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Introduction

The practice of sustainability reporting has increased at high rates among firms and organizations in the last decade. However, in the healthcare sectors most organizations, especially the public ones, seems not to be particularly interested in the disclosure of sustainability practices, particularly when it comes to revealing their impacts on the economy, communities and environment to their stakeholders. Generally speaking, in the public sector the application of sustainability reporting and the use of recognized standards to report disclosures appear to still be in their infancy in the public sector, especially if compared to the private one.

The literature on sustainability disclosure in the hospital sector is lagging behind too. A number of papers have examined how and why certain hospitals have undertaken sustainability reporting. In these cases, such analysis adopted both theoretical and empirical approaches. Nevertheless, as also pointed out by various of the papers above, more research is required to improve our understanding of why hospitals decide to disclose sustainability information or not.

There are also examples of healthcare companies that have undertaken a path of sustainability reporting, and previously also of social reporting if we look at the Italian experience in the early 2000s. However, these practices remain isolated cases, or brief experiences that were eventually abandoned by the same organizations.

Institutions and bodies responsible for monitoring and evaluating the activity of health organizations generally require the disclosure of non-financial information. It is of note though that no obligation yet exists binding the healthcare organizations to report impacts comprehensively and to adopt defined standards, as opposed to other companies of public interest.

Healthcare organizations account for a significant share of public spending in the European Union, the average of health expenditure of states amounts to around 8% of their GDP. Their core mission is to provide high-quality services and, as a consequence, they owe an implicit duty to communities. In this regard, hospitals have undergone an array of substantial changes and reforms which have increased the demand for greater accountability to stakeholders. In

order to operate they require high resource consuming and energy intensive facilities running night and day seven days a week, having a negative impact on the environment. Therefore healthcare organizations are called upon to contribute to a more sustainable society and socially responsible accounting.

The first part of this work will define the concept of sustainability and sustainability reporting, providing an overview of their evolution in the last decades, alongside with the description of the main standards adopted for disclose impacts. Further, we will analyze the potential downsides of sustainability reporting, particularly considering that, despite the fact that the concept of sustainability and its reporting is nowadays well known, inequalities and climate change are still threatening our communities and our planet.

In the second part, we will explore, with an eye on academic literature, what factors can influence and have an impact on the quality and significance on healthcare organizations' sustainability reporting. Exploring what motives can drives such organizations and its leaders to disclose impacts, as well as the actual and potential effect on the organizational sphere of implementing sustainability reporting. Moreover, this section will illustrate some experiences and reports from organizations and institutions that could be taken as a reference in the process of approaching sustainability reporting in healthcare settings.

The last chapter will instead present the results of a research project conducted inside an Italian University Hospital, Azienda Ospedale Università di Padova (AOUP). After dealing briefly with the description of the Italian health system and giving a context of AOUP, will be described the approach adopted to come to the definition of a proposal for a sustainability report for AOUP. In the end will be outlined a number of preliminary indicators, grouped in general information, social, economic and environmental dimensions, that could be the starting point for an healthcare organization when deciding to adopt sustainability reporting practices.

Sustainability and reporting

1.1 Institutional pressures, evolution of sustainable development

Sustainable development was defined for the first time in 1987 in “Our Common Future”, also known as the Brundtland Report, as “.. development that meets the needs of the present without compromising the ability of future generations to meet their own needs” one of the key concepts it contains is the idea of “limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs” meaning that no more resources must be used than the ones that can be produced. This report resulted from the work of the World Commission on Environment and Development (WCED), an independent commission of the United Nations called by the General Assembly to propose “a global agenda for change”. More broadly: “to propose long-term environmental strategies for achieving sustainable development by the year 2000 and beyond; to recommend ways concern for the environment may be translated into greater cooperation among all the countries and lead to the achievement of common and mutually supportive objectives that take account of the interrelationships between people, resources, environment, and development; to consider ways and means by which the international community can deal more effectively with environment concerns; and to help define shared perceptions of long-term environmental issues and the appropriate efforts needed to deal successfully with the problems of protecting and enhancing the environment, a long term agenda for action during the coming decades, and aspirational goals for the world community.”

The line traced by this report marked a series of initiatives made by countries and the UN that shaped the global political context.

In June 1992, at the Earth Summit in Rio de Janeiro, Brazil, more than 178 countries adopted Agenda 21, a comprehensive plan of action to build a global partnership for sustainable development to improve human lives and protect the environment. The summit brought the widespread acceptance of politicians, NGOs and business leaders that none of economic growth, social equity and concern for the carrying capacity of natural systems sustainability can be solved without also solving the other two (Keating M. 1993. The Earth Summit's Agenda for Change Centre for Our Common Future: Geneva).

The Millennium Declaration at the Millennium Summit in September 2000 leading to the elaboration of eight Millennium Development Goals (MDGs) to reduce extreme poverty by 2015.

The Johannesburg Declaration on Sustainable Development and the Plan of Implementation, adopted at the World Summit on Sustainable Development in South Africa in 2002, reaffirmed the global community's commitments to poverty eradication and the environment, and built on Agenda 21 and the Millennium Declaration by including more emphasis on multilateral partnerships.

At the United Nations Conference on Sustainable Development (Rio+20) in Rio de Janeiro, Brazil, in June 2012, Member States adopted the outcome document "The Future We Want" in which they decided, inter alia, to launch a process to develop a set of goals to build upon the MDGs and to establish the UN High-level Political Forum on Sustainable Development. In 2013, the General Assembly set up a 30 member Open Working Group to develop a proposal on such goals. In January 2015, the General Assembly began the negotiation process on the post 2015 development agenda.

From the global standpoint, 2015 was a landmark year for multilateralism and international policy, shaping a major contribution to the path to sustainable development with the adoption of the "2030 Agenda for Sustainable development" and the "Paris Agreement on climate change".

With the "2030 Agenda" all 193 Member States agreed to a comprehensive set of 17 Sustainable Development Goals (SDGs) and 169 targets; it was the result of a large consultation between countries and companies participating in the Global Compact in an effort to end extreme poverty, fight inequality and injustice, and solve climate change challenges by 2030. These goals represent the actual point of reference for sustainable development and are an urgent call for action by all countries, developed and developing, in a global partnership. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth, all while tackling climate change and working to preserve our oceans and forests. The SDGs are inclusive, far-reaching goals, adaptable to each national context and strongly interconnected. They cover topics ranging from basic livelihoods, such as the fight against poverty and hunger, to more complex areas such as responsible consumption and production, decent economic growth and climate action. The annual High-level Political Forum on Sustainable Development serves as the central UN platform for the follow-up and review of the SDGs.



Figure 1: The UN's Sustainable Development Goals

In the final resolution submitted, members of the Summit acknowledged that the United Nations Framework Convention on Climate Change (UNFCCC) is the primary international, intergovernmental forum for negotiating the global response to climate change. Its annual meeting, held in Paris in December (21st Conference of the Parties, or “COP 21”, to the UNFCCC), came up with a legally binding international treaty on climate change. Its goal is to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels. To achieve this long-term temperature goal, countries aim to reach global peaking of greenhouse gas emissions as soon as possible to achieve a climate neutral world by mid-century. Additionally, the agreement aims to increase the ability of countries to deal with the impacts of climate change, and at making finance flows consistent with a low GHG emissions and climate-resilient pathway. The agreement reaffirms that developed countries should take the lead in providing financial assistance to countries that are less endowed and more vulnerable, and, for the first time, also encouraging voluntary contributions by other Parties. Climate finance is needed for mitigation, because large-scale investments are required to significantly reduce emissions. Climate finance is equally important for adaptation, as significant financial resources are needed to adapt to the adverse effects and reduce the impacts of a changing climate. The Paris Agreement is a landmark in the multilateral climate change process because, for the first time, a binding agreement brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects, also overcoming the traditional distinction between developing and developed countries presented in the Kyoto protocol.

The subscribed goals (Nationally Determined Contributions, NDCs) are communicated by countries starting from 2020, together with the actions they will take to reduce their Greenhouse Gas emissions in order to reach the goals of the Paris Agreement. In order to periodically update the NDCs, a periodic verification mechanism has been envisaged, the Global Stocktake, i.e. an exercise to evaluate the collective effectiveness of the NDCs with respect to the achievement of long-term objectives on mitigation, adaptability, means of implementation and support. The purpose of this exercise is to assess collective progress in an incremental perspective to achieve global net zero emissions by 2050, in line with the recommendations of the 2018 Intergovernmental Panel on Climate Change (IPCC) Report. There is also a significant correlation between the climate action promoted by the Paris Agreement and the 2030 Agenda. National plans and discussions on projects financed by emissions trading mechanisms are, in fact, connected to the SDGs, as there is a strong call to respect for human rights and to sustainable development in the modalities of implementation of the agreement.

So far in the last two decades the term sustainability has been the trending topic of most political agendas of major world's leaders, top tier managers of major corporations and investment funds, of renowned think tanks, conferences, forums and meetings. In the literature, it is generally used to express development in a sustainable manner (Marsden 2000; Hart and Milstein 2003) therefore, sustainability and sustainable development terms are mostly used as synonyms.

One of the most prominent initiatives at the corporate level is the UN Global Compact, a voluntary initiative based on CEO commitments to implement universal sustainability principles and to take steps to support UN goals. It's the world's largest corporate sustainability initiative with more than 12,000 companies based in over 160 countries, both developed and developing, representing nearly every sector and size. A call to companies to align strategies and operations with universal principles on human rights, labor, environment and anti-corruption, and take action that advance societal goals. The Global Compact supports companies to do business responsibly by aligning their strategies and operations with ten principles on human rights, labor, environment and anti-corruption; and take strategic actions to advance broader societal goals, such as the UN Sustainable Development Goals, with an emphasis on collaboration and innovation. These Ten Principles, covering human rights, labor rights, the environment and anti-corruption,

are intrinsic for the sustainability of business, people and the planet. They offer companies of all sizes a blueprint for contributing towards achievement of the 2030 Agenda for Sustainable Development and the Paris Agreement.

In Italy, with a project launched in 2010, Istat (Italian national Institute for Statistics), together with representatives of the third sector and civil society, has developed a multidimensional approach to measure “equitable and sustainable well-being” (Bes), in order to complement the indicators related to production and economic activity with measures of the key dimensions of well-being, together with measures of inequality and sustainability. 12 domains were identified to describe well-being in Italy. To this end, the traditional economic indicators, GDP first of all, have been integrated with measures of the quality of people’s life and of the environment. The detailed analysis of indicators are published annually in the Bes Report since 2013, to raise awareness of the Country’s strengths and difficulties. To improve the quality of life of citizens the concept of well-being should be considered as starting point for public policies and individual choices. In 2016, the “Equitable and sustainable well-being” has become part of the Italian economic planning, as the annual Economic and Financial Document (Def) has to include an analysis of recent trends for selected indicators and an impact assessment of proposed policies. Every year in February a monitoring report is to be presented to the Parliament.

Since 2016, well-being indicators and welfare analyzes have been presented with indicators for monitoring the objectives of the 2030 Agenda for Sustainable Development. According to Istat, the two sets of indicators are only partially overlapping, but certainly complementary.

At the European level it also needs to be mentioned the Next Generation EU (NGEU) or European Union Recovery Instrument; a €750 billion recovery plan issued after the COVID pandemic in 2020 that, besides the objective of repairing from the economic and social damages of the pandemic, aims to:

- assist the green transition;
- smart, sustainable, and inclusive growth and jobs;
- social and territorial cohesion;
- health and resilience;
- policies for the next generation, including enhancing education and skills.

Looking at this objectives is clear how much the EU polices are committed to the path towards sustainable development, as well as the Italian policies. The National Recovery and Resilience

Plan (NRRP) issued by the Italian government as part of the NGEU, tackles a number of weaknesses that have been weighing down on Italy's economy and society, among the others the divides between the country's geographical areas, gender inequality, and part of the plan's resources will go towards driving a comprehensive ecological transition.

1.1.1 Sustainable development and healthcare

For the purpose of this thesis, it is useful to briefly describe health and healthcare sector's contribution to sustainable development.

The SDG 3 aspires to “ensure healthy life and well-being for all at all ages”, including a bold commitment to end the epidemics of AIDS, tuberculosis, malaria and other communicable diseases by 2030. It also aims to achieve universal health coverage, and provide access to safe and effective medicines and vaccines for all.

Since 2016 the World Health Organization (WHO) monitors in its annual reports progress towards the main health and health-related SDGs and associated targets, highlighting that SDGs are powerful mechanisms to improve health and to reduce health inequities and the centrality of health to achieve sustainable development. In fact SDG3 underpins many of the other goals: for the 27 SDG3's indicators there are 32 health related indicators across others SDGs that will be boosted by making improvements in health conditions. At the same time achieving SDG3 will depend on progress in others SDGs like poverty reduction, education, nutrition, gender equality, clean water and sanitation, sustainable energy and safer cities. (OECD 2017; WHO 2020; WHO Europe 2019).

For this reason, from the global point of view, the WHO stated that the primary strategic objective is to have reliable health information, essential for meeting the health-related SDGs and measuring progress towards achieving UHC and addressing national health priorities. Health-related SDG target setting will depend on a functioning national health information system for the production, analysis, dissemination and use of accurate and timely health information by decision-makers at different levels of the system. According to the WHO “good health data is at the core for supporting people everywhere” (WHO 2020) and suggests countries to report timely, relevant, accurate, and accessible data; high level data must be broken down into subnational components (e.g. sex, age, district/second administrative level,

level of income) thus to be able to identify and monitor health inequalities and help inform equity-oriented policies, programs and practices that can close existing gaps.

At the European level the WHO promoted the European Health Equity Status Report initiative (HESRi) developed as a mechanism to promote and support policy action and commitment for health equity and well-being in the European Region. It recognizes that Health and health inequities are influenced and shaped by policies outside of what Ministries of Health directly control and such policies include (WHO Regional Office For Europe, 2019):

- Income and social protection.
- Employment and working conditions.
- Good quality early child development programs.
- Whole-school approaches that prioritize emotional well-being as well as equitable educational attainment.
- Minimum income, especially for families to achieve food security.
- Housing interventions to reduce crowding, improving conditions Environment and green spaces, providing equitable access to water and sanitation facilities as well as green spaces and active travel.
- Human rights promotion and protection, including gender equality and minority rights such as; class, ethnicity, disability, sexual orientation, and gender identity.

The targets supporting each SDG make explicit links which expect countries to work across sectors with a “whole of government, whole of society approach” which includes partnerships between public sector and civil society organizations (community groups, NGOs, unions and partnerships between the public sector and social economy). This participatory approach that engages people and communities in policy development and implementation processes is recognized as key in addressing the link between exclusion, powerlessness, and health equity.

Concluding, the WHO with the Health Equity Status Report identifies five policy action areas needed to be able to live a healthy, prosperous life:

- health Services;
- income Security and Social Protection;
- living Conditions;
- social and Human Capital;
- employment and Working Conditions;

and reports 4 “drivers of health equity”, namely the factors fundamental to creating more equitable societies and create and sustain a healthy life for all:

- policy coherence;
- participation;
- empowerment;
- accountability.

1.2 The adoption of sustainability reporting

Together with the evolution of the concept of sustainability, policymakers have started to stress the necessity for businesses to adopt a reporting system that can somehow embody not only financial disclosures but also their impact on society and the environment; i.e. organizations were asked to provide transparency on how contribute or aim to contribute to sustainable development.

In addition to the increasing social pressure from regulators, policy-makers, lawmakers and governments, the rapid and widening uptake of sustainability practices and the associated reporting stems from increasing social pressure from other corporate stakeholders such as consumers, investors, employees, and communities. But it needs also to be mentioned the global environmental megatrends such as climate change and loss of biodiversity and ecosystems that are forcing response from companies to greater disruptions, scarcity, and higher costs (CEOs report that their businesses are already experiencing the damaging effects of climate change and they are ready to take bold action. - Accenture 2020); and rising interest among investors and lenders increasingly concerned about the potential financial impacts from environmental and social risks (Esty Cort 2017).

The world of finance also participates in this process, thanks to the efforts of regulation and direction at the level to guide financing in activities that support sustainable development and through initiatives such as the United Nations’ Principles for Responsible Investment. In 2019, the Business Roundtable called for radical change when it released a new Statement on the Purpose of a Corporation. The organization, representing 200 of the largest U.S. corporations, reworked the definition of corporate purpose, which was traditionally understood to be returning profit to shareholders. The new statement declared that “companies must serve not only their shareholders, but also deliver value to their customers, invest in employees, deal

fairly with suppliers, and support the communities in which they operate”. In line with this cultural shift, large asset owners and managers (e.g., BlackRock’s CEO Larry Fink letter to CEOs) are increasingly committing to investing in more sustainable companies and committing to science based climate targets or to net-zero climate emissions and impact (UN Global Compact and Accenture, 2021).

Commitment to sustainable enterprise is not limited to publicly traded companies. Many private companies, nongovernmental organizations (NGOs), and public sector entities like universities and municipalities now seek to demonstrate good corporate citizenship via environmental and social disclosures.

According to the last Survey of Sustainability Reporting (KPMG 2020) there is a growing momentum worldwide towards mandatory disclosures of certain types of information, such as climate-related risks and resilience strategies. Scrutiny over sustainability and ESG data from financial stakeholders, especially asset owners and managers, has become markedly more intense and demanding over the last 3 years. Sustainability is a key corporate priority: nearly 9700 companies have committed to the United Nations Global Compact, more than 90% of the world’s largest companies and more than 80% of the “N100 companies” issue sustainability reports (N100 refers to a worldwide sample of 5200 companies. It comprises the top 100 companies by revenue in each of the 52 countries and jurisdictions researched in this study. These N100 statistics provide a broad-based snapshot of sustainability reporting among large and mid-cap firms around the world).

In Europe the regulation that has given high rates of adoption of sustainability disclosures is the EU Non-Financial Reporting Directive. It currently applies to large public-interest companies with more than 500 employees. This covers approximately 11700 large companies and groups across the EU, including: listed companies, banks, insurance companies, other companies designated by national authorities as public-interest entities. The transposed law in Italy has been issued in 2016 and requires public-interest companies to present their own declaration of non-financial nature, in which must be disclosed: environmental and social information relating respect for human rights, the fight against active and passive corruption; presented to the extent necessary for understanding the performance of the company, its results, the impact of its activity including the business model (*modello aziendale*), the policies applied and the related risks and a description of the policies applied in relation to the composition of the administrative, management and control boards of the firm.

1.3 Sustainability reporting foundations

Social accounting (a generic term to include “social and environmental reporting”. “ethical accounting”; “accounting and reporting” and later “sustainability reporting”) is “the universe of all possible accountings; covers an enormous range of issues - not just all of accounting and finance but labor law, ecology, carbon trading, theories of justice etc. The issues we are concerned with are exceptionally complex - the relationships between human culture, information, economics, business, morality, the planet and society.” (Gray 2004). At the root of social accounting, there is the normative framework of social accountability. It is through the preparation of social accounts and the disclosure of social and environmental information that the several stakeholders are potentially able to assess and evaluate the actions and initiatives that are (are not) undertaken by organizations in their operational undertakings (Rusconi Contrafatto 2020).

At first in the beginning, sustainability was seen as a concept that requires companies to be sensitive to the environment and to reduce their negative impacts on the environment. However, over time this approach has been replaced by an approach that advocates the balanced consideration of the economic, environmental, and social objectives of the companies, realizing that economic sustainability alone is no sufficient condition for the overall sustainability of a corporation thus departing from the sustainability concept from orthodox management theories (Gladwin et al., 1995). With the triple bottom line concept introduced by John Elkington in 1997 for the first time, traditional accounting was expanded to include financial performance as well as social and environmental performance. A single-minded focus on economic sustainability can succeed in the short run; however, in the long run sustainability requires all three dimensions to be satisfied simultaneously, the neglect of one of these three areas will endanger all company operations and future (Aras 2020). As the three dimensions of the ‘triple-bottom-line’ concept are interrelated, they may influence each other in multiple ways (Dyllick, Hockerts 2002).

Another key element of sustainability reporting is that it requires the firm to meet the needs of its stakeholders in the future as well as today, integrating the short-term and long-term aspects. Sustainability therefore involves a positive and negative distribution of impacts, which will eliminate the conflict between them and give attention to the future as well as to the present, i.e. “Short-termism is no more acceptable for sustainability” (Aras 2020).

From a corporate perspective the requirement to maintain the capital basis is a common place in the business realm. It is broadly accepted as a precondition of successful and responsible management. However, in order to achieve long-term sustainability, it is important to remember that businesses will have to manage not only economic capital, but also their natural capital and their social capital (Dyllick, Hockerts 2002).

1.4 Effects in adopting sustainable reporting

The adoption of sustainable behavior by companies and their supply chains does not only result in higher costs for management and control but also in an increase in terms of value. The Business and Sustainable Development Commission has actually estimated growth of approximately \$12 trillion and the creation of 380 million jobs thanks to the achievement of the SDGs globally (UN Secretary-General António Guterres' remarks at the International Organization of Employers 2020).

Most of the reasons of the potential benefits of sustainable reporting stem from materiality analysis, which rely on identifying the most significant impacts of the organization on the economy, society and environment. Materiality is key to both reaching conciseness and to identifying the relevant issues in the companies' value creation process. (Fasan, Mio 2017). From the internal point of view it may lead to overcoming fragmentation, the external benefits result from involving different stakeholders in the process of accountability. (Bartocci and Picciaia, 2013). A proper materiality analysis carried out according to the criteria and principles of international standards, that will be exposed in the next paragraph, could be a strategic tool for defining opportunities, risks and trends with a view to sustainability. Furthermore, it is believed that companies capable of carrying out a good materiality analysis are also those capable of informing investors, authorities and other stakeholders on social, environmental and governance issues in the best possible way (KPMG, Sustainable Insight: The essentials of materiality assessment, 2014).

Considering the opinion of stakeholders means opening up to new opportunities that are useful for strengthening the value chain but also for increasing relational capital and the level of trust. The practice of stakeholder engagement has led in many cases to improving the quality of relationships and starting innovative partnerships besides gaining social legitimation. Inside the organizational sphere, the adoption of sustainable reporting could lead to a profound

change in the value and norm system of the organization shaping its corporate culture. (Contrafatto, 2014).

Potential benefits for an organization in adopting sustainability reporting are well acknowledged, and they will be further highlighted both in the next chapter when related to sustainability reporting of healthcare services, and in the next paragraphs that deals with the majors reporting standards. However, it is also important to report some caveats that have arisen in the last years in order to not “Oversell” sustainability reporting. In fact, during this same 20-year period of increased reporting and sustainable investing, carbon emissions have continued to rise, and environmental damage has accelerated. Social inequity, too, is increasing. For example, in the United States the gap between median CEO compensation and median worker pay has widened, even though public companies are now required to disclose that ratio (Pucker 2021). This could be explained as some companies do not really address real sustainability issues, but only create the image of sustainability (Aras and Crowther 2008). According to KPMG's recent report “Time is come”, SDG reporting is mostly unbalanced and often disconnected from business goals. The research suggests that corporate reporting on the SDGs focuses almost exclusively on the positive contributions companies make towards achieving the goals, and lacks transparency of their negative impacts. A significant majority of both N100 companies (86 percent) and G250 Companies (90 percent) report a one-sided view focused only on their positive SDG impacts. Approximately half the companies in both the N100 and G250 samples report performance targets related to the SDGs. For the G250, this represents an improvement since 2017 of 16 percentage points (N100 data for 2017 is not available). Therefore, the language of the statements made by companies tends to be used as a tool of preventing thought about the various alternative realities of organizational reality. Significantly, it creates a security image for investors and thus reduces the cost of capital for such companies (Aras 2020). In applying the TBL, companies often look for areas where the dimensions overlap and are mutually reinforcing. But the TBL does not connect company performance to the economic, environmental, and social resources on which they rely as social and environmental impacts are often assessed relative to the company itself or its peers, rather than against thresholds linked to those resources.

A solution could be adopting an embedded view that makes explicit connections between a company's performance and its place in the wider world (Marcus J, Kurucz E, 2010). This

different representation sees companies as existing within the broader society, which itself exists within the natural environment. This perspective could provide a basis for defining true sustainability that is operating within economic, environmental, and social thresholds.

Thresholds are best set through multistakeholder initiatives (MSIs). Relevant thresholds must be identified and translated to the company level. Setting thresholds, however, involves judgment; it is not a purely scientific exercise. Standard setters provide guidelines to help companies set thresholds themselves, but MSIs based on companies working with government, civil society, and others are best positioned to institutionalize thresholds (Searcy 2019). Part of the literature on sustainable reporting is stating that reporting is not a proxy for progress (Pucker 2021) contesting the assumption by which sustainable company exist only by recognizing environmental and social matters and by involving them in strategic planning. On contrary to these common assumptions, Aras and Crowther (2008) emphasized that sustainable activity is an activity where current decisions do not restrict future options. If this belief of sustainability is accepted, it follows that development is not a necessary or desirable aspect of sustainability.

Also a leading figure in the sustainability landscape like Yvon Chouinard, Patagonia's founder recently lamented, "It's all growth, growth, growth. And that's what's destroying the planet.". Sustainability professionals continue to be critical about overall progress made on sustainable development. The proportion of experts who say progress on sustainable development has been poor has increased from 49 percent to 54 percent over the past two years, specialists of the survey conducted by GLOBEScan2021 continue to agree that society's progress on sustainable development broadly and the SDGs specifically has been inadequate. To focus on reporting may actually be an obstacle to progress, consuming bandwidth, exaggerating gains, and distracting from the very real need for changes in mindsets, regulation, and corporate behavior, as it's extremely difficult to individually change the rules of competition in an industry, since in order to do that more collective actions are required.

Corporate sustainability efforts have not, in the aggregate, made much difference for society or the planet. In addition, the reporting itself suffers from some very real problems:

- Lack of mandates and auditing: most companies have complete discretion over choice of standard-setting body, the minority of them request a validation by a third party. One example from UN Global Compact and Accenture's last 2021 report is that business leaders from high-emitting sectors are not advancing their climate action at the requisite

speed. To date, just 38% of CEOs from the most high-emitting sectors say they have already set, or plan to set, a net-zero emissions target validated by the SBTi within the next year.

- Specious targets: companies set targets on their aspirations without considering science-based target related to planet boundaries. According to a (Bjørn et al., 2016) less than 5% of reporting companies made any mention of the ecological limits constraining economic growth. Auden Schendler, the senior vice president of sustainability for Aspen Skiing Company and author of the book *Getting Green Done*, stated that “Measurement and reporting have become ends to themselves, instead of a means to improve environmental or social outcomes”. Taking as an example the fight for climate change, 57% of CEOs believe they are making sufficient efforts to limit the global rise in temperature to 1.5°C above pre-industrial levels. Yet, only 2% of these CEOs have validated their targets with the Science Based Targets initiative (SBTi) in line with a 1.5°C warming trajectory. (UN Global Compact and Accenture 2021).
- Complexity: like opaque supply chain or tracking scope 3 emissions that comprehend collecting an enormous and disaggregated amount of data like employees' business travel, usage of product sold etc.. (UN Global Compact and Accenture 2021).
- Confusing information from reports because of different use of metrics.
- Inattention to developing countries that in the coming decades will register the greatest increases in consumption, emissions, and social impacts.

High-leverage interventions that would move the needle are largely outside the control of individual corporations. Changes are required in the rules governing companies' behavior, a repricing of resources to address market failures, and a reorientation of how public assets are allocated and how power is distributed. Corporate focus on commitments to science-based goals in line with nature's limits is one promising path to improvement. Together with a “measure less, better” policy. More than the choice of what standard to choose for reporting, or what will be the prevailing one, is key that sustainability reports must be mandated and audited by an empowered referee. Also mobilizing to create larger awareness on social inequalities and climate change could be a useful path. A sustainable system will ultimately require a paradigm shift from the prevailing goal of wealth creation to one of well-being, and a shift in focus away from GDP and toward something akin to the OECD's Better Life Index. (Pucker 2021).

1.5 Standards for sustainability reporting

The past decade has seen a boom in sustainable reporting frameworks and standards available, most of them are backed by credible organizations and with reputable individuals on their Board. Some of the most recognized at the worldwide level are: CDP - Carbon Disclosure Project, CDSB - Climate Disclosure Standards Board, GRI - Global Reporting Initiative, IIRC - International Integrated Reporting Council, SASB - Sustainability Accounting Standards Board, TCFD - Taskforce on Climate Related Disclosures, WEF IBC - World Economic Forum International Business Council (Rogmans, El-Jisr 2022).

For the purpose of this thesis (to entail the whole concept of “sustainable development”) and the necessities of both AOUP and the Italian Health System (that will be described in the next chapters), the framework adopted should have been able to encompass the entire range of UN Sustainable Development Goals and providing disclosures to different ranges of audiences/stakeholders including the regional and national health authorities, patients, employees and civil society.

Besides, it has to be highlighted that sustainability reporting is constantly evolving. In 2020 five major non-financial reporting organizations (GRI, SASB, IIRC, CDSB and CDP) have published a Statement of Intent, committing to work together towards comprehensive corporate reporting. Last year International Integrated Reporting Council (IIRC) and the Sustainability Accounting Standards Board (SASB) officially announced their merger to form the Value Reporting Foundation (VRF). On 21 April 2021, the European Commission adopted a proposal for a Corporate Sustainability Reporting Directive (CSRD), which would amend the existing reporting requirements of the NFRD and envisage the adoption of EU sustainability reporting standards. The draft standards would be developed by the European Financial Reporting Advisory Group (EFRAG) and the first set of standards would be adopted by October 2022.

This is why it is important for organizations to know the context of guidelines, standards and other frameworks that can influence the form and content of their sustainability report (Gianguialano, Solimene 2019).

1.5.1 The Global Reporting Initiative (GRI)

Among the international reporting standards, the most widely adopted by organizations is the Global Reporting Initiative (GRI).

The Standards have been first issued in 2016 and in their recent 2021 version (which will be in effect from January 2023) are designed as a modular set (see annex /figure from “A short intro to gri..”).

- The Universal Standards that apply to all organizations (“GRI 1 Foundations”, “GRI 2 General Disclosures”, “GRI 3: Material Topic”).
- The Sector Standards to develop sector-specific impacts (if applicable, there is still no sector standard for healthcare sector) standards will be developed for 40 sectors and released over time (GRI 11, 12 etc. double digit numbers).
- The Topic Standards contain disclosures for providing information on a broad range of topics related to economic social environmental impact. Examples include Standards on waste, occupational health and safety, and tax. Each Standard incorporates an overview of the topic, disclosures specific to the topic and how an organization manages its associated impacts. An organization selects those Topic Standards that correspond to the material topics it has determined and uses them for reporting (GRI 201, 301 etc. triple digit numbers).

In regard to the reporting process, the GRI describe a series of 4 steps that the organization should undertake in order to determine topics that “represent the organization’s most significant impacts on the economy, environment and people, including impacts on their human rights” i.e: the “material topics”

1. Understand the organization's context.
2. Identify actual and potential impact.
3. Assess the significance of their impacts.
4. Prioritize the most significant impact for reporting thus determining material topics.

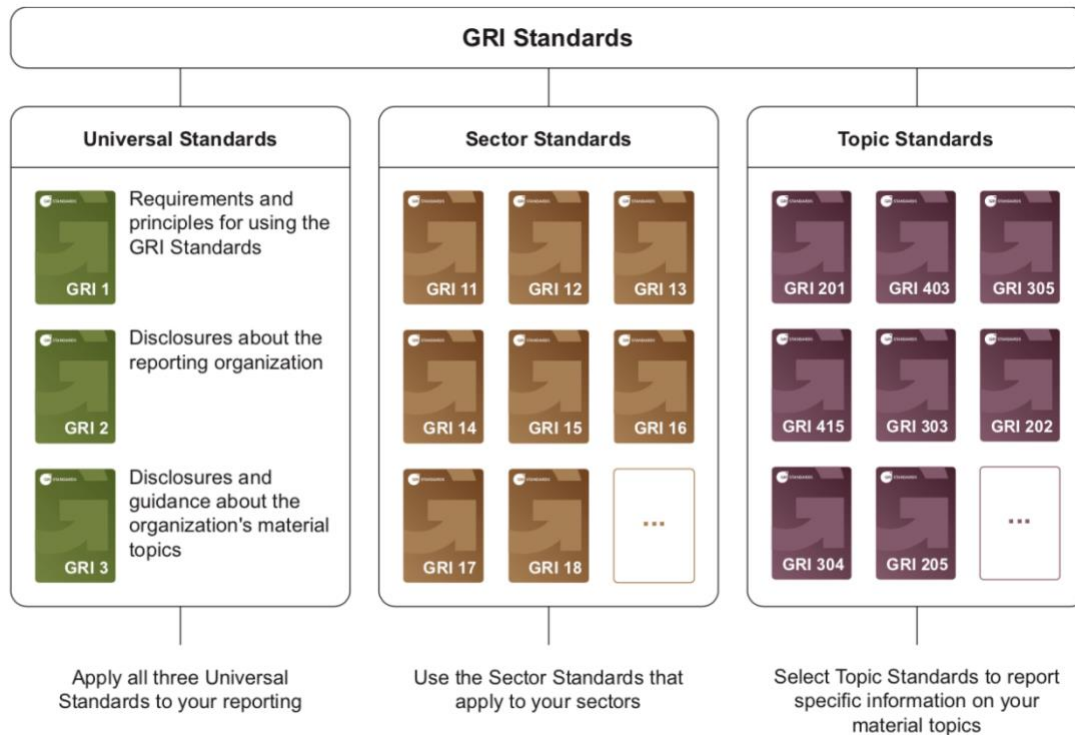


Figure 2: GRI Standards, Universal, Sector and Topic Standards

Usually, a complete materiality analysis ends with the definition of the Materiality Matrix, that is a matrix that summarizes on a graphic level the relationship between the values attributed to the various topics by the company (x axis) and by the stakeholders (y axis). The GRI Standards allow an organization to report information in a way that covers all its most significant impacts on the economy, environment, and people, or to focus only on specific topics, such as climate change or child labor. GRI recommends reporting “in accordance” with the GRI Standards. Under this approach, the organization reports on all its material topics and related impacts and how it manages these topics.

However, if an organization cannot fulfill some of the requirements to report in accordance with the GRI Standards or only wants to report specific information for specific purposes, such as when complying with regulatory requirements can use selected GRI Standards or parts of their content, and report “with reference” to the GRI Standards.

From the organization perspective the GRI framework is characterized by the following relevant aspects:

- It is a standard specific for reporting and is now considered a suitable criteria by auditing firms, also in for the Italian legislation (KPMG 2018).

- It can be adopted by any organization, regardless of size, activity or geographical position.
- Each standard has a similar structure, distinguishing between reporting requirements, Recommendations and Guidance, to facilitate understanding of mandatory and optional information requirements. (Gianguialano, Solimene 2019).
- The possibility to report “with reference” could be useful for an organization that approaches sustainability disclosure for the first time.
- The content of the guidelines is structured in a modular and interconnected system of standards, which make them a more flexible and versatile tool for the different communication needs of organizations.
- The general standards give the organization a practical guide on how to structure its report and which basic principles to follow, including the key principle of materiality. By applying the principles and guidelines it is in fact possible to identify the specific aspects of an organization's activity that have the most significant impacts, positively and negatively, on the business itself and on stakeholders (local communities, employees, the environment, consumers etc.).
- The steps required to determine material topics need to engage with relevant stakeholders and experts, thus enabling both the organization and its stakeholders a deep understanding on the ability of the organization to create value (materiality analysis powerful stakeholder engagement tool).

1.5.2 The Integrated Reporting and IR Framework

In the national and international context, interest in integrated reporting is now increasingly consolidated, although the approaches adopted are still varied and based on experimental paths. As for sustainability reporting, also in this case there is an international body, the International Integrated Reporting Council (IIRC) which has the purpose of defining the methodologies and principles for preparing the integrated report. The IIRC defines integrated reporting as a process based on integrated thinking. The latter is described as the active consideration by an organization of the relationships between its various operating and functional units and the capitals that the organization uses or affects. Integrated thinking leads to integrated decision-making and actions that consider the creation, preservation or erosion of value over the short, medium and long term. The report represents the final stage of this process, it is a concise

communication that illustrates how an organization's strategy, governance, performance and prospects allow to create value in the short, medium and long term.

The <IR> Framework, proposed by the IIRC, is the framework on integrated reporting which today represents the methodological reference for most of the integrated reports published internationally.

The framework is based on the principle according to which the success of an organization depends on various types of "capital", i.e. stock of value that increases, decreases or transforms through the activities and business model of the organization. In the model proposed by the IIRC, the capitals are: financial, productive, intellectual, human, social and relational and natural, and constitute the basic elements of the concept of value and a guideline to ensure that the organization considers all forms of capital it uses or impacts.

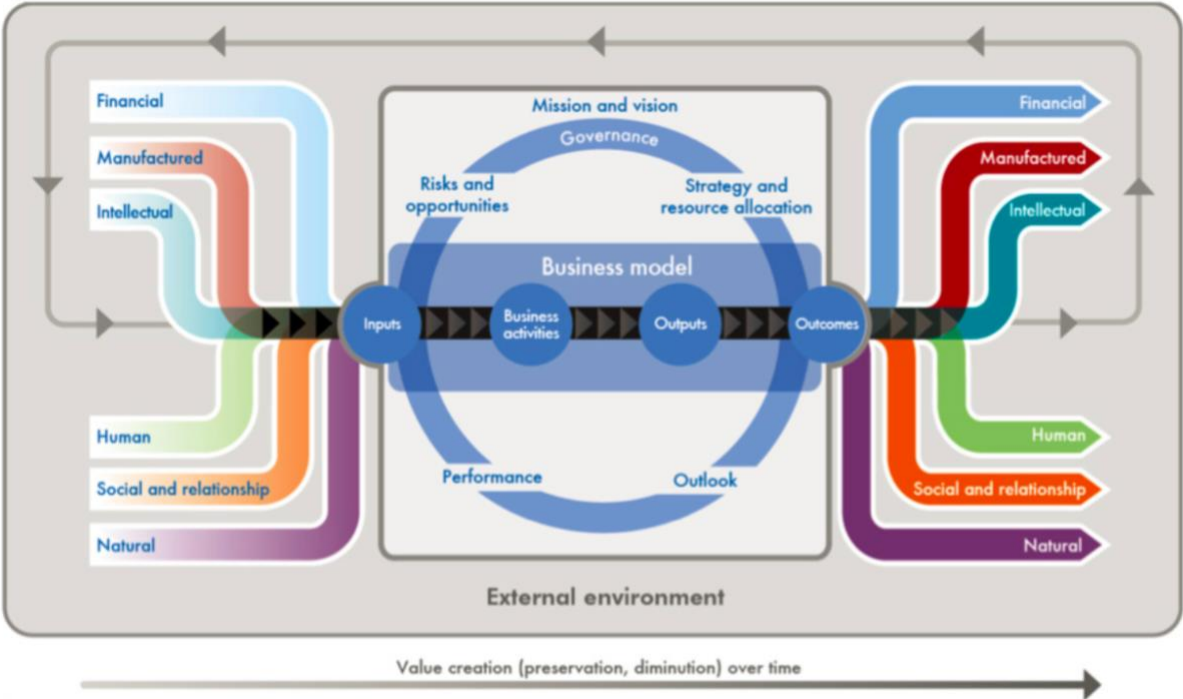


Figure 3: The value creation process (International <IR> Framework)

The <IR> Framework illustrates 7 “Guiding Principles” that inform how disclosures should be prepared and presented:

1. Strategic focus and future orientation
2. Connectivity of information
3. Stakeholder relationships
4. Materiality

5. Conciseness
6. Reliability and completeness
7. Consistency and comparability

And sets content expectations through 8 “Content Elements”:

1. Organizational overview and external environment Section
2. Governance Section 4B
3. Business model Section
4. Risks and opportunities
5. Strategy and resource allocation
6. Performance Section
7. Outlook Section
8. Basis of preparation and presentation.

Integrated reporting allows an organization to:

- improve the quality of the information transmitted to financial capital providers (investors and shareholders);
- promote a more cohesive and efficient approach to corporate reporting, ensuring that it draws on different reporting elements and transmits a wide range of factors that significantly affect the ability of an organization to produce value over time;
- strengthen accountability and responsibility for managing the various forms of capital (financial, productive, intellectual, human, social, relational and natural) and address the understanding of the interdependence between them;
- supporting integrated thinking, decision-making and actions aimed at creating value in the short, medium and long term;
- greater integration of sustainability strategies in the broader corporate strategy.

The preparation of an integrated report involves a process of evolution of the management and reporting mechanisms of the group's performance and requires a high commitment on the part of the whole organization, which can only be achieved through a clear process of organizational change (Gianguialano, Solimene 2019).

Sustainability Reporting in Healthcare Services

2.1 Status of sustainability reporting in healthcare sector

Healthcare organizations account for a significant share of public spending. Over the period between 1995 and 2014, healthcare expenditures within OECD countries have increased by more than 3% on average of gross domestic product measured in euros. Hospitals have also undergone several significant changes, such as the New Public Management (NPM) reforms, which have increased the demand for greater accountability to stakeholders (Andrews et al., 2019).

The Italian context is a typical example of a country with a high level of investment in public services. Particularly, one of the most supported sectors in Italy is represented by the Italian National Healthcare System (SSN, Sistema Sanitario Nazionale). In fact, the health expenditure made by the Italian Government consists of an average expense of 140bn of euro a year (European Commission, 2016), and the entire healthcare system represents about 75 per cent of the total (ISTAT, 2017). These expenses are driven by several factors that define the Italian context such as the provisions of free access for medical services, free drug distribution and the free access to all services.

The implicit responsibility of public organizations is justified by the significant contribution of the public sector in national economies and its purpose is to meet social and environmental needs; anyway the practice of sustainability disclosure is more a prerogative of the private sphere in respect of the public sector.

The literature on sustainability disclosure in public hospitals is quite poor, compared to the ones in organizations of different sectors. Just some papers have examined how and why certain hospitals have tried to undertake some sort of sustainability reporting (Monfardini et al., 2013; Marasca et al., 2020; Andrades et. al., 2021).

Italian healthcare is one of the sectors in which an annual report is integrated with non-financial information. However studies in public sector organizations investigating integrated reporting (IR) practices within public organizations are few and do not lead organizations to a comprehensive and long lasting implementation of a sustainability report (Cavicchi et al, 2019).

Despite in the recent past the Italian Healthcare Sector has experienced the presence of national guidelines provided for healthcare organizations by practitioners (see next paragraph about GBS experience for reference); the integration of this information into the non-financial information produced by Italian public hospitals is difficult because of the absence of specific regulations. To make a comparison, national legislation's requirement to disclose environmental and social impacts currently applies to large "public-interest companies" with more than 500 employees. Such legislation does not apply to Local Health Authorities and Hospitals of the Italian Health System that are much bigger.

Some authors have questioned themselves on such reasons, that is for public organizations not adopting practices of sustainability disclosure. There is a legitimacy gap in the hospital sector because the adoption of sustainability disclosure practices does not match the expectations of different stakeholders (Monfardini et al., 2013). The lack of a generalizable standard, the lack of training among professionals or the lack of involvement of stakeholders could be hindering the legitimacy of the practice of sustainability disclosure (Marasca et al., 2020). In cases when the state gives some sort of partially mandatory requirements to health organizations, the partial mandatory reporting requirements for hospitals could explain why these hospitals have had a poor level of sustainability disclosure. The correct adoption of mandatory disclosure requirements must be accompanied by monitoring and enforcement mechanisms (Kansal et al., 2018; Andrades et al. 2021). Sustainability disclosures may not be high on hospitals' list of priorities because they have to meet many other mandatory accountability requirements and they have a social mandate that implies an implicit social responsibility (Traxler and Greiling, 2019; Marasca et al., 2020). Some entities have experienced scarce push of key stakeholders suggesting that the achievement of legitimacy cannot be taken for granted by the mere adoption of sustainability disclosure practices (Monfardini et al., 2013). The term sustainability is often not well understood and is considered too abstract making difficult the measurement and reporting on hospitals sustainability performance thus contributing to organizational accountability (Burritt and Schaltegger, 2010;

Jones and Mucha, 2014). A study of Spanish hospitals suggested how isolated initiatives of implementation of NPM reforms, while these principles have been implemented on a more structural basis in Anglo-Saxon countries, could have negatively affected the adoption of sustainability disclosures in Spanish hospitals (Ortiz et al., 2018). From a managerial perspective, the provision of mandatory reports about hospital's activity could represent a barrier to the adoption of innovative practices and strategies to solve complex medical cases because of the subsequently negative output to disclose in cases of failure, the accounting of unfavorable non-financial data could represent a negative driver in terms of competition between public hospitals. (Pizzi et al., 2020)

Focusing on the Italian healthcare context, some preliminary work acknowledges the possibility that top managers of healthcare organizations tend to be pressed by politicians to balance cost reduction with quality of services cost containments' philosophy and in this sense prevent from addressing environmental issues (Chiarini et al., 2016). The Italian national health system (SSN) is characterized by some criticalities such as an inconsistent per capita expense, long waiting lists and geographical social inequality in terms of access to the services and lack of transparency (OECD, 2017). This evidence can suggest the public sector's preference to engage with internal stakeholders leading citizens to not perceive the quality of the services and the contribution by the SSN to SDG3 (Pizzi et al. 2020).

It needs to be said that following the recent COVID pandemic the Italian government has issued its National Recovery and Resilience Plan (NRRP) to manage investments for €191,5 billion coming from NGEU, 15 of them dedicated for the healthcare sector. Therefore Italian healthcare organizations are expected to adopt tools to cope with the request of shifting to more sustainable practices, reducing risks and complete the digitalization process.

2.1.2 Social Reporting in Italian Health Sector (GBS)

In the landscape of the Italian Healthcare sector described in the previous paragraph is noteworthy the experience, matured in this first decade, of the "Gruppo per il Bilancio Sociale" (GBS - Group for the Social Report).

Born in 1997 it was structured a year later in the form of a Study Group to establish the principles for drafting the Social Report, with the spontaneous and stable presence of 32 participants representing 13 Italian universities, the professional associations of Chartered

Accountants and Accountants, and some of the main companies' auditors as well as other bodies and experts. For three years it has carried out an intense study and research activity, concluding a first phase of studies with the issuance of the principles for drafting the Social Report in 2001. It has produced, published and disseminated in the national and international community 2 Standard (one on "Principles for drafting the Social Report" and one on "Reporting in the social and public sector") and 12 Research documents, the n.9 "Social reporting of local health authorities" for an adaptation of the public sector to the national health system of the standards of the "Social Report".

The Veneto Region, through the Regional Social Health Agency (ARSS), presented the guidelines for the experimentation of Social Reporting for the Health Authorities of Veneto on the basis of which was initiated a participated process between ARSS, Health and Social Health Authorities, included AOUP.

AOUP organized its work engaging with relevant experts with the joint coordination of the Health Director and the Administrative Director. In his final report after the experimentation AOUP defined the Social Report:

- a process for social reporting
- a tool for accountability
- a tool of internal and external communication
- a management tool
- a tool for empowerment

and was eventually able to issue its Social Report whose indicators could be partially integrated in the framework of the sustainability report of AOUP developed in the next chapter.

2.2 Reasons for healthcare organizations to adopt sustainability reporting

As we have seen also in the previous chapter there is a growing number of researches illustrating why companies disclose their sustainability performance information with their stakeholders. Several of them utilize a "theoretical perspective" that describes motivations that lead companies to disclose their sustainability information even though it is not mandatory. At the

same time, considering the healthcare environment, these analyses can give some reasons on why healthcare organizations should commit to sustainability reporting.

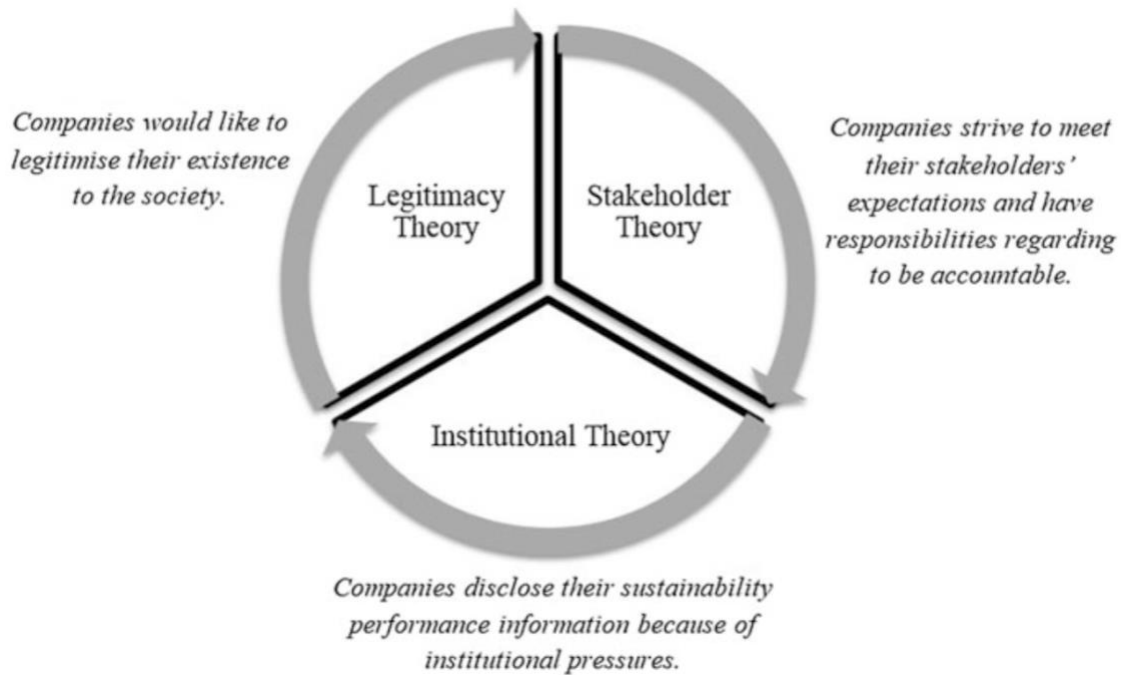


Figure 4: sustainability disclosure: theoretical framework (Aras, 2004)

According to legitimacy theory, companies would like to legitimize their existence to society. Sustainability disclosure is a powerful legitimizing instrument because it recalls the idea of accountability, which is considered the right thing to do (Monfardini et al., 2013). Organizations establish their legitimacy based on society's perception of their contribution to the public good (Bushman & Landsman, 2010). The relationship between organizations and society, then, is viewed as a “social contract” in which their continuing existence relies upon adapting to the social norms, values, and expectations of organizations and their activities (Menicucci & Paolucci, 2018). Many organizations will prioritize their sustainability management activities that increase and secure legitimacy, whereas profit orientation will be emphasized much less (Baldini et al., 2018). In line with legitimacy theory that “social contract” is used for regulating the relationship between a company and society. Considering this contract, the company has to meet some requirements toward society in return for gaining the approval of the society. For instance, to enable the society to assess the company’s sustainability performance, the company would provide information about its sustainability performance to society; otherwise, the society would assume this action as a breach of the “social contract”. “Social contract” in turn led to the development of stakeholder theory (Aras, 2020). Also Pizzi et al. (2020) research suggests how public entities could adopt non-financial reports to increase their degree of

legitimacy to stakeholders. In this sense, the increase of transparency by public entities will improve the stakeholder's awareness of SDGs. Finally the positive effects are not limited to SDGs consciousness but it could be extended to other aspects such as manager's reputation and competition. In fact, the increase of information about non-financial activities represents in healthcare a strategic driver to improve the quality of the services. In this sense, the introduction of common rules about non-financial reporting in the SSN could be a way for policymakers to improve citizens' satisfaction and encourage managers to adopt best practices. In fact, the disclosure of non-financial information impacts positively on several aspects such as a firm's reputation, financial performance and stakeholder engagement (Galbreath, 2006, 2010; Malik, 2015).

Some authors have criticized that legitimacy theory provides a partial explanation of why organizations adopt sustainability disclosure practices (Soobaroyen and Ntim, 2013). Thus, a more sophisticated approach to legitimacy is required to understand the role of sustainability disclosure (Lodhia et al., 2012). Suchman (1995) recognizes 3 ways of acquiring legitimacy. Pragmatic legitimacy is achieved when the organization satisfies the expectations of its most immediate stakeholders (Soobaroyen and Ntim, 2013). Moral legitimacy is achieved when any organization adopts an action that it is seen as the right thing to do (Monfardini et al., 2013). Cognitive legitimacy refers to those actions that are accepted in society and they are commonly represented as taken for granted initiatives (Suchman, 1995). There are two strategies to gain legitimacy from stakeholders through the disclosure of sustainability information (Soobaroyen and Ntim, 2013). First, hospitals could simply use symbolic actions through images, symbols or metaphors to project an appearance consistent with society's expectations (Ashfort and Gibbs, 1990). Thus, sustainability disclosures aimed at symbolically managing their legitimacy. Second, hospitals could adopt substantive practices to introduce real changes in organizational goals, structures or processes to meet the performance expectations of their most influential stakeholders (Soobaroyen and Ntim, 2013). Thus sustainability disclosures could be a response to the demands from key stakeholders that are scrutinizing their activity (Andrades et. al, 2021).

According to stakeholder theory, companies strive to meet their stakeholders' expectations (Aras 2020) and would use the disclosure of sustainability information to satisfy the expectations of its most powerful stakeholders and it would help to manage the relationships with them (Bonollo, 2015). Freeman (1984) defines the concept of stakeholder as "any group or people that may affect the company in achieving its objectives or that may be affected by the

company's achievement." Thus, the stakeholder concept encompasses all groups that affect business activities (Sternberg, 1997). Stakeholder approach is a philosophy that takes care of employees, customers, suppliers, and shareholders and takes their expectations and needs into account. In line with stakeholder theory, a company's stakeholders have rights to the information about the company's sustainability performance. Furthermore, Freeman et al. (2000) argue that stakeholder theory helps position sustainability management in a bigger picture and sustainability enters the debate on "values-based capitalism." Therefore, stakeholder theory provides an important support for business persuasion, which is why companies should adopt a corporate sustainability approach and why companies should disclose their sustainability performance information with their stakeholders. (Aras, 2020). In terms of the rights of stakeholders as mentioned in the stakeholder theory, Gray et al. (1996) have taken account of this from the perspective of accountability. In their accountability model, it is considered that companies have responsibilities to share their activities or inactivity not only because of the demand of stakeholders for information. According to accountability model, regardless of whether society demands or not for accountability information from the company, the company is still bound to disclose this information to society. Therefore, it would be simplistic to assert that the accountability model is based on the concept of social contract. In accordance with accountability model, there are two types of social contract: explicit terms and implicit terms. While the explicit terms are the laws, implicit terms are society's expectations. Thus, companies view corporate reports as a communication tool disclosing their accountability information to society both for explicit and implicit terms (Aras, 2020).

In accordance with institutional theory companies disclose their sustainability performance information because of institutional pressures. Institutional theory explores the external pressures that influence the behavior of companies to adopt certain organizational practices (Hirsch 1975). Basically, this theory investigates the forms of companies' practices and clarifies why companies within a particular field have similarities in practices owing to the institutional pressures. Institutional theory supports legitimacy theory, but while legitimacy theory argues companies' strategies for achieving legitimacy, institutional theory considers companies' practices adopted to achieve it. The main reason why research on corporate sustainability reporting uses institutional theory is that it complements legitimacy and stakeholder theories by ensuring insights for how companies react to institutional pressures. In the meantime another significant reason for adopting institutional theory in corporate sustainability reporting studies. This reason is that the theory integrates organizational practices to the expectations of the

society (Aras, 2020). Institutional theory indicates that organizations are influenced by broader social structures, such as public and private rules, and the presence of nongovernmental and other independent organizations that monitor corporate behaviors affecting a company's activities and mode of operation (Di Maggio & Powell, 1983; Farneti, Guthrie, & Canetto, 2019).

Two drivers, NPM and competition, that can negatively affect the adoption of sustainability disclosures at the same time could be positively correlated with the adoption with sustainable reporting.

The first because there have been different levels of implementation of NPM implementations in Europe due to the varying administrative traditions; that is in a country characterized by a consolidated NPM reform sustainable reporting can enhance its impact on the efficiency, transparency and accountability of hospitals (Andrews et al., 2019; Ortiz et al., 2018).

Regarding competition, a prior study (Leonard et al., 2013) denoted how the competition between hospitals could increase the quality of the services because of the major attention paid by the public managers to the average quality of their services. Moreover, further studies denoted how in a context characterized by a higher level of information, entities with a low level of information disclosed loose patients more than the other (Cutler et al., 2004).

In public sector organizations, the adoption of integrated thinking may lead to internal and external benefits to the organization: internal benefits such as overcoming fragmentation due to compartmentalized services and a silo mentality; and external benefits such as involving different stakeholders in the process of accountability (Bartocci and Picciaia 2013).

It has already been pointed out that climate change is driving a response from companies to greater disruptions, scarcity, and higher costs; and also institutions are starting to pressure organizations on declaring and maintaining their consumption at efficiency levels. Moreover, climate emergency is a health emergency (Costello et al. 2019), it threatens the foundations of good health, with direct and immediate consequences for patients, the public and national health systems. Many Hospitals are energy and resource intensive enterprises that, as they operate today, contribute substantially to climate change while inadvertently contributing to respiratory and other illnesses. Procurement, resource use, transportation and other policies and practices

contribute to the health sector's significant climate footprint. By reducing this footprint and moving toward carbon neutrality, the health sector can demonstrate the path forward in response to climate change, thereby playing a leadership role in advocating for a healthy and sustainable future (WHO and Health Care Without Arm, 2009).

Delivering well-being can also be improved to the stakeholder engagement in the process of reporting. Participation is a “driver of health equity”, one of the factors fundamental to creating more equitable societies and creating and sustaining a healthy life for all . A participatory approach that engages people and communities in policy development and implementation processes is recognized as key and to deliver multiple benefits. There is growing evidence that people's health and well-being is improved when they feel like they have a greater say and are able to influence decisions that affect them. Participatory approaches thus have a key role to play in addressing the link between exclusion, powerlessness, and health equity (WHO Regional Office For Europe 2019, “Evidence and resources to act on health inequities, social determinants and meet the SDGs”).

For public sector organizations such as healthcare organizations, value creation consists of “public value” creation, where public value is discussed as ecological, political, economic, social, and cultural value and refers to the possibility of enabling stakeholders to be active participants in the co-production of services as well as to contribute to their own welfare (Katsikas et al. 2017; Benington 2009). Bartocci and Picciaia (2013, p. 198) stated that “public value is the final result of several interconnected factors in which social environment, strategic choices and structures all play a role”; “thus, IR represents a suitable tool to allow these interconnections to emerge” (Katsikas et al. 2017).

What constitutes materiality is relevant for investors (Khan et al. 2016) and for stakeholders' decision making and needs to be clarified especially in the public healthcare sector, where the institutional shareholders are the main recipients of the management commentary as they represent local communities (Simnett and Huggins 2015). This is particularly true in public sector organizations where information that is not strictly financial can assume major relevance for stakeholders and may deserve to be included in the report (Bartocci and Picciaia 2013).

Pirozzi and Friulano (2016) and C. Cavicchi, E. Vagnoni (2017), stated that especially in nonprofit organizations, such as healthcare organizations, the Intellectual Capital (composed by human, relational, structural capital) has been claimed to help these entities in both achieving

financial sustainability in front of diminishing public funding, and complying with their social mission, in particular nurturing the relations with stakeholders that count on healthcare professionals' competences. Since sustainable reporting is a tool to foster corporate culture and create a better work environment, it is possible to create a positive feedback loop by adopting principles of sustainability and investing in IC.

2.3 Case studies

2.3.1 UK's National Health Service approach to net zero emission

The UK's National Health Service (NHS) is a publicly funded health system in the world, that delivers 17 million inpatient admissions from more than 200 hospital trusts and more than 270 million primary care appointments from nearly 7000 general practices.

To commit with the Climate Change Act issued by the UK government, the NHS created in 2008 the Sustainable Development Unit. The first assessment of the NHS's carbon footprint was concluded that year and regularly updated and improved, constituting the longest-running effort to quantify healthcare-related greenhouse gas emissions in the world. These assessments are the only national-level analyses carried out by a public agency with institutional support, rather than by independent researchers.

In January 2020 the NHS launched a campaign to mobilize its staff and set an ambitious, evidence-based route map and date for the NHS to reach net zero. With a report issued in late 2020, the NHS set out the initial results of this work: reaching net zero emissions for the care the NHS provides (the NHS Carbon Footprint) by 2040, and zero emissions across the entire scope of NHS emissions (the NHS Carbon Footprint Plus) by 2045. These dates, and the activities that will help deliver them, have been advised by NHS staff, an international call for evidence and the NHS Net Zero Expert Panel. (NHS England and NHS Improvement, 2020; Tennison et al., 2021).

This report presents several examples that could be taken as reference for the implementation of a sustainability report; both for the early steps this works recognizes to be taken and for the analytical approach and the methodology chosen to calculate the emissions. The latter can be useful to guide efforts in other countries as they monitor their own health-care emissions.

It also underscores the importance of a comprehensive and broad scope approach for tracking the full impact of health-care provision and the need for investing in bottom-up data collection through robust and validated information systems to increase the accuracy and resolution of emissions accounting and inform focused interventions (Tennison et al., 2021).

Furthermore, it needs to be emphasized the broad and participatory process – which involved more than 1 million people - that led to the drafting of the report and the acknowledgment that to meet the commitment it will be necessary to mobilize every part of the NHS.

Regarding the analytical approach the reports illustrates 4 steps.

1. **Baseline.** A complete update of the NHS carbon footprint was conducted to provide an estimate of present-day emissions against a 1990 baseline. Regarding the methodology, NHS England’s emissions were calculated using a hybrid accounting method that combines two approaches: location-generic (top-down) results for categories that can only be measured in economic terms or that are too complex to model physically drawing on financial activity data and an environmentally extended input–output model, and product-specific and location-specific (bottom-up) results for emissions categories that can be measured and described physically drawing on a range of inputs from NHS organizations, including local travel, buildings and medicines data. The NHS carbon footprint presented complies with the Greenhouse Gas Protocol, covering Scopes 1, 2, and 3 as well as other personal travel (patient and visitor travel) that would not normally be included in an organization’s footprint. It uses a hybrid modelling approach that takes advantage of the accuracy associated with bottom-up data and the broad coverage of top-down economic input–output modelling. The disaggregation of greenhouse gas emissions by type of clinical activity, as well as per unit of health-care provision, further enables the identification of long-term mitigation interventions.
2. **Projections.** A number of scenarios were then modelled to understand the emissions from the NHS over the long-term, including a ‘do nothing’ scenario and a ‘committed policies’ scenario.
3. **Carbon reductions available across the system.** Available reductions for each of the key sources of carbon were then estimated, which informed the system-wide targets for net zero.

4. Net zero interventions. Drawing on the call for evidence and external technical input, an extended set of interventions and carbon reductions were modelled, to give confidence in the credibility and ambition of the trajectories.

Regarding the early steps that will be taken to decarbonize, the reports illustrates 8 interventions required to meet the target.

1. Care: by developing a framework to evaluate carbon reduction associated with new models of care being considered and implemented as part of the NHS Long Term Plan.
2. Medicines and supply chain: by working with suppliers to ensure that all of them meet or exceed NHS's commitment on net zero emissions before the end of the decade.
3. Transport and travel: by working towards road-testing for zero-emission ambulance by 2022, with a shift to zero emission vehicles by 2032 feasible for the rest of the fleet.
4. Innovation: by ensuring the digital transformation agenda aligns with the ambition to be a net zero health service, and implementing a net zero horizon scanning function to identify future pipeline innovations.
5. Hospitals: by supporting the construction of new 'net zero hospitals' as with a new Net Zero Carbon Hospital Standard.
6. Heating and lighting: by completing a LED lighting replacement program.
7. Adaptation efforts: by building resilience and adaptation into the heart of the net zero agenda, and vice versa, with the third Health and Social Care Sector Climate Change Adaptation Report in the upcoming months.
8. Values and governance: by supporting an update to the NHS Constitution to include the response to climate change, launching a new national program for a greener NHS, and ensuring that every NHS organization has a board-level net zero lead, making it clear that this is a key responsibility for all the staff.

2.3.2 Integrated Reporting experience in an Italian university hospital

One of the fewest examples of adoption of a sustainability report by a public company is the implementation of an Integrated Report by a public university hospital, following an action research approach with a group of researchers from the Department of Management of "Università Politecnica (Polytechnical university) delle Marche" located in Ancona, Italy and their following study (Marasca et al. 2020).

The organization studied is the Azienda Ospedaliero Universitaria (AOU) located in Ancona. In 2018, more than 3500 employees (physicians, nurses, technical, and administrative personnel) contributed to the health care needs of patients with about 45000 admissions to the hospital and 5 million outpatient services. The analysis began in late 2016 and developed for several years, the last report produced with the IR framework in AOU's website dates back to 2018.

The researchers became involved by working directly with managers within AOU's organization, assisting and analyzing the organization; the other team members from the hospital were the director general (DG), the administrative director, the health director, and the head controller (HC). The three directors were the sponsors of the project and they were directly involved in decision making. A key role was played by the HC who allowed the researchers to access organizational resources and people necessary for conducting the study. This approach was used not only to understand the DG's reasons for leading a public hospital to embark on sustainability reporting but also to follow the implementation process and to grasp the company's stakeholders' perception of the final document.

The key stakeholder of the hospital were interviewed once the integrated report was submitted, they were the rector of the university and the Dean of the Faculty of Medicine, a representative of the citizens, a representative of nonprofit organizations and a representative of the region. The motivations which led AOU to consider publishing an integrated report, arose from the need to communicate the key activities and the results. As declared by the DG the aim was to inform citizens with a 360-degree picture of what we do and to inform the Region as the financing institution. That is the 2 intention of the DG is to use this document to legitimize his work and therefore respond to a need for legitimacy theory (Menicucci and Paolucci, 2018; Suchman, 1995) and institutional theory (Baldini et al., 2018).

Looking at the results both from the internal and external stakeholder's point of view, the study acknowledges that there were limitations of usability of the integrated report. Despite the efforts of AOU managers and researchers to create a simple document, very few citizens attended the IR presentation each year; most of the participants were AOU employees and representatives of the region and the local university.

From the internal perspective, as stated by the HC, the biggest current limitation of the IR lied in its lack of usability by the various stakeholders. "It is not a readable document for those who

do not work in the sector or know the analytical aspects. It is still a document addressed to the institutions that do not use it in practice. No one reads it and nobody uses it to make decisions”.

From the external point of view the president of the participation committee of citizens confirmed the HC’s view, stating that only citizens particularly interested in the subject could decide to read the document. Moreover, some of the topics contained in the document are not accessible to persons who are not acquainted, for this reasons the report “should be addressed to a more “normal” audience”.

Likewise the head of the regional health agency admitted that the integrated report is not used to make decisions and to evaluate the work of the organization as the document is not linked to other sources of information that are used by the Region to carry out its functions of programming, control, monitoring, and verification of the activity carried out by the AOU. On the contrary, the citizen, would need more immediate channels, such as newspapers or social media, to receive information on the organization's activities, “they do not accept detailed and scientific documents like this one”.

The results of this study conducted by Marasca et al. (2020) show that the IR ended up being a tool for voluntary institutional reporting and not a tool of social legitimization. The citizens to whom the document is mainly addressed do not read it because it is too difficult.

The stakeholders interviewed suggested some actions in order to fill the gap in legitimacy; from their contributions arises the need to broaden the concept of accountability, not only to the reference entity but to the entire regional health service to respond to citizens' requests for information on how the region responds to their health needs.

This is what suggested the president of the participation committee of citizens, as citizens “needs to know how the treatment of illness is helped by the regional health system”, recognizing a strong demand for increased accountability “that goes from being limited to the walls of the single actor to a more regional vision”.

Another suggestion came from the Rector of the university that aimed on an expansion of information about the impact of the AOU on society in term of attractiveness, of research development and economic value.

2.3.3 Example of good communication from an American leading hospital

An interesting example of how a report could be drafted in order to respond to different stakeholders is the Cleveland Clinic's Sustainability & Global Citizenship Report. It is an excellent example on how to communicate quantitative information about corporate efforts to meet environmental and social goals and ensure ethical governance. For that reason Cleveland Clinic has been honored by Ethisphere as one of the world's most ethical companies; recognized as No. 3 on DiversityInc's list of hospitals and health systems leading the way in diversity and inclusion; and ranked by Practice Greenhealth among the Top 25 hospitals, demonstrating environmental excellence and sustainability leadership.

Surely part of this success is due to the effort and the resource invested by one of the most acknowledged healthcare providers in the world in the materiality assessment. The latter was made possible by engaging on an annual basis, or more frequently, with the several organization's stakeholders.

What is important to highlight is the decision on how to present the organization's impacts to their stakeholders. The report is incorporated in the organization's website, as it was created an *ad hoc* reserved section. The material topic were grouped in 5 macro categories (Caregivers, Governance, Environment, Patients and Community) and divided in subsections in which more details increase in quantity and quantity the lower the level is.

The final report is a rather small, more readable document consisting in a letter from the CEO, the description of the materiality process and the contents indexes of the GRI and SDGs in which every disclosure/target is linked to the webpage of the related topic.

2.3.4 Catalonia Region corporate social responsibility experience

A study on sustainability disclosures of Spanish hospitals performed by Andrades et al. (2021) revealed that Catalan hospitals have disclosed more sustainability information than others. This because the Catalan Institute of Health, the administrative body responsible for managing Catalan hospitals' activity, is strongly committed to the implementation of sustainability practices.

This organization has issued a corporate social responsibility plan for the period 2017–2020, and it is composed of 6 major areas of action: ethical management and good governance, user orientation, professional guidance, environmental commitment, relationship with suppliers and relationship with the community. These 6 areas are divided into 26 objectives and 57 actions. Within the first area, the fourth objective aims to strengthen the Catalan Institute of Health brand as a model of social responsibility. This objective includes implementing two main actions: the adherence to corporate social responsibility initiatives (Global Compact, for example) and the publication of sustainability reports.

The person responsible for elaborating this plan has stated that Catalan's Health Institute social responsibility is a transversal commitment to improving professional quality and human excellence. This plan is aimed at fulfilling a social function that represents the mission of the Institute.

In response to this institutional commitment to the Catalan Health Institute's sustainability, many hospitals in Catalonia have had higher levels of online sustainability disclosure and have embedded sustainability actions in their management. Some of these hospitals have defined sustainability principles in their mission, vision or core values and also their strategic plans contain some commitments towards the efficient and sustainable management of resources.

In combination with the embeddedness of the corporate social responsibility plan in their strategy, other hospitals have published good governance or ethical reports. According to the normative approach of institutional theory, the commitment to sustainability of the Catalan Institute of Health creates an informal norm of a socially desirable behavior to achieve moral legitimacy.

2.3.5 Institutionalization of sustainability reporting in an Italian company

An example of what can produce at the internal level the adoption of sustainability reporting is provided by Contrafatto (2014). The paper has focused on the processes and dynamics through which social and environmental reporting has over time become an institutionalized actuality in an Italian multinational company operating in the energy sector that decided to early adopt these practice. Three main processes and related outcomes has been identified:

1. Construction of the common meaning system around the idea of social and environmental responsibility. Developed in the early to mid 1990s and culminated in

the publication of the first environmental report. A processes of externalization and objectivation were spurred by three committed and motivated organizational representatives who acted as catalysts for change. These employees acted as interpreters of the institutional messages in the external environment and promoters of the processes of comprehension and translation inside the organization. They highlighted that such influential employees, who do not necessarily to be top managers, can also play in the phases prior to the decisions of their superiors. The employees made social and environmental issues understandable, intelligible and, therefore, more acceptable and adoptable in the organizational discourse of the company. As a result of the process of construction of a common meaning system, the concept of social and environmental responsibility and its meaning system became institutionalized.

2. Practicalisation, whereby rules and routines were adopted and diffused inside the organization. Commenced in the mid 1990s immediately after the first environmental report had been published. As a result of the process of practicalisation, increasingly structured rules and routines were progressively adopted in the organization, over time. These routines, which reflected institutional principles, norms and meanings, were enacted and reproduced by the individuals of the organizations in their daily activity. Through a recursive process, these routines/rules became institutionalized in the organization.

Social and environmental reporting acted as a structured formal language which contributed, through the mechanisms of typification/categorization, quantification and communication, in making the notion of social and environmental responsibility more operable, recognizable and manageable.

3. Reinforcement through the adoption of intraorganizational managerial structures and procedures. In the third phase, initiatives were undertaken to support and reinforce the reporting related activities. In the early 2000s, two highly formalized structures were established: the Environment and Safety Department and the Social Responsibility Unit respectively. These structures contributed to sustain the legitimacy and quality of the established practices of social and environmental reporting. In addition, effective and appropriate management and control systems, along with the acquisition of new staff and implementation of ad hoc projects, were also adopted.

2.4 Final recommendations and considerations

In this last paragraph it will be illustrated some conclusions that the literature has taken, highlighting what should be considered when deciding to institutionalize a sustainability report, both from the organizations and the legislator/overarching governing body point of view. Some of these considerations will be the foundations designed to approach the next chapter, in which a proposal for sustainability reporting in an healthcare organization will be elaborated.

There are several principal factors that influence and have an impact on the quality and the significance of social and environmental reporting within an organization (Contrafatto 2014). One of these is the role of organizational key representatives (e.g. CEO and senior executives) and their attitudes; on this point, regarding the Italian health system, preliminary studies denote how public managers are typically oriented to disclose this kind of information in presence of personal purposes (Pizzi et al. 2020).

Other factors are the presence of, and role exerted by, public authorities and regulatory bodies and whether, and the extent to which, reporting activities are undertaken in accordance with specific guidelines (Contrafatto 2014). Introducing structural NPM-like reforms in the management of hospitals could be positively correlated with the ability to embed sustainability disclosures, as such reforms increased the demand for greater accountability to stakeholders (Andrades et al. 2021).

Particularly in the healthcare sector, there is a need to build a standardized instrument to measure sustainability disclosure to ensure the comparability of the information disclosed, as Pucker (2021) reminded, there's a risk of confusing information from reports because of the different use of metrics. Creating a standardized instrument for hospitals would provide an appropriate normative climate to institutionalize the practice of sustainability disclosure (Andrades et al. 2021). On this matter, European Lab Project Task Force at the European Financial Reporting Advisory Group, in the final proposal issued last year for a relevant and dynamic EU sustainability reporting standard-setting suggested fostering sector-specific sustainability reporting. The standard-setter should recognize sector-specific sustainability reporting as a natural and necessary complement to sector-agnostic and entity-specific disclosures in order to promote an appropriate layer of sectoral relevance and comparability. Sector-agnostic sustainability reporting requirements (i.e. reporting requirements that apply to all companies regardless of the sector in which they operate) are pivotal to allow comparability

across sectors. However, sector-agnostic disclosures are not sufficient to address the specific information needs related to the many challenges a reporting entity is confronted with. At the same time, entity-specific disclosures (i.e. disclosures that are made because they are relevant to the particular circumstances of the reporting entity) are not sufficient to complement mandatory sector-agnostic disclosures. Pucker (2021) points out that is more important to “measure less, better” applying rigorous science-based targets in line with resources’ limits. Indeed it’s also important that such disclosure comes with thresholds, as a sustainable company must operate within economic, environmental, and social thresholds.

The degree of stakeholder involvement in the process of accounting and reporting is also an important factor influencing the quality and significance of social and environmental reporting (Contrafatto 2014). That is thresholds are best set trough multistakeholder initiatives (Searcy, 2019), in which internal and external hospital stakeholders communicate the needs of society (Andrades et al. 2021). Cavicchi and Vagnoni (2017) pointed out that the shift to sustainability requires to develop new and adequate governance mechanisms through supra-organizational and participative models of decision making in order to achieve integrated care paths derived from the coordination of professional skills and technologies, and in order to define and assess healthcare responsibilities to ensure the satisfaction of stakeholders’ needs through optimization strategies. According to these views it goes without saying that the standard that ultimately prevails is less important than the rigorousness in setting the targets and the fact that sustainability reporting must be mandated and audited by an empowered referee (Pucker 2021).

Inside an organization what influence the quality and significance of social and environmental reporting the availability is the organization of resources, such as time, finances, know-how, managerial experience and an active strategic attitude without which the decision making about the reporting would be hobbled (Contrafatto 2014). Regarding the availability of know-how, Andrades et al. (2021) recommend sustainability training for employees and managers of hospitals as this help to improve understanding about sustainability and facilitate the institutionalization of sustainability reporting. It is fundamental to the end of shifting to sustainability the development of the three fundamental components of intellectual capital (human, relational and structural capital) to promote open innovation for the sustainability of the Italian public health system. To achieve this, some authors suggested: the participation of citizens in the evaluation and planning of healthcare services, the development of professionals’ competences devoted to innovation,

change in the culture and structure of the organization to overcome the internal efficiency logic and to develop social capital strategies, and cooperation between citizens and public administrations through information and communication technologies and social web (Cavicchi and Vagnoni, 2017). Andrades et. Al (2021) suggested that disseminating the best practices successfully adopted by some hospitals could lead to encourage other hospitals to imitate these practices because their legitimacy is taken for granted as a factor that impacts on sustainability reporting (Contrafatto is 2014) is the extent to which organizational behavior is influenced by the initiatives taken by other companies (i.e. mimetic process).

As we have seen in the first chapter regulation requires increasingly private and public organizations to disclose financial and non-financial information. In the healthcare context, Legislative Decree number 118 (2011) defined the management commentary within an organization's annual report as the accounting instrument to communicate financial and non-financial information concerning an HCO's performance. Thus this document could be considered by an healthcare organization a starting point from which initially disclosing its impact on the economy, society and environment.

Lastly, scoping the landscape of Italian public administration, the Italian universities are the ones that largely adopted and issued sustainability reports. It can be useful to remind what are the objectives of the sustainability report according to Rete delle Università per il Bilancio Sostenibile (Network of the University for Sustainability Report) and Gruppo di Studio per il Bilancio Sociale (Study Group for Social Report), described in a report issued last year.

The Sustainability Report contributes to:

- promote and improve the communication process between universities and stakeholders;
- provide an overall picture of the activities and results achieved by all external and internal bodies connected to the university;
- support decision-making processes at different levels of responsibility through an organic system of indicators;
- make explicit the improvement and innovation objectives that the university is committed to pursue over time.

In particular this means:

- to highlight the consistency between choices and behaviors and the identity and values assumed by the university;
- to measure the performance of the universities both in terms of achieving institutional goals and in terms of allocation of resources between different objectives or between different activities;
- to provide an integrated and coordinated framework of the various communication tools already existing in order to identify improvement actions.

Through the Sustainability Report, universities must account for the results/impacts of all activities carried out directly or indirectly through other public or private organizations (research centers, foundations, institutions, University colleges, etc.) over which it exercises significant influence through conventions, contracts, shareholdings, etc.

Proposal for a Sustainability Report for Azienda Ospedale Università di Padova

3.1 Italian Health System

The Italian National Health Service (SSN) provides healthcare to all Italian citizens without distinction of gender, residence, age, income and work and is based on the following fundamental principles:

- public responsibility for health protection;
- universality and equity of access to health services;
- overall coverage based on the care needs of each person, in accordance with the essential levels of assistance (“LEA – Livelli Essenziali di Assistenza”);
- public financing through general taxation;
- "portability" of rights throughout the national territory and reciprocity of assistance with other regions.

The governance of the health system is mainly exercised by State and the Regions, according to the distribution of competences established by the Italian Constitutional Charter and by the relevant legislation. The constitutional provisions bring about a complex distribution of competences in the field of health. On the one hand, the state legislation is responsible for determining the essential levels of benefits concerning civil and social rights that must be guaranteed throughout the national territory (i.e. determines the LEA); on the other hand, the protection of citizens' health falls within the concurrent competence entrusted to the Regions. Therefore, Regions can legislate in compliance with the fundamental principles set by State legislation as well as the essential levels determined by the latter.

Based on the constitutional "subsidiarity principle", the health service is divided into different levels of responsibility and governance:

- central: the State has the responsibility to ensure all citizens the right to health through a strong system of guarantees, through the essential levels of assistance;

- regional: Regions have direct responsibility in the government and on the expenditure for achieving the health objectives of the country. The Regions have exclusive competence in the regulation and organization of healthcare services and on the financing criteria of local health authorities and hospitals (also in relation to management control and assessment of the quality of health services in compliance of the general principles established by the laws of the State).

The SSN is made up of institutions and bodies at different institutional levels, which contribute to the achievement of the objectives of protecting citizens' health:

- The Ministry of Health which is the central body.
- At national level: Higher Institute of Health (ISS); Experimental Zooprophyllactic Institutes (IIZZSS).
- Bodies and territorial bodies: Regions and Autonomous Provinces; Local Health Authorities; Hospitals; Scientific Hospitalization and Treatment Institutes (IRCCS).

The actual organization of the SSN dates back to 1992 with legislative decree 502 and its subsequent revisions, that sanctioned the decentralization from the State to the Regions in order to guarantee diversity of management solutions in response to the different needs of citizens. Under this system each region obtains funds from the regionally based national health system; the funds are apportioned in relation to the region's economic and health care objectives and to the demographic and epidemiological characteristics of its population. The Region runs the health services through Local Health Authorities and the hospitals in their territory, setting their budgets and determining their strategic goals. It is up to them to:

- elaborate the contents of health policies;
- decide how to allocate health resources;
- define the programming tools;
- establish the operating rules of the regional system and its structure (the number of companies and the institutional purposes assigned to them);
- evaluate the performance.

This financing system from the region to LHA and hospitals, results in a model defined as “quasi-market” (Le Grand and Barlett 1993), where the State/Region maintains control of the functioning of the health sector but delegates the production function of the services to independent organizations, public or private, which compete to “acquire” customers. The financing model at regional level envisages the coexistence of three elements (Russo 2012):

- the division among LHAs of the regional funds by quotas on the basis of the resident population;
- financing of hospitals based on the payment by LHAs or the region of tariffs for the services performed;
- function financing for specific projects or activities.

The tariff system for hospital services is defined according to the Diagnosis Related Group (DRG) mechanism. It constitutes a classification system of hospital admissions that identifies more than 500 final categories of hospitalization. They represent the main financing instrument for hospitals and accredited private structures, and the main modality of regulation among LHAs of the services performed for patients not belonging to the supplying LHA.

3.1.2 Veneto Region health system

The Veneto region healthcare system is divided into levels of increasing intensity and provides that citizens must be guaranteed medium and low complexity care according to a proximity criterion and high complexity treatment according to a centralization criterion. This identification, to be carried out both at company and regional level, ensures, in addition to the maximum possible safety of care, the best possible allocation of professional and instrumental resources.

The centers identified, in addition to enhancing present levels of competence, are identified on the basis of the results of their performance in addressing the LEA and are subject to constant updating and monitoring, in particular with regard to the volumes and results of activities and also regards the role played in training and the contribution to research.

The regional system then clearly outline the role of each place of care and assistance, in addition to the path that the patient undertakes and the methods/criteria for accessing health services to face the complexity of people's needs, the multiplicity of relationships, the territorial specificities and the plurality of skills necessary for appropriate and safe care. It distinguishes:

- hospital structures, developed according an “Hub and Spoke” model, divided into Hubs, hospital facilities (Spoke linked to the reference Hub), network nodes and additional network structures.

- intermediate care health facilities: community hospitals and territorial rehabilitation units, hospices, extra-hospital rehabilitation structures, rehabilitation therapeutic communities and other health facilities characterized by temporary permanence;
- residential and semi-residential social-health structures, which are divided into service centers for the elderly, for the disabled, for addictions, developmental age and mental health.

In recent years in Veneto the hospital has increasingly become the place of care dedicated only to the acute phase of the care path and this was the result of a long process of organizational change, made in consistency with national provisions, witnessed among other things by a rate of hospitalization among the lowest in Italy.

The definition of the places of care for hospital assistance, articulated according to the "Hub and Spoke" network model, is designed in accordance with national provisions which establishes that the role of the hospital and the assigned specialties are identified with reference to the catchment area served. Therefore, the types of hospital structures that characterize the network of regional health centers are:

- 5 Hub hospitals with user base of approximately 1 million inhabitants;
- 2 district importance hospitals identified as Hub;
- Network Hospitals/Spoke, with a user base of about 200,000 inhabitants or in any case fundamental territorial centers where there are evident infrastructural difficulties to reach the reference hub by the population and/or become indispensable during the tourist season;
- Network Node Hospitals and network integration structures.

Among the 5 hubs provided, the University Hospital of Padua (AOUP) and the Integrated University Hospital of Verona are identified as hubs of excellence of regional reference. The Veneto Oncological Institute is identified as a regional reference hub for oncological pathology.

The hubs of excellence are qualified by the presence of high specializations and guarantee the necessary competences for the management of the most complex cases, also thanks to the presence of the most innovative technologies. They are characterized by institutional cooperation with the Universities of Padua and Verona through the integration of assistance, teaching/training and research activities, and by participation in national networks as well as by cooperation with the most prestigious international hospitals.

The Hubs ensure the development of clinical practices and the introduction of innovations derived from research into hospital practice, contributing to the continuous improvement of the levels of care of the regional hospital network. They support the structures of the regional hospital network in the management of complex cases both through models of centralization of patients, even for the acute phase of the care path only then facilitating a management by the nearby hospitals for the management of the post-acute phase, and through the development of consultancy models to be guaranteed also with IT tools. Hub hospitals represent the top of the organizational pyramid for the reference area.

The Spoke Hospitals and Network Nodes assume the function of territorial reference Hospitals for medium and low complexity pathologies.

3.1.2 University hospitals and AOUP

From a business/economic prospective university hospitals are complex organizations (Mintzberg 1983, Foley and Mulhausen 1985) where specialized care, research, and teaching activities are performed. Given the link with a university, these hospitals integrate different activities and employ different actors (academics, physicians, hospital physicians, health professionals, students etc.). Patient care involves both academics and hospital staff, and is directed to the provision of high quality treatments and specialized paths developed through research activity. Due to the specialized activity performed and the integration of teaching and research, the university hospital is a knowledge-based organization whose intellectual capital is one of the main drivers of value creation (Vagnoni and Oppi 2015).

As the hospital and the university are highly interdependent, the university is a relevant shareholder to consider when investigating the kinds of services that are provided by the hospital.

Among the hospitals, the university hospital is publicly financed through the diagnosis-related group system (i.e. activities performed) and not through capital-weighted systems like for the Local Health Authorities. The role of tariffs represents a share of financing for a university hospital while in LHAs hospitals they have the mere purpose of allowing the accounting of activities and better management control, but do not perform any financial function (Russo 2012).

The Region appoints the General Director who is considered responsible for the overall organizational management. The GD is accountable to regional governments for resource consumption and the quality of care delivery and to achieve the organization's strategic plans. The university hospital is also accountable to the LHA and municipalities with regard to the planning and delivery of primary care services to the population of the local territory (Cavicchi et al. 2019).

University Hospital of Padua ("AOUP - Azienda Ospedale Università di Padova") has been acknowledged as a national referral hospital of high specialization and by the regional health and social plan as "Hub" hospital of excellence of regional reference.

AOUP hosts multiple centers and structures of inter-companies, district and regional reference set by regional law. Transplantation activities are carried out for adult and pediatric patients of solid organs (heart, lungs, liver, kidney and pancreas) and, currently only for pediatric patients, also of hematopoietic stem cells, with expected short-term extension also to adult patients. Overall have been recognized 52 specialized regional centers: 24 in the medical area, 14 in the surgical area, 7 in the maternal-infant area, 7 in the diagnosis and care services area.

In the international arena, AOUP has proved to be one of the most important Italian healthcare providers by number of patients with rare diseases taken care. At a European level, in fact, AOUP possess the highest number of center of expertise in this area with 22 out of 24 center recognized.

According to the Memorandum of Understanding between the Veneto Region and the University of Padua concerning the contribution of the School of Medicine and Surgery to the assistance activities of the Regional Health Service, AOUP is reference company for the realization of the institutional collaboration between the Regional Health Service and the University of Padua.

This last information can be found in the "Company Deed" ("Atto Aziendale") whose purpose is expressing the company's missions and vision as well as its principles and the system of values and defining the general principles of organization and the configuration of the organizational structure and governance.

The institutional offices of AOUP are:

- General Director (DG), appointed by the President of the Regional Council in agreement with the Rector of UNIPD, has the legal representation of AOUP and is responsible for overall management of AOUP. He appoints the Health Director and the Administrative Director by which he is assisted in the exercise of his functions.
- Board of Auditors, appointed by the General Director remains in office for three years and is made up of three members, one of which is designated by President of the Regional Council, one from the Minister of Economy and Finance and one from Minister of Health. Is owner of the institutional control function relating to the progress of AOUPs activities and the compliance of the management with the principles of legality and economic properness.
- Directive Office (“Organo di Indirizzo”), composed of five members. Its President is appointed jointly by the Rector of the UNIPD and the President of the Regional Council, UNIPD’s President of the School of Medicine and Surgery is a member by right. The other three members are designated one by the Rector and two by the President of the Regional Council, between personalities of recognized competence in the field of organization and planning of health services; they cannot be employees of AOUP nor be framed in the roles of the UNIPD School of Medicine and Surgery or having held positions in both entities. Formulates proposals to the Region and the UNIPD regarding regional health planning as regards the integration of welfare, educational and training activities and research; proposals regarding the methods for determining the necessary requirements for the inclusion of assistance structures within the training network; expresses assessments and proposals on the vision and strategic management of the General Director.
- Board of Directors (“Collegio di Direzione”), is a collegiate body nominated by the General Director, contributes to the governance of clinical activities and participates in the planning of activities. Is composed by the three directors, the directors of all company’s function, the directors of hospital medical departments, director of Pharmacy, Scientific Director, Directors of the University Departments awaiting the establishment and activation of Integrated teaching-scientific-welfare departments.

The organization of AOUP is divided into:

- Departments
- Complex Operating Units (UOC, “Unità operative Complesse”)

- Simple Departmental Operational Units (UOSD, “Unità Operative Semplici Dipartimentali”)
- Simple Operating Units (UOS, “Unità Operative Semplici”)

AOUP identifies two forms of departmental aggregation:

- Department of Health Area (DIDAS, “Dipartimenti Area Sanitaria”); made up of UOC, UOSD and infra or inter-departmental programs, with university or hospital management.
- Functional departments. Aggregate UOC and UOSD which, even if belonging to different structural departments, contribute to the realization of specific strategic and transversal corporate objectives.

Overall AOUPs structure is composed by:

- 4 DIDAS;
- 18 Functional Departments;
- 9 Inter-companies Functional Departments;
- 101 UOC (10 not in healthcare area);
- 38 UOSD (1 not in healthcare area);
- 81 UOS (14 not in healthcare area).

Regarding AOUPs mission, the Company’s Deed says that AOUP realizes the integration among the assistance, teaching and research activities, contributing to the achievement of welfare objectives of the Regional Health System and favoring the achievement of teaching objectives e research of UNIPD and its School of Medicine and Surgery. AOUP guarantees all welfare activities in a process that inseparably includes teaching and research activities. Inclusion in European networks and participation in international collaborations give AOUP a supranational dimension and recognition.

Values and principles of AOUP are described in nine points:

- Centrality of the person. Intending both patient and caregivers, placing them at the center of AOUPs actions.
- Equity. Equal access to healthcare services and contribute to overcoming ideological, cultural, social and religious barriers, enhancing the integration between institutional activities and social, cultural, religious, voluntary and social assistance.

- Quality of care and of administrative processes, also those services proper of a “Hub” and excellence center of reference for the regional and national health system.
- Teaching and training. For the students of the specialization schools of UNIPD School of Medicine and Surgery and for AOUPs personnel investing in continuous staff training.
- Research and innovation. Ensure the development of research activities in AOUPs units and equivalent opportunities and methods of participation of both university and hospital staff. Promote management innovation through the development of new organizational models.
- Transparency. Ensure transparency both at internal and external level enhancing an appropriate communication system capable of delivering free and correct information to internal staff and structures, patients, citizens and social and political institutions.
- Sustainability. Develop management policies to respond to environmental, economic and organizational sustainability, with particular attention to organizational well-being, respect for principles of equal opportunities and fight against any form of discrimination.

AOUPs performance plan is issued with a three year timeframe and updated every year, it incorporates regional and national indications. Current objectives and strategic evolutions for the next two years include principally the implementation of the National Recovery and Resilience Plan, with the implementation of community hospitals that is intermediate structures between hospital and home, modernization of technological assets and digitalization.

Moreover, AOUPs is dealing with an important shift of facilities: most of its activities will be moved in a new “Hospital Pole” to be built in the east part of Padua while will be carried out a profound restructuring of the existing structures to create a “Mother and Child Hospital” with the construction of a new pediatric building.

Also is being analyzed the possibility to be accredited as a national institute for scientific hospitalization and treatment for mother and child care and the rare diseases, both activities already carried out by AOUP, in order to gain more funds.

It’s also important to briefly describe AOUPs organizational context of the last year, when was performed the analysis of the hospital. The current general director, and consequently the health and administrative director, was nominated in March 2021 with a three year mandate with the

possibility of extension for two more years. A peculiar choice as all the directors were previously holding the same role in another local health authority of the region, not the LHA for Padua area, and their career has not seen them occupying prominent roles in the structures of UNIPD/AOUP or Padua local health authority. At least one, if not all three, of the previous directors of AOUP had strong ties with Padua university and/or AOUP itself.

Regarding the difference in the management of the hospital in respect to previous directors a particular attention was dedicated by current directors, especially the DG, to the implementation of communication and promotion of AOUPs activities to the external stakeholders. In particular, in addition to an implementation of activities on social media, was decided to held a press conference every week at which were present local media and sometimes also regional and national media depending on the topic of the conference.

3.2 Proposal to AOUP and description of the approach

The process thanks to which this work has come to an initial proposal for a sustainability report for AOUP started in November 2021, when an active research project between AOUP and the department of Management of Ca' Foscari University was launched, and concluded in June 2022. The project consisted in an internship to be held in the Management Control Unit of AOUP (UOC Controllo di Gestione) and at the same time a research activity on the current state of sustainability reporting. From AOUP's perspective the initiator of the project was the administrative director (AD), wishing to research and eventually disclose the impact of AOUP not only at the financial level but also from the social and environmental point of view.

In November two meeting were arranged with the AD to clarify the objectives of the research project and define the steps through which come to a final proposal. At the second meeting were also present the director of the Management Control Unit (UOC Controllo di Gestione) and the director of Budget and Accounting Unit (UOC Contabilità e Bilancio). Their presence was required by the AD in order to inform them on the project, asses the eventual presence of similar past experiences, like the social report issued by AOUP 10 years ago, and the current state of knowledge regarding the matter of sustainability and reporting within these two units.

Regarding the objectives, it was made clear by the AD that one of the main goals was the desire of a better understanding of the whole impacts generated by AOUP and for which AOUP is

responsible and then the feasibility to produce a sustainability report where disclose such impacts. The two directors informed that the experience of social reporting had concluded ten years before, during a time when both of them were non at the head of their units, and any lasted knowledge from this past project would be assessed; concerning the current state of knowledge of sustainability reporting in the two units, it was assessed that after that experience of social reporting, no similar project took place, thus there was a lack of skills and competencies regarding such themes.

For this reasons it was decided to start an internship to both recover documents and procedures from the experience of the social report and to better understand the norms and practices inside AOUP's organization, in order to be facilitated in identifying the impacts and then translate them into a report through their disclosure. The choice to collocate the internship in the Management Control Unit was made for its positioning inside the organization, as a structure reporting directly to the General Director, well suited to understand the strategies and necessities of the directors of AOUP and also the norms, routines and practices of the units one level below (Human Resource, Procurement, Budget and Accounting, IT, Health direction and medical departments) with which the unit relates periodically i.e. to deepen knowledge of the organizational context of AOUP.

At the same time a research was performed in order to scope the current state of sustainability and sustainability reporting inside the healthcare organizations in order to identify the reason to adopt a sustainability report and if could be the same for AOUP and its necessities.

This first step was determined to last for 3 months and then the AD would have been informed by the research team with a proposal on what and how to report for the sustainability report of AOUP.

Eventually the meeting for the proposal was scheduled in late March, this because the hospital and the AD himself had to deal with the final tail of the pandemic wave thus slowing down the activities of the project.

In this meeting the AD was informed with the current situation of sustainability reporting both worldwide and at the local level, the institutional pressures, the standards used, how and if the healthcare sector responded, and were described to the AD the potentials benefits for AOUP in adopting the tool of sustainability report as described in the first two chapter of this work:

- better knowledge of processes inside the organization;
- better risk management;
- development of corporate culture;
- stakeholder engagement and better communication towards them;
- gain in legitimacy, from society and institutions.

It was also reported that in these months inside AOUP the research assessed a low level of knowledge by AOUP's personnel towards the theme of sustainability in general and sustainability reporting. However, it was recognized the presence of some practices that could be traced as "sustainable" and thus be included in a sustainability report, such as the social reports submitted ten years before and existing requirements for the accreditation of the hospital services, the quality certifications, the clinical studies, medical waste, clinical and employee risk and the management commentary through which disclose also non-financial information.

At the same time a necessity was highlighted: it was stressed that to submit a comprehensive and institutionalized report, the bottom-up initiative of AOPD would have needed the top-down support of the Veneto Region in order to set common standards and thresholds, thus the report could be correctly evaluated and be meaningful for all the stakeholders.

The AD acknowledged the pressures towards organizations to disclose social and environmental impacts, coming not only from the institutions but also from society as a whole. Moreover, he showed interest for the potential benefits resulting in the adoption of a sustainability report particularly the engagement with the stakeholders, hence the possibility of improving the communication towards them, an important aspect for the current AOPD's leadership.

Regarding the standards the GRI framework resulted to be the best suited for AOUP as the modular system and the broad content index with a various range of topics, even without the presence of a standard for the healthcare sector, seemed to be easily adopted and understood also by the employees at the different level of the organization.

As a result of this meeting, the AD gave mandate to the evaluation and extraction of indicators in order to create a sustainability report for AOUP that could be the starting point for further implementations of the report itself. This because were acknowledged time constraints, as the project was expected to be delivered in June, and also the need of a more thorough engagement

with the stakeholder to deliver an inclusive report and a better definition of material topics, particularly with the Veneto Region for what said above. Thus it was clear that the report would not be considered “complete” in all of this parts but would be used as a tool to start a process of “practicalisation” (Contrafatto, 2014) towards sustainability reporting inside AOUP.

The approach towards the creation of the sustainability report for AOUP can be sum-up considering the following sources of information:

- GRI framework. GRI foundations give the possibility to organizations who chose its standards to report “with reference”, thus not strictly complying with the disclosure of material topics like when an organization decides to report “in accordance”. That said, this work use the content index containing all the topics that GRI consider to be disclosed as a blueprint for the disclosure of AOUP’s standards. The standards in AOUP’s sustainability report will be divided in 4 dimensions (general information, economic, social, environmental).
- AOUP Social Report. The past experience of AOUP in social reporting has somehow performed a sort of rudimental materiality analysis and the identification of major stakeholders. Also some indicators are used in the social dimension of the sustainability report.
- Existing examples of sustainability reports and practices. Case studies reported in the second chapter like Cleveland Clinic Sustainability & Global Citizenship Report and the Integrated Report of “Azienda Ospedaliero Universitaria” of Ancona, are taken as reference to complement the other sources of information.
- Existing requirements for AOUP. As said before in this paragraph, there are several requirements and reports produced inside AOUP’s organization that can be object of interest for a sustainability report. Among the others the managing commentary for the disclosure of financial and non-financial informations, the certifications for quality of services and accreditations of the hospital structures, etc.
- Direction indications. To complete the report with entity-specific indicators this work relates to the indication of the top management, and particularly the AD, to identify those indicator that can be considered material for AOUP activity.

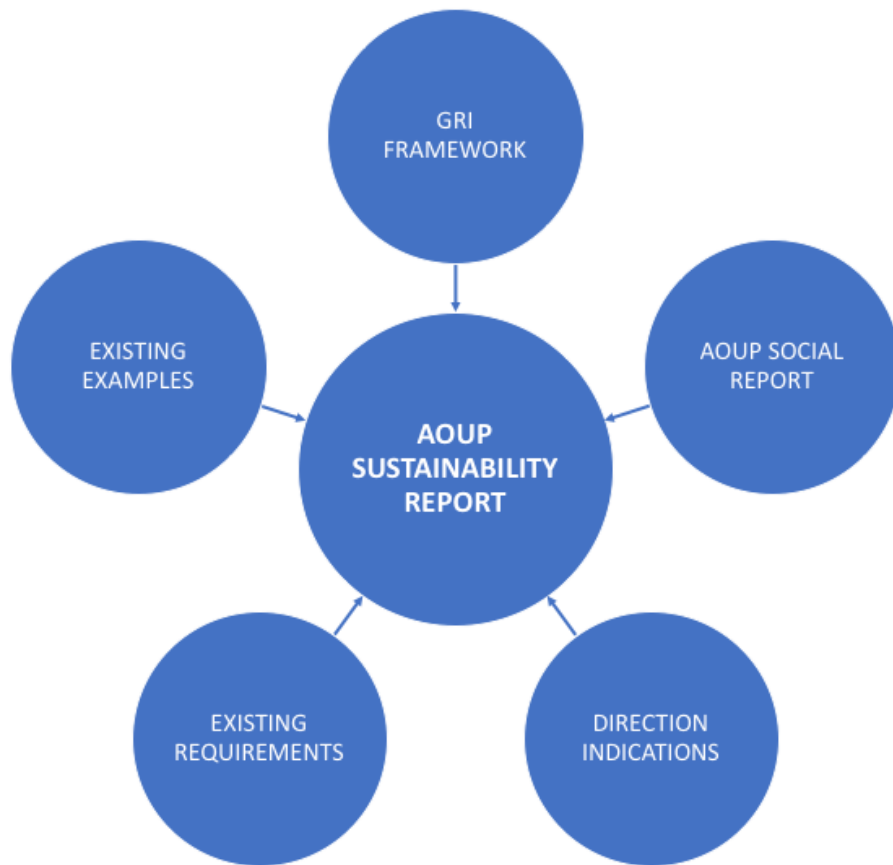


Figure 5: approach to AOUP sustainability report

3.3 General information dimension

This paragraph takes as references the indications provided in GRI2 “General Disclosures” and contains disclosures for organizations to provide information about their reporting practices; activities and workers; governance; strategy, policies, and practices; and stakeholder engagement. Thus to give insight into the profile and scale of the organization and provide a context for understanding their impacts.

To report about its activities AOUP should describe its value chain and the organization’s activities, products, services, and markets served; GRI Disclosure 2-6 “Activities, value chain and other business relationships” specifies that the organization is not required to provide a detailed description of each activity in its value chain. Instead, it can provide a high-level overview of its value chain.

For AOUP, and more broadly by a healthcare organization, that can be translated in a summary of the principal activities carried out by the organization: assistance (scheduled or for emergency hospitalizations; surgery; emergency room; outpatient) and, especially for university hospitals, research and teaching activities. The following tables displays the assistance activities with a time reference.

	2019	2020	2021
Hospitalizations	48.174	50.605	51.362
Day hospitalizations	12.136	10.434	10.415
Total hospitalizations	60.310	61.039	61.777
Value of hospitalizations	€ 273.282.197	€ 286.492.032	€ 298.225.092
Average hospital stay	7,64	8,03	8,00
% urgent admissions	60,52%	62,64%	64,47%
Outpatient services	6.299.531	6.305.207	6.789.443
Value of outpatient services	€ 102.836.941	€ 133.515.115	€ 131.882.735
Surgical acts performed	48.966	56.408	61.028
Emergency room accesses	117.439	107.923	129.153

Table 1: AOUP main activities in the last three years

The table shows the activities that occurred in the last 4 years for AOUP. The increase in activities in 2020 is due to the acquisition of the other city hospital of the city of Padua, belonging to the local health authority (ULSS 6). It can be noted the decrease in the daily hospitalizations because of the COVID pandemic as most of them are elective activities.

In some cases analyzing the provenience of the patients can also help understanding the healthcare context, especially what occurred in the pandemic phase. GRI disclosure 2-6 also requires to specify together with the activities the markets served. Grouping the last year hospitalization by gender and classes of age (Table 2), and by the origin of the patient (Table 3) highlights that AOUP activities cover the entire healthcare sector and serve a “market” that goes beyond the city district.

	2019			2020			2021		
	Women	Men	Total	Women	Men	Total	Women	Men	Total
0-14	5.061	5.975	11.036	4.092	5.321	9.413	4.631	5.363	9.994
15-64	14.652	11.736	26.388	13.676	11.952	25.628	13.698	11.865	25.563
65+	10.225	12.661	22.886	11.958	14.040	25.998	12.140	14.080	26.220
Total	29.938	30.372	60.310	29.726	31.313	61.039	30.469	31.308	61.777

Table 2: AOUP hospitalizations by gender and age class in the last three years

	2019	2020	2021
Padua district	40.600	43.735	44.082
Veneto region	12.795	11.558	11.910
Italy	6.625	5.471	5.494
Foreigners	290	275	291
Total	60.310	61.039	61.777

Table 3: AOUP hospitalizations by provenience of the patient in the last three years

Moreover, confronting the hospitalization with the complexity of the activities carried out (form A, more complex, to D less complex) can also highlight the nature of a national and regional referral hospital whose activities are considered “specialized”. To evidence more this aspect can be considered the activities of similar university hospitals and/or a comparison with the nearby local health authorities.

	Complexity	2019	2020	2021
Padua district	A	3.936	4.649	4.756
	B-C-D	36.664	39.086	39.326
Veneto region	A	1.937	1.969	1.914
	B-C-D	10.858	9.589	9.996
Italy	A	1.367	1.239	1.182
	B-C-D	5.258	4.232	4.312
Foreigners	A	38	41	33
	B-C-D	252	234	258
Total		60.310	61.039	61.777

Table 4: AOUP hospitalization by provenience of patient and complexity of care in the last three years

Another AOUP activity that discloses the market served, is the one in the emergency room of the hospital. It also can be linked with social activities as AOUP ensures a mediation service for people with disabilities or who do not speak Italian or common languages.

	Adult	Pediatric		
Italy	90.630	17.550	Pakistan	448 77
Romania	3.645	1.365	Sry Lanka	336 121
Morocco	1.537	485	Philippines	303 63
Moldova	1.337	474	Ukraine	253 64
Nigeria	1.188	324	Senegal	244 23
Albania	932	337	India	211 68
Tunisia	796	67	Serbia	203 41
China	670	310	Others	3.631 564
Bangladesh	629	227	Total	106.933 22.160

Table 5: AOUP Emergency room admission by provenience of patient (adult and pediatric) in 2021

Further analysis on those who were discharged with a withe code (i.e. patient with a minor ailment or injury and with mild suffering, whose conclusion of the clinical procedure can be delegated to the General Practitioner) could give insights not only on the efficiency of the territorial health services but also on occurring social issues in the district where the emergency room is located, such as students from other regions not engaged with local healthcare services, foreigners temporarily present, etc.

According to its company's deed, AOUP is the organization of reference for the realization of the institutional collaboration between the Regional health service and the University of Padova (UNIPD). It is recognized that the assistance activity is inextricably intertwined with teaching and research, as institutional tasks of UNIPD. Therefore research is considered a strategic activity for AOUP, the Unit for the Clinical Research (UOSD Progetti e Ricerca Clinica) established for regional law, acts as a link between the University and the regional health system, thus favoring a continuous evolution of research and of the paths useful for supporting the "preclinical-clinical experimentation" chain. It has the task of providing adequate organizational and administrative/accounting support to AOUP, acting as a link between the ethical committee, researchers, sponsors, Operational Units involved and administrative structures.

Clinical studies can be divided in two categories, experimental or interventional studies and observational studies. The former are studies on humans (patients or volunteers) aimed at discovering or verifying the effects of a drug or a medical device to ascertain its safety and/or efficacy; these studies are designed to evaluate the most appropriate treatment of future companies with a specific pathological condition. The latter also called non-interventional studies, study the relationship between a characteristic (like a drug treatment or demographic/behavioral factors) and an event (diagnosis/onset of a disease, death) without intervening on the conditions in which the study is conducted; in these studies medicines are prescribed according to the indications of the marketing authorization, there is no need for the Healthcare organization to take out additional insurance policies.

	2018	2019	2020	2021
<i>Interventional with medical device</i>	7	2	1	10
<i>Interventional with drug</i>	66	59	50	72
<i>Interventional without drug and medical device</i>	14	14	13	15
<i>Observational with medical device</i>	6	2	2	6
<i>Observational with drug</i>	24	20	20	16
<i>Observational without drug and medical device</i>	57	48	50	177
<i>Total</i>	174	145	136	296

Table 6: AOUP clinical studies approved in the last 4 years

As shown by the table there is a strong increase in the activity of the unit, as it has been upgraded by AOUP in 2020.

Studies can be divided into those who have a sponsor (“sponsored” or “profit” studies) for which the sponsor manages, finances and takes responsibility for the study, and those which do not have an industrial purpose and are aimed at improving clinical practice.

	2018	2019	2020	2021
<i>Profit</i>	100	75	69	204
<i>Non profit</i>	73	70	67	92
<i>Total</i>	173	145	136	296

Table 7: AOUP profit and non-profit studies approved in the last 4 years

The Ethics Committee issues an opinion for all studies, it can be suspended pending additions and changes by the promoter, following which the committee decides to express itself in favor or not, table 7 shows the opinions of the Ethical Committee regarding studies in the period taken as reference.

	2018	2019	2020	2021
<i>Approved</i>	106	106	114	179
<i>Approved under conditions</i>	61	37	17	16
<i>Acknowledgment</i>	7	2	5	101
<i>Suspended</i>	9	13	7	10
<i>Not approved</i>	6	2	1	1
<i>Total</i>	189	160	144	307

Table 8: activity of the Ethical Committee

The last table on research and clinical experimentation divides the studies that were started in the reference period into those promoted directly by AOUP and those in which it participates in partnership with other entities. Further insights into this aspect can measure the impact of AOUPs research with respect to involvement with other public and private institutions.

	<i>2018</i>	<i>2019</i>	<i>2020</i>	<i>2021</i>
<i>AOUP</i>	51	28	26	137
<i>Others</i>	123	117	110	159
<i>Total</i>	<i>174</i>	<i>145</i>	<i>136</i>	<i>296</i>

Table 9: accepted studies sponsored by AOUP and by external institutions in the last 4 years

Regarding the teaching activities, a sustainability report for a healthcare organization can report the attendance of the trainees (doctors in training) who have transited through the years, as knowledge gained during the daily assistance activities constitutes the teaching basis for students and graduates. This will be displayed later in this paragraph as GRI specifies to report the presence of not employed workers.

For employees GRI Disclosure 2-7 “Employees” request to report the total number of employees (temporary, full-time, part-time) and a breakdown of this total by gender and by region.

	<i>AOUP</i>			<i>UNIPD</i>		
	<i>Women</i>	<i>Men</i>	<i>Total</i>	<i>Women</i>	<i>Men</i>	<i>Total</i>
<i>Doctors (managers)</i>	369	375	744	85	171	256
<i>Non-doctors managers</i>	53	6	59	52	12	64
<i>Nursing staff</i>	2.454	544	2.998	10	1	11
<i>Health technicians</i>	305	142	447	48	16	64
<i>Professional managers</i>	3	3	6	0	0	0
<i>Professional staff</i>	0	1	1	0	0	0
<i>Technical managers</i>	2	2	4	2	3	5
<i>Technical staff</i>	88	150	238	10	29	39
<i>Social health operators</i>	839	207	1.046	0	0	0
<i>Administrative managers</i>	7	3	10	0	0	0
<i>Administrative staff</i>	304	89	393	52	17	69
<i>Total</i>	<i>4.424</i>	<i>1522</i>	<i>5.946</i>	<i>259</i>	<i>249</i>	<i>508</i>

Table 10: AOUP permanent employees at 31/12/2020 (head count)

In a public healthcare organization, employees are divided into healthcare, technical, professional and administrative personnel. Table 10 divides also employee in managers (responsible of UOC or UOS) and staff, doctors of public hospitals are always classified as managers even if they are not responsible for a UOC/UOS. Particular of the university hospitals

and AOUP is the presence of the university personnel whose half of its cost is covered by UNIPD. Data for 2021 are still not provided by the hospital, regarding temporary employees a there are 13 fixed-term contract employees, 26 with project contract and 84 with scholarships contract.

As previously mentioned, another peculiarity of public hospitals, especially the ones linked with universities, is the presence of doctors and other graduates with health related degrees (dentistry, pharmacy) specializing in specific schools of medicine or related high specialization schools. Those residents spend their time in AOUP wards and outpatients clinics for a period from 3 to 5 years, to gain knowledge and experience supported by AOUPs and UNIPDs doctors. From AOUP point of view they are not working employees as they are fully employed by university, and GRI Disclosure 2-8 requires to reports their total number.

	<i>1st</i>	<i>2nd</i>	<i>3rd</i>	<i>4th</i>	<i>5th</i>	<i>Total</i>
<i>DIDAS Surgery</i>	175	162	117	117	100	670
<i>DIDAS Medicine</i>	250	252	177	183	39	902
<i>DIDAS Woman and Child</i>	100	79	66	61	61	367
<i>DIDAS Diagnostic</i>	114	107	75	77	0	372
<i>Pharmacy</i>	1	1	2	2	0	6
<i>Total</i>	<i>640</i>	<i>601</i>	<i>437</i>	<i>440</i>	<i>199</i>	<i>2.318</i>

Table 11: AOUP "doctors in training" divided by school year in 2021

Numbers in the table above show a relevant impact in numerical terms of residents of the different 47 schools of medical specialization and divided in the 4 AOUPs medical departments, thus highlighting the contribution to teaching by AOUP.

Data on residences can be relevant to evaluate how much a health organization in carrying out its activity is on the one hand held back by the presence of an excessive number of trainees in the first years (usually first and second) and on the other hand helped by the presence of doctors almost at the end of their specialization path and therefore able to replace a specialized doctor. Moreover, from both the health and superior education systems perspective this can help evaluate a correct allocation of trainees, in fact, recent trends show an ever-increasing need for doctors to cope with the generational turnover and an ever-increasing demand for healthcare assistance.

Relevant for the city of Padua can be the presence of first-year trainees from outside the province or region as competition to access specialization schools is organized on a national

level. There are 487 trainees at first year of specialization coming from outside the Padova district that are likely to settle their residence in the city, giving an impact from a social and economic point of view.

General information about AOUP organization and governance are required to be disclosed by GRI2. It is specified that if the organization intends to publish a standalone sustainability report, it does not need to repeat information that it has already reported publicly elsewhere, such as on web pages or in its annual report. In such a case, the organization can report a required disclosure by providing a reference in the GRI content index as to where this information can be found (e.g., by providing a link to the web page or citing the page in the annual report).

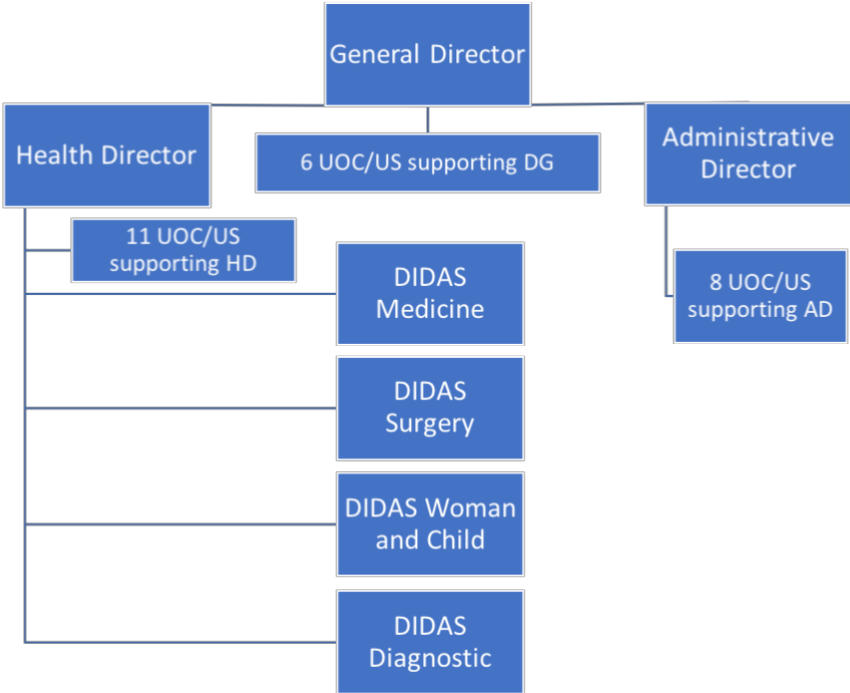


Figure 6: AOUP organization chart

This work has already provided in the first paragraph a brief overview of the organization of AOUP, however, as exposed in other reports that have been consulted could be useful to disclose the number of Departments and Complex Operating Units as well as the company’s organizational structure with the current organizational chart of AOUP.

According to AOUP “Company Deed” and as the organizational chart show, there are 25 Units supporting the activities of the General, the Health and the Administrative Directors. Then in the health area 128 units (91 UOC and 37 UOSD) are divided into 4 Departments: Medicine, Surgery, Women and Child, Diagnostics. Besides the Director General, who is nominated by

the president of Veneto region in consultation with the Rector of UNIPD, the other institutional bodies of AOUP are the Board of Auditors (“Collegio Sindacale”), the Directive Office (“Organo di Indirizzo”) and the Board of Directors (“Collegio di Direzione”).

The disclosures in the section of GRI2 regarding information about the organization’s sustainable development strategy should be implemented once the management decides the methods and procedures for submitting AOUPs sustainability report. In this section are also required information about AOUP overall policies and practices for responsible business conduct. In this work such information is presented in the following paragraphs when addressing the topics.

The last part of disclosures in the general information dimension asks to provide information about the organization’s stakeholder engagement practices, including how it engages in collective bargaining with employees (Disclosure 2-29 “Approach to Stakeholder Engagement” and Disclosure 2-30 “Collective Bargaining Agreements”). AOUP external stakeholders have been identified by the organization from the past experience with social reporting and are:

- Veneto Region. AOUP engages with the region reporting its economic and healthcare performances through several documentation (performance report above all) requested for being part of the regional systems as a referral hospital of national and regional interest.
- Padova University. As research and teaching are inextricably intertwined with the assistance AOUP engages with UNIPD at several levels to achieve these missions (institutional offices like Directive Office, professors employed by AOUP and UNIPD with role of director, joint research projects).
- ULSS 6. It’s the Local Health Authority for Padua district, AOUP is the only hospital located in the city of Padua and engages through 7 intercompany functional departments.
- City of Padua. AOUP facilities are all within Padua municipality, everyday thousands of workers and visitors access in its structures. Moreover, AOUP is planning to expand in the east side of the city.
- Patients and its families. AOUP engage with them through Public Relation Office (“Ufficio Relazioni con il Pubblico”) and the Services Conference (“Conferenza dei Servizi”), convened at least annually by the Director General.

- Suppliers. In charge of the relationship are unit supporting the Administrative Director the Procurement Unit (“UOC Provveditorato Economato e Gestione della Logistica”) and Budgeting and Accounting Unit (“UOC Contabilità e Bilancio”).
- Volunteering associations.
- Funders.

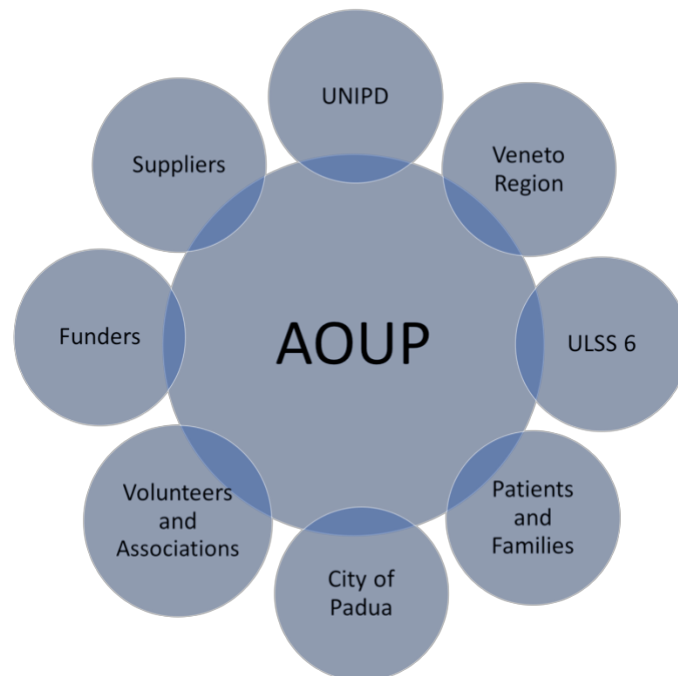


Figure 7: AOUP external stakeholders

As stated in the previous paragraph, deeper analysis of the stakeholders and new practices of engagements will need to be implemented in order to better identify AOUPs material topics and its actual and potential impacts.

Regarding the second disclosure of this section, AOUP employees are all covered by collective bargaining agreements. As stated by the Company’s Deed relations with trade unions represent, for the Company, an indispensable tool for the proper management and enhancement of human resources. The system of trade union relations is structured consistently with the aim of balancing the interest of employees in improving working conditions and professional growth with the need to increase and maintain the effectiveness and efficiency of the services provided.. Relations with trade unions are regulated by national collective labor agreements (CC..NN.LL). which identify the matters subject to negotiation, consultation, consultation and information.

3.4 Economic dimension

According to GRI standard 201 “Economic Performance” an organization is expected to compile information for economic disclosures using figures from its audited financial statements or from its internally-audited management accounts. The reclassification of the income statement according to the “added value” method represents the measure of the residual "wealth" that the institution has managed to create, once all the costs necessary for the production of health services have been covered, and where such value has been distributed. This method responds to GRI Disclosure 201-1 “Direct economic value generated and distributed” and has been used in several sustainability reports of Italian organizations.

	2019	2020	2021
A. PRODUCTION VALUE	605.334.640,39	661.956.904,97	705.508.428,34
<i>Grants related to income (net adjustments)</i>	103.903.675,74	121.440.615,33	134.426.602,07
<i>Use of provisions for unused shares of tied contributions from previous years</i>	1.229.938,74	1.368.222,09	14.334.558,58
<i>Revenues from health services</i>	456.569.636,44	514.058.767,20	532.965.958,59
<i>Sharing of expenses for health services (Ticket)</i>	11.131.663,25	9.141.642,13	9.568.469,96
<i>Other revenues and incomes</i>	32.499.726,22	15.947.658,22	14.212.839,14
B. PRODUCTION COSTS	345.412.117,61	374.823.547,46	418.024.888,57
<i>Purchases of health goods</i>	224.368.310,04	243.096.019,88	256.989.252,01
<i>Purchases of non-health goods</i>	2.850.715,93	3.308.591,51	3.175.744,24
<i>Purchases of health services</i>	46.628.056,58	47.099.018,15	58.046.422,70
<i>Purchases of non-health services</i>	48.790.791,39	56.665.072,88	63.654.685,23
<i>Maintenance and repair</i>	19.794.613,49	23.510.493,47	24.059.886,00
<i>Cost of rents and leases</i>	5.046.055,40	5.496.274,77	5.869.024,69
<i>Other operating expenses</i>	2.087.414,74	3.150.912,40	3.429.210,26
<i>Change in inventories</i>	4.153.779,96	-7.502.835,60	2.800.663,44
VALUE ADDED (A-B)	259.922.462,78	287.133.357,51	287.483.539,77

Table 12: Production and value costs for AOUP in the last three years, values in euros

The table above highlights that the value of the production, generated mainly from revenues for healthcare services and operating grants, covers production costs (mainly Goods, Services and Maintenance) generating value in 2021 for 287,5 million euros. Further analysis on the reclassification of the financial statements of health companies can be useful to highlight how the added value is then distributed to the various stakeholders. The following table shows how the costs of personnel and then of the machinery for the operating management of AOUP impact on revenues. It must be said that it is not sure that this approach can really make “visible” the value creation process of a public health company.

	2019	2020	2021
VALUE ADDED	259.922.462,78	287.133.357,51	287.483.539,77
<i>Personnel Cost</i>	39.739.587,34	11.839.410,86	5.585.371, 15
EBITDA	39.739.587,34	11.839.410,86	5.585.371, 15
<i>Amortization, Depreciation, Provisions</i>	33.627.000,25	35.408.689,00	58.196.796,48
<i>Amortization of intangible fixed assets</i>	4.954.147,03	4.547.060,59	4.349.945,16
<i>Depreciation of tangible fixed assets</i>	14.136.943,83	15.016.076,41	17.990.629,13
<i>Depreciation of fixed assets and credits</i>	637.010,49	627.790,60	767.773,27
<i>Provisions for the exercise</i>	13.898.898,90	15.217.761,40	35.088.448,92
EBIT	6.112.587,09	-23.569.278,14	-54.611.425,33
RESULT NOT CORE BUSINESS	-736.227,72	2.043.895,85	-2.046.515,75
<i>Total financial income and expenses</i>	-117.262,35	-4.602,04	-1.498,07
<i>Total extraordinary income and expenses</i>	-618.965,37	2.048.497,89	-2.045.017,68
OPERATING RESULT OF COMPANY MANAGEMENT	5.376.359,37	-21.525.382,29	-54.657.941,08
<i>Total taxes and duties</i>	17.045.760,06	20.743.936,44	22.173.995,04
ECONOMIC RESULT BEFORE STERILIZATIONS	-11.669.400,69	-42.269.318,73	-76.831.936,12
<i>Share of contributions to capital allocated for the year</i>	17.306.460,64	17.894.136,55	20.087.082,37
NET EXERCISE INCOME/LOSS	5.637.059,95	-24.375.182,18	-56.744.853,75

Table 13: AOUP financial results of last three years, values in euros

Through cost accounting tools healthcare organizations can further analyze the value generated by their activities. Recently AOUP has analyzed its research activity, in order to applying for being acknowledged as a scientific research institute. Preliminary results are shown in the following table.

	2019	2020	2021
<i>Grants related to income from the Ministry of Health</i>	840.486,08	1.159.851,94	1.770.248,17
<i>Grants related to income from the Region</i>	2.270.358,90	2.546.426,73	2.099.052,28
<i>Grants related to income from other public bodies</i>	2.099.590,30	1.007.345,93	735.419,38
<i>Grants related to income from private</i>	2.562.347,09	2.196.355,34	2.917.770,76
TOTAL RESEARCH CONTRIBUTIONS	7.772.782,37	6.909.979,94	7.522.490,59
<i>Purchases of goods and services</i>	419.218,81	424.235,68	419.327,74
<i>Healthcare personnel</i>	2.441.186,89	2.259.332,01	1.614.707,67
<i>Administrative personnel</i>	840.814,82	805.970,84	792.341,31
<i>Technical - professional personnel</i>	174.800,56	138.508,47	67.709,09
<i>Amortization of intangible assets</i>	160,31	5.678,68	17.935,55
<i>Depreciation of tangible assets</i>	56.144,50	120.893,80	143.119,98
<i>Diagnostic equipment</i>	2.923,88	5.115,84	10.907,37
<i>Scientific equipment</i>	46.228,84	95.988,58	96.793,68
<i>Other direct costs</i>	6.991,78	19.789,38	35.418,93
<i>Provisions</i>	3.539.702,91	2.848.930,77	4.146.299,44
TOTAL DIRECT RESEARCH COSTS	7.472.028,79	6.603.550,25	7.201.440,78

Table 14: AOUP direct and indirect costs for research in 2021, values in euros

National legislation requires public administrations to publish indicators of timeliness of payments relating to purchases of goods, services and supplies. AOUP index is defined in terms of weighted average payment delay based on the amount of the invoices. The value of the payment timeliness indicator is calculated by multiplying the amount paid to the supplier for each invoice by the days of delay or advance with respect to the legal deadline set at 60 days from the receipt of the invoice.

	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>
2019	-0,16	-12,53	-12,66	-16,82
2020	-13,16	-7,70	-8,80	-12,44
2021	-6,62	-12,32	-11,02	-12,25

Table 15: AOUP indexes of timeliness of payments in the last three years, divided in quarters

Compared to 2020, the value of the annual average index shows an improvement, passing from an annual average value of -10,44 to a value of -10,58. During 2021, the indicator reached the target required by the legislation both as a quarterly average and if calculated for the entire year, settling at values below zero. Translated into average payment days, the indicator represents a situation that sees the average payment times in the year attested approximately to 50 days.

Further analysis related to suppliers and procurement practices can be the proportion of spending on local suppliers, as required by GRI Disclosure 204-1. By supporting local suppliers, an organization can indirectly attract additional investment to the local economy. Local sourcing can be a strategy to help ensure supply, support a stable local economy, and maintain community relations.

3.5 Social dimension

Regarding the Social dimension of healthcare organizations, most reports respond in this section to the issues coming from both employees (employment turnover, their health and security at work, training and equal opportunities) and patients (safety, complaints and satisfaction, privacy). Moreover, it can be shown the impacts of the organizations on the local communities, defined as individuals or groups of individuals living or working in areas that are affected or that could be affected by the organization’s activities.

GRI Disclosure 401-1 “New employee hires and employee”, requires organizations to represent the number of employees hired during the reporting period, grouped by age group and gender.

The following two tables display total employee of AOUP divided by gender and age and the total AOUP employees hired at the end of 2020, divided by gender.

	20-30		30-44		45-59		60+	
	Women	Men	Women	Men	Women	Men	Women	Men
Doctors (managers)	0	0	164	124	141	144	64	107
Non-doctors managers	0	0	15	1	26	3	12	2
Nursing staff	373	89	479	283	1.054	615	73	32
Health technicians	34	12	97	52	159	60	15	18
Professional managers	0	0	0	0	1	3	2	0
Professional staff	0	0	0	0	0	1	0	0
Technical managers	0	0	0	0	1	2	1	0
Technical staff	2	3	2	17	64	107	20	23
Social health operators	22	7	162	48	561	128	94	24
Administrative managers	0	0	0	0	4	1	3	2
Administrative staff	4	5	56	15	202	50	42	19
Total	435	116	975	540	2.213	1.114	326	227

Table 16: AOUP employees divided by gender and age classes at the end of 2020, head count

It can be noted in the table above that a consistent share of permanent employees is shifting towards more high age classes, especially nursing and administrative staff, thus in next years AOUP may need a substantial staff turnover that has already started as shown in the table below.

New Hires	Women	Men	Total	Ceased	Women	Men	Total
Healthcare	753	359	1.112	Healthcare	213	99	312
Professional	2	2	4	Professional	1	0	1
Technical	303	105	408	Technical	45	29	74
Administrative	41	11	52	Administrative	22	6	28
Total	1.099	477	1.576	Total	281	134	415
Turnover rate	24,84%	31,34%	26,51%	Turnover rate	6,35%	8,80%	6,98%

Table 17: employees hired and ceased at 31/12/2020 divided by gender, head count

Regarding employees' dynamics, a peculiar issue came out in the last months of 2021 as to tackle COVID pandemic mandatory vaccination was required for personnel working in the healthcare sector, thus resulting in a part of employees being suspended, as shows table 18.

	<i>August</i>	<i>September</i>	<i>October</i>	<i>November</i>	<i>December</i>
<i>Suspended personnel</i>	29	97	169	254	254
<i>Returned personnel</i>	0	7	14	21	28
<i>Absent personnel</i>	29	90	155	233	226

Table 18: AOUP suspended personnel in 2021, returned means vaccination/immunity after contagion

AOUP through its Prevention and Protection Office (“UOS Servizio Prevenzione e Protezione”) promotes actions aimed at preventing and reducing risk for its workers.

	<i>2019</i>	<i>2020</i>	<i>2021</i>
<i>Needlestick</i>	173	170	121
<i>Other injuries/sicknesses</i>	217	212	303

Table 19: injuries of AOUP employees, reported in the last three years

Moreover, a recent assessment was made to monitor the aggressions to health operators. AOUP reported 86 cases of aggression in 2021, about half of them happened in the Medicines Department in the afternoon, usually the period when familiars can visit the patient, and 73% of the total of the aggression (63 cases) are reported in the wards (corridors and rooms). The aggressor 74% of the time is identified as the patient and 19 times has been identified as a familiar/visitor, in 3 cases the aggressor was not identified.

	<i>Aggressions</i>	<i>%</i>
<i>DIDAS Medicine</i>	42	49%
<i>DIDAS Surgery</i>	23	27%
<i>DIDAS Woman and Child</i>	13	15%
<i>Other units</i>	8	9%

Table 20: aggressions to AOUP employees in 2021

Also in 2021 were issued by AOUP 10 courses in 29 editions regarding employee security, for a total of 435 hours of training distributed to 1450 participants.

Regarding employees training and education, GRI topic standard 404 requires to report information about employees training (in hours per employee) and education-related impacts, and how the organization manages these impacts.

Internal training in AOUP is provided annually by implementing the activities reported in the Company Training Plan (“PFA - Piano Formativo Aziendale”).

All the training activities listed in the PFA are organized into macro areas that are topics of interest declared by the Veneto Region: clinical-care outcomes, organizational models, organizational-welfare models, age/diversity management and safety of workers in the workplace.

AOUPs Training Plan is divided in two levels:

- strategic level, managed entirely by Training Unit (budget, accreditation, planning, delivery, final report);
- department /complex structure/operating unit level, promoted by individual units upon request from their Director responding to training needs of the specific structure. The budget used is the one available by the requesting Unit; the Training Unit remains responsible for accreditation checks payments.

In 2021 have been organized 97 training events and were involved 3571 employees resulting in average 30,6 hours of training per employee. Further implementation regarding training hours per employee divided per gender and employee category will be needed to fully comply with GRI standards.

GRI Disclosure 405-1 “Diversity of governance bodies and employees”, requires organizations to disclose the percentage of individuals of diversity categories within the organization’s governance bodies and the percentage of employees of diversity categories per employee category. Gender and age class can be considered diversity categories considering AOUPs context, thus the second percentage has already been disclosed in table 16. Details that disclose the first percentage are shown in the following table.

	45-59		60+	
	Women	Men	Women	Men
Doctors in charge of UOC/UOS	3	14	16	18
Other Healthcare Personnel in charge of UOC/UOS	1	0	1	1
Professional managers	1	3	2	0
Technical managers	1	2	1	0
Administrative managers	1	2	1	0
Directors (DG/AD/HS)	0	1	0	1
Total	10	22	22	22

Table 21: AOUP directors and employees in charge of UOC/UOS divided by age class and gender

To collect further details regarding the percentage of individuals of diversity categories within the organization’s governance bodies will be needed the age of university personnel employed, most of which is in charge of AOUP UOCs. It could also be involved the Single Guarantee Committee (“CUG - Comitato Unico di Garanzia”) for equal opportunities, workers wellbeing and against discrimination, AOUPs reference body for this topic. The body converges the competences of the previous Equal Opportunities Committees and Committee on the phenomenon of mobbing. The tasks of the CUG include the preparation of positive action plans to promote equality between men and women in the work environment. The “Positive Actions Plan 2022-2024” as well as the previous two years plan, in the action number 5, promotes training courses on equal opportunities and gender issues addressed to all staff.

Moving towards the social impacts of healthcare organizations, patients safety plays a primary role in guaranteeing an adequate quality of care. For this reasons AOUPs has instituted the Clinical Risk Office (“UOS - Rischio Clinico”) whose mission is to develop a corporate risk management system aimed at increasing safety of patient and of all operators, supporting the professional activity of all operators, improving corporate image and patient confidence, reducing the possibility of litigation between the patient and AOUP.

GRI Disclosure 416-2 “Incidents of non-compliance concerning the health and safety impacts of products and services” substantially request an healthcare organization to report incidents of non-compliance within the reporting period.

	2017	2018	2019	2020	2021
<i>Fallings of patient</i>	444	495	426	431	675
<i>Other incidents</i>	504	676	1310	1326	1391

Table 22: AOUP trend of reported incidents in last 5 years

In 2021, 2066 incidents were reported by health professionals. The increase to the previous year is due to the introduction of a new procedure and the obligation to report incidents through the incident reporting portal. Incidents excluding fallings of patients, slightly increased too, resulting in 1391 cases reported.

For each report received, the type of error/criticality is defined in the following categories:

	<i>n.</i>	<i>%</i>			
<i>Fallings of patient</i>	675	32,7%	<i>Delay of drug prescription/administration</i>	11	0,5%
<i>Inaccuracy of data</i>	466	22,6%	<i>Injuria from decubitus posture</i>	6	0,3%
<i>Infection</i>	166	8,0%	<i>Failure to provide assistance</i>	5	0,2%
<i>Inadequate drug prescription</i>	134	6,5%	<i>Delay of diagnostic procedure</i>	4	0,2%
<i>Inadequate provision</i>	106	5,1%	<i>Inadequate surgical performance</i>	4	0,2%
<i>Aggressions</i>	86	4,2%	<i>Failure to provide drug prescription/administration</i>	3	0,1%
<i>Wrong device positioning/functioning</i>	43	2,1%	<i>Delay of therapeutic procedure</i>	2	0,1%
<i>Inadequate diagnostic procedure</i>	28	1,4%	<i>Failure to provide therapeutic procedure</i>	1	0,0%
<i>Delay of provision</i>	18	0,9%	<i>Other</i>	241	11,7%
<i>Reaction to drugs</i>	17	0,8%	<i>Total</i>	2.066	
<i>Delay of surgical provision</i>	14	0,7%			
<i>Event related to blood administration</i>	13	0,6%			
<i>Failure to provide diagnostic procedure</i>	12	0,6%			

Table 23: AOUP patients incidents reported in 2021

The table indicates that the most reported events are fallings, an event connected to the implementation of the new procedure "Prevention and management of falls in the hospital", the second event reported always remains the patient identification error, the third type of event reported is infection, an event linked to the new provisions of the Veneto region, the fourth type of event reported concerns the error involving the pharmacological process, both in the prescribing phase and in the administration phase.

Moreover, is important to highlight that in 2021 14 "sentinel events" took place in AOUP related to: death or serious injury due to a fall of a patient; suicide or attempted suicide of a patient in hospital; instrument or other material left inside the surgical site that requires subsequent surgery or further procedures; any other adverse event that causes death or serious harm to the patient. The so-called "sentinel events" are adverse events of particular gravity, potentially avoidable that determine a loss of trust of citizens towards the Health Service. Due to their seriousness, it is sufficient the occurrence of only one for the organization to make it appropriate an immediate investigation to ascertain which eliminable or reducible factors have caused or contributed to it and the identification and implementation of appropriate corrective measures.

To fully comply with GRI standards in incident reporting, AOUP should also include in its disclosures incidents of non-compliance that resulted in a fine or penalty or in a warning.

GRI topic standard 417 requires customer access to accurate and adequate information on the positive and negative economic, environmental, and social impacts of the services they consume – both from service labeling and a marketing communications perspective. To comply with the issue healthcare organizations have designed in their structure the Public Relations Office (URP).

In fact AOUPs URP missions are among others:

- give citizens possibility to report poor service, complaints, suggestions to improve the services offered through the “Complaints management system” process;
- encourage the Company's process of communication and information towards citizens in order to ensure equal ease of access to the services provided;
- intervene in the verification process of quality of services and user’s satisfaction.

Complaints increased from 456 in 2020 to 707 in 2021 (659 complaints for a total of 707 types of complaints). The table below shows last years’ trend of different categories of complaint.

	2018	2019	2020	2021
<i>Interpersonal dimension</i>	200	214	116	187
<i>Technical/organizational functioning</i>	205	159	218	324
<i>Waiting time</i>	258	185	119	193
<i>General dissatisfaction</i>	3	1	3	3
<i>Total</i>	666	559	456	707

Table 24: AUOP complaints received in last 4 years

Macro categories of complaint can be disaggregated to analyze with more detail what particular issues went wrong with some patients.

		n.	%
Interpersonal dimension	Professional aspects	130	18,4%
	Relational aspects	187	26,4%
	Information	26	3,7%
Waiting time		193	27,3%
Technical/organizational functioning	Organizational aspects	80	11,3%
	Economic aspects	42	5,9%
	Hospitality aspects and comfort	26	3,7%
	Facilities and logistics	20	2,8%
General dissatisfaction		3	0,4%

Table 25: AOUP complaints received in 2021 divided into sub-categories

Besides complaints in 2021 AOUP received 339 praises given to 89 units of the hospitals by users.

The survey to determine AOUP perceived quality is carried out through the administration of a questionnaire, the following table shows the perceived quality index in recent years. It must be denoted that due to the pandemic the administration of questionnaires has been slowed down thus current index is not to be considered accurate.

	2017	2018	2021
Perceived quality index	81%	82%	85%

Table 26: AOUP perceived quality index

3.6 Environmental dimension

Hospitals are energy-intensive organizations operating without interruptions, their energy costs can constitute the second item of expenditure, after personnel. GRI topic standards 302-303-304-305-306 and 308 requires organizations to disclose its direct and indirect environmental impact regarding energy consumption, emissions into air and water stewardship as long as assessing the environmental impact of their suppliers.

Regarding energy consumptions and emissions issues, after a confrontation demanded by the AD with AOUPs Technical Office (“UOC Servizi Tecnici e Patrimoniali”) it appeared that such an approach had not yet been implemented. One of the engineer senior executives pointed out the need by the office to create a figure (i.e. “energy manager”) for monitoring and implementing protocols for usage of energy besides fuel consumptions and water management.

It was formulated a preliminary approach towards energy consumptions inside AOUPs facilities as shown by the following table:

	2019	2020	2021
Primary energy (kwh)	19.777.150	21.113.189	16.832.811
Self-generated energy (kwh)	18.045.354	16.059.000	15.047.400
Natural Gas (m3)	6.432.420	6.747.039	-

Table 27: energy consumed by AOUP in last three years (2021 without November and December data)

The total primary energy consumed for heating, cooling, lighting and the operation of electrical equipment in an area of about 219thousand square meters amounts to 16.832.811 kwh in 2021 (not considering November and December), while natural gas amounted in 6.757.039 cube meters in 2020.

GRI Disclosure 302-1 also requires to specify if energy is self-generated or purchased from external sources and if it comes from renewable sources (wind, hydro or solar) or from non-renewable sources (coal, petroleum or natural gas).

AOUPs is provided with a cogeneration plant, natural gas powered, capable of simultaneously producing electricity and thermal energy which can be converted into hot water, superheated water and/or steam. This solution can lead to significant energy and economic savings, as well as significantly reducing the impact on the environment in terms of CO2 emission. Thus the self-generated energy amounts to XX in 2021, 47% of the total.

Regarding the source of energy consumption the cogenerators are gas powered, the supply of electricity is decided through a national tender (CONSIP) thus limiting the actions available to AOUP whether to source renewable energies for its energy consumption.

Further steps will be required to asses AOUPs both direct and indirect emissions and to implement plans to reduce its environmental impacts. Moreover, in evaluating investments to be made to improve current environmental impact, must be taken into account that AOUPs is planning to move most of its activities in a new facility that will be built in another area of the city.

The disposal of waste in healthcare facilities is of considerable importance due to the complexity of the waste produced, especially hazardous ones and the potential risks that their

handling entails for the health and safety of healthcare workers, patients and for the environment.

GRI topic standard 306 contains disclosures for organizations to report information about their waste-related impacts, and how they manage these impacts. The disclosures enable an organization to provide information on how it prevents waste generation and how it manages waste that cannot be prevented, in its own activities and upstream and downstream in its value chain.

For hazardous waste there are differentiated deposits that allow AOUP to constantly have an updated stock situation and consequently send the waste for disposal in accordance with the regulations in force. Hazardous waste produced by AOUP can be classified into medical waste with infection risk, chemical waste, waste of electric and electronic equipment, batteries and others. As the following table displays, hazardous medical waste represents the largest production waste, followed by chemical ones.

	2019	2020	2021
<i>Hazardous medical waste with Infectious risk</i>	904.186	1.303.274,13	1.521.721,50
<i>Chemical waste</i>	133.392	176.677,10	180.897,36
<i>Waste of Electric and Electronic equipment</i>	24.115	32.538,00	39.380,00
<i>Batteries</i>	644	1.923,00	1.517,00
<i>Other</i>	16.333	297,00	205,00
<i>Total</i>	1.078.670	1.514.709,23	1.743.720,86

Table 28: AOUP hazardous waste in last three years, measured in kg

Also for this issue further analysis are required, regarding for example other types of waste generated by AOUP and the description of the disposal also for hazardous ones. Thus to provide a holistic overview of waste generation and its causes, which in turn can support the organization in identifying opportunities for waste prevention and for adopting circularity measures. In this way, the organization can go beyond mitigating and remediating negative impacts once waste has been generated and move towards managing waste as a resource.

Conclusion

Institutional pressures towards the adoption of sustainability practices and their limpid reporting are a reality. In addition, growing inequalities and climate change will lead the public opinion to demand more and more transparency and accountability from organizations and their managers. It is therefore clear that ever more stringent regulations will be enforced also in the health sector, for hospitals and healthcare organizations will be required to disclose their economic, environmental and social impacts on the communities and our planet.

This work has provided an overview of how sustainability report can be a tool to meet the needs of healthcare organizations. By their nature, hospitals have a high social value and, provided they are perceived as a primary good, they are to be accountable for their work to the community. Sustainability report, with its stakeholder-centered approach and materiality analysis can help to better understand the needs of, and improve communication with patients and their families as well as employees and institutions. This appears to be even more accurate for AOUP and all university hospitals, which integrate research and teaching into the assistance activity and, consequently, must also interface with the needs of prominent stakeholders such as universities.

According to the World Health Organization, empowerment, accountability and participation are all drivers of health equity and they can be enhanced by a meaningful implementation of a sustainability report.

Through a sustainability report, a healthcare organization can achieve greater institutional and social legitimation. Sustainability reporting also allows for better manage environmental social and governance risks, granting a deeper understanding of the impact of its internal processes and strategies, and the creation of a corporate culture intended as a “real” emancipatory change in thinking and performing activities.

The implementation of sustainability report for an healthcare organization in Italy, as described in the last paragraphs of this work, can initially take place at no great expenses of resources and time. The preliminary indicators can be included in the management commentary attached to the financial statement of the year or included in its annual performance report, thus starting a

“practicalisation” process, whereby sustainability rules and routines are adopted and spread inside the organization.

However, in order to maximize the result out of the implementation of a sustainability report, a broader involvement of stakeholders at all levels is necessary for AOUP, together with a constant dialogue with relevant experts.

It is important to engage with employees in order to avoid the risk that the implementation of the sustainability report be reduced to a short-term experience, matching the mandate of the three directors of the company, as happened for example to AOUP with the experience of the social reports. This requires a high commitment by the whole organization, which can only be achieved through a well-defined process of organizational change. Indeed, as reported by studies on the feasibility of integrated reporting in healthcare organizations, employees at different levels appear not to be involved in the definition of value creation and, thus, in the integrated thinking process. Moreover, this change in attitudes is not likely to happen for entities that already have a strong organizational culture acting as a cultural control over personnel, results, and actions, so that integrated thinking clashes with the latter.

It is further necessary to engage with the Regional Authority, in the case of AOUP and Italian healthcare organizations, or with other relevant institutions and with major experts via so-called multistakeholder initiatives. This will help define common sector standards and thresholds without which it would not be possible to compare the impacts of the various organizations on communities; it will make filling the legitimacy gap in the hospital sector possible because the adoption of sustainability disclosure practices eventually matches the expectations of different stakeholders. This also to put in place an effective monitoring and enforcing mechanism.

Lastly an important reflection must be devoted to how the information disclosed through the sustainability report should be best communicated. Surely a synthesis work on the indicators should be performed to relay only what results to be essential to the understanding of all citizens. At the same time, institutions and more interested persons/entities ought to be able to investigate in more detail the impacts of an organization on the economic, social and environmental dimensions in order to evaluate its contribution to the achievement of the stated goals for sustainable development.

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