Introduction

Covid-19 pandemic has been something extraordinary and unique for the world in the modern age. The challenges faced during the first two years of this decade have been tough for the entire world. The European Union has been acting from the beginning of the pandemic in order to stabilize the situation as much as possible both economically and from a health perspective. Next Generation EU is considered one of the biggest recovery instruments since the establishment of the European Union and it is up to member States to take advantage of this tool.

This work tries to underline the importance of this recovery instrument, focusing on the Italian recovery plan, the PNRR, and in particular on how the national healthcare system is destined to change drastically with the implementation of health facilities which will provide services in a modern and redesigned way. The scope of this work is to describe the crucial aspects of this change, highlighting the huge role Italian Regions have in choosing the way to spend the funds and especially to approach this development period. In the third chapter, the most important one, two big aspects are analyzed: the allocation of funds to Regions based on the care setting; the indeterminacy of the national policy and the consequential autonomies of the Regions and local authorities.

This paper analyzes the data (updated to June 2023) collected through the regional websites of three different regions: two northern and very well developed regions like Veneto and Emilia Romagna, and a southern more historically problematic one like Calabria. The work also offers a summary of some reflections and considerations, proposed in articles (in particular

OASI Report 2021 and 2022), on the actions taken by Regions and health authorities.

Chapter 1

Overview of Next Generation EU

As defined by the European Commission websites, Next Generation EU is the EU's €800 billion temporary recovery instrument to support the economic recovery from the COVID-19 pandemic and build a greener, more digital and more resilient future. It is a large-scale recovery plan designed to support member states and stimulate economic growth across the EU.

1.1 Funding of Next Generation EU

The centerpiece of Next Generation EU is the Recovery and Resilience Facility (RRF), which serves as an instrument providing grants and loans to support reforms and investments in EU Member States. The RRF has a total funding allocation of €723.8 billion in current prices.

Part of the funds, amounting to up to €338 billion, are being provided to Member States in the form of grants. These grants offer direct financial support to the respective Member States.

Another portion of the funds, up to €385.8 billion, is allocated for loans to individual Member States. These loans will be repaid by the borrowing Member States.

In the event that Member States do not utilize the full amount of loans available under the RRF, the remaining funds will be utilized to finance REPowerEU, a program designed to accelerate the EU's green transition and decrease its dependence on Russian gas.

Repayment of the money borrowed for Next Generation EU by the European Union (EU) will begin in 2028 and continue until 2058. The

borrowing Member States are responsible for repaying the loans, while the grants will be repaid through the EU budget. To assist with repaying the grant portion of the borrowing, the European Commission has proposed additional sources of revenue for the EU budget, known as own resources.

1.2 Distribution of funds to Member States and the Italian PNRR

In order to access the support provided by the RRF, EU member states are required to submit comprehensive national Recovery and Resilience Plans (RRP). These plans must encompass specific targets, milestones, and estimated costs, outlining the intended utilization of investments. Subsequently, the European Council, through a qualified majority vote, assumes the responsibility of approving or disapproving these plans.

Crucially, the RRP serves as a blueprint for each member state's utilization of investments to align with the green and digital priorities outlined by the European Commission. To this end, two specific targets have been established: a minimum allocation of 37% of the expenditure must be dedicated to green-related actions, while 21% should be allocated towards digital initiatives. Furthermore, member states are mandated to adhere to the overarching objective of achieving climate neutrality by 2050, as disposed by the European Union.

In response to an unprecedented crisis precipitated by the global pandemic, Italy has crafted a comprehensive recovery and resilience plan, PNRR (Piano Nazionale di Ripresa e Resilienza),to address the pressing imperative of facilitating a robust recovery and ensuring its preparedness for the future. The plan encompasses a series of reforms and investments aimed at augmenting Italy's sustainability, resilience, and readiness to embrace the challenges and opportunities presented by the green and

digital transitions. Specifically, the plan entails 132 targeted investments and 58 reform initiatives, which will be supported by a combination of €68.9 billion in grants and €122.6 billion in loans.

Within the plan, a substantial allocation of 37.5% is dedicated to advancing climate objectives, signifying Italy's commitment to addressing pressing environmental concerns. Additionally, 25.1% of the plan is channeled towards driving the digital transition, reflecting Italy's resolve to embrace digitalization and harness its potential for economic growth and enhanced societal well-being.

The implementation of the plan is expected to yield significant positive outcomes, including a projected increase of Italy's gross domestic product by 1.5% to 2.5% by the year 2026. This economic boost is anticipated to generate employment opportunities for up to 240,000 individuals, contributing to a reduction in unemployment rates and strengthening social welfare.

Chapter 2

The pillars of PNRR

2.1 6 Missions and 16 components for PNRR

The Italian PNRR is divided into 6 missions and every mission is composed by a few components for a total number of 16: every single component is assigned a specific amount of money and is described generally how these money should be spent.

The 6 missions are:

- Digitalization, innovation, competitiveness, culture and tourism
- Green revolution and ecologic transition
- Infrastructure for sustainable mobility
- Education and research
- Inclusion and cohesion
- Healthcare

2.2 Mission n°6: healthcare

The PNRR dedicates Mission 6 to Health. In this section, the Plan identifies the issues that have become even more evident due to the Covid-19 pandemic and emphasizes the importance of technologies and skills (digital, professional, and managerial) to review healthcare processes and achieve a more effective connection between research, data analysis, and planning.

The mission involves a funding of 20.23 billion and is divided into two components:

1. Proximity networks, intermediate structures, and telemedicine for territorial healthcare assistance. (€9 billion)
2. Innovation, research, and digitization of the national healthcare service. (€11.23 billion)

It is worth highlighting that the first component aims to strengthen the healthcare services provided at the local level through the enhancement and creation of territorial structures and facilities (such as Community Houses and Community Hospitals), the strengthening of home care, the development of telemedicine, and a more effective integration with all social and healthcare services.

However, before making investments, it is necessary to define and implement a reform of local healthcare services and establish structures and standards for territorial assistance. The document, therefore, outlines the objectives of launching a reform to pursue a new healthcare strategy that enables the country to achieve adequate quality care standards, in line with the best European countries, and increasingly considers the National Health Service (SSN) as part of a broader community welfare system.

2.2.1 Mission n°6: component n°1

The first component of this mission is divided into a reform and three categories of investment.

Reform

The implementation of the reform aims to pursue a new healthcare strategy, supported by the establishment of an adequate institutional and organizational framework, enabling the country to achieve appropriate quality care standards in line with the best European countries. It

increasingly considers the National Health Service (SSN) as part of a broader community welfare system.

The last two years have been important to start this reform; the goals that were described in the initial PNRR are these two:

- Defining consistent structural, organizational, and technological standards for territorial healthcare and identifying the dedicated facilities to be adopted by 2021 through the approval of a specific ministerial decree.
- Defining a new institutional framework for prevention in healthcare, environmental, and climatic fields by mid-2022, following the presentation of a bill to the Chambers, in line with the "One-Health" approach.

Investment 1

Investment 1.1 focuses on Community Houses (CdC) and person-centered care as part of the larger plan. It addresses the need to strengthen the SSN in providing quality services at the local level, particularly for the growing number of people with chronic diseases. Community Houses will serve as centralized hubs where multidisciplinary teams, including doctors, nurses, and social workers, work together to coordinate and improve healthcare services. These houses will provide a single access point for comprehensive assessments and gender-specific services. The investment aims to establish 1,288 Community Houses by 2026, utilizing existing and new facilities, with an estimated cost of €2.00 billion. The Ministry of Health, in collaboration with regional administrations and other relevant entities, will be responsible for implementing this initiative.

Investment 2

The investment aims to strengthen home care services by increasing their volume and leveraging technology. It seeks to provide care for 10% of the population over 65 by 2026, focusing on those with chronic illnesses or limited independence. The goals include developing a shared model for home care delivery using telemedicine and digitization. Each Local Health Authority (ASL) will establish an information system to collect real-time clinical data. The 602 planned Territorial Operational Centers (COT) will coordinate home care services with other healthcare facilities, and telemedicine will be used to support patients with chronic diseases.

The estimated cost of the investment is €4.00 billion, with funds allocated for serving more patients, establishing operational centers, and implementing telemedicine. These measures align with previous investments and aim to integrate healthcare and social services, promoting autonomy and reducing hospitalizations. The introduction of home automation, telemedicine, and telemonitoring will facilitate this integration.

The investment also supports telemedicine projects proposed by regions, focusing on harmonization, scalability, and integration with the Electronic Health Record. Telemedicine helps address healthcare challenges by reducing disparities, enhancing the care experience, and improving efficiency through home care and remote monitoring. Projects encompass various clinical areas and functionalities, such as tele-assistance and tele-consultation. According to the plan, priority will be given to projects spanning multiple regions and aiming to create scalable telemedicine platforms.

Investment 3

Investment 1.3 focuses on strengthening intermediate healthcare and its infrastructure, specifically Community Hospitals (OdC). These facilities (with 20 to a maximum of 40 beds) provide short-term care to patients with medium to low-intensity clinical needs, reducing unnecessary visits and referrals. They facilitate the transition from acute care to home, allowing families to adapt to the environment. The plan involves establishing 381 Community Hospitals, coordinated across levels, with an estimated cost of €1.00 billion and completion by mid-2026. Staffing levels will be increased within existing resources. This investment emphasizes the importance of community-based care, improving patient outcomes and the overall healthcare experience. By expanding the network of Community Hospitals, the system can deliver efficient and tailored care.

2.2.2 Mission n°6: component n°2

The second component of mission 6 is divided into a reform and two investment categories

Reform

The main objective of the reform is to review and update the legal regime of the Institutes for Research and Treatment with a Scientific Character (IRCCS), but also to renew the policies of research of the health ministry.

The plan was to adopt these changes with a reform before the end of the 2022. The goal is to improve the strategic management and the areas of competence of the IRCCS through a review of the governance of these institutes. Another way this reform has to impact the healthcare system is with the differentiation of the IRCCS based on their activities and with the

establishment of a network between these institutes and others SSN structures to exchange specialized expertise.

Another important part of the reform includes a change in the governance and a greater empowerment of the general manager and scientific director on the results to be achieved: this is crucial in a system where the funds are given to the health structures based on the publication on journals with high impact facto and based on the development of clinic trials.

Investment 1

The first category is relative to a technological and digital update and is divided into 3 subcategories of investment.

Investment 1.1

It is planned to buy new equipment (3133 devices) for the modernization of the technological fleet of the hospitals, in particular for the devices which are more than 5 years old. The goal is also to improve the level of digitalization of 280 health facilities that are considered departments of emergency and admissions (DEA).

As stated by the Decree-Law n°34/2020 there is also a plan to be followed that needs to reach 3 goals:

1. +3500 beds in intensive care in order to reach the standard of 0.14 beds per 1,000 people
2. The consolidation of the process of separation of paths in the emergency room
3. An increase in number of the vehicles for secondary transports

The aggregate spending for this part of the investment (including the funds allocated for the Decree-Law n°34/2020) is €4.05 billion and is divided this way:

- 1.19 billion for the replacement of 1568 technological devices by the third trimester of the 2023, 0.60 billion for the replacement of the remaining 1565 devices by the end of 2024
- 1.45 billion are allocated to the digitalization of the first and second level DEA
- 1.41 billion for the renovation of the intensive and semi-intensive care beds, modernization of the emergency rooms and the increase in the number of vehicles for the secondary transports

Investment 1.2

The goal of this investment is to adapt the health facilities to the seismic standards. This need stems not only from the necessity to ensure the compliance of the infrastructures to the Ordinance of the President of the Council of Ministers No. 3274 of March 20, 2003, but especially from the awareness that the conditions of the health facilities are crucial in case of disaster because of the services they provided and because they host people who have limited reaction capability.

Based on an evaluation done in 2020, 116 interventions have been identified and the total amount of money allocated to this investment is 1,64 billion.

Investment 1.3

Electronic Health File (Fascicolo Sanitario Elettronico - FSE)

The goal is to improve the FSE in order to ensure the accessibility to the system for all the healthcare professionals.

The FSE has 3 key functions:

1. Access point for patients to healthcare services.
2. Database for professionals including all the clinic history of the patient.
3. Instrument for ASL to analyze data and improve their services.

The investment requires:

- The full integration of all healthcare documents and data types, the creation and implementation of a central archive, interoperability and service platform, the design of a standardized user interface, and the definition of services that FSE should provide.
- The integration of documents by the regions within FSE, financial support for healthcare service providers to update their technological infrastructure and data compatibility, financial assistance to regions adopting the FSE platform, and support in terms of human capital and expertise to implement the necessary infrastructure and data changes for the adoption of the FSE.

Total amount planned to be allocated to this investment is 1.38 billion (0.57 billion of this amount are relative to the program of the health electronic card (TSE)).

Technological infrastructures of the ministry of health and predictive model to ensure LEA

The objective is the strengthening of the New Health Informative System (NSIS) which can be achieved through an improvement in the infrastructures and in the analysis instruments of the ministry of health for the LEA levels (essential assistance levels), but also through a planning of the healthcare services based on the future needs of the population, trends and epidemiological picture.

The investment includes:

1. Strengthening of the technological infrastructure of the ministry of health.
2. Improvement of the collection and production of data for the NSIS at a local level.
3. Development of instruments capable of advanced analysis in order to study complex phenoms and predictive scenarios with the goal of improving the ability to plan the healthcare services and identifying emerging diseases.
4. Creation of a national platform where demand and supply for telemedicine services can meet.

The estimated cost for this project is 0.29 billion.

Investment 2

Investment two focuses on training, scientific research and technological transfer; there are two subcategories.

Investment 2.1

The main goal of this investment is to enhance the system of biomedical research in Italy, making centres of excellence more responsive in the sector of rare diseases and promoting the technological transfer between research and companies.

Three types of interventions are planned:

1. funding for Proof of Concept (PoC) projects aimed at bridging the gap between scientific research outcomes and industrial application, by developing prototypes for commercialization and mitigating potential risks, such as patents, licenses and market barriers that could discourage investors.
2. funding for research programs or projects in the field of rare diseases and rare tumors.
3. funding for research programs on highly debilitating diseases.

For the realization of the projects PoC there are plans for calls for tender with a total value of 0.1 billion; for the research programs and for the projects in the field of rare diseas and rare cancers are planned two different fundings of 0.05 billion each; for the research on high debilitating diseases were planned two different funding of 0.16 billion each to be assigned before 2023 and 2025.

Investment 2.2

Scientific progress and technological innovations require constant learning by medical staff in general practice and infective diseases, but also there is a need to improve the digital and managerial skills of the healthcare workers.

The investment includes:

- An increase in the number of scholarships in general practice.
- A special training plan on infective diseases given not only to the medical staff but to all the healthcare workers.
- The implementation of a management skills acquisition program for healthcare professionals in the SSN, aiming to prepare them to address current and future challenges.
- An increase in the specialized training contracts in order to fill the gap between the numbers of doctors who just graduated and the numbers of slots available for the specialization post-lauream

The cost of the investment is 0.74 billion and the goal is to fund these activities:

- Additional 900 scholarships for general practice every year from 2021 to 2023 (2700 in total)
- A special plan for the education on infective diseases with 290,000 attendees in total
- Formative projects for the development of management skills for the SSN professionals (6,500 workers in total by 2026)
- 4,200 additional specialized training contracts starting in 2020.

Chapter 3

Challenges faced by Regions in mission 6

In this chapter we can start our real analysis on how Italian regions are challenged to make important changes in the healthcare system, according to the guidelines given by the central government.

To understand how the funds are distributed among the Italian Regions, relative to the mission n°6, we can consider the funds that have been assigned by the Italian government to the regions with the Ministerial Decree of January 20, 2022. The funds assigned with this Decree sum up to € 8.042.960.665,58 (of which € 6.592.960.665,58 from the PNRR and 1.450.000.000,00 from the PNC, the plan for complementary investments).

While some guidelines are more detailed and the range of action for the Regions is restricted, for most of the measures which have to be implemented by Regions, the central government gave freedom of action to regional and local entities: this is probably the most challenging and intriguing part of the mission 6 of the PNRR.

Regions were given a number of months to formulate their strategies (POR, Piani Operativi Regionali) in which they explained their Action Plan. The results of these actions can only be seen partially because the spending of the funds and the implementation of the changes is still underway.

Thanks to a few articles published in 2022 in the Journal Mecosan and to the contribution of CERGAS (Centre for Research on Health and Social Care Management) with OASI Report 2021 and 2022 (Observatory on Companies and the Italian Health Care System), is possible to summarize

a few of the biggest challenges which regional and local entities have to face, giving relevance to 2 different aspects: the allocation of funds to Regions based on the care setting; the indeterminacy of the national policy and the autonomies of the Regions and local authorities.

We'll analyze all these aspects not only with the help of some articles, but also by taking care of the data of three different Regions: Emilia Romagna, Veneto and Calabria.

3.1 Redistribution of funds to Regions based on the setting

3.1.1 CdC

We discussed already the importance of the Community Houses and the role they have in the territorial healthcare. The 1,350 planned CdC have some specific characteristics dictated by the DM 77 while others can be determined by the local health institutions.

	1.1 (CdC)	
Region	**Funds**	**Target**
Emilia Romagna	124,671,951	84
Veneto	135,401,850	99
Calabria	84,677,262	61

Table 1

In table 1 we can see the amount of money assigned for each region for the realization or conversion of a target number of CdC. We can immediately see some differences between these three regions especially if we analyze the number of inhabitants of the region for each CdC: 52,713 in Emilia Romagna, 48,836 in Veneto and 30,090 in Calabria. This difference between Calabria and the other two regions has to be found in the way the Italian regions are trying to see the implementation of the CdC. In fact, the goal is to have a good system of territorial healthcare

that helps particularly chronic patients, one of the few kinds of patients that all the regions agree in treating in the CdC. Therefore is extremely important to consider the territorial background where the Community Houses are located: Calabria is a way less equipped than Emilia Romagna and Veneto in terms of mobility infrastructure and also the mountainous nature of the region was a part of the decision to build more CdC in proportion to the population compared to other regions. An aspect strictly related to the nature of the territory under consideration is for sure the trade-off between capillarity and proximity. Without any doubt the unrealistic goal would be to offer the majority of services available in the largest possible number of center, but being this goal unreachable, some decisions need to be made and the best way to do it is to consider the regional setting.

Another important consideration which underlines the importance of the regional setting is that CdC can have two different vocations: being a mere health facility or a community center (Longo and Zazzera, 2022). This decision depends on two interconnected factors: the engagement of external actors like local authorities and community organizations, and the available resources. CdC's vocation cannot be predetermined, even though it offers services with social and community aspects. In contexts with strong institutional and social support, a community-oriented approach with co-programming and co-production is more feasible. However, in situations with complicated service integration, the focus might lean towards healthcare. The actual vocation depends on how these dimensions are combined and adapted to suit the specific circumstances.

One notable fact is that on average 1.5 million is assigned to every CdC and this amount could be limiting especially for the Community Houses

which need to be built ex novo. It is therefore clear that regions who already had existing structures which were similar to a Community House not only had an advantage in the planning period but they could use more money on reconversion than on building new infrastructures. Is the case of Emilia Romagna where the existing "Case della Salute" (Health Houses) model was taken as an example for the drafting documents which contain the guidelines for the realization of the CdC model.

3.1.2 COT

The second part of the first component of mission 6 is the one related to enterprise interconnection, purchase of new devices and especially the realization of 602 territorial operations centres (COT) nation-wide.

One first important difference between COT and CdC is that COT is not a health facility where patients can go by themselves, but is more of a service which is part of the ASL. Being this service very dependent on the integration between different facilities, it is easy to understand how every region could make COT work in different ways and therefore the national guidelines indicated in the DM 77 are less specific for their realization, compared to the ones regarding CdC and OdC.

Some examples of services very similar to the ones offered by COT were already present before the spread of Covid-19 in some regions, while others have been implemented as a response to the pandemic. It is therefore intriguing to analyze some common characteristics of these centres (OASI Report 2022):

- The target of patients mainly includes frail and socially/medically complex individuals who are not self-sufficient.
- It mainly manages the discharge flow of hospital patients. In 63% of the centres, the patient flow is only step down, meaning patients

are discharged from the hospital to lower-level care facilities. In the remaining 37% of cases, where a bidirectional flow exists, the predominant flow remains step down.

- Centres primarily serve as a back-office function (63% of cases), with only a few instances where it includes a front desk for direct access.
- The main functions pertain to evaluating the appropriateness of the referral, identifying the appropriate setting, and booking the service.

An important aspect to note is that a benefit which COT could generate lies in the way these centres could monitor all the steps followed by patients in the different health facilities: this action could push to find adjustments which could benefit the whole local health system.

Overall, we can say COT can take advantage of all these previous experiences, trying to adopt the best territorial strategies in order to connect in an efficient way all the different services provided.

We can see in table 2 how every COT planned has been granted a similar amount of money and how the goal is to reach an average of a COT per 100,000 inhabitants and per each district, without taking care of territorial difference.

	1.2 (COT)	
Region	**funds**	**Target**
Emilia Romagna	7,788,375	45
Veneto	8,480,675	49
Calabria	3,288,425	19

Table 2

3.1.3 OdC

Community Hospitals have been designed way before Community Houses and COT in Italy, in fact we can find some outlines of OdC in the PSN (National Health Plan) dated 2006-2008 and subsequently in a document

called Patto per la Salute 2014-16 where is stated the need to stipulate an agreement between central government and regions on the requirements of the OdC. Later in 2020 this agreement is signed and now the DM 77 is the document containing the guidelines regions have to follow: one OdC every 100,000 inhabitants with 20 beds each is the target. This target requires 590 OdC while with the PNRR funds combined with the regional additional ones the plan is to build or convert 436 facilities.

Analyzing the data of the 2022 OASI Report we can find some interesting info: the majority of already existing OdC before 2022 are located in the North of the country (68.7%), while only 21.5% and 10.7% respectively in the Centre and in the South. It is therefore clear how some regions are way more experienced in the field of OdC because of the past presence of these facilities. Furthermore, the regional target in these regions (Veneto and Emilia Romagna are two of them) can be reached more effortlessly because the amount of new facilities to establish is lower compared to those regions where the OdC are considered something new.

A few things have to be highlighted with regard to the target of the DM 77 (one OdC every 100,000 inhabitants). This goal, as we stated before, can't be achieved with the PNRR funds and we should even ask ourselves the importance of this target: while it is true that is important to reach the highest amount of areas with a good number of facilities, is also true that is even more important that every facility possesses the staff, the equipment and the capacity to work properly. In addition to this important consideration is crucial to understand why this value of 1.0 OdC per 100,000 inhabitants not only is almost never reached by the regions, but is also very volatile between different areas. In particular, not considering the small case of Valle d'Aosta, we have only Calabria reaching this figure

and a small amount of southern regions (Puglia, Basilicata, Sardegna and Sicilia) going near this value. This explains how the value of 1.0 can't be considered nationally. In fact, exactly like for CdC, the nature of the territory, mobility infrastructures and the presence of not very densely populated urban areas, have to be taken in consideration. In table 3 we can see how in Calabria, which counts less than half the population of both Veneto and Emilia Romagna, the plan is to build way more than half the amount of OdC planned in the two northern regions.

	1.3 (OdC)	
Region	**Funds**	**Target**
Emilia Romagna	68,002,882	27
Veneto	73,855,554	35
Calabria	37,634,339	20

Table 3

Furthermore, if we want to compare this value with the one of UK which has a long history of Community Hospitals and a healthcare system similar to the Italian SSN, we can see how across the United Kingdom there are 500 facilities for a population of 68.1 million: translating this value into the Italian system would mean that in Italy there should be 432 OdC, but is useless to think of a perfect proportion that would fit every health system.

Another highlight is how the role of the healthcare staff has to change with the introduction of the OdC: not only the general practitioners will be key components of these facilities, even if with different degrees of importance based on the region, but also nurses and doctors will need to review their roles and responsibilities. The essence of the tasks performed should lean heavily towards providing assistance and support, while minimizing medical intervention as much as possible. This way of seeing the OdC also tries to give an answer to one of the biggest questions that has arisen in

the SSN during the last years: is there really a lack of specialized doctors? Well, the upcoming birth of OdC and CdC, and the way these facilities will work give an explicit answer: nursing figures will be the most needed in this decade. Moreover, according to FNOPI's estimates, in the next decade, there will be an outflow of 14,000 nurses, with entries ranging between 11,000 and 13,500 units. These numbers are against the ambitions of strengthening the services announced, as they are not able to guarantee even the coverage of the current shifts as currently organized (Longo and Ricci, 2021).

3.2 Indeterminacy of the national policy and the autonomies of the Regions and local authorities

As we have seen, the first component of the mission 6 of the PNRR is based on the institutions of the Community Houses (CdC), Territorial Operational Centers (COT) and Community Hospitals (OdC). The Regions have to follow the guidelines of the DM 77 (Ministerial Decree n.77), but there is still so much room for action for local entities.

One first important thing to note is that PNRR requires the achieving of some milestones and targets in terms of infrastructure, while there is freedom given to Regions in terms of innovation of services, skills and productive processes. This setting allows the local health authorities to choose different strategies in a National Health System very heterogeneously. Another important aspect lies in the fact that the Regions have the opportunity to see the mission 6 of the PNRR in two ways:

- As a spending program and as an instrument to acquire additional financial resources for new investments

- As an opportunity to start a process of change in terms of how the territorial healthcare works, considering that these investments in infrastructure and new technologies could be the starting point for the development of new regional policies.

In order to align these two views interaction between Region and local entities is needed: some Regions, like Lazio, decided to delegate both parts of the workload to a unique big working group; another possible solution would be to simply make sure that the different working groups are on the same page and communicate with each other.

Moreover, it seems that only two out of the three dimensions of the survival triplet have been taken into consideration in the monitoring systems (deadlines and costs, not targets). In particular, even if specific targets had been set out by the central government, there is a lack of metrics to monitor the degree of achievement of these targets at a regional or local level. The reasons for the lack of the monitoring system could be many: lack of clarity of the targets and missing competencies to define the KPI (Key performance Indicators) are two of the most relevant. Clearly then, considering this setting, is extremely important the role of Regions and local entities: trying to fill this gap in order to bring to a successful conclusion this important period of change.

As we have already seen, we can define the second component as an investment with the purpose of carrying out technological and digital modernization. While the first component asks the regions to do something new and to invent strategies to improve the territorial healthcare, even if with some national guidelines, the second component is a mix of funds allocated to regions for different aims but with specific paths. The

modernization of the devices, the additional scholarships for newly graduated doctors, the training courses and the renovation of facilities are all investments that require a large amount of money (component n°2 in fact is more relevant economically than component n°1), but these investments require way less strategic planning then the ones related to component n°1. This fact, naturally, does not imply that the role of regions and local health authorities is less important: regions are still responsible for the division of funds to hospital companies and need to track the development of the investments, local health authorities have an even bigger role because they are granted a considerable amount of money for the renovation of the technological park and the digitalization of the DEA (Emergency and Admission Department). In fact, what we can see from the next 3 tables is that for this component a lot of money is directly distributed to hospitals companies.

	Component 1	Component 2	**Total**
Ausl PC	13,325,447.09	10,038,970.26	23,364,417.35
Ausl PR	21,152,918.84	4,935,144.25	26,088,063.09
Ausl RE	24,736,271.53	30,755,751.81	55,492,023.34
Ausl MO	32,950,539.03	12,605,638.96	45,556,177.99
Ausl BO	41,285,140.90	30,308,344.53	71,593,485.43
Ausl Imola	6,220,914.44	6,885,391.20	13,106,305.64
Ausl FE	16,005,638.94	16,842,844.08	32,848,483.02
Ausl Romagna	52,336,781.22	81,543,200.99	133,879,982.21
AOU PR		35,694,440.84	35,694,440.84
AOU MO		27,449,256.94	27,449,256.94
IRCCS AOU BO		33,488,022.77	33,488,022.77
IRCCS IOR		21,337,812.34	21,337,812.34
AOU FE		9,640,702.07	9,640,702.07
Total	**208,013,651.99**	**321,525,521.04**	529,539,173.03

Table 4 (distribution of funds from region to local health authorities in Veneto)

	Component 1	Component 2	**Total**
AULSS 1 Dolomiti	16,492,143.53	56,302,652.51	72,794,796.04
AULSS 2 Marca trevigiana	58,976,956.88	76,457,437.28	135,434,394.16
AULSS 3 Serenissima	46,050,769.55	29,521,604.46	75,572,374.01
AULSS 4 Veneto Orientale	21,595,868.44	8,115,779.32	29,711,647.76
AULSS 5 Polesana	15,084,129.69	14,780,125.00	29,864,254.69
AULSS 6 Euganea	51,718,879.85	66,584,592.02	118,303,471.87
AULSS 7 Pedemontana	25,350,444.75	13,794,574.25	39,145,019.00
AULSS 8 Berica	35,123,773.26	33,607,029.90	68,730,803.16
AULSS 9 Scaligera	70,807,130.29	15,276,162.77	86,083,293.06
Azienda Ospedale - Università di Padova	655,554.00	19,839,731.07	20,495,285.07
Azienda Ospedaliera Universitaria Integrata di Verona	1,033,768.05	23,214,138.22	24,247,906.27
IRCCS Istituto Oncologico Veneto		5,651,540.00	5,651,540.00
Total	**342,889,418.29**	**357,493,826.80**	700,383,245.09

Table 5 (distribution of funds from region to local health authorities in Emilia Romagna)

	Component 1	Component 2	**Total**
ASP Catanzaro	32,366,903.50	32,064,459.30	64,431,362.80
ASP Cosenza	57,636,645.00	38,445,469.30	96,082,114.30
Asp Crotone	12,125,642.35	9,574,511.10	21,700,153.45
Asp Reggio Calabria	40,797,946.00	22,796,648.90	63,594,594.90
Asp Vibo Valentia	14,005,690.35	26,465,445.80	40,471,136.15
Ao Catanzaro		12,736,596.63	12,736,596.63
AOU Mater Domini Catanzaro		2,302,839.30	2,302,839.30
AO Cosenza		33,231,833.60	33,231,833.60
GOM Reggio Calabria		14,319,727.50	14,319,727.50
Regione Calabria		1,140,320.46	1,140,320.46
Total	**156,932,827.20**	**193,077,851.89**	350,010,679.09

Table 6 (distribution of funds from region to local health authorities in Calabria)

What we can note from table 6 is that there are funds who are not distributed to local authorities and are still managed by the Region itself. According to the regional DCA we can see how these funds are the ones related to the implementation of the new 4 flows of information: the Region has not figured it out yet how to distribute these funds.

Conclusion

The Italian PNRR allows the country to take a step forward to the stabilization of the economy and to an improvement and renovation of the national healthcare system. New services like CdC, OdC and COT are instruments to strengthen the local healthcare in a significant way, particularly if supported by the other planned investments regarding digitalization and the renewal of the technological park.

From the analysis is clear how the role of regions and local health authorities is incredibly important: the freedom given to them by the national guidelines in the strategic planning is what makes the challenge at the same time challenging but also achievable. This high freedom of action is an opportunity to plan the interventions locally, keeping in mind the difference between different areas in terms of the nature of the territory, the needs of the population and the development of the local healthcare system. It is also crucial to understand how these investments have to be seen as an occasion not to only spend money in order to improve in some not so efficient services, but also to shift the way healthcare is perceived by the population and the procedures which make old and new services available to the citizens.

Ultimately, we can state that only truly understanding the real needs of the SSN at a local level and applying a monitoring system capable to inspire positive change it will be possible to reach the planned targets and improve the national healthcare assistance both locally and nationally.

Bibliography

Bobini M., Cinelli G., Del Vecchio M., Longo F., Meda F., Oprea N., Tozzi V., Zazzera A. (2022), "Il PNRR e i sistemi sanitari regionali: modelli di governance e processi di change management", Cergas OASI Report 2022, Chapter 8, pp 349-379, Milano, Egea

Dalponte F., Ferrara L., Zazzera A.,Tozzi V.D. (2022), "COT tra indicazioni nazionali e declinazioni territoriali", Cergas OASI Report 2022, Chapter 11, 433-464, Milano, Egea

Del Vecchio M, Giudice L., Preti L.M., Rappini V. (2022), "Le Case della Comunità tra disegno e sfide dell'implementazione", Cergas OASI Report 2022, Chapter 10, pp 407-432, Milano, Egea

European Commission, Directorate-General for Budget, EU budget policy brief : the EU as an issuer : the NextGenerationEU transformation. #3, July 2022, Publications Office of the European Union, 2022, https://data.europa.eu/doi/10.2761/111076

Fattore G., Meda F., Meregaglia M. (2021) "Gli ospedali di comunità in Italia: passato, presente e futuro", Cergas OASI Report 2021, Chapter 14, pp 563-601, Milano, Egea

Fattore G., Meda F., Meregaglia M. (2022), "Gli Ospedali di Comunità: quali prospettive alla luce del PNRR?", Cergas OASI Report 2022, Chapter 12, 465-517, Milano, Egea

Ferrara L., Morando V., Tozzi V.D. (2017), «Configurazioni aziendali e modelli di transitional care: la gestione della continuità ospedale territorio», in Cergas (a cura di) Rapporto OASI 2017, Capitolo 12, pp 425- 455, Milano, Egea.

Ferrara L., Tozzi V.D., Zazzera A. (2021), "Il management della transizione: COT e non solo COT", Cergas OASI Report 2021, Chapter 12, pp 489-517, Milano, Egea

Giudice L., Mallarini E., Preti L.M., Rappini V. (2021), "Case della salute: evoluzione delle configurazioni tra fisico, digitale

e ruolo nella rete", Cergas OASI Report 2021, Chapter 13, pp 519-561, Milano, Egea

Gugiatti A., Lecci F, Rotolo A. (2022), "Le metriche di monitoraggio e valutazione dell'implementazione del PNRR", Cergas OASI Report 2022, Chapter 9, pp 381-406, Milano, Egea

"Italia Domani, il Piano Nazionale di Ripresa e Resilienza" https://www.italiadomani.gov.it/it/home.html

Longo F., Barsanti S. (2021), "Community building: logiche e strumenti di management: comunità, reti sociali e salute" Milano, Egea.

Longo F., Boscolo P.R., Bongiorno Sottoriva C. (2022), "Un framework per la digitalizzazione del territorio", MECOSAN 122/2022, pp 105-122, DOI: 10.3280/mesa2022-122oa14872

Longo F., Zazzera A. (2022), «Dalle Case della Salute a quelle di Comunità: quale vocazione?». from: www.lombardiasociale.it.

Longo, F., Guerra, F., & Zazzera, A. (2023). "La trasformazione dell'assistenza territoriale e gli spazi di autonomia locali: le variabili strategiche." Mecosan - Management Ed Economia Sanitaria - Open Access, (123). https://doi.org/10.3280/mesa2022-123oa15581