for women, to ad hoc events in specific companies and courts. This macro-category also includes all the events related to anniversaries or birthdays of the various Avis branches interviewed. Very often, events and demonstrations are not managed autonomously but in cooperation with other Associations dealing with volunteering or Associations dealing specifically with sports. Especially in cases of partnerships with sports Associations, events are often aimed at the promotion of healthy lifestyles, or at sponsoring special events, such as football, basketball tournaments.

4. **Activities abroad**: only in two specific occasions some cases of activities abroad were mentioned as best practice, and they concern projects to raise awareness and funds for international projects, and projects of European and extra-European networks.

Fig. 18 shows some examples of the four categories of events mentioned above.

**Fig. 18 - Some examples of best practice**

The box below contains some examples of best practices implemented by the Avis interviewed. The selected examples are not exhaustive of the existing practices, but want to be reported as cases to keep in mind for the development of future activities of all the Avis existing on the national territory.
**BOX 4 - Event in schools "At school with Avis'**

The project "At school with Avis", promoted by the Provincial Avis of Turin, intends to help, through the use of a booklet and a kit of school supplies, the volunteers of the Municipal Avis who run initiatives for the promotion and dissemination of the gift of blood in schools.

Through the use of this manual, the volunteers who meet the students in primary and secondary schools have an additional tool to communicate with students and teachers, and to communicate the values of solidarity and importance of gift that they exemplify.

The aim of this project is to draw the attention of children and to ensure that they themselves become spokesmen, in their families, of the messages they have learnt and of the importance of regular blood donation, and not of donation as related to emergency management. This project also wishes to encourage the presence of the students of today, who will one day become adults, as loyal donors of Avis.

The project started in 2010 and has registered 6,000 students involved in 2010, and over 4,000 in 2011.

---

**BOX 5 - Event in schools "A bookmark for Avis"**

The provincial Avis of Como promoted in 2010, with the Municipal Avis of the Province, the creation of the contest "A bookmark for Avis", for students of primary and secondary schools, in order to promote the presence of Avis in the libraries of the Province of Como.

The municipal branches of Avis have proposed the project to the schools of their territory, so as to promote the participation of a number of students. 700 young people were involved and the selection of the works was carried out at first by Municipal Avis branches and then by the Provincial Avis that chose the ones to be printed.

In the end 11 works were selected for the creation of 6 double-sided bookmarks, and 34,000 copies were printed and distributed in the libraries and schools that had participated.

---

**BOX 6 - Presentation in schools of the "Cartoon" "N-Avis"**

The Municipal Avis of Legnano seeks to raise awareness, through the projection of a cartoon in schools, among the students of today, in order to leave a trace in the students of the schools and ensure that they become the donors of the future.

It is the story of a relentless struggle against time, a fantastic journey aboard an old and rusty airship, the N-Avis, looking for pure blood, uninfected by the "serum of Indifference". The protagonist finds himself at the end of the adventure with many experiences and a new awareness of the importance of blood donation. The project, born in 2010, is addressed to primary school students and aims at raising awareness not only among the students, so that they become the donors of tomorrow, but in their families, using word of mouth as a communication tool.
BOX 7 - Conference RISKIAA
On 24 September 2011 the Municipal Avis of Vigevano organized the conference RISKIAA, together with the Association for Renal Diseases (AMAR), to raise awareness among citizens on the issue of the early identification of cardiovascular risk in the population of Avis blood donors of Vigevano. As suggested both by the topic and by the partnership established, the conference is an example of partnership between two Associations involved in volunteering and in meetings, increasingly proposed by Avis, on the matter of prevention.
In this way, through conferences open to citizens, new potential donors being particularly sensitive to the theme of the conference and to that of prevention are involved.

BOX 8 - AC Perugia Calcio - Avis
The partnership between Avis Perugia and AC Perugia Calcio has as a slogan "Together to win", and has created a new initiative to raise awareness on blood donation and to promote it. The awareness-raising initiative on blood donation took place on 5 May 2013, during the match Perugia-Prato, in which players and referees wore T-shirts made by Avis with the words "Together to win".
The shirts worn in the field were of three different types: red for Perugia, blue for Prato and white for the referees, with the picture of the Grifo and of a drop of blood.

BOX 9 – Non-competitive march "A walk with Avis"
This year, the non-competitive walk "A walk with Avis" was at its 40th edition and was held on 21 April. The first march took place in 1974, the year of the 25th anniversary of the foundation of the Municipal Avis of Alba, and was created and organized by the youth group; today it is attended by over 1,500 people and has quickly proved to be a wonderful tool of propaganda for Avis.
The non-competitive march is a strong awareness tool for those who do not donate, but are sports fans and can, in this way, get close to Avis.

BOX 10 - Avis Casalnuovo for Kenya
The Municipal Avis of Casalnuovo started a partnership with the Kenya Project, a collaboration that was then consolidated in 2006, when some Avis members left for Muyeye to help the children of the "Mama Anakuja" orphanage.
To date, the Avis branch of Casalnuovo has created the Association "Avis CASALNUOVO for KENIAN CHILDREN" and, while continuing to work with the friends of Kenya Project Onlus, now works in the management and implementation of some projects, especially dedicated to the protection of the childhood and health of the people of Kenya.

Among the awareness-raising tools of Avis which have been discussed in this paragraph, the ones that seem to play a role of paramount importance are the events in schools, since they operate with a dual lever: on the one hand, they work on raising awareness among today's students who could become donors tomorrow, and do that in the most varied ways, through school kits, contests, projections of cartoons; on the other hand, through the word of mouth, they leverage on parents and, in general, on the child's family, who may be indirectly sensitized to the issue of the donation through the stories.
The other major theme that emerges is the issue of prevention. The conferences that Avis has organized are increasingly focused on the pivot topic of awareness on blood donation accompanied by the prevention of cancer, cardiovascular diseases and other diseases in general.

7.9. The tools for donor retention

The communication tools analyzed so far have been those related to the attraction of new blood donors. This section will analyze, instead, the tools for donor retention, the tools that make the donor become stable over time and be a carrier of a constant presence which is functional ("Precious") for the Association. The "in-depth interviews" conducted with a sample of Avis presidents (for further details on sampling, see chapter 2) show that the tools used to retain donors are: customized call, publication of news on the website and on social networks, SMS, newsletters, house organ ("association magazine").

![Fig. 19 - Customized call](image)

![Fig. 20 - Website](image)

![Fig. 21 - SMS](image)

![Fig. 22 - Newsletter](image)

![Fig. 23 - House organ ("Association magazine")](image)
The graphs above show that retention tools, customized call, social networks and SMS are used in the standard sample as follows:

- 85% of the sample uses the customized call;
- 56% of surveyed Avis uses its website as a retention tool to donors;
- 66% of the sample of Avis respondents say they use SMS to call donors;
- 33% of the sample, instead, use the tool of the newsletter;
- Finally, 55% use as a tool for retention the “association magazine”, which is sent periodically to members.

The graphs above show that the tools being most used to retain the donor are the customized call and the SMS; it also emphasizes the importance that the website of Avis is acquiring as a communication and retention tool to maintain contact with the donor.

**Fig. 24 – Donation index and retention tools**

| Index of plasma donation in 2011 | Customized call | Website and social | SMS | Newsletter | House organ"

| association magazine" |
|-------------------------|-----------------|-------------------|-----|------------|-------------------|
| 0.34                    | 0.32            | 0.31              | 0.32| 0.32       |
| 0.35                    | 0.33            | 0.32              | 0.31| 0.32       |
| 1.50                    | 1.50            | 1.50              | 1.52| 1.50       |
| 1.50                    | 1.47            | 1.51              | 1.57| 1.54       |

**Index of plasma donation in 2011**: the index of plasma donation, in 2011, is higher for those Avis branches using the customized call, followed by those using the website and the social networks, the newsletter and the association magazine, while it is lower for those using SMS.

**Index of plasma donation in 2010**: the index of plasma donation, in 2010, is, as before, the highest for those making customized calls, and lower for those using the newsletter as a retention tool.

**Index of whole blood donation in 2011**: the newsletter shows the highest donation index; the lowest index corresponds to the remaining tools of communication: SMS, website and social networks, personalized call and association magazine.

**Index of whole blood donation in 2010**: the index shows, for 2010, the following trend: higher for the newsletter and the association magazine, lower for SMS and customized call. The lowest value is recorded for the website and for social networks.

**Fig. 25 shows the relationship between the tools used and the index of plasma and whole blood donation.**

**Fig. 25 suggests that, by dividing the matrix into 4 quadrants, the tools for donor retention can be analyzed as follows:**

**Newsletter**: it ranks in a medium – high position with regard to the index of plasma donation and in a high position as regards, instead, the index of whole blood donation.

**Association Magazine ("house organ", Fig. 25 only contains the term "association magazine" according to the "Standard Language"): it is placed in a medium-high position with regard to the index of whole blood donation, in a medium-high position with regard to the index of plasma donation. In the matrix, it is placed in the same position as the website and social networks.
- **Social networks and website**: they rank in the same position as the association magazine / house organ.

- **Customized call**: it ranks in a high position with regard to the index of plasma donation and in a medium-high position with regard to the index of whole blood donation.

- **SMS**: it is placed in the quadrant in which the index of plasma donation is medium-low, while that of whole blood donation is medium-high.

**Fig. 25 – Retention tools and performance indicators**

![Retention tools and performance indicators diagram]

After analyzing the point of view of the sample surveyed, it is now time to examine how some communication tools are influential, according to existing donors, to evaluate the continuity of the membership in Avis. Donors have answered the question "**How important, from 5 to 1, are the following factors for the continuity of membership in Avis?**"

The answers were classified as follows:

- very important: 5
- quite important: 4
- averagely important: 3
- unimportant: 2
- not important: 1

In this case the value taken by the concept of altruism is not considered, as in Box 10 an ad hoc study will be analyzed, that takes into account the concept of altruism as a variable influencing the donation index.

**Fig. 26 - Continuity of belonging to Avis**

![Continuity of belonging to Avis graph]
Fig. 26 on the continuity of membership of donors to Avis shows that:
- donors consider the events and the newsletter, in particular, as "irrelevant" for their loyalty. This result confirms the hypothesis that the events are a more useful tool to attract new donors rather than to retain the existing ones;
- in order to define the sense of continuity of belonging to Avis, the least relevant means of communication and retention are the newsletter and the events, which are defined as “slightly relevant” respectively for 25% and 27%;
- the newsletter and the events are defined, moreover, as "fairly relevant" respectively by 31% and 27% of the donors interviewed;
- donors consider "very important", for their loyalty and for the definition of their continuity of membership in Avis, the events in schools, the customized call, the institutional campaigns and their sense of belonging.

Ultimately, what is apparent from Fig. 26, is that the sense of continuity of membership in Avis is mainly given by one’s own sense of belonging, by institutional campaigns and events in schools.

For research purposes, it was important to investigate whether there were differences in the assessment of one’s membership by Avis donors who donate plasma; to do this, the communication tools used for the retention of donors have been correlated with their level of satisfaction and with the specificity of their donation: whole blood or plasma.

Fig. 27 shows that, as for the newsletter, this tool is considered, by the sample of donor surveyed, fairly relevant for their loyalty, whether they are plasma or whole blood donors. In numerical terms, the level of importance attributed to this type of communication tool ranges between 2 and 4.

Fig. 28 shows that events are considered, by the sample of donors who responded to the survey, fairly or slightly relevant for their loyalty to the Avis association, and this is true both for plasma donations and for whole blood donations. In numerical terms, the level of importance ranges between 2 and 3.

The customized call is considered very important for both blood donors and plasma donors, and is placed in a numerical interval ranging between 5 and 6.

The sense of belonging is the key variable for the retention of donors in the Association. Both plasma and whole blood donors consider the sense of belonging as "very important" in respectively 38% and 34% of cases. In numerical terms, retention through a sense of belonging takes on a value between 5 and 6.

Fig. 31 shows that events in schools are considered as one of the most important communication tools for donor retention and this is true both for those who donate blood and for those who donate plasma. In numerical terms, they are placed in a range between 5 and 6.

Fig. 32 shows that Avis institutional campaigns are a very important retention tool both for plasma donors and for whole blood donors. Once again, the level of importance in terms of numbers lies in a range between the highest level of importance, 6, and the "fairly important" level 5.
Fig. 27 - Donation – plasmapheresis comparison: newsletters

<table>
<thead>
<tr>
<th></th>
<th>Very important</th>
<th>Quite relevant</th>
<th>Fairly relevant</th>
<th>Slightly relevant</th>
<th>Irrelevant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plasmapheresis</td>
<td>10%</td>
<td>21%</td>
<td>31%</td>
<td>23%</td>
<td>14%</td>
</tr>
<tr>
<td>General Donation</td>
<td>9%</td>
<td>21%</td>
<td>31%</td>
<td>25%</td>
<td>15%</td>
</tr>
</tbody>
</table>

Fig. 28 - Donation – plasmapheresis comparison: events

<table>
<thead>
<tr>
<th></th>
<th>Very important</th>
<th>Quite relevant</th>
<th>Fairly relevant</th>
<th>Slightly relevant</th>
<th>Irrelevant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plasmapheresis</td>
<td>11%</td>
<td>18%</td>
<td>27%</td>
<td>26%</td>
<td>18%</td>
</tr>
<tr>
<td>General donation</td>
<td>9%</td>
<td>18%</td>
<td>27%</td>
<td>27%</td>
<td>19%</td>
</tr>
</tbody>
</table>

Fig. 29 - Donation – plasmapheresis comparison: call

<table>
<thead>
<tr>
<th></th>
<th>Very important</th>
<th>Quite relevant</th>
<th>Fairly relevant</th>
<th>Slightly relevant</th>
<th>Irrelevant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plasmapheresis</td>
<td>37%</td>
<td>29%</td>
<td>20%</td>
<td>9%</td>
<td>5%</td>
</tr>
<tr>
<td>General donation</td>
<td>36%</td>
<td>29%</td>
<td>20%</td>
<td>9%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Fig. 30 - Donation – plasmapheresis comparison: the sense of belonging

<table>
<thead>
<tr>
<th></th>
<th>Very important</th>
<th>Quite relevant</th>
<th>Fairly relevant</th>
<th>Slightly relevant</th>
<th>Irrelevant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plasmapheresis</td>
<td>38%</td>
<td>29%</td>
<td>19%</td>
<td>9%</td>
<td>5%</td>
</tr>
<tr>
<td>General donation</td>
<td>34%</td>
<td>31%</td>
<td>20%</td>
<td>9%</td>
<td>5%</td>
</tr>
</tbody>
</table>
Figs. 27-32 show that, basically, the reasons for continued loyalty to the Avis association are the same for both plasmapheresis and general donation.

So the reasons of donors are the same both for donors who only donate plasma and for those who donate blood in general. A cross comparison shows that the events in schools, according to the sample of donors who underwent the questionnaire, are the means by which they manage to retain more donors. What is clear, moreover, is that the sense of belonging to Avis itself is a key variable for the retention of donors, and this suggests the emotional attachment of those who donate to the Association itself and not only to the idea of the gift per se as a value. In a view of polarization, the tool which is considered, in most cases, slightly relevant for the retention of both plasma donors and blood donors is the newsletter, probably because it is unable to emotionally engage the donor as much as the events in schools and the sense of belonging to the Association.
Taking into consideration the literature on donation, it is possible to identify some of the variables that influence the overall rate of donation. By looking at the following variables, a test has been created which would guarantee to highlight the possible relationships starting from the questionnaire given to 15,737 donating members.

The variables tested are:

- **altruism**: altruism is one of the factors identified as fundamental by the literature to guarantee the loyalty of donors;
- **sense of belonging to the organization**: the sense of belonging to the organization is identified as a very important factor for the continuity of the donation and of volunteering;
- **lack of time**: in the questionnaire, the lack of time is identified as one of the most critical inherent factors for the frequency of the donation;
- **satisfaction in the process of donation**: the satisfaction of the whole process is an index that definitely influences the opportunity to donate;
- **female gender**: it is interesting to assess whether the female gender has an impact or not on the frequency of donation.

The model can be tested in fig. 33.

###Fig. 33

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 13</th>
<th>Model 14</th>
<th>Model 15</th>
<th>Model 16</th>
<th>Model 17</th>
<th>Model 8</th>
<th>Model 19</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Volunteering</strong></td>
<td>0.00604</td>
<td>0.0059</td>
<td>0.005</td>
<td>0.005</td>
<td>0.005</td>
<td>0.005</td>
<td>0.005</td>
<td>0.006</td>
<td>0.006</td>
</tr>
<tr>
<td>Age</td>
<td>0.00404</td>
<td>0.0039</td>
<td>0.003</td>
<td>0.003</td>
<td>0.006</td>
<td>0.003</td>
<td>0.003</td>
<td>0.006</td>
<td>0.006</td>
</tr>
<tr>
<td>Collection unit</td>
<td>0.00733</td>
<td>0.0075</td>
<td>0.007</td>
<td>0.007</td>
<td>0.005</td>
<td>0.007</td>
<td>0.007</td>
<td>0.005</td>
<td>0.005</td>
</tr>
<tr>
<td>Transfusion Center-NHS</td>
<td>0.00352</td>
<td>0.0035</td>
<td>0.003</td>
<td>0.003</td>
<td>0.002</td>
<td>0.003</td>
<td>0.003</td>
<td>0.002</td>
<td>0.001</td>
</tr>
<tr>
<td>Blood Mobile</td>
<td>-0.0289</td>
<td>-0.0290</td>
<td>-0.029</td>
<td>-0.029</td>
<td>-0.028</td>
<td>-0.029</td>
<td>-0.029</td>
<td>-0.027</td>
<td>-0.028</td>
</tr>
<tr>
<td>Importance of sense of belonging</td>
<td>0.002</td>
<td>0.002</td>
<td>0.002</td>
<td>0.002</td>
<td>0.002</td>
<td>0.001</td>
<td>0.001</td>
<td>0.001</td>
<td>0.001</td>
</tr>
<tr>
<td>Importance of altruism</td>
<td>0.0029</td>
<td>0.0029</td>
<td>0.0029</td>
<td>0.0029</td>
<td>0.0029</td>
<td>0.0029</td>
<td>0.0029</td>
<td>0.0029</td>
<td>0.0029</td>
</tr>
<tr>
<td>Lack of time</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Female gender</td>
<td>0.030</td>
<td>0.030</td>
<td>0.030</td>
<td>0.030</td>
<td>0.030</td>
<td>0.030</td>
<td>0.030</td>
<td>0.030</td>
<td>0.030</td>
</tr>
<tr>
<td>Quality of the donation process</td>
<td>0.010</td>
<td>0.010</td>
<td>0.010</td>
<td>0.010</td>
<td>0.010</td>
<td>0.010</td>
<td>0.010</td>
<td>0.010</td>
<td>0.010</td>
</tr>
<tr>
<td>Sense of belonging* – lack of time</td>
<td>0.00890</td>
<td>0.00890</td>
<td>0.00890</td>
<td>0.00890</td>
<td>0.00890</td>
<td>0.00890</td>
<td>0.00890</td>
<td>0.00890</td>
<td>0.00890</td>
</tr>
<tr>
<td>Altruism * Lack of time</td>
<td>0.003</td>
<td>0.003</td>
<td>0.003</td>
<td>0.003</td>
<td>0.003</td>
<td>0.003</td>
<td>0.003</td>
<td>0.003</td>
<td>0.003</td>
</tr>
</tbody>
</table>
By analyzing the table, it is possible to identify some interesting implications concerning the tools and the important points to guarantee the continuity and frequency of the donation:

**altruism** is not a factor being significantly associated with the donation. This means that, probably, it is not one of the factors to insist on in retention and awareness-raising campaigns; altruism is definitely important, and probably, since all the respondents are donors, the initial level of altruism is high, but this is not essential to ensure continuity of donation;

**a sense of loyalty to the organization** is an important factor, it is significantly related to the donation, but this is not essential to ensure the continuity of the donation. It is important to insist on the sense of belonging, but it is more important to insist on other features of the process;

**lack of time, quality of the process and level of satisfaction** are particularly important to ensure continuity in the donation, this means that it becomes necessary to assume tools that ensure appropriate work-life balance, guarantee to reduce the effect of the lack of time and always identify a high-level service to maintain a very high rate of satisfaction. It is therefore important to identify a service and maintain those activities which ensure the support of the donation, while guaranteeing more and more the inclusion of women (who, given their higher rate of altruism, donate more frequently);

**the blood mobile** instead appears to decrease the likelihood of a higher frequency of donation, and to stress the need to verify that the process is at a satisfactory level even within blood mobiles.

### 7.10. Conclusions

Chapter 7 has presented the marketing tools used by Avis to communicate: to attract new donors and retain existing donors.

In this part of the book in-depth interviews have been analyzed, as well as the corresponding indicators, the results of the questionnaires of the survey administered to donors and the results of the focus groups, and it is possible to say that there are two main categories of operational marketing tools: one has as a target the attraction and awareness of new donors, the other one, instead, aims at the retention of existing members.

The work out of research data shows that the traditional communication tools such as leaflets, posters and events are much used by Avis and have a positive impact in raising awareness and in attracting new donors.
donors.

The content analysis of the reasons for which donors have started to donate in Avis showed the existence of four drivers: word of mouth, events, family and spontaneity; the last one, in particular, refers to the value of the gift, the other three share the emotional involvement in the cause due to an event being external to the donor.

The content analysis of the answers related to the question on marketing provided some keywords that suggest the great importance that all Avis branches recognize to the role of communication, not only in terms of awareness of new donors, but especially of retention of existing donors; the other important finding is the concern for the efficient management of the call of donors. An issue which was rarely mentioned, but is of fundamental importance, and discussed in chapter 4, is that of women and of the rate of fall in their donation as a result of events such as, for example, marriage or the birth of a child.

As for retention tools, instead, more than 50% of the Avis surveyed use customized call, SMS and websites, and the correlation of these tools with the indexes of whole blood and plasma donation shows that, for plasma, the donation index is higher for those Avis making customized calls, while the index for whole blood is higher for those Avis using the websites and the newsletters.

Finally, the donors surveyed believe that events in schools and customized calls are the most important communication tools most for the continuation of their relationship with Avis, while they consider events in general to be slightly relevant as drivers of the belonging of donors to Avis. What is clear, moreover, is the enormous importance that donors allocate to the sense of belonging to the Avis association, which confirms the fact that Avis donors, besides being sensitive to the cause inherent in the value of the gift and of blood donation, are emotionally involved in the values of the Association.
8.1. Introduction

A key role for the continuity of the Associations / Federations of donors consists of all those working for free (collaborators) or being paid (physicians, nurses and administrative staff) within the different branches.

This statement supports the argument that the staff (paid and unpaid / voluntary), with the growth of the non-profit "social enterprise", represents the main and constant core of its same existence and development. The two predominant types of staff within the organization are:

1. collaborators-volunteers: their relationship is not of legal-administrative dependence, but is based on the identification with the values and objectives of the non-profit company. They are a variable resource, and in the relationship with the social economic body (that is, Avis as an organized structure of reference for the research in question) they try to maximize their utility. By analyzing the statute of 2003, it is possible to identify as members those who "donate their blood regularly, those who for age or health reasons have interrupted the donation activity and take part with continuity in the activities of the association, and those who do not make donations, but exert continuously unpaid functions whose value is recognized in the association". It is therefore possible, also in this case, to identify as collaborators all those who perform with continuity unpaid tasks of acknowledged validity, and who may or may not donate blood;

2. physicians or nurses, as well as the relevant administrative structure: they have a paid legal-administrative relationship with the nonprofit company of reference (Avis in the research in question), they too represent a basic condition of the non-profit social enterprise and maximize their utility.

The stronger statement, though, is that both the volunteers-collaborators and the medical or nursing staff as well as the administrative structure are all functionally dependent on the non-profit social enterprise and therefore, regardless of whether they are paid or not, they must be given attention in their management and in the implementation of mechanisms of staff management (planning, recruitment and selection, placement and socialization, evaluation and monitoring, training and professional development and evaluation)

That said, the first part of the chapter analyzes the mechanisms of selection, training and retention of staff members that Avis puts in place to ensure the sustainability of their presence over time and their involvement in the Association; the second part contains a focus on the inputs resulting from the survey carried out among collaborators, to analyze which prospects are considered in terms of training and future prospects regarding the continuity of membership in Avis.

To analyze these issues, the results of in-depth interviews to a sample of regional, provincial and municipal presidents, as specified below, have been examined, as well as the questionnaires to collaborators and the results of the focus groups.

---

1 G. Fiorentini (1992), non-profit organizations and charities, ETAS Books, Milano.
8.2. The cooperating members

8.2.1. The semi-structured interviews

The semi-structured interviews to a statistically significant sample of regional, provincial and municipal presidents of 169 Avis branches existing on the national territory (for more details see Chapter 2) found that, on average, the 169 Associations surveyed, both in 2011 and in 2010 had 46 collaborators. It is useful and positive to note that the constant and numerous presence of the collaborators reinforces the thesis that Avis is able to preserve over time a constant basic association-functional balance; this provides a sufficiently reassuring picture of the organizational form of the Association itself. But everything happens if a stable and constant legal and socio-economic framework exists; in case of any changes, it would be necessary to rethink the organizational structures that change with the evolution of the context.

In most cases, collaborators apply spontaneously to cooperate with Avis; these are often historical volunteers of the Association and sometimes they have approached to Avis through the word of mouth from friends or relatives.

The levers that are bringing people to Avis, in general, are the same for both donors and collaborators; in fact, going back to the matrix of Chapter 7 on the reasons for which donors donate, it can be noted, as is apparent from Fig. 1, that two of the four levers, respectively word of mouth and family, are present simultaneously. These levers are of fundamental importance for the approach of collaborators to Avis.

Fig. 1 - Content analysis: how collaborators began their cooperation

<table>
<thead>
<tr>
<th>WORD OF MOUTH</th>
<th>EVENT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FAMILY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SPONTANEITY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

8.2.2. The survey conducted on donors

Given the survey conducted on 537 collaborators, some significant issues have emerged that represent the mechanisms of human resources management.

1. **Selection of collaborators**: the mechanisms of selection of volunteers are key to ensuring a sustainable path over time; only through structured mechanisms will it be possible to identify the collaborators being necessary for the Association and to assign corporate functions according to the skills and capabilities.

The sample of respondents provides a breakdown based on the gender diversity of the donors; it is in fact possible to verify that 35% of respondents are female while 65% are male (Fig. 2).
The significant percentage of female collaborators implies a specific attention to gender, that will have to find "tailored" management solutions, for example on the reconciliation of volunteering time and family time, consistent with the female personal equation and with other types of activity that can support female donation.

Fig. 2 - Composition of the sample

In this case, too, the focus is again on women, who represent, in the remarks on the future of Avis, a subject of fundamental importance, because not only will it be necessary to intervene to increase their level of retention and to avoid their dispersion for example after maternity, but it will also be necessary to find a way to involve them more directly in the life of the association, even when they can no longer donate.

As shown in Fig. 3, the collaborators interviewed have been volunteering for some years in Avis. The majority of collaborators (41%) have performed volunteer activities for over 10 years, thus constituting a group dedicated since long to the continuity of the Association. 20% have carried out an activity since 5 to 10 years and 26% have carried out volunteering activities for the Association since 2 to 5 years. Lastly, 13% of the sample surveyed have carried out volunteering activities within Avis for less than a year.

Fig. 3 - Years of volunteering

Data show that the majority of collaborators has been volunteering for a long time and this is consistent with the hypothesis that part of the employees are former donating members because of age or of lack of eligibility for donation. The figure also underlines the stability of the membership base of Avis, made up for 61% by collaborators who have been active in the Association for at least 5 years.

A sort of relay and functional transition therefore exists between former donors and cooperating volunteers who, in the future, will have to be stabilized through training-information sets converting former donors into volunteer members and collaborators being actively involved in the management of the organization. All this can happen only with a change
that goes from a motivation focused on blood donation as a dominant factor, to a motivation of belonging to the organization as a main element and to a strong sharing of the mission of Avis. The reasons of solidarity and selfless donation linked to the indispensable value of blood donation have therefore become a recognition of the importance of a gift of solidarity and social value linked to the sharing of the mission of Avis and to the assumption of the responsibility of managing the organizational structure of the association itself, which is a necessary condition to make blood donation efficient and effective (in the logic of marketing and retention tools, management of collection and management of all the structural activities needed for the continuity of the association).

Ultimately, the final step can be summarized through an in-depth analysis of the value inherent in the donation, which has not a greater value because of the appearance of the gesture, but because of the sharing of the mission of Avis.

The methods for the selection of collaborators differ significantly, and have been summarized in the chart below.

**Fig. 4 - The rules for the selection of collaborators**

![Chart showing the rules for the selection of collaborators]

The methods for the selection of collaborators were as follows:

- **internal organs:** in 32% of cases they are selected and reported by internal bodies of the Association, so the collaborators are placed by other collaborators. Collaborators report the placement of these new collaborators within Avis for their affinity and sharing of the values of the Association, and because they believe that the people identified can help manage the Association according to their specific skills;

- **previous volunteering:** in 24% of cases they have become collaborators because they previously carried out volunteering activities in the Association and have formalized their presence over time, thus becoming active contributors;

- **word of mouth:** in 19% of cases, respondents have approached the Association, and have later become collaborators, through word of mouth. It is worth emphasizing once again the importance of the word of mouth, which is a key driver not only for the recruitment of new donors but also to approach new over time to Avis;

- **direct knowledge:** 12% of respondents became collaborators through direct knowledge of Avis. This percentage of cooperating members has chosen Avis because they know the activities of the Association and share its mission;

- **former donor:** 9% of the collaborators are former donors, who no longer donate because of age or eligibility reasons; this option, with this management side, might seem a residual choice but could instead be a mode of selection based on the qualitative aspect of the motivation that drives a large number of former donors. The emotional push of the former donor, however, involves a shift from a commitment of values to the donation itself, to an attachment to the values of the Avis association.
and of its mission;

- **civil service and other**: the remaining 4% of the sample interviewed became collaborators after spending a period of civil service at the association (2% of the sample) and therefore after deciding to continue the cooperation with it in a logic of continuation of a training path; after a selection interview (1% of the sample) by the internal bodies of Avis, aiming at understanding the specific skills of the future collaborator and his involvement with the values of the Association; through an "external request" received by the member from people outside Avis who reported to the future collaborator the need for its specific skills in the Association.

Therefore, most of the collaborators surveyed (32%) are selected and reported by the Association itself to become collaborators and often, they are volunteers who have already worked in the association. The selection is therefore proportional to the level of membership (quantity and quality) in the organization itself.

Taking into account the mechanisms of growth and support to collaborators, it is possible to identify the creation of periodic specialist training courses, aimed at providing the collaborators with basic knowledge in terms of health and management of the Association, and divided into modules that meet the training needs expressed by collaborators. The collaborators interviewed are extremely interested in the issue of training.

**Fig. 5 - Attendance of training courses**

Fig. 5 shows that 48% of the collaborators surveyed attend training courses. The figure of 52% of collaborators who do not attend training courses, implies that within the organization there is still a dominant culture saying that the Association is not seen in its dynamism, but still in its stillness, and draws on the specific and pre-existent skills of the collaborators, without recognizing the value and dynamism of training in a prospective view; this lack of dynamism in training is closely connected with a certain orientation, typical of the organization, to donation in itself, which does not recognize the added value of training courses. This underlines the importance of a cultural change within the Association that recognizes the importance of dedicated training for its optimal management.
The theme of training must be considered of paramount importance for the future of Avis, and could be a key driver for improving the management of the Association through the recognition of the importance and the subsequent delivery of training courses related to the management of the Association, of volunteers and human resources, of events and campaigns for the recruitment and retention of donors.

The issues dealt with in training activities are shown in Fig. 6. The histogram shows the collaborators who participate in training courses on:

- 26% attend modules on health issues;
- 21% courses of administration and budget;
- 11% attend modules on the creation of events;
- 11% attend modules on the management of councils;
- 8% attend modules on public speaking;
- 5% modules on the creation of partnerships in the area;
- 4% very specific modules on online marketing;
- 14% modules on other topics. These include issues related to the management of human resources, of volunteers and to cooperation.

An analysis of the training courses attended by employees shows the preponderance of health and specialized issues, in the field of management of the Association, such as modules on administration, finance and control. The analysis of specific training issues shows, therefore, the willingness of the Association to train collaborators not only on issues related to health care, but also on more operational and managerial issues. It is important, moreover, that a certain percentage of the courses taken is linked to issues related to the creation of events: this confirms the importance of the role of events as a marketing tool to attract new donors.

The analysis on the training courses attended by the employees was also very detailed, given the number of courses taken. The number of courses attended by the employees is shown in Fig. 7. Fig. 7 shows that:

- 14% have attended more than 10 training courses;
- 17% from 5 to 10 training courses;
- 29% from 3 to 5 training courses;
- 40% 1-2 training courses.

Collaborators who claim to attend training courses, attended, for the most part, 1-2 training courses during their experience as collaborators for Avis.
By linking this answer to the previous one, it is possible to infer that probably those who attended a smaller number of courses were trained on health issues or on administration, finance and control, while those who attended more courses also studied other issues, such as those relating to the management of events and the creation of co-operation with other local operators.

**Fig. 7 - Number of training courses attended**

- 1-2 training courses: 40%
- 3-5 training courses: 29%
- 5-10 training courses: 17%
- 10+ training courses: 14%

**Fig. 8 - Attendance of training courses in the future**

- No: 24%
- Yes: 76%

The issue of training is also very interesting with regard to the future of the collaborators interviewed: 76% of respondents say, in fact, that they plan to attend training courses in the future.

The interest in training encountered in the collaborators was confirmed by the high number of training topics they proposed for future planning.

Collaborators are interested in training courses on the following topics, in order of importance:
- marketing;
- administration and budget;
- fundraising and event management;
- problem solving and management of the Association;
- online marketing;
- event creation;
- Association management and improvement.
The suggestions on the issues of education, which collaborators would like training courses to focus on, show the need to formalize some of the contents to manage the Association at best.

The collaborators of Avis are also very much involved in the activities of the association and would continue in the future to do volunteering (so say 99% of the collaborators interviewed), as shown in the graph below.

**Fig. 9 - Prospects of future volunteering**

The interviews with collaborators therefore show the need for specific training courses that can make the management of the Association more efficient and effective, in terms of economic management, as per the suggestion on the courses on management and budget, both in terms of communication management and of marketing. There is, in fact, a very strong need to structure courses with a focus on marketing, online marketing, fund-raising and event creation, in order to raise awareness among new donors and retain existing donors.

### 8.2.3. Focus groups

If we compare the results of the analysis of the focus groups composed by Provincial presidents, it is possible to identify similarities with the results of the questionnaires submitted to members engaging in active volunteering within the Associations (collaborators). The issue of training and recruitment of staff was also noted during the focus groups structured with the presidents of the Provincial Avis.

FIG. 10 shows the importance of the issue of training during focus groups.

---

1 See Chapter 2 for further details on the methodology of research.  

---

226
Fig. 10 shows that the issue of training is an important issue for Avis and this leads back to what was said earlier in relation to the need for training on specific issues encountered by employees. During the focus groups, moreover, the issue related to the problems of recruitment of collaborators has been generally discussed; in this regard, the issues raised are as follows:

- **training courses for association executives**: Some Avis provide training courses only for the executives of the Association; these courses are often focused on the management of the Association, and address topics such as administration, finance and control and health issues;

- **healthcare training courses**: Most of the training courses cover topics related to health and first aid; as confirmed by the previous analyses, health issues are those in which Avis invests more for the training of their employees;

- **training courses on donations and international cooperation**. Some Avis have organized training courses for staff on blood donation and international cooperation; the courses on international cooperation appear as an innovative theme which the future training of the collaborators and also the secondary activities of Avis should focus on, in order to have a greater number of best practices related to partnerships with non-profit Associations operating abroad;

- **Training courses for Volunteering Service Centres**: Many Avis branches that do not have internal training courses benefit from those of the Voluntary Service Centers, which offer free training for the Associations being part of its network;

- **problems in finding people willing to collaborate**. Many Avis branches are experiencing considerable difficulties in recruiting people willing to collaborate with the Association, and it is precisely for this reason that no selections are made, but unsolicited applications are accepted. Accepting unsolicited applications implies a low level of selection of collaborators and of their skills: this confirms the hypothesis that Avis in the future should invest in training, not only to level the basic skills of the collaborators, but also to convey specific skills to collaborators who deal with specific areas of the management of the organization;

- **former donors**: Employees in many of the Avis interviewed are former donors who cannot donate for age or eligibility reasons;
• civil service. Some Avis branches have stated that the cannot donate being present in their Associations are people, especially young people, who, after the Civil Service, continued to collaborate with the Association.

As for training courses, the issues raised in the focus groups as key themes of the training provided at the association level are issues related to health care, administration, marketing tools. Many Avis branches are also investing in training for the development of fundraising techniques, in order to provide this knowledge to collaborators, with a view to the future development of the Association.

With a view to improving the techniques of retention of donors, moreover, many Avis branches invest in training courses that, in the field of marketing, deal specifically with how to retain their donors.

8.3. Conclusions

The aim of this chapter was to provide a general overview of the data coming from the surveys conducted among collaborators, defined according to what was expressed in the Avis statute of 2003. A summary of the findings of the survey conducted on collaborators shows that:

- the majority of the collaborators interviewed has volunteered for a long time, and this is consistent with the hypothesis that part of the collaborators are former donating members because of age or ineligibility issues, or have already volunteered for a long time in the Association;
- The methods to select collaborators are the most varied, but the most important ones are the reporting of the member by those who work internally to Avis, and having been already an Avis volunteer for some time;
- collaborators attend training courses especially related to health issues and administration.

The issue of training is essential for collaborators, especially in terms of suggestions for the investment on future training: in fact, they wish a more accurate training especially on the issues related to marketing and fundraising, in order to raise awareness among new donors towards the Association and to retain the existing ones, on more specific issues relating to the internal management of the organization.

If, on one side, the point of view of collaborators was presented, especially in terms of training and continuity of cooperation through their volunteering activities, on the other side the views of Presidents on the recruitment and selection of collaborators were also presented. What results is that many Avis branches have difficulties in involving collaborators and accept unsolicited applications, without selecting the collaborators of the Association.

The macro-concepts and the future challenges arising from the analyses carried out in this chapter, can be summarized in the few key words below:

- women,
- continuity,
- training,
- internal choice,
- word of mouth,
- Collection Unit,
- value of the gift versus sharing of the mission.
The analysis of every macro-concept results in the following remarks:

- **women.** They are one of the focus and of the future challenges of Avis and a transverse driver in terms of investment because, on the one hand, it is necessary to understand how to retain their presence as donors, on the other hand it is necessary to find techniques for work-life balance that can guarantee their greater involvement in the Association. It is also useful to assume a specific training investment also providing training courses on work-life balance. Women represent a cross-cutting issue in the analysis of a sample of 80 physicians, and here again there is a greater presence of men due both to the difficulty and the investment in terms of training, and to the management situation of the profession, that makes it difficult sometimes to find the right compromise between working life and family life;

- **continuity:** It is the keyword that best fits in reference to the activities of the employees, that is collaborators who in most cases provide their service for a long period and that, in addition to having developed an attachment to the value of the gift, have developed a sharing of the values of the Avis association's mission;

- **training:** the results show that there is still room for improvement on the part of the Avis association on this issue, and this implies, on the one hand, the need to fill the training gaps of collaborators, on the other hand to modernize a bit the intrinsic structure of Avis, which must realize to be in the middle of a cultural shift in which the legacies being typical of the nonprofit Association should be abandoned in favor of a more efficient management of the structure, where collaborators are trained and specialized in certain areas;

- **internal choice:** It is still the most widely used method of selection for the involvement of collaborators. This choice is independent from the specific skills of collaborators, but takes into account other drivers, such as internal reporting and interpersonal knowledge;

- **Word of mouth:** The word of mouth appears to be the most effective method of involvement not only in terms of involvement of donors, as outlined in the previous chapters, but also in terms of active involvement in the management of the Association;

- **Collection Unit:** It is the physical place where most physicians working for Avis operate.

The last concept that emerges from the analyses of the chapter is "value of the donation versus attachment to the mission", which summarizes, on the one hand, the motivation behind the staff of the various Avis branches and of the physicians employed by Avis, whose logics of management and remuneration are those typical of the non-profit sector, and on the other hand, represents the transition, not only internal between donors and collaborators, but also generational, from an Association being poorly structured in terms of management, to an Association being ready to face the challenges of the future and that invests in terms of training for its employees and collaborators.
Conclusions and the future: points of view

9.1. Introduction

The Italian blood system, with its functional and service value, as described in previous chapters, faces the infrastructural challenges of the Italian National Health System and its process criticalities; this is why it should organize itself dynamically to increase its level of operational effectiveness and its strategic positioning in the blood system and in the Italian National Health System.

The chapter highlights the future solutions identified by the different players of the blood system and in particular:

• the solutions identified by the Presidents of the Avis branches interviewed;
• the solutions identified by the physicians working within the organizational structures related to the first stage of the transfusion system;
• the solutions identified by the key informants belonging to different institutional levels.

After a comprehensive overview of the future steps that the different players will have to face, an in-depth analysis is conducted on the solutions that are proposed for the development of a synergistic system ensuring a greater integration and the achievement of outcomes and outputs both in terms of effectiveness and in terms of performance.

In fact, the objective, as explained in chapter 2, is to outline what are the solutions that the different players can adopt in order to:

• improve the Italian transfusion system;
• achieve qualitative and quantitative self-sufficiency in the Regions, within the country as a whole and with respect to the international system.

9.2. The future prospects of the transfusion system: the point of view of the Association

Given this critical and challenging time for the transfusion system, highlighted in Chapter 3, it was considered essential to analyze the growth prospects structured by the Association, from the point of view developed by the association presidents and by the physicians of the Association.

9.2.1. The point of view of the association’s Presidents

Within the interviews dedicated to the presidents of the Association, the last question developed considers what kind of future can be envisaged in case of a hypothetical and possible reduction in reimbursements resulting from the Italian National Health Service. The results from the analysis of the data of this question can be found in fig. 1.

---

1 It is worth pointing out that no player has assumed the reduction in the reimbursements of the blood system. On the basis of an overall assessment of the spending review, it is certainly possible to identify a financial strain that is affecting today the national health system.
As shown by Fig. 1, fund-raising is the solution outlined by most Associations. Fund-raising is linked particularly to partnerships, in fact 30% of the presidents who have seen in fund raising a possible solution, have highlighted the need to create partnerships with different players in the area.

In particular, the issue of fund-raising becomes interesting in the establishment of relations with profit companies in view of a synergistic collaboration with other non-profit organizations in order to increase their negotiating and social cohesion capacity, and with the Public Administration, both to respond jointly to calls for funding and to establish successful synergies allowing to increase the impact in terms of effectiveness and efficiency. This activity that has seen the Association particularly focused, until today, on the creation of a greater social impact in the area with the support to other non-profit organizations, could start focusing on the possibility of the Association itself to structure a path of self-financing and fundraising for its activities.

In addition to fund-raising, part of the solutions proposed by the Presidents results from the ability of the Associations to rationalize costs by creating economies of scale that allow to activate a reduction in expenditure. This solution is particularly related and connected to the branches that deal with association collection, and that will have to face in particular the investment deriving from the adaptation to the minimum requirements.

After an evaluation of the responses of the Associations mainly involved in collection, the dreaded possibility of a reduction in the available resources has led to the assessment of a non-sustainability over time, highlighting the difficulty in continuing to structure the whole service or highlighting the need to completely renovate the offer.

The change in supply involves, on the one hand, the reduction in numbers of the activities planned on the territory, that is, the ability to concentrate and focus only on the part of the activities being purely related to awareness-raising in the area, or the transition to a concept of pure volunteering, which is axed mainly on the ethics of gift and free labour. Lastly, another possibility is defined in the legislative and operational change of the Association (legal change or change in the activity against the health system - from partner to service provider).

Less attention has been paid to the possibility of improving the service, intended as an activation of a process of support to donation and to donors that allows to increase the number of donors, ensuring the continuity of the association and assuming economies of scale at different levels of membership.
Lastly, a rather high percentage of Presidents does not believe it is possible to progressively reduce repayments by the National Health System, and highlights the impossibility to find plausible solutions in this direction.

The results explained by the presidents highlight therefore that the Association is going in two very different directions that permeate evenly the different choices:

- the first direction considers the creation of a system of fundraising and partnership as one of the solutions for the development of the activity of the association; the role of relationship with the other players within a territory is seen as crucial to encourage the collection of the resources needed to ensure continuity; the tools learnt in the management of fundraising for other Associations become a necessary tool for the Association itself, structuring a growth path that allows to use at best the tools already used;
- the second direction considers instead the present cost rationalization as a possible solution. This rationalization can lead, on the one hand, to a change of service in terms of attention to possible inefficiencies and therefore to the improvement of the indicators structured in chapter 4, but sees its extreme realization as a possible reduction or termination of the service.

Less attention is paid instead to the opportunity to improve the service, and it is worth pointing out that only a few Presidents (n = 5) have identified in this historical moment the opportunity to improve the service provided by identifying as very important the attention given to the donor and the construction of new dedicated services.

Similar results also stem from focus groups, which pay, however, special attention to:

- cost rationalization,
- reduction in costs arising from merits,
- stimulation of growth in the number of donors.

The economic crisis is certainly seen as a possible cause of the service reduction and of a necessary organizational change; and it is clear that there will be future difficulties to be faced, that will lead to necessary changes in the process and in the overall reorganization.

It is therefore possible to say that the Association will have to promote all the three points structured above, and to place itself in a system where probably the concept of fund-raising and, in particular, of partnership, will become crucial to improve the service, attract new donors and retain existing donors. This will be done through a special focus on the economic resources that will have to provide a return in terms of social impact and cohesion; the rationalization of resources will therefore have to be addressed to the inefficiencies being identified, but the objectives of the Association itself will have to be preserved. Lastly, services dedicated to donors will have to be structured, in order to encourage the donation by certain groups that may guarantee the continuity and growth of the Association itself. These new services may be structured also with minimum investments, such as the creation of a planning of events or particular attention to children while women donate, thus encouraging the use and consolidation of resources in collaboration with other non-profit organizations that may develop, through Avis, their path of social cohesion.
9.2.2. The point of view of physicians

The questionnaire submitted to physicians gives the possibility to analyze, given the problems identified in the organization where they work, the solutions to be developed to overcome the possible impasse identified. The issues raised in chapter 3 are therefore resumed to foster an analysis of the solutions.

The weaknesses outlined by physicians in relation to the activities of the association being mainly carried out in collection centers (both operated by the Associations and by transfusion systems), are as follows:

- little cooperation and integration with other players of the blood system and in particular with Health Units and the related Transfusion Services for the development of effective and efficient activities;
- low organizational integration between the different heads of the different activities carried out within the collection centers: the organization has difficulties in finding young people, problems with understaffing and a high resistance to change;
- difficulty relating to the structures, to the achievement of the accreditation and to the implementation of innovative activities: these difficulties stem both from the lack of staff, and from the resistance to change, but also from the shortage of funds in the area.

By analyzing fig. 2, it is possible to highlight that the solutions proposed are tightly linked to the critical points identified.

In fact, the required greater integration among the players of the blood system is identified as one of the most valuable solutions to promote a more effective and efficient system; the creation of synergies becomes fundamental to ensure the rationalization of the costs previously identified and to reduce the information asymmetries that in a social system create an even greater negative impact both in terms of effectiveness, and therefore of social impact, and in terms of efficiency.

Physicians see as necessary also a path of improvement of the service, expressed in the definition of an improvement in awareness and therefore in a greater attention to the target of donors to be attracted, especially young people, in an improvement of retention tools that need to be aligned with the recipients they are addressed to, and in a path of improvement of the collection service which must be increasingly focused, on the one hand, on the needs of the donor and, on the other hand, on a concept of efficiency.
The concept of efficiency is also expressed in the vision of physicians, who highlight the need to reorganize the transfusion system, and in particular the role of non-profit Associations, and to identify the importance of structuring economies of scale that ensure the development of a qualitative and quantitative concept of self-sufficiency.

The concept of reorganization has an impact not only on the relationships of non-profit organizations with other institutional players, but also on the internal organization of structures. It is crucial to structure a greater internal integration, allowing to limit the possible disconnection between the membership part and the collection part. It is also very important to stimulate training programmes that allow to "reward" the motivation of volunteer and non-volunteer workers who guarantee the qualitative growth of the service offering.

Lastly, it is interesting to notice the low number of physicians who see in the increase of funds a solution to improve over time the continuity of activities. This is important because clearly, the lack of funds still seems not to impact on the ability to structure a continuous service over time.

An analysis of the data from the questionnaires submitted to physicians shows a clear need to work with the same resources or fewer resources to improve the overall service dedicated to donation in its entirety. Resources can result from a better use of resources, aimed at the development of an integration between the various institutional players and at the achievement of the reduction in information asymmetries.

A portion of the resources will have to be necessarily invested, on the one hand, to ensure training courses and support to employees and consultants, targeted on the basis of needs and experiences, and, on the other hand, will have to impact the internal integration tools and processes that ensure the sharing and structuring of continuous relationships between the association and physicians.

9.3. The future prospects of the transfusion system: the point of view of key informants

Through an analysis of the feedback from key informants it is possible to identify as crucial, against the weaknesses and problems highlighted in Chapter 2, some operational solutions that would allow for a support to the organizational change that the Italian transfusion system will face in the coming years.

For the sake of completeness, it is worth starting from the SWOT Analysis and the remarks expressed in Chapter 2 to analyze the considerations related to the solutions to support the growth of the transfusion system (Fig. 3).

By analyzing the internal weaknesses, the following hot topics can be highlighted, that need to be addressed in order to be able to activate an effective and efficient process of change.

- The fragmentation of the different phases of the blood system does not guarantee the achievement of a qualitative and quantitative self-sufficiency; fragmentation leads to increased difficulties of integration between different players and to poor planning and control, which could result in greater effectiveness and efficiency.
• Organizational resistance to change, coming from a culture that hardly provides for the acceptance of an organizational change which could lead to a different balance and a different allocation of resources.
• Difficulties in adapting to the minimum requirements which refers to the need to strike a balance between possible economic difficulties and requirements resulting from European Directives; this weakness is tightly integrated with the need to be able to achieve a high level of consistent quality in terms of self-sufficiency in the area.

Together with these weaknesses, it is necessary to point out which threats come from outside and could undermine the process of change that needs to be implemented in the coming years. The first results from the current economic moment, which provides for a reduction in resources and for the need to redesign expenditure and reprogram services (spending review). In some branches it will be difficult, therefore, to enable structural changes to achieve the accreditation, and it will therefore be difficult to imagine preserving the number and fragmentation of the current system. The diversity of health systems is certainly reflected in the management of the regional blood transfusion systems, and leads to the presence of highly critical elements from the point of view of blood transfusion in the Regions having major healthcare problems. A very effective threat is the lack of attention paid by decision makers, which resulted, in some areas, in difficulties in ensuring the smooth functioning of the system. Lastly, the transfusion system is not considered as a subject of specialization per se, and this reduces the sharpness of such discipline.

Fig. 3 - SWOT analysis of the blood system

<table>
<thead>
<tr>
<th>Strengths of the Blood System</th>
<th>Weaknesses of the Blood System</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Policy Planning activated in advance that has allowed to consider the process of self-sufficiency.</td>
<td>• Internal fragmentation of the blood system (low concentration of Transfusion Services, Associations, Job centers and validation) which will lead to a much-needed reorganization.</td>
</tr>
<tr>
<td>• Composite system between different players who will have to find joint synergies in order to activate an effective and efficient reorganization.</td>
<td>• Poor planning and control for the assessment of the needs related to the demand for blood.</td>
</tr>
<tr>
<td></td>
<td>• Difficulties in adapting to the minimum requirements (both from a qualitative point of view and from a temporal point of view).</td>
</tr>
<tr>
<td></td>
<td>• Resistance to change and to reorganization (problem of organizational culture).</td>
</tr>
<tr>
<td></td>
<td>• Lack of coordination between different institutional levels, players of the blood system, Associations.</td>
</tr>
<tr>
<td></td>
<td>• Poor attention to the quality of products related to self-sufficiency (too much focus on the quantity and activation of a qualitative heterogeneity).</td>
</tr>
<tr>
<td>Opportunities</td>
<td>Threats</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>• Necessary achievement of the accreditation and of the new minimum requirements.</td>
<td>• Spending review and economic crisis within public bodies.</td>
</tr>
<tr>
<td></td>
<td>• Difference due to different healthcare levels within Regions</td>
</tr>
<tr>
<td></td>
<td>(unevenness of productivity and efficiency).</td>
</tr>
<tr>
<td></td>
<td>• Little attention from political decision makers towards institutional</td>
</tr>
<tr>
<td></td>
<td>bodies.</td>
</tr>
<tr>
<td></td>
<td>• Lack of a school dedicated to the medical specialization on transfusion</td>
</tr>
<tr>
<td></td>
<td>medicine.</td>
</tr>
</tbody>
</table>

Source: CERGAS.

The solutions proposed within the questionnaires structured with key in-formants and, in particular, the questionnaires related to Regional Coordination facilities, emphasize some assumptions and projects on which the different regional branches are working, at different levels and speeds. The proposals that are having a greater cross-cutting success through the different regional branches consist in activating a process of reorganization of the system of validation and processing of blood, possibly based on the creation of a possible agency of the National Blood System which should ensure greater integration among the different institutional levels. The proposed reorganization is to impact also on the system of collection, which must include greater attention to donors, through the implementation of booking tools and staff training. The concept of integration between the different players becomes crucial to enable a process of efficient and effective synergies; lastly, it is very important to activate pathways dedicated to attention in the use of blood to ensure an appropriate use and limit the risk of waste and uses not being fully appropriate.

By analyzing the interviews structured with the key players of the transfusion system, it is possible to highlight the activation of a path full of opportunities and challenges to be seized; the Italian transfusion model is a virtuous and competitive model, but there are a series of cultural revolutions to be put in place that are very strong, and it is therefore necessary to undertake a debate in order to carefully reassess the situation, even by putting into question each role and the activities being performed, and being conscious that perhaps they will no longer be the same. It is a very strong challenge, it is about a review of the system and a cultural revolution, based on choices of rationalization and reshaping of the Services that cannot satisfy the criteria being required. This path will inevitably lead to a reorganization of the system, based on the achievement of economies of scale. It is worth stressing the need to integrate and modify the objectives structured within law 219/2005, by encouraging a higher level of cohesion of the regional blood systems that allows, in accordance with regional autonomies, for the creation of a greater network functionality.
All of this can be done through some proposals for action, such as the integration of the know-how of several consultants belonging to the key stakeholders aimed at structuring a process that can achieve compliance with European regulations, and the creation of a centralized system of monitoring of consumptions, in a view to allocate unused resources where consumption is higher, so as to support an efficient and rational exchange that can support the achievement of qualitative and quantitative self-sufficiency.

Only through the synergistic coordination of the skills of the different players will it be possible to support and understand the change, while maintaining the strengths well listed in the previous figure, seizing the opportunities, eliminating or reducing the weaknesses and limiting the threats.

9.4. The conclusions of the White Paper

The watermark of the chapters presents some concluding remarks.

1. Over the years, at a European level, the legislative work concerning transfusion grew in quantity, becoming more intense and restraining, describing opportunities and risks related to the change that the system is facing. The guidelines issued at Community level have had the objective of harmonizing the transfusion systems of the different European countries; in the future, with more homogeneous transfusion systems, it will be possible to open the market more and also to create the opportunity to achieve overall self-sufficiency in all the countries belonging to Europe. The national level has transposed the European directives trying to conform to the EU context, although sometimes more slowly. The Italian legislative activity concerning transfusions has become more intense especially between 2006 and 2007, and has produced a large quantity of rules. Now there is a situation of great difficulty to face, resulting from the accreditation, by 31 December 2014, of the transfusion facilities, including Collection Units, imposed at a European level, that is creating many difficulties not only to the system but also to its institutional players (public, non-profit and profit). As for the regional level, in terms of legislation on the transfusion system, the situation is rather heterogeneous and complex. An imbalance may be noticed in terms of quantity of regulatory and legislative production, precisely in relation to the number of Laws, Decrees, Agreements and Resolutions issued in some regions rather than in others. Moreover, most of the Regions have a Regional Blood and Plasma Plan which is relatively recent, with certain limited exceptions, aimed at supporting, primarily, self-sufficiency or its achievement. The diversity of the Regions is closely linked to the various levels of the Regional Health Service, but it would be important to prospectively identify tools that ensure an adequate level of quality standards throughout the country, trying to break down possible barriers related to a culture of division rather than of integration.

2. In the last ten years, undoubtedly, many steps forward have been made from the point of view both of self-sufficiency in blood components and of the development of policies linked to the transfusion system. It is important, however, to develop the
awareness of being in a moment of profound change of the system, imposed by European regulations, by the pursuit of the achievement of self-sufficiency, not only in quantitative terms but also in qualitative terms. The path that the players belonging to the transfusion system are facing is therefore a challenging route, that will go through major changes in the coming years. All of this needs appropriate organizational choices. Together with the opportunity and effort linked to the implementation of the accreditation standards, there are factors that make up a future challenge, on the one hand the economic crisis leading to a need to activate processes of rationalization and efficiency, while maintaining the research of a high quality standard, and on the other hand, the demographic change that because of the aging of the population and the collapse of birth rates will lead to a change in the need and supply of blood.

To address these challenges and to be able to achieve qualitative and quantitative self-sufficiency for both blood components and plasma derivatives, it is important to generally invest on the strengths of the system, thus limiting and monitoring the critical points. It will therefore be important, on the one hand, to protect the ability to raise awareness, integrate, support the donor in his experience, but it will be equally important to invest in limiting the criticalities of the integration between the different players of the transfusion system, in limiting resistance to change, fragmentation and the difficulties detected in programming.

A role of integration between the different players at different institutional levels thus becomes very important, because only through the identification of synergistic processes will it be possible to protect the achievement of a qualitative and quantitative self-sufficiency, based on ethical and cultural values being linked to the concept of gift.

3. An analysis of one of the key players in the Italian blood system, Avis, allowed for the identification, in a phase in which the non-profit company is the main protagonist, of the characteristics, challenges, problems and opportunities that need to be seized in order to reach the goal of qualitative and quantitative self-sufficiency. The Associations / Federations of donors represent a very important player within the different levels of government and have an influential role that depends on the importance of the activities created on the territory. Within its historical path, Avis has become a real non-profit organization that can be assessed in terms of social and economic impact and can be analyzed in terms of organizational models.

Just starting from the remarks on the organizational models, it was possible to identify some differences at a national and regional level on how responsibilities are handled, and this highlighted a lack of homogeneity of models, but the prevalence of two of them in particular, one that provides for public collection as well as retention and awareness-raising activities being managed at a local level, and one providing for the full decentralization of the activities to the local Associations. Given these models, it was possible to apply some performance indicators built on the activities of associations, and providing for a high coverage of the territory, an ability to design and align with planning, but also just a medium level of integration with other stakeholders, a controversial result concerning the effectiveness of the call and a problem related to plasma collection.
The indicators show a solid Associations, which, despite the presence of a very strong economic contraction, are starting an intense process of rationalization.

4. One of the most important results was provided by the donor questionnaire which, given all the difficulties of the Italian transfusion system, is anyway appreciated by donors, who consider it very satisfying and highlight all its strengths. Lastly, always considering donors, their composition is changing in terms of age groups and percentage of women. The Associations and the system in general will have to be able to seize this change in order to manage it and to turn it into a strength that may ensure the continuity of the system itself.

5. As for the complexity of the blood system, it is important to study and evaluate the relationships activated between the different players of the area. The Italian transfusion system has many stakeholders, as it is a system that, by its nature, has to meet a general interest of the community. The system includes primary and secondary players of the system, which in their complexity handle the added value that can and must be created. The degree of collaboration between the various stakeholders is not differentiated on the basis of collecting or retention/awareness-raising activities, except in terms of the intensity of the relationship with the Committee for the Appropriate Use of Blood. It can instead differ in case organizational models are evaluated. The association model that provides for the collection and the call/awareness raising at the provincial level, provides for a high cooperation and synergy with the other Associations and with the players of the relevant Public Administration. The highest degree of collaboration with the Committee for the Appropriate Use of Blood is instead that of the organizational model that provides for collection by public facilities and association activities by local facilities, as well as in the patterns providing for collection by provincial facilities. In this case, the underlying reasons are evident in the model itself, because there needs to be a good integration between the Transfusion Services and the local branches, and it is important to evaluate the role of the Associations within the Committees in case the collection is structured at the provincial level. The two models having the highest degree of cooperation are the mixed association model and the mixed public model, which therefore represent the two models with the greatest synergy between the various stakeholders analyzed and the Associations.

6. In a further study on organizational models analyzing the results and the differences between the different organizational models in terms of effectiveness, performance and territorial proximity, it is interesting to notice that donors, who are the glue of the Association, have the same prime factors of membership in the Association itself, thus showing a profound unity in geographical, social and cultural terms. Starting then from the awareness of this unity, it has been possible to identify the differences and problems raised by the various organizational models.
By analyzing the general view of the composition of donors it is possible to detect a shared evaluation in the attraction of young donors, and a special attention to the female gender, which is considered important for the Association itself; more attention must be paid, instead, to possible foreign donors, as in the future they will ensure a major catchment area for the sustainability of the association.

As for the indicators of effectiveness, instead, the mixed association model shows the best results for the awareness of the area, although it turns out to be a difficulty in the change of plasma donations and therefore in the retention of the area. The centralized association model, instead, manages to obtain a greater retention, and reaches a positive result in the change of plasma donations. All the models, except for the centralized public model, have a very high inclusion rate in the area, allowing for a penetration rate of the active population which guarantees future continuity over time. The decentralized public model and the decentralized association model add to this the ability to attract the right donors, thus reducing significantly the rate of ineligible donation. Lastly, the mixed public model and the mixed association model are the ones providing for a higher rate of integration with stakeholders. Through the analysis of performance indicators, it is possible to notice an efficiency in the call in all the organizational models, and in particular in the decentralized public model, which demonstrates once again the proximity to the local population. Given the average number of monthly donations by collection site, the centralized association model ensures a high number of monthly and daily donations by collection centre, thus probably suggesting a larger extension which guarantees continuity. The relationship between collaborators, donors and total members shows that the mixed association model can guarantee, thanks to its high inclusion, an easier management of donors, just like the decentralized association model, thus presenting retention tools that can be replicated more easily.

The indicators of economic efficiency and corporate solidity show good results for all organizational models, although special attention should be paid to the decentralized public model in terms of corporate solidity. All the organizational models must, however, pay particular attention to the non-core business that is becoming more and more critical to the development of a donation service. The above remarks are confirmed, in terms of territorial proximity, by the very strong presence of decentralized models and of the mixed model, which rarely uses the event channel, but manages to attract new donors over time. The channel of partnerships therefore becomes important to be able to reach the area.

7. Very positive results were found in the evaluation of donors, who appreciate their expertise in all organizational models, but attention should be paid to existing problems, particularly by the centralized association model, to avoid the risk of increasing the number of members who claim to have experienced an unsatisfactory process.
8. Going into the details of the dynamics managed by the Associations in terms of marketing, it is possible to identify two types of operational marketing: the one aiming at the attraction and awareness of new donors, and the one aiming, instead, at the retention of existing members. The research shows that the traditional communication tools such as leaflets, posters and events are much used by Avis and have a positive impact on raising awareness and attracting new donors.

9. The study of the reasons why donors have begun donating to Avis showed the existence of four drivers (word of mouth, event, family, spontaneity). The last one, in particular, refers to the value of the gift, the other three share the emotional involvement in the cause generated by an event being external to the donor.

10. The analysis of the relationship of the different organizations with the theme of marketing provides some keywords suggesting the great importance that all Avis branches recognize to the role of communication, not only in terms of awareness of new donors, but mainly in terms of retention of existing donors; the other important findings is the concern for the efficient management of the call of donors. An often neglected issue, which is however of fundamental importance, is that of women and of the decline of their donation as a result of events such as, for example, marriage or the birth of a child.

11. As for retention tools, instead, more than 50% of the Avis surveyed use the customized call, the SMS and the websites, and by linking these tools with the indexes of whole blood and plasma donation, it can be noted that, for plasma, the donation index is higher for the Avis branches using the customized call, while the index for whole blood is higher for the Avis branches using websites, social networks and newsletters.

12. The donors interviewed believe events in schools and customized call are the communication tools being most important for the continuation of their relationship with Avis, while they consider events in general to be unimportant as drivers of the donor’s belonging to Avis. What is evident is also the enormous importance that donors allocate to the sense of belonging to the Avis Association, which confirms the fact that Avis donors, besides being sensitive to the cause inherent in the value of the gift and of blood donation, are emotionally involved in the values of the Association.

13. By analyzing, instead, the relationship with collaborators, that is, with the people who work most closely with the Association, it is possible to identify some peculiar characteristics:
   - the majority of the collaborators interviewed has carried out volunteering activities for a long time, and this is consistent with the hypothesis that part of the collaborators are former donors because of problems related to age or eligibility for donation, or already volunteered in the Association;
   - They are selected through different methods, but the most important are the reporting of the member by those who work inside Avis, and having been an Avis for a long time; they have
the opportunity to attend training courses and in particular the training courses related to health and administrative issues;

- The issue of training is essential for collaborators, especially in terms of suggestions for the investment on future training: in fact, they would like a more accurate training especially on issues related to marketing and fund-raising, in order to raise awareness among new donors towards the Association and to retain existing donors, on more specific issues related to the internal management of the organization.

If on one side, the views of collaborators have been presented, especially in terms of training and continuity of cooperation though their volunteering activities, on the other side the views of the Presidents have also been presented on the recruitment and selection of collaborators. It was found that many Avis have difficulties in involving collaborators and accept unsolicited applications, without selection.

14. The macro-concepts and future challenges resulting from the analyses carried out in relation to internal organizational models can be summarized in a few key words: women, continuity, training, internal choice, word of mouth, the value of the gift versus sharing of the mission.

15. Women are one of the focus and future challenges of Avis and a cross-cutting driver in terms of investment because, on the one hand, there is the need to understand how to retain their presence as donors, and on the other hand there is the need to find other techniques of work-life balance that can guarantee their greater involvement in the Association. Moreover, it is useful to assume a specific training investment also providing for training courses on work-life balance. The issue of women is cross-cutting to the analysis of a sample of 80 physicians. Here, too, the presence of men is more significant due both to the difficulties and the investment in terms of training, and to the management situation of the profession, that makes it difficult sometimes to find the right compromise between working life and family life.

16. Continuity is the key word that best fits in reference to the activities of the collaborators; it is about people who, in most cases, provide their service for a long period and that, in addition to having developed an attachment to the value of the gift, have developed a sharing of the values of the Avis association's mission.

17. As for training, there is still room for improvement on the part of the Avis association on this issue, and this implies, on the one hand, the need to fill the training gaps of the collaborators, and on the other hand to modernize a bit the structure inherent to Avis, which must realize the fact of being in the middle of a cultural shift in which the legacies typical of the nonprofit Association must be abandoned, in favor of a more efficient management of the structure, whose staff should be trained and specialized in certain areas.
18. The selection of human resources based on internal choice is still the method of selection most widely used for the involvement of collaborators. This choice is independent from the specific skills of the collaborators, but takes into account other drivers, such as internal reporting and interpersonal knowledge. Part of this administration comes from word of mouth, which turns out to be the most effective method of involvement not only in terms of involvement of donors, as outlined in the previous chapters, but also as an active involvement in the management of the Association.

19. Another concept that emerges is the "value of the gift versus attachment to the mission" which summarizes, on the one hand, the motivation behind the staff of the various Avis branches and of the physicians employed in Avis, whose logics of management and compensation are typical of the non-profit sector, and on the other hand, the shift, not only internal, between donors and collaborators, but also generational, from a poorly structured Association in terms of management, to an Association being ready to face the challenges of the future and investing in terms of training for its employees and collaborators.

20. To conclude this book, it is essential to analyze what are the future prospects, so as to meet the huge challenges for the transfusion system. The challenges that need to be faced in this moment are challenges but also opportunities to improve the transfusion system and maintain a continuity over time. The Associations / Federations, and Avis in particular, will have to position themselves in the future in a system where the concept of fund-raising and above all, of partnerships, will become especially critical to improve the service, attract new donors and retain existing donors. This will have to be done through a special focus on the economic resources that will need to bring a return in terms of impact and social cohesion. The rationalization of resources will therefore have to be addressed to inefficiencies that are identified, but trying to preserve the objectives of the Association. Lastly, services dedicated to donors will have to be structured, to encourage donation by certain targets groups, to ensure the continuity and growth of the Association itself. These new services may also be structured with minimum investments, such as the creation of a schedule of events or a particular attention to children while women donate, thus encouraging the use and consolidation of resources in collaboration with other non-profit organizations that can develop, through Avis, their path of social cohesion. In global terms, instead, it is important to activate a process of reorganization of the system of validation and processing of blood, which ensures greater integration between the different institutional levels. The proposed reorganization also impacts on the system of collection, which must include greater attention to donors, through the implementation of booking tools and staff training. A concept of integration between the different players then becomes crucial to enable a process of efficient and effective synergies. Ultimately, it is very important to activate pathways dedicated to attention in the use of blood to ensure its proper use and reduce the risk of waste and uses being not fully appropriate.
The Italian transfusion model is a virtuous and competitive model, but there are a number of cultural revolutions to be put in place that are very strong, and therefore a debate is needed to make a careful reassessment of the situation, even putting into question each of the roles and the control activities, knowing that perhaps they will never be the same. It is a very strong challenge, about a review of the system and a cultural revolution, based on choices of rationalization and restructuring of the structures that cannot fulfill the required criteria. A change must be made explicit in the definition of an improvement in awareness and therefore of a greater attention to the target of donors to be attracted, especially young people, of an improvement of retention tools that need to be aligned with the recipients they are addressed to, and of a path of improvement of the collection service that must be increasingly focused, on the one hand, on the needs of donors and, on the other hand, on a concept of efficiency. Only through the synergistic coordination of the powers of the different players will it be possible to support and understand the change while maintaining the strengths, seizing opportunities, eliminating or reducing the weaknesses and limiting threats. This process is critical to continue to have a system being appreciated by voluntary blood donors.
The following section will highlight, for each Region, the main Laws, Decrees or resolutions related to the regional blood transfusion systems made available by the Presidents of the Regional Avis branches or searched on institutional websites. In particular, for some regions it was not possible to find all the legislative data, therefore a study was conducted on Regional or Provincial Blood Plans.

**Region Abruzzo**

Within the Italian context, the situation of the Abruzzo Region is quite uniform compared to the national system.

The main regulations still governing the system today are:

- **Regional Law no. 143/96**, establishing and regulating the Regional Transfusion System pursuant to National Law 107/90 which appears to be suppressed. In particular, it defines:
  - the general objectives and levels of care of the regional blood transfusion service;
  - the activities recognized to the organizations of blood donors;
  - the functions assigned to the management and administrative coordination bodies (Regional Office for Transfusion Activities - URAT) and to the technical and scientific coordination bodies (Regional Coordination and Compensation Centre - CRCC) with regional significance;
  - the minimum organizational, structural and technological requirements of transfusion structures;
  - the agreements between the Associations and the Transfusion Services;
  - the management criteria and the financing methods of the system;

- **Blood and Plasma Plan 1999/2001**, where several objectives are identified, including:
  - self-sufficiency of blood and blood derivatives;
  - rationalization of the organizational model;
  - blood safety;
  - scientific and technological development;
  - quality, efficiency and cost management of Transfusion Services;
  - social policy in the field of blood transfusions.

To these objectives specific actions are linked, aimed at the achievement of each of them.

The **Regional Health Plan 2008-2010** regulates, instead, the network of immunohaematology and transfusion medicine, providing instructions on the planning guidelines for the organizational redesign and the rationalization of the "Regional Transfusion System" and guidelines for the formulation of Blood Plan 2008-2010.

The **Blood and Plasma Plan 2008-2010** shows a remodulation within the functions of regional coordination of the blood transfusion service, which until then had been entrusted to URAT (Regional Office for Transfusion Activities) and CRCC (Regional Coordination and Compensation Centre); it also provides for the establishment of the Regional Blood Centre which will be entrusted with at least the tasks and functions necessary to the reinforcement of clinical and economic governance of the system itself. The organization of the Regional Blood Centre is entrusted to the Regional Health Agency (SRA).

The general guidelines followed in the definition of the Blood Plasma Plan 2008-2010 are:

- the strengthening of the coordination function of the system and the creation of the Regional Transfusion Network;
- the direct involvement of the players of the system in the process of formulation of
goals and the creation of strong mechanisms of accountability for results;

• the identification of methods of resource allocation to ensure,
regardless of the policy choices of each Health Agency, their dedicated use for the
transfusion sector and for the pursuit of the general goals of the System defined at a
regional and national level.

In the Operational Plan 2010 there is no reference to the question of the
reorganization of the regional blood transfusion network. The only provisions
concerning the Transfusion Sector are contained in the resolution of the
commissioner no. 15 of April 14 that, pursuant to the Operational Plan 2010,
defines the interventions of rationalization of the complex operating units and of
the structural departments.

Lastly, the last document considered of particular importance for the transfusion
system of Abruzzo is Regulation 2603/2011 V.A.S. (Abruzzo Blood Volunteers);
this regulation implements the provincial statute. The V.A.S. is the set of sections
and groups of volunteer donors at the regional, provincial, municipal, local and
corporate level who carry out their activities within the framework of the
applicable laws on transfusion medicine.

Region Basilicata

The transfusion system of the Basilicata region is regulated by Resolution no.
1057 7 August 2012 which provides for the recognition of blood collection units
for transfusion purposes referred to in D.G.R. 35/11. As for the planning of
activities aimed at the authorization and accreditation of transfusion facilities,
collection units and blood collection points, instead, they are regulated under
D.G.R. 750/11, which transposes the agreement of the Standing Conference on the
relations between State, Regions and Autonomous Provinces of Trento and
Bolzano of 16 December 2010.

Region Calabria

The framework of the transfusion system of Calabria offers a varied
situation, with a gradual increase in blood collection in some areas and shortages in others.
Despite the increase in blood collection, the regional demand has also increased in
parallel, and a further increase is expected.
The availability of blood, blood components and blood products is an
irreplaceable condition to guarantee, within the Region, the health services being
possible today and aimed at ensuring the levels of care. For the years 2007-2009,
the following priorities are detected in the health plan:

• achievement of regional self-sufficiency of blood, blood components and blood
products drugs;
• blood safety;
• uniform conditions for transfusions throughout the region through the
reorganization of the transfusion system;
• development of transfusion medicine and of the proper use of blood.

With L.R. April 24, 2008 no. 327, the approval of the new organizational
model for transfusions in Calabria was approved. This law has as its primary
objective that of ensuring the achievement of regional self-sufficiency. To do so,
some changes, also in organizational terms, have been necessary, and have led to
the establishment of the Regional Blood Centre and of the Technical Committee
for blood transfusion activities. Indeed, a model is going to be created which, on
the one hand, redefines and strengthens the functions at the regional level and, on
the other hand, determines a stable and functional organization of transfusion
structures with a limitation of costs. The Regional Blood Centre was therefore
established, a structure intended to ensure the inter-regional and intra-regional
coordination of transfusion activities. Such structure will be supported and assisted
by the Technical Committee for transfusion activities.

By Decree of the President of the Regional Council n. 33 of March 2012,
the establishment of some teams has been decided for the verification visits of the
Blood Transfusion Services and of the Collection Units for blood and blood
components.

Region Campania

With regard to the regulations of the Campania Region, the legislation provides
for resolutions on the subject of the transfusion system. The first of them is
Resolution no. 159 of 3 February 2004, which provides for the update of the unit
price of sale of blood and blood components between "Public health services" of
the Campania Region; the second is Resolution no. 1278 of 7 October 2005, which provides for the extension of the NAT screening to search for viral components related to HBV-DNA.

In the regional sitting of 23 December 2008 Resolution No. 2042, instead, the Guidelines for the regulation of the Collection Units for human blood and blood components in the territory of the Campania Region were defined.

Resolution no. 1647 of 30 October 2009 is approved by the Regional Blood Plan 2008-2010. It defines the necessary guidelines to achieve self-sufficiency for the years 2009-2010, thus making the plan become an act of address at the regional level.

The Campania Region poses, then, as priorities the following objectives:
• maintaining self-sufficiency in whole blood;
• increasing the production of plasma and blood products within the scope of the Region;
• collaborating as Region to the achievement of national self-sufficiency in blood, plasma and blood products, in line with the provisions of the relevant and applicable national legislation, through the sale of surplus to the health facilities of the regions lacking;
• enhancement of the role played by the Associations and Federations of voluntary donors of blood and bone marrow for the achievement of the purposes of the present “Plan”.

Region Emilia Romagna

Emilia Romagna is among the Regions that have a considerable legislative activity; there are many laws, agreements, resolutions and conventions being entered into.

With the Blood and Plasma Plan 2002/2003 the Special Blood Programme was established to regulate the activities of collection and manufacture of blood components and blood products, with the involvement of both the Services of Transfusion Medicine (SMT) and the Associations and Federations of Volunteers working on the promotion, organization and blood collection, in order to strengthen the integration and coordination of all the components of the Transfusion System which are aimed at ensuring the highest quality of those products and transfusion services identifying the mission of the system itself, structured on a regional level (special regional blood program) and on a local level (Special provincial blood programs).

In relation to Law n. 219/2005, in Emilia-Romagna the participation of the Associations and Federations of voluntary blood donors to transfusion activities is regulated, as well as their contribution to the institutional purposes of the National Health Service. The Blood and Plasma Plan 2005-2007 defines the objectives and actions for the three-year period in relation to:
achievement of regional self-sufficiency;
development and integration of the network of transfusion centers;
CRCC qualification as a planning, coordination and address point of the regional blood system;
blood safety;
enhancement of the role of Volunteering Associations;
preservation of a high level of skills of the staff;
quality assurance;
information system and computerization;
third-level activities and new technologies.

L.R. n. 11 of 20 November 2006 on the "Benefits in favour of AVIS", consists in the implementation of art. 2 "Principles and objectives", paragraph 2, letter 1 on "voluntary activities" of the Regional Statute drafted after the amendment of Title V of the Constitution.

With the agreement of 20 March 2008, the State-Region Conference reviews the amounts of minimum reimbursement to the Associations and Federations of voluntary blood donors for their work in favour of the national blood system.

The Resolution of the Legislative Assembly of the Region Emilia Romagna n. 163 of 22 April 2008 approves the Regional Blood and Plasma Plan for the years 2008-2010, and defines the objectives and actions in relation to:
• new regional institutional framework;
• regional self-sufficiency of blood components and blood products and contribution to national self-sufficiency;
• development and integration of the Network of transfusion structures;
• qualification of the Regional Blood Centre (CRS) as a programme, coordination
and guidance point of the regional blood system;
- blood safety;
- enhancement of the role of Volunteering Associations;
- Preservation of a high level of skills of the staff;
- quality assurance;
- information system and computerization;
- third-level activities and innovations in transfusion medicine.

The Convention adopted by the Regional Council between the Region Emilia Romagna and the Associations and Federations of blood donors in 2008 establishes that the Public Health Authorities of the Region will have to immediately enter into implementing agreements with the local AVIS and F1DAS associations. The agreement between the Italian League for the Fight against Cancer NPO and the Regional AVIS of Emilia Romagna of 23/03/2009, instead, defines the cooperation in the fields of health education and the theme of giving, of the sharing of technical and scientific skills and equipment, of the partnership in the promotion of events for fundraising, etc.

The last Blood and Plasma Plan for 2013-2015, provides a programming based on the need for blood, so that blood units are always ready when needed; moreover, the organizational model will be based on the management of blood processing by Wide Area (there are three vast areas: Area Vasta Romagna, Wide Area North Emilia, Emilia Wide Area Central) and its use in clinical processes is expected to be more efficient.

The last Regional blood and plasma Plan approved by the Legislature aims, on the one hand, at ensuring the regional self-sufficiency of Emilia Romagna and hence at contributing to the achievement of national self-sufficiency, and on the other hand, at ensuring the quality and safety of the transfusion system, of blood, and of its components. The new regional plan, indeed, provides for an effective and efficient management of the regional blood system, based on the need for the presence of a collection system being in line with consumption and based on the growing sophistication of the manufacturing processes of blood units, as well as on the refining of the criteria for the prescription of transfusions, given the increasing complexity of medical interventions.

Region Friuli Venezia Giulia

The Decree of the Regional Council - D.G.R. n. 6619 of 29 December 1995, approved the "Second regional plan on blood, plasma and blood products" which, in accordance with law 4.5.1990, no. 107, set the following objectives:

- the achievement of self-sufficiency of plasma - source for the production of blood products at the regional level;
- Contribution of the Region Friuli Venezia Giulia to the achievement of national self-sufficiency in blood, plasma and blood products, in line with the provisions of the relevant national legislation being applicable, through the sale of surplus to health facilities of the Regions lacking;
- the enhancement of the role played by the Associations and Federations of voluntary donors of blood and bone marrow for the achievement of the purposes of the plan itself.

The project of the "Regional health and social-health plan 2006-2008", approved by D.G.R. no. 3222 of 12 December 2005 is aimed at implementing the new regulations that provide for the supra-corporate regulation of Transfusion Services and at ensuring quality and safety for the collection, testing, processing, storage and distribution of human blood and blood components, and thus identifies the adoption of the organizational and management tool of the Intra-corporate structural Department of transfusion medicine. The document "Annual guidelines for the management of the Regional Health Service in 2006" identifies the following addresses:

- preserving regional self-sufficiency in blood, plasma and blood products throughout the region;
- guaranteeing the safety and appropriateness of transfusions;
- coordinating the transfusion system at a regional level.

The third Regional Blood and Plasma Plan 2006-2008 outlines the objectives of the Plan and the organizational model of the regional blood transfusion network. The objectives defined in the plan are:

- regional self-sufficiency in blood components and blood products;
- safety and quality assurance in the transfusion chain;
- quality, efficiency and cost-effectiveness of Transfusion Services;
• social policies in the field of transfusions.

Region Lazio

In recent years, the Lazio Region has established a Transfusion Network that covers the whole region. The blood system is the result of an important synergy between the Region, Public health authorities, Local authorities and Associations of volunteer donors.

The Blood and Plasma Plan 1999/200 provided for a reorganization based on departments. In this experimental model, transfusion facilities were placed under the control of the Departments, and a company was designated to coordinate all the others.

D.G.R. n. 343 of 2006 approved the Blood and Plasma Plan 2006-2008 and provided for the identification of the regional structure of the transfusion system (later modified by D.G.R. 82/2009), with 7 departments of transfusion medicine. The basic objective is the achievement of self-sufficiency of blood, blood products and blood components within three years; this objective is divided, in turn, into:

• implementation of the collection;
• spreading of the methodologies for autotransfusion and checking of the Good Use of Blood and Blood components;
• rationalization of the organizational model.

Furthermore, the Plan also pursues the objectives of quality, efficiency and cost-effectiveness of transfusion systems and of transfusion safety. With D.G.R. 694/2007 the Departments of Transfusion Medicine are established, and their objectives are defined in relation to the provisions of Decree no. 343 of 2006.

As of 2009, the institutional framework has adapted to the changes introduced in the organizational system by law no. 219/2005, which introduced the Technical Standing Advisory Board Standing for the Transfusion System and the National Blood Center (CNS). Under this law, the agreement between Companies/Authorities and Associations/Federations was approved by resolution of the regional council 612 of 2009.

Regional Decree 00082 of 16 December 2009 reorganizes the transfusion system through:

• the creation of a Regional Blood Centre including a Steering Committee which performs tasks of address;
• the establishment of three Departments of Transfusion Medicine and the suppression of the Departments established by D.G.R. 343 of 2006;
• the allocation to the three Departments of Transfusion Medicine of the 25 transfusion facilities;
• the modification of the technical advisory committee.

This decree was subsequently amended by the Decree of the Commissioner "ad acta" U0092 of 2010, which provides for the abolition of the three Departments of Transfusion Medicine, the reduction from 25 to 21 of transfusion facilities and the review the objectives of the blood system. Following the audit in 2010 of the failure to achieve the goals of self-sufficiency and savings, the Operational Plan for 2011-12 was defined, and approved by the Decree of the Commissioner "ad acta" U0113 of 2010; it provides the direct entrustment of the responsibilities for the coordination and direction of the activities of reorganization to the CRS, while confirming the specific objectives already identified and the centralization of production functions and biological qualification. The planned results are therefore:

• suppression of transfusion Departments and transfer of coordination responsibilities to the Regional Blood Centre;
• concentration of production in a single site for each macro-area;
• concentration of the activities of biological qualification of donations.

Lastly, the Decree of the commissioner "ad acta" U0122 of 2011 resolved that the serum immunological tests related to the validation of the blood being subject to transfusion activities should be performed at the SIMT transfusion facilities of the Local Health Unit of Rome B, with the support of the SIMT of the Umberto I Hospital.

Region Liguria

The particular territorial conformation of Liguria has also had effects from the point of view of blood transfusions; this resulted in the need to create a high number of Transfusion Services (9) and Collection Units compared to the basin of potential donors.
In the Region Liguria, many different resolutions have been approved on transfusions:

- the **D.G.R. n. 549 of 28 May 2004**, provides for the adjustment of the unit price for the exchange of blood and blood components for clinical use at the regional level and of remunerations and reimbursements of AVDS (Volunteer Blood Donor Associations) for their institutional activities;
- **D.G.R. of 10 October 2006** governs the representation of AVDS (Volunteer Blood Donor Associations) at the Committee of the Regional Blood Centre;
- Resolution **587/07** sets out the criteria for the safety of blood transfusions. Moreover, it defines the experimental program for the conduct of investigations related to the viral constituents of HCV, HBV, HIV with molecular biology techniques on the blood units collected in the region Liguria;
- Regional Resolution **507/2007**, instead, defines the operational plan for the evaluation of all the Collection Units for blood and blood components produced by the regional facility and the technical and administrative directives regarding the CRCC;
- Regional resolution **499/2009**, concerning the approval of the requirements and procedures for the authorization of transfusion “collection units” intended for blood collection (fixed, occasional and mobile Collection units).

The **Regional social and health plan 2009-2011** has as a main objective the creation of a network organization of the health system of Liguria and thus the enhancement of the collaboration between expertise, structures and institutions, in order to answer, in a modern and effective way, the health needs of the citizens of Liguria. This is intended to overturn the previous logic of competition between public facilities. The strategic objectives are:

- Improving the continuity of care;
- enhancing the responsiveness outside hospitals;
- reducing waiting times;
- improving pharmaceutical care;
- developing research.

The regional social-health plan 2009-2011, identifies the strategic and organizational objectives aimed at qualifying the Regional Health Service and to bring it at the level of quality of the best Italian experiences.

**Region Lombardy**

Established for years in the health system of Lombardy, thanks also to the different laws on the issue, the transfusion network has led the Region Lombardy to full self-sufficiency of blood and blood components, with high levels reached in quality and safety for the protection and guarantee of both recipients and donors.

The adoption of the **Fifth Regional blood and plasma plan** of the Lombardy Region for the years 2005/2009 (L.R. 8 February 2005 - no. 5), has been intended to confirm and strengthen the already important guidelines contained in the previous plan for the transfusion system of Lombardy. The objectives of the Plan include:

- ensuring levels of regional self-sufficiency of blood, blood components "available" and blood products;
- supporting the Associations and Federations of blood donors in the promotion and development of voluntary and organized donation of blood, blood components, bone marrow and hematopoietic stem cells;
- promoting regionally the process of health of donors and patients transfused.

The **V Regional Blood and Plasma Plan of the Region Lombardy** moreover, defines the following organizational structures:

- Director General of Health;
- Technical and Scientific Commission, which includes the representatives of the Associations;
- Regional Coordination and Compensation Centre;
- Departments of Transfusion Medicine and Hematology: they deal mainly with the coordination of Transfusion Facilities;
- Transfusion Structures and Collection Units.

**Resolution No. VII / 1732** introduces, among the exams required for the biological validation of the units of blood and blood components collected in all transfusion centers, the test for HIV and HBV screening, in addition to the test for the screening of HCV with NAT method, and establishes the entrustment, to the Regional Coordination and Compensation Centre (CRCC), together with the Operating Unit for Prevention, Human Health and Veterinary Protection Directorate General of Health, of the definition and implementation of appropriate
measures for monitoring, discussion and consultation with the operators of the Transfusion Services, so as to enable the collection and dissemination of the technical, scientific, epidemiological and economic findings resulting from the introduction in routine of the HBV RNA, HBV-DNA and HCV-RNA tests in molecular biology, aimed at the biological qualification of the units of blood and blood components. Moreover, it establishes the cost for additional screening exams on each bag of blood and blood component.

The Decree of the Directorate General for Health No. 11654 of 19/10/2006 identifies the composition of the Hospital Transfusion Committee, which also includes a representative of the Associations; among the tasks of the Directorate-General is the structuring of indicators of good use of blood and the creation of training courses.

The Social Health Plan 2007/2009 defines the blood system in Lombardy, in reference to the previous regulations. It continues to outline the following priorities:
• preserving the regional self-sufficiency already achieved in terms of blood and blood products;
• contributing to the national and international self-sufficiency of blood and blood derivatives;
• ensuring high levels of quality and safety in all transfusion processes for a greater guarantee of the donor and protection of the recipient;
• identifying regional reference centers as centers of excellence, and create a network of centers related to them in order to meet the real need for prevention, treatment and care of the population of Lombardy;
• assisting and supporting the Associations and Federations of volunteer donors by training them on the various organizational levels of the transfusion system and on a system of quality management;
• promoting specific projects for international partnership initiatives in projects financed by the European Union and related to the matter of transfusions.


The Social Health Plan 2010/2014, in continuity with the previous plans, identifies the evolution of the blood system in the Region Lombardy.

Region Marche

Drg.434 07/05/2007, Deliberation of the Regional Council, defines the budgeting process of the Regional Department of Transfusion Medicine. This has defined the plan of production of blood products for the period 2007-2009, and also defines the system of incremental remuneration.

The Regional Health Plan 2007-2008 regulates the government, the sustainability and the innovation and development of the regional health service for the health of the people of Marche. The Regional social and health plan 2012-2014 is developed in line with the previous ones, the Regional Health Plan 2007-2009 and the Regional Social Plan 2008 - 2010, in a logic of integrated development, and represents the main tool of strategic planning for the realization of the "health system" of the Region Marche. The Plan does not just represent the attachment of programmatic lines, but rather develops a new cultural reality where welfare acts as the driver for the development of the whole political, economic and social regional system, which is the substantial and positive part of the change needed to address the ongoing socio economic transformations.

Region Molise

As for the regional reality, the strength of blood collection in Molise is the presence of a Blood volunteering, mostly belonging to AVIS, which is consolidated, active, and covers more than 80% of the demand of blood and blood components. There is a substantial high level of blood safety and there is, lastly, a fruitful collaborative relationship between the world of Volunteering and the Professionals.

The Region Molise approved the "Regional Blood and Plasma Plan ", with the resolution of the Regional Council no. 117 of 15 May 2007. This Plan recalls and adopts some goals, such as:
• adjustment of the organization of transfusion structures and functions to the indications defined by Law no. 219 of 21 October 2005;
• achievement of regional self-sufficiency of blood, blood components and blood
products through a suitable programming and through the valuable role of the Associations of Voluntary blood Donors;
• uniform conditions of the blood transfusion service throughout the region;
• good use of blood and of specific programs of diagnosis and treatment that are made, in particular, in the context of care to oncology-hematology patients;
• ensure the training and retraining of personnel;
• develop new therapeutic strategies through the use of stem cells of the hematopoietic tissue.

Decree n. 52 of 21 November 2012 approved the Regional Blood and Plasma Plan 2013-2015. This plan includes, among its major objectives:
• the consolidation of regional blood self-sufficiency with the help of voluntary associations dealing with blood donation;
• the rationalization of the use of these resources;
• the achievement of a more effective protection of public health by reaching the highest levels of safety.

The Plan also aims at redefining the transfusion network, through the implementation of computerization, the consolidation of laboratory activities and the adoption of management control systems, and at adapting the technology assets and promoting the scientific development through the implementation of projects for the innovation of Transfusion Services also as a support to transplants. The document also intends to start the process of accreditation of transfusion structures based on the definition of structural, technological and organizational standards.

Region Piedmont

The Resolution of the Regional Council of May 21, 2007, no. 5-5900, approved the Blood and Plasma Plan for the years 2008-2010. The objectives of the present Blood and Plasma Plan are:
• the preservation of self-sufficiency in blood products achieved through the recruitment of volunteer and periodic donors, in accordance with the Association of Donors, and the use of sampling techniques complying with predefined quality standards to protect the health of both the donor and the recipient;
• the contribution of the Region Piedmont to the achievement of national self-sufficiency through the continuation of the programs of sale of blood products to the health facilities of the lacking Regions, Sardinia first;
• the enhancement of the role played by the Associations and Federations of voluntary blood donors for the achievement of the goals of this Plan;
• improvement of the level of coverage of the regional demand for blood products obtained from the processing of the plasma collected in the region from volunteer and periodic donors;
• improvement of the safety and quality of blood components and transfusion services, generally also through the development of quality systems, monitoring structures and standardization of procedures;
• the development of the integrated network of the regional blood transfusion system, with particular reference to the computerization, the management of emergencies, the rationalisation of production activities, the monitoring and the rationalization of the consumption of blood components and blood products, also in order to deal with new growing needs;
• the review of the information system of the transfusion structures in order to overcome the current fragmentation, which seriously undermines the development of any integrated network of services, and to adapt it to the regional and national information systems;
• the development of transfusion medicine, of the good use of blood and of specific programs of diagnosis and treatment implemented in particular in the context of the assistance to oncology-hematology and transplantation patients.

In Piedmont, the relationship between the Associations and Federations of blood donors and the Regional Health Service are regulated by agreements between the parties that define mutual commitments geared to meeting the need for blood and blood products, and to the protection of the health of donors and recipients.

The Convention between the Region Piedmont and the Associations and Federations of blood donors has been implemented by the Region Piedmont with D.G.R. 6-9935 of 3 November 2008, in accordance with the Agreement between State-Regions-Autonomous Provinces rep. 115 / CSR of 20 March 2008; such agreement reached maturity on 1 January 2012 and was extended by the Region with the Resolution of the Regional Council of 19 March 2012, no. 57-3567.

The collaboration between the blood transfusion systems of Valle d'Aosta and
Piedmont, which have been in place for some time, has been very successful and has developed synergies aimed at the qualification and optimization of the respective health services, while also pursuing the aim of standardizing distribution. That is why the cooperation between the two systems was expanded and formalized with the signing of a special agreement recently renewed with D.G.R. no. 21-10832 of 23 February 2009 and expired on 31 December 2011, and given the fact that the possibility of interchange was fundamental in situations of immediate need, the Convention has been renewed for another three years with the **Resolution of the Regional Council of 27 April 2012, n. 67-3777**.

**Region Puglia**

The objectives pursued by the transfusion system of the region Puglia are:

- to reach and ensure, by means of a regular activity of programming and coordination of the transfusion system, the levels of self-sufficiency in blood, blood components and blood products to the regional public and private health facilities;
- to contribute to the achievement of national self-sufficiency;
- to encourage the promotion of specific initiatives of international cooperation in order to meet the extra-national needs of blood, blood components and blood products;
- to promote and encourage the use of the techniques for autologous blood collection, for perioperative recovery and for the use of blood components for topical use;
- to ensure high levels of safety of blood, blood components and plasma derivatives.

These objectives are defined by the **Regional law 24 of 3 August 2006**, which outlines the rules for the organization of the regional blood transfusion system by establishing:

- the regional coordination of transfusions activities;
- the Scientific Commission;
- the inter-company Departments of transfusion medicine;
- the Regional Coordination compensation Centre;
- the Services of immunohaematology and transfusion medicine;
- the transfusion Sections;
- the mobile and fixed Collection Units.

The **Agreement between the Region of Puglia and the Associations of 2009** regulates the relations between the Associations / Federations and the region for the development of blood collection. Lastly, with Regional regulation 15 April 2009 number 6 the requirements for the temporary and mobile units for the collection of blood and blood components.

**Region Sardinia**

The transfusion system in the region Sardinia is distinguished from the other Italian regions for some features such as:

- the collection of more than 40 units of pockets per 1000 inhabitants, which is equal to the European standard of self-sufficiency, although it is not sufficient to ensure the Regional demand;
- the demand for red cells over 60% compared to European standards.

Given the specific health peculiarities and the characteristics of the territory the Regional Blood and Plasma Plan 2008-2010, aims at achieving strategic goals such as:

- to identify the actions needed to achieve the objectives of improving the donation indices for the attainment of regional self-sufficiency;
- to achieve higher levels of safety;
- to achieve uniformity in transfusion care and in the development of the good use of blood.

The Regional blood Plan 2008-2010, approved by **Resolution of 03/09/2008 no. 46/1**, has the task of adapting the regional blood transfusion system to the applicable regulations, by adopting an inter-company departmental and organizational structure and starting the procedures for the accreditation of blood transfusion structures. The departmental model is intended to enable the programming of the activities and the management of the system in a supra-corporate view, in compliance with the principles of efficiency, security and economy, in close collaboration with the Voluntary Associations.

**Region Sicily**

The Region Sicily, along with other regions such as Emilia Romagna, is among the regions with the more intense legislation activity on transfusions.
The Decree of 15 January 2003 defines the directives related to the activation of multiple collection of blood components, providing that in specific situations of need and for specific clinical needs, pursuant to D.M. 26 January 2001, Annex 6, letter d), paragraph II, the activation of other procedures for the multiple collection of blood components is permitted, under the direct responsibility of the heads of the departments of transfusion medicine and immunohematology.

The Decree 28 October 2004, defines the various areas of transfusion centers of the province of Trapani, Siracusa, Ragusa, Palermo, Enna, Catania, Caltanissetta, Agrigento. With this decree, the territories of the transfusion structures of the provinces are defined and the hospitals and nursing homes are assigned, including the S.I.M.T. themselves, which ensure the necessary units of blood and blood components, and the related Associations and / or Federations of volunteer blood donors are identified, which have fixed and mobile Collection Units authorized by the Regional Health Council, with the aim of a better planning and programming of information, of training, of the creation of collections of blood units and blood components among the affected population.

Circular no. 1150 of 15 November 2004 establishes the anonymity of blood donation and of donor identification. "Anonymous" donation should not be confused with "unidentifiable" donation. Indeed, the demand for anonymity is only valid towards the recipient since, for obvious reasons, it is not appropriate nor correct to let him know the name of the person who donated blood, but the demand is not and must never be valid towards the transfusion center.

Even for the province of Messina the territorial areas of transfusion structures were defined in 2004, as it happened previously for the other provinces, with the Decree of 16 November. The same decree also defined the unit price for the sale of blood and blood components.

The Decree of 19 November 2004 regulates the financial compensation of blood and blood components, and resolves on:
- the economic compensation of the sale of blood and blood components; module on the sale of blood components and increases;
- procedures for the filling in of forms;
- nursing homes not accredited;
- revocation of previous relevant provisions.

As part of the Region Sicily, the validation of all units of blood and blood components by NAT technique, already ordered by decree no. 74 of 28 January 2002, was extended to the triple viral screening for HBV DNA, HCV RNA and HIV RNA, preferably with automatic techniques, with the Decree of 16 February 2005.

The Decree of 16 February 2005 establishes the plan for the annual regional demand for blood, blood components, blood products and for the amount of plasma being required to be sent to the centers of fractionation of the pharmaceutical industry for the year 2005; the plan allows for proper planning of the needs of services and Transfusion Medicine and Immunohaematology Services (SIMT) of Sicily, depending on the needs of the resident population and of the health facilities falling within the pertaining territory, at a provincial and regional level. In order to meet the needs of the individual SIMT of Sicily, the heads of the SIMT have the obligation to agree directly on the following issues:
- amount of units to be sent on a weekly or fortnightly basis;
- identification of the blood group to be sent;
- mode of transport of the units of blood and blood components.

The Decree of 4 April 2006 establishes the Operational Plan for the implementation of the levels of transfusion safety within the region Sicily, in order to further raise the levels of transfusion safety.

The Decree of 26 April 2006 establishes an additional financial reward from the local health offices SIMT to the Associations of blood volunteer donors for the increase of the number of units of blood and / or blood components coming from voluntary donations made for the first time and from periodic donations.

With Decree of 19 July 2007 the report of the activities of the Blood Registry of the Region Sicily for the year 2006 was published; the report of the activities of the Blood Registry of the Region Sicily 2006 allows to provide data on the collection and distribution of human blood and the information on all the activities carried out by the Services of Immunohaematology and Transfusion Medicine. The activity report is composed of two sections: the first relates to the movement of human blood used for transfusion and of its derivatives, the second concerns information on the organization of the Services of Immunohaematology and Transfusion Medicine.

The Decree assessorial of 19 September 2008 marks the approval of the agreement between the Region Sicily, the Department of Health and the regional
Associations and Federations of voluntary blood donors under law 21 October 2005 no. 219, of the minimum repayments for the activities of the association and for the activities of collecting membership and of the schedule type of agreement between the Health Unit where the transfusion structure is based and the Associations and Federations of blood donors belonging to different territories. The Law of the Region Sicily 41/76 of 2009, instead, sets out the contributions for the maintenance, operation and development of Transfusion Services and the providences in favour of the Associations of voluntary blood donors.

In the Regional Health Plan 2011-2013, the action of regional government, outlined by the reform law, is developed along the following lines of action:

- the gradual shift of health services from the hospital to the territory for a more correct and effective balance of performance according to the needs;
- the reorganization of the public and private hospital network realized through the consolidation and increased operational capacity of underutilized hospitals;
- the overcoming of the fragmentation and/or duplication of structures, through processes of aggregation and operational and functional integration;
- the expansion of the services and beds earmarked for rehabilitation, long-term care and post-acute care;
- the reduction of extra-regional passive health mobility;
- the progressive reduction of hospital admissions being inappropriate from both the clinical and organizational point of view;
- the introduction of a system of allocation of resources commensurate with the delivery of planned activities, the quality and efficiency of the work of businesses;
- the implementation of the principle of accountability through a system of checks and controls based on well-defined technical and management processes and on the computerization of the streams.

Region Tuscany

The region Tuscany identifies, among the priority objectives on transfusions, the safety of transfusions and the protection of the health of the donor and recipient. For this reason, resolution no. 1183 of 22 November 2004 provides for the introduction, with effect from 1 January 2005, of the test for hepatitis B screening in molecular biology (HBV - DNA) among the tests performed in the routine by NAT (nucleic acid test) Diagnostic Centers for the biological qualification of blood components being ready to use collected in the Transfusion Structures of Tuscany, as already operated for HCV - RNA and HBV - RNA.

The Regional Council Decision No. 483 of 23/06/2008 established the Regional Service for Biological Qualification aimed at donation paths.

With the resolution of the Regional Council no. 53 of 16/07/2008 the "Regional Blood Plan 2008-2010" is approved, with a focus on the "Blood plan" point, which requires an intervention of reconfiguration of the Transfusion Network of Tuscany for an overall improvement of the quality, appropriateness and productivity of the Structures of the Tuscan Transfusion System. During the three years, the cultural and strategic processes initiated with the previous health plan, through the funding for projects of health promotion, will be consolidated and strengthened. In particular, it will operate to:

- renew the Framework Programme with the World Health Organization (WHO) in order to consolidate and expand the results achieved in terms of strategic development and improvement of health in Tuscany;
- give continuity to the projects resulting from the collaboration with the WHO, in particular to the Health Promotion Hospital (HPH) network, by increasing the exchange and the debate between the healthcare world, social organizations and citizens;
- continue the Health Behaviour in School-aged Children (HBSC) study;
- develop projects for the welfare of young people taking into account their real needs and enhancing their Protagonism;
- promote a strategic and functional connection with the Ministry of Health as part of the "Gaining health Programme";
- develop organic and systematic forms of cooperation with the organizations of Paediatricians and General Practitioners to stimulate citizens to the acquisition of healthy lifestyles;
- promote, through the Integrated Health Plans, the development of intersectoral action to experience training and cultural paths at the local level, in order to increase scientific knowledge and encourage the development of social motivations for healthy and aware lifestyles;
- act to help processes of social inclusion, as well as knowledge, school education
and social participation in the population;
• create and facilitate partnerships with public and private social subjects to
develop agreements and collaborations allowing people to gain health and
improve well-being in social organizations;
• support local development processes with measurable health goals;
• define an integrated model of documentation on health promotion that supports
regional and local initiatives, collects the results related to the good practices on
the issues of health, lifestyles, contrast to disease and poverty, providing over
the three years a reorganization of the current system of documentation on
health promotion, with the aim of improving the availability of information and
culture.

The **Regional Council Resolution no. 658 of 4 August 2008** renames the
"Regional Coordination and Compensation Centre for transfusion activities" into
"Regional Blood Centre" and redraws the bodies of the Tuscan Transfusion System
also in relation to the provisions of the Blood and Plasma Centre 2008-2010. The
**Resolutions of the Regional Council no.253, no.471, no.355** outline the
"Programs of Action for the Tuscan Transfusion System".

The **Resolution of 27 October 2008, no. 854** defines the guidelines about blood
components for non-infusion purposes, in accordance with Community and national
provisions on blood transfusions, with directives and quality standards.

**Regional Law no. 51 of 5 August 2009** resolves on the quality and safety of
regional health facilities, establishing the procedures and requirements of
authorization to exercise and the accreditation systems; the **Regional Council
Decree No. 61 of 24 December 2012** defines the regulation implementing the
Regional Law of 5 August 2009, no. 51 "Regulations on the quality and safety of
health facilities: procedures and requirements for the authorization to exercise and
accreditation systems."

This Regulation implements Article 48 of regional law 5 August 2009, no. 51
and regulates:
• the requirements for the exercise of public and private health facilities;
• the obligations of private health care facilities and professional cabinets;
• the tasks, the time commitment and the incompatibility of the medical director
of private health facilities;
• the requirements for the exercise of professional studies;
• the professional cabinets subject to authorization or declaration of commencement
of activity;
• the procedures for the identification of functional organizational structures;
• the requirements for the institutional accreditation of health facilities both
public and private;
• the terms and procedures for the issuing and renewal of the institutional
accreditation for the structures;
• the modes of operation of the evaluation team and the hypotheses of abstention of
its components.

The **Regional Integrated Health and Social Plan 2012-2015** represents for the
region Tuscany a major challenge, particularly significant in this complex and
evolving moment. The decision to develop an integrated planning act, addressing both
the social and health issues, reflects the awareness that the two areas are inseparable if
the goal is that of the "welfare" of the individual and if the concept of health is
accepted as defined by the WHO: "a state of complete physical, mental and social
well-being and not merely the absence of disease or infirmity".

**Autonomous Province of Trento**

The **Provincial blood Plan 2004/2008** represented a major milestone for the
development of the regional blood transfusion activity, and set as general objectives
the planning of the collection activity to guarantee the maintenance of self-
sufficiency, the technical and safety quality of the blood transfusion activity, the
organizational and network quality of Transfusion Services with the application of
structural, technological and organizational requirements. A further objective
concerned the intervention on the social side of transfusion activities, in the
promotion of donation and in the enhancement of volunteering. In the 2004/2008
plan, moreover, some measures have been planned to minimize the clinical risks of
transfusion activities by initiating processes of identification through a "bracelet",
thus eliminating the possibility of errors at the bedside, and the collection of data
relating to non-compliance, discussed during clinical audits within departments, has
been implemented. The provincial transfusion centers have been merged into a
computer network through the computer transfusion system EMONET.
The Blood Plan 2010-2012, approved by the provincial government, is the planning tool that defines the evolutionary lines of the provincial transfusion system, that is, the system which governs the collection, processing, distribution and use of blood and blood components for treatment purposes, and is therefore of strategic importance within the provincial health service.

A second important step was the Blood Plan 2010-2012, whose general objectives are:

- maintaining the level of provincial self-sufficiency of blood, blood components and blood products, through careful planning and the coordination of the collection network of the various offices;
- contributing to national self-sufficiency and promoting specific projects for international cooperation initiatives;
- ensuring a high level of safety of transfusion activities through the full computerization of facilities and the standardization of procedures;
- strengthening the departmental organization by increasing the functions and responsibilities of the Collection Units and strengthening the function of the transfusion Department not only in the management and control of the application of guidelines and protocols, but also providing it with tools for the organization and management, human and non-human resources, in order to optimize and improve the function of distribution of blood components in peripheral hospitals;
- initiating the collection of stem cells from peripheral blood and increasing the collection of umbilical cord; pursuing the improvement of organizational and structural quality through the continuation of the processes of licensing and accreditation of facilities;
- increasing the forms of cooperation with volunteering through the enhancement of the activities of the Associations, the networking and the support to the activities of promotion and development of donation.

**Region Umbria**

The Transfusion System of the Region Umbria has an institutional framework complying with the National Law, in particular with Law no. 219/2005, and is made of the Directorate for Health and Social Services of the Region, the permanent Technical Council for the regional blood transfusion system, the Regional Coordination and Compensation Center for Blood Transfusion Services (CRCC), the Immuno-Transfusion Services (GIS), the Collection Units (RU) and the Association of volunteering (AVIS and CRI).

The **Resolution of the Regional Council on 29 December 03 no. 2115** updates the unit price for the management of blood and blood components among public health services, thus producing a surcharge on the amounts that healthcare companies are required to pay to the Regional Avis of Umbria for donations made by Avis donors.

With the **deliberation of the Regional Council of Umbria no. 298 of 28 April 2009** the "Regional Health Plan 2009-2011" was approved, after validation by the Technical and Scientific View for the Regional Blood System. The **Regional Government Resolution No. 1455 of 19 November 2009**, incorporates the Regional Blood Plan and decides with regard to it; it creates the Information System for the Blood Transfusion Services of the Region Umbria – S.I.S. Tra. - Umbria), as an integral part of the National System; this resolution, moreover, updates the price of sale for intra and extra regional exchanges of blood and blood components for topical infusion use.

The **Regional Blood Plan 2009-2011** is a document of strategic planning nature, which is entrusted with the task of identifying the key choices and priorities and to identify the innovation needs of the regional health legislation, while leaving to the implementation programming the definition of standards and operational models. The solution detected consists in placing the entire cycle of strategic and implementing health planning to the procedures and times forecast for the acts of general programming of the Region, thus operating a strong simplification.

The objectives identified for the 2009-2011 period can then be summarized as:
- Achievement of regional self-sufficiency of blood components and blood products, preferably with periodic donors and through regional planning of the needs of erythrocytes and plasma sent every six months and evaluated by the CNS;
- development and integration of the Network of transfusion facilities with a reorganization of the transfusion tasks within the regional blood system;
- improvement of transfusion safety by eliminating misidentifications, which represent one of the greatest risks of transfusion, and monitoring of adverse
events;
extension of the national tariff for intra-regional exchange of blood and blood components for infusion purposes;
verification of the appropriateness of use of blood components and blood products by enhancing the activity of the Committees for the good use of blood;
standardization at the regional level of the forms of Transfusion Services;

enhancement of the role of the Associations of Volunteers also through the development of integrated activities to promote donation between Region, Health Units and Voluntary Associations;
continuous improvement of the level of qualification of the staff;
quality assurance through regional accreditation of Immunotransfusion Services and Collection Units;
upgrading of IT links between SIT, RUs and Voluntary Associations, and activation of a regional database of blood transfusions and of telemedicine technologies;
activation of studies and protocols to improve scientific and technological development.

Region Valle d'Aosta

In recent years Valle d'Aosta has experienced a steady increase in donors, reaching 3,600 in 2010. The regional self-sufficiency of blood and blood components in the Region was and is an achieved and consolidated fact, but must be maintained over time, against the progressive aging of the population. In the last few years, the Region Valle d’Aosta has been in a position to provide support to the Regions still lacking, both in structural terms and in relation to particular times of the year, thus contributing to the system objective of national self-sufficiency.

Resolution no. 16 of 12 January 2007 of Valle d’Aosta and that of the Regional Council of Piedmont number 30/5528 of 5 February 2007, approved the agreement between the Autonomous Region of Val d’Aosta and the region Piedmont for the functional connection of CRCCs.

Resolution 2597 of 5 September 2008 sets out the directives on traceability of blood and blood components intended for transfusions.

The objectives of the regional blood transfusion system defined by the second regional blood and plasma Plan 2007-2009 took into account the local context, the regulatory framework determining the tasks of the Region and of health service facilities in the field of Transfusion Medicine, and the provisions for the national transfusion network by the Ministry of Health contained in the National Health Plan 2006-2008. The system objectives established by the Regional Plan 2007-2009, in line with the national ones, were:

• achievement and maintenance of a constant regional self-sufficiency of blood, blood components and blood products;
• realization of ever higher levels of quality and safety of blood transfusions in the immunological and infectious terms, within regional organizational models with a high capacity in terms of professional experience and technological innovation;
• widespread application of clinical appropriateness in transfusions with the adoption of verifiable, specific and shared indicators of output and outcome;
• development of therapeutic technologies based on hematopoietic progenitors, which should support and allow the evolution of the current transfusion methodology. Resolution 2598 of 5 September 2008 transposes the directives of the Local Health Unit of Valle d'Aosta for the creation of a quality system for Transfusion Services. Regional Law 23/11/2009, number 41 contains provisions on transfusion activities for the achievement of regional self-sufficiency in terms of blood, blood components and blood products, and also deals with voluntary transfusions and with the protection of the health of collectivity.

The Blood and Plasma Plan 2012/2014 is the system defined on the basis of the previous legislation. It establishes the regional information system of Transfusion Services, deals with the creation of programs to protect the health of citizens, manages the agreements with companies of blood products and coordinates the transfusion system.

Region Veneto

Resolution number 18 of 25 March 2004 stipulates the adoption of the fourth Regional blood and plasma plan for the years 2004-2006, prepared pursuant to
article 11, paragraph 2 of Law 4 May 1990, no. 107.

The Region Veneto, in accordance with Article 4 of the Statute and in the exercise of its powers to ensure health protection services to all citizens, favors interventions to promote the donation of blood, bone marrow and organs between living people and recognizes the donor as a promoter of a leading social-health service which is useful to the whole community with Regional Law of 28 June 2007 no. 11; the Law sets, in fact, measures of exemption of ticket for donors with more than 50 donations.

Considering the legislation of the Region Veneto, there are three important stages in the process of definition of the transfusion system. The first important step is represented by Resolution number 18 of 25 March 2004, approving the adoption of the regional blood and plasma program for the three years and highlighting that the Deliberation of the Board number 3221 of 28 October 2008 provides for the adoption of the rules in legislative decree 9 November 2007, no. 208 "Implementation of the Directive 2005/62 EC implementing Directive 2002/98 / EC on the community standards and specifications related to a quality system for Transfusion Services".
Annexes

Annex 1 - Questionnaire to the Presidents of Regional, Provincial and Municipal Avis

Customer details of the Informant

Age:

Sex: M / F

Year of Foundation:

Role:

Term of office:

Years of commitment in the association:

1. **What is the position of the association in the region compared to other Associations, to the CNS, the Regional Coordination facilities, the Committee for the Appropriate Use of Blood and SIMTI?** Temporal frequency of the relationship: everyday, 1/3 times a week, 2 times per month, 1 time per month, 1 time a year by what means: phone, email, personal meetings, fixed / sporadic meetings, conferences, other; intensity of the relationship: low / medium / high.

2. **What is the governance model of the transfusion system in your region?**

3. **What is the governance model of the association:** how / where is the responsibility placed? Who is responsible for **blood collection**? Who is responsible for **calls**? *(Draw with them a map)*

Which governance model do you identify with:
- centralized model;
- decentralized model;
- mixed model.

4. **What is the kind of tools used to communicate with the donor and retain him/her ex post or ex ante?** *(Recruitment-information-retention)* and how much do they work?  
- list of tools: newsletters, newspapers, phone calls, flyers, posters, institutional events, events on the field, or otherwise;
- customized call for donation;
- an example of best-practice and an example of a negative experience;
- description of tools & description of the type of feedback received for each tool used e.g. no. of events in 2010 and 2011 & average no. of participants to each event.

5. **What is the institutional investment in communication campaigns towards donors?** What impact do they have on donor retention? Types of funding from:
- Regional Health System;
- Province;
- Municipality;
- Service Centers for Volunteering.

Example of best practice and example of negative experience.

6. **What is the mechanism of recruitment-selection- (in) formation-retention of volunteers?**

7. **Drop-out rate:** the no. of donors who no longer donate? What is the no. of donors who no longer donate to your association because they are involved in other associations? What is the no. of donors who no longer donate to
the association because they have exceeded the threshold of 65 years of age?

8. Request the map with Collection Units (No. Collection Units, organizational structures, blood mobiles) (Ask for % and / or numerical data)

9. What were the consequences entailed by the process of centralization / consolidation, if any?
- variation in number of donors:% reduction or increase;
- changes in staff;
- changes in costs: specifications.

10. Have you created any partnerships? If yes, with whom and of what type: profit, non-profit, public administration? An example of best practices and an example of a negative experience
   Examples of collaboration activities: - in terms of fundraising, promotion, direct blood collection, calls for donations, etc.

11. How (and through who / what) do you integrate funding flows? What is the prospective development that you hypothesize compared to the methods used today?

12. If hypothetically you no longer received funding from the state (Regional Health System) how could your fundraising develop in the future?

Annex 2 - Data collection from regional, provincial and municipal presidents

Designation structure:

Mail:

Legal representative:

Mail:

MEMBERSHIP ACTIVITIES

1. Number of Members
   Members 2010: 
   Members 2011: 

2. Number of donors 2010 and of donors 2011
   2010:
   2011:

3. Number of donors 2010 and 2011 (breakdown by classes of age, origin - Italian or not, sex and blood type)

<table>
<thead>
<tr>
<th></th>
<th>2010 No. donors</th>
<th>2011 No. donors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26-35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36-45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>46-55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>56-65</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Provenance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Europe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other countries</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4. Number of Donations by type 2010

<table>
<thead>
<tr>
<th>No. of Donations</th>
<th>Whole blood</th>
<th>Plasmapheresis</th>
<th>Cytoapheresis</th>
<th>Other apheresis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Number of Donations by type 2011

<table>
<thead>
<tr>
<th>No. of Donations</th>
<th>Whole blood</th>
<th>Plasmapheresis</th>
<th>Cytoapheresis</th>
<th>Other apheresis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. Number of members who joined in 2011 and 2012 by age and sex group

| 2011     | 2012      |  |  |  |  |
|----------|----------|  |  |  |  |
| Age 18-25 | Age 18-25 |
| Age 26-35 | Age 26-35 |
| Age 36-45 | Age 36-45 |
| Age 46-55 | Age 46-55 |
7. Number of Representatives within institutional bodies for each branch in which there is a list of representatives of the branch and number:
- National Blood Centre
- Regional Blood Centre
- Regional Coordination facility
- Committee for the Appropriate Use of Blood
- Departments of Transfusion Medicine
- Other bodies

8. Number of meetings within institutional bodies:
- National Blood Centre
- Regional Blood Centre
- Regional Coordination facility
- Committee for the Appropriate Use of Blood
- Departments of Transfusion Medicine
- Other bodies

9. Number of Volunteers working within the Association, that is, who carry out activities voluntarily and for free in:
2010
2011

10. Headcount in:
2010
2011

11. Budget 2010 and Budget 2011 -Indicate balances total revenue & total expenses
(Non itemized cost) (attach financial statements and notes)

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12. Number of Agreements Structured with other organizations
Private:
Public:

HEALTH AND COLLECTION ACTIVITY

13. Number of calls:

14. No. of donors with negative check in 2010 and 2011 (No. of donors who proved ineligible following the procedures of control of donated blood):
2010
2011

15. Number of Members who can no longer donate in 2010 and 2011 because of permanent and temporary suspension:
Members in permanent suspension:
Members in temporary suspension:

16. Within the area of jurisdiction, indicate the total number of donors also belonging to other associations:

17. Number of scheduled donations in terms of expected results by the organization for the year:
2010:
2011:

18. Number of Collection units divided by type and place of donation
(Collection Unit or organizational structure or bloodmobile, Transfusion facility)

Branch: __________________ type: 
Branch: __________________ type: 
Branch: __________________ type: 
Branch: __________________ type: 
Branch: __________________ type: 

19. Total of collection days per year:

20. No. of preventive and / or corrective actions taken by Transfusion Facilities/Collection Units (the SIMTI indicator is given, indicate whether it has been calculated) to prevent reactions:

21. No. of checks carried out by ST in Collection Units (if eventually managed):

COMMUNICATION ACTIVITIES

22. Total number of participants in the events organized in:

2010: 
2011: 

23. Number of total events organized:

2010: 
2011: 

24. Number of partnerships 2010 and 2011:

2010: 
2011: 

25. Communication space in the newspaper:

<table>
<thead>
<tr>
<th>Type of newspaper</th>
<th>No. of articles</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td></td>
</tr>
</tbody>
</table>

26. Number of revisions of information material (this represent a SIMTI indicator) for the year:

2010: 
2011: 

Annex 3 - Questionnaire for Donating Members

1. Sex: M / F

2. age:
   18 25 
   26 35 
   41 50 
   51 65 

3. Which is your profession?
   - employee
   - freelance
   - housewife
   - entrepreneur
   - unemployed
4. Do you carry out volunteering activities in other organizations? yes/ No  
5. If yes, in which industry does the Association you volunteer for operates?  
   - Senior citizens  
   - youth  
   - alcoholics and drug addicts  
   - disabled people  
   - Environmental protection and enhancement  
   - health, diseases, prevention  
   - cultural heritage  
   - minors  
   - detainees  
   - emergency  
   - marginalization  
   - Hiv positive, AIDS  
   - deviance  
   - homeless  
   - protection of women  
   - immigrants  
   - families in need  
   - other ____________________

6. And how often are you doing it?  
   - less than 1 day per month  
   - 1-2 days per month  
   - 3-6 days per month  
   - more than 6 days per month

7. When was your last donation?  
   - Yesterday  
   - more than 1 week ago  
   - more than 1 month ago  
   - more than 6 months ago  
   - more than 1 year ago

8. How many times on average do you donate in a year?  
   - 4 times  
   - from 2 to 4 times  
   - one time

9. Donations in apheresis (plasma donation)? Yes/ No

10. How many times on average do you donate in a year?  
    - more than 4 times  
    - 4 times  
    - from 2 to 4 times  
    - 1 time

11. Do you usually go donating on weekdays? yes/ No

12. If yes, do you take advantage of the day of exemption from work? yes/ No

13. How satisfactory do you consider the experience of donation? (Scale from 1 to 5)  
    - Not satisfactory at all  
    - unsatisfactory  
    - almost satisfactory  
    - quite satisfactory  
    - very satisfactory

14. Where do you donate (Avis collection units, hospital Transfusion Structure)?

15. Are you experiencing problems in your donation process: yes/ No

16. If yes, Which ones?  
    - long queues  
    - poor hygiene  
    - little attention to donors  
    - slowness in the approval for donation  
    - inconvenient or inflexible opening hours  
    - other: ____________________

17. Which is the major issue that you experienced to become a donor?  
    - fear of diseases  
    - distance of the collection center  
    - difficulty in obtaining information  
    - difficulty with opening times  
    - other: ____________________

18. In your opinion, which is the major distrust for non-donors?
- fear of diseases
- laziness
- disinterestedness
- you do not know
- other: ____________________

19. How far is the place of donation where you donate?
- 0-5 km
- 5-10 km
- 11-30 km
- more than 30 km

20. Would you go to donate anyway if the donation site was farther? YES/NO

21. From 1 to 5, how important are the following factors for your continued adhesion to Avis? (Scale from 1 to 5)
- Events
- Newsletter
- Call
- Sense of belonging
- Events in schools
- Institutional Campaigns
- Values inherent in the gift

22. Why and how did you become an AVIS donor? (Max 1000 characters)

Annex 4 - Questionnaire for physicians

1. Gender
2. Age
3. In which province do you carry out the activity?
4. In which facility do you exercise your activity?
   - Collection Unit
   - Organizational branch
   - blood mobile
   - Transfusion Center
5. The responsibility for the call within the organization you operates in belongs to:
   - Municipal Avis
   - Provincial Avis
   - Transfusion Center
   - Other non-profit organizations
6. The responsibility for collection within the organization you operates in belongs to:
   - Municipal Avis
   - Provincial Avis
   - Transfusion Center
   - Other non-profit organizations
7. The structure you operate in is owned by:
   - Avis
   - Hospital or ASL
   - other: _______________
8. Your salary is paid by:
   - Avis
   - Public administration
9. What are the strengths you see in your organization? (Name at least three strengths)
10. What are the criticalities you see within your Collection Unit / Organizational Branches or Transfusion Centre? (List three critical issues)
11. What are the solutions you propose to the criticalities described above? (Open answer)

Annex 5 - Questionnaire for Cooperating Members

1. Gender
2. Age
3. In which province do you run your activity?
4. For how many years have you conducted activities of active volunteering
within Avis?
- 0-1 year
- 2-5 years
- 5-10 years
- more than 10 years

5. How were you selected?

6. Have you attended training courses? Sì/ NO

7. If yes, how many:
- 1-2
- 3-5
- 5-10
- more than 10

8. What are the issues related to the training courses you attended?
- administration and budget
- Creating events
- health issues related to blood
- how to use online marketing mechanisms
- how to create partnerships with different players in the territory
- public speaking
- how to manage councils
- other: _______________

9. Would you like to attend more courses in the future? yes/ No

10. On what issues? Indicate 3 areas of interest

11. Will you continue to volunteer in Avis? yes/ No

Annex 6 - Questionnaire for Managers of Regional Coordination Facilities

1. Region of Reference:

2. List the problems related to the blood system in your region of reference (The three major problems in ascending order)

3. Which factors result from these issues?

4. What are the problems and strengths related to collection and call for blood donation through the Association? (List three strengths and three weaknesses)

5. How is it possible to overcome these problems and encourage the strengths of the blood system?

Annex 7 - Questions of the structured Interview to key informants

1. Which is the governance model of the regional transfusion system? (Analysis of the map you will be provided)

2. What are the issues related to the transfusion system? Which inefficiencies and how can they be overcome?

3. What are the problems and strengths related to collection and call for blood donation through the Association?

4. How is it possible to overcome these problems and encourage the strengths of the blood system?

5. Annex 8 - Questions structured in focus groups

1. What are the problems faced by the associations dealing with blood collection and by those dealing exclusively with awareness and call? How are they reflected on the territory and which models of governance are present?

2. What are the tools of communication and marketing that you mainly use to attract new donors and what are the ones you use to retain existing donors?

3. What mechanisms do you put in place for the selection and development of your volunteers and staff?

4. Spending review and future prospects, what are the risks for the association
Avis (2003), Statuto e Regolamenti.


Gillespie T.W. e Hillyer C.D. (2002), “Blood donors and factors impacting the blood donation decision”, Winship Cancer Institute, Emory University, 1365B Clifton Road.


Humphrey, Albert (2005), “SWOT Analysis for Management Consulting”, *SRI Alumni Newsletter (SRI International).*


