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Integrated Reporting in the landscape of non-financial disclosure: comparative analysis between Atlantia and Terna.

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A mio zio Giovanni, modello esemplare di virtù e generosità, grazie. Il tuo ricordo ed esempio saranno sempre con me. Questo successo è anche tuo.
Ai miei nonni Francesco e Maria, che con amore mi guardano e proteggono da lassù, grazie. Questo successo è anche vostro.
Ai miei straordinari genitori, per il loro sconfinato amore e instancabile supporto, al mio amato fratello Giorgio, ai miei adorati nonni Giorgio e Maria, ai miei cari zii e cugini, grazie. Siete stati sempre presenti, sempre capaci di spronarmi e sostenermi nelle sfide della vita con un amore e una fiducia di cui sarò eternamente grato. Questo successo è anche vostro.

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INTRODUCTION

INTRODUCTION AND MOTIVATIONS OF THE PAPER

The last decades have been characterized by an increasing demand for non-financial information (NFI) by companies' stakeholders. This has over the years determined an arising need for organizations to change their patterns of communications and therefore reporting on environmental, economic, governance and social performance.

Consequently, many initiatives have been developed to innovate the traditional reporting towards the integration of financial and accounting information reporting with non-financial information. Among them, one of the most interesting is the IIRC's International <IR> Framework, based on the combination of Integrated Thinking and Integrated Reporting, and focused on the assessment of an organization's ability to create value over time.

The spread of the International <IR> Framework has been accompanied by both praises and criticisms from reporting organizations, scholars and other stakeholders, that with time passing by are becoming more familiar and critical on it.

This study is therefore aimed at analyzing the *Framework* proposed by the IIRC, capturing its main challenges and opportunities from the point of view of different stakeholders, together with insights on the way they are reacting to it.

The paper will analyze two case studies of two Italian organizations that have taken part in the 2011 IIRC's Integrated Reporting Pilot Programme and produced Integrated Reports since the first release of the *Framework*. The analysis demonstrates the strong flexibility characterising the Framework's adoption and reflects on the ability of the <IR> to induce an internal change within firms adopting it towards more sustainable practices.

STRUCTURE OF THE STUDY

The study will be structured in 5 chapters as follows.

Chapter 1 will overlook at the main theories on sustainability and sustainability reporting produced overtime, eventually analysing the most relevant sustainability frameworks adopted nowadays in the international corporate environment, highlighting their pros and cons.

Chapter 2 will deepen the topic of sustainability reporting by tackling the main theme of this study: the IIRC's International <IR> Framework. The chapter will at first look at the journey leading to the idea of Integrated Reporting, fundamental principle of the Framework, then analyse the *Framework* itself in all its components, and finally provide a literature review on the main criticisms and opportunities identified since its first appearance.

Chapters 3 and *4* will present two case studies on the concrete application of the *Framework* by two leading companies from the Italian landscape, participants in the 2011 IIRC's Integrated Reporting Pilot Programme: Atlantia and Terna.

Chapter 5 will draw the conclusions of the study.

1 SUSTAINABILITY IN THE CORPORATE ENVIRONMENT

The purpose of this chapter is to guide the reader through the theories that over a time span of more than fifty years tried to tackle the increasingly important theme of sustainability and its relationship with firms.

1.1 FROM CSR TO SUSTAINABILITY REPORTING

Sustainability and sustainable development are themes that started to gain the attention of research in social sciences starting from the second half of the 20th century.

It is interesting to consider how some enlightened minds started tracing the path towards today's sustainability even earlier, in the mid to late 1800s. In the industrial revolution companies were facing the challenge to enhance and improve their workers' productivity while the raise of social issues such as poverty, exploitation of children and women and labor unrest was showing the dark sides of the factory system in a still very unregulated market.

On this topic, Adam Smith, one of the first relevant authors of economic thought, was an attentive observer of the British society of the 1800s and careful studied the dynamics underlaying the market interactions between subjects (Heilbroner 1999). He studied the way wealth is created and distributed within societies of different nations as well as the way governments in different countries can be enhancing or slowing down the economic development of the former.

Adam Smith is usually considered an economist against the modern ideas of corporate and social responsibility, cause associated with the metaphoric concept of the invisible hand guiding markets. The famous concept, introduced by Smith in his book *The Wealth of Nations*, supports a free market scenario in which economic actors, behaving and interacting in accordance to their own personal interest, eventually reach an autonomous market equilibrium without the influence and control imposed by governments (The Economic Times 2019). This, the economic system that found great success in the 1800s thanks to Smith and usually referred to as *laissez-faire*.

At the same time though, Adam Smith wrote in 1759 the *Theory of Moral Sentiments,* a study that preceding the more famous *The Wealth of Nations,* starts exploring the general systems of morals and their connection with a true liberal society. Smith points out how the *sine qua non* of a sustainable liberal society is to be found in the hearts of its citizen and in the measure by which they act according to sentiments of justice and measure (Evensky 2005). Self-interest, not as a short-minded selfishness in the realization of any sort of market transactions, but as sense of moral respect towards the others and their freedom, is the first and rightful requirement to achieve socially beneficial results and a sustainable society. In this way Adam Smith can be considered a first sustainability activist of more than two centuries ago, able to understand the value of sustainability and integrated sustainability thinking as tools to implement fair markets conditions and support societal progress (Evensky 2005).

Before the 1950s though there is not a real theorization of the relationship between society and firms. In the years up until the 1950s there are examples of a philanthropic and socially responsible behaviors, but mostly related to philanthropic behaviors in which companies would be engaging in acts of donation for the support of social causes relevant to specific community groups or to the general community itself (Carroll, A history of corporate social responsibility: Concepts and practices 2008).

Following the 1950s, usually referred to as the *philanthropic* era, the period between the 1953 and 1967 is classified as the *awareness* era, a period in which social issues raise an increasing attentions all over the world leading to a more concrete recognition of the important role and responsibility attributable to businesses within community affairs (Murphy 1978).

The first relevant document to unfold the beginning of today's literature of CSR and draw attention to the social responsibility of businessmen is the publication from Howard Bowen in 1953, *Social Responsibilities of the Businessman*. The assumption on which Bowen based his analysis was the acknowledgement that many large firms were relevant centers of power and decision-making, so that consequently they could exercise a relevant influence, with their strategies and business actions, on the life of citizen in their society.

Bowen created therefore a first definition of CSR, or, to be more precise, of Social Responsibility (henceforward SR), as the concrete definition of Corporate Social Responsibility was formally defined many years after Bowen's book. On page six of *Responsibilities of the Businessman* Bowen writes (Bowen 1953, 6):

"It (SR) refers to the obligations of businessmen to pursue those policies, to make those decisions, or to follow those lines of action which are desirable in terms of the objectives and values of our society."

Bowen’s first formalization of CSR was not immune to criticisms from the academics of his time. Among them, Milton Friedman was among those more decisively challenged Bowen’s ideas by asserting that the creation of monetary value for those investing in the very same corporation was the only concrete social responsibility that the firm had. The term “social” was therefore referred only to a small cluster of stakeholders, in contraposition with Bowen wider meaning of it. Friedman pushed his criticisms even further by not only disagreeing with the ideas of Bowen, but by labeling them as a concrete threat to the very foundation of the economic system of the times, that saw in the free will of enterprises an essential variable to foster progress and growth (Chang 2017).

Even if there were no more relevant discussions on CSR before the 1960s, Bowen’s contribution was crucial for opening academic discussion on the responsibility of a firm towards society and on the strategies by which organization’s management could tackle the topic. His suggestions on strategies such the change of composition of boards of directions, the use of social audit, the righteous formation necessary for management to acquire a socially-responsible viewpoint when running a company or the creation of a moral code of business conduct would find a fertile ground in the following years (Carroll, A history of corporate social responsibility: Concepts and practices 2008).

A solid breakthrough in the evolution and definition of CSR came in 1971 with the study *Social Responsibilities of Business Corporations* conducted by the Committee for Economic Development (here forward CED). The nonprofit business-led policy organization had since its foundation in 1942 analyzed the American society and the laws governing it, in order to define appropriate strategies able to promote a sustainable economic growth for the country.

In accordance to the mission of the organization, its 1971 publication emphasized the changing role of firms within society. Instead of being considered only as a mere producer of goods and services the CED pointed out the responsibility of firms in serving the needs of society to the satisfaction of society itself. As a main servant of society, the effectiveness of a firm had be determined by the ability of the former to adapt to the different and constantly evolving needs of its public, the main character of this dialectic process (Ellerup Nielsen 2007).

The idea of CSR of the CED was organized in three concentric circles: an inner, intermediate and outer circle. The three, metaphorically representing a company’s spheres of action from the more operational activities of the core business to the role played within society, defined the three different levels of social responsibility of the firm (Carroll, A history of corporate social responsibility: Concepts and practices 2008):

- Responsibility for the efficient execution of the economic function-products and economic growth.
- Responsibility to operate with a business model sensitive towards the transforming social values and priorities.
- Responsibility to become proactively involved in challenges faced by the social environment.

Despite the progresses made by the CED in shifting the focus from social responsibility to social responsiveness (Carroll, A Three-Dimensional Conceptual Model of Corporate Social Performance'. 1979), the question that had not been faced was the one of reconciling a firm economic orientation with its social one. A theoretical framework facing the issue, and to which many academics refer, came from Carroll in 1979 with the four-part framework of CSR in the publication: *A Three-Dimensional Conceptual Model of Corporate Social Performance*. In 1991, the same Carroll extracted the four-part definition and recast it in the form of a CSR pyramid (Carroll, Carroll's pyramid of CSR: taking another look 2016).

Figure 1 (source: https://ecampusontario.pressbooks.pub/businessfuncdn/chapter/article-carrolls-corporate-social-responsibility-pyramid/)

The CSR pyramid is composed by four categories that identify the four different types of existing social responsibilities (Carroll, The pyramid of corporate social responsibility: Toward the moral management of organizational stakeholders 1991):

- Economic Responsibilities.

  The economic responsibilities of the firm are related to the basic function of it: the sustainable production of goods and services for society. As being the basic economic unit in our society the first duty for a firm is to be profitable and maintain a high level of competitiveness and operating efficiency in order to be able to survive and benefit society overtime.

- Legal Responsibilities.

  The legal responsibilities come as consequential to the economic one. The firm, in the fulfilment of his societal function in the sustainable production of good or services, has to operate in accordance to the ground rules set by regulators. Carroll refers to the legal responsibilities as *codified ethics*, embodying the basic notions of fair operations as established by our lawmakers (Carroll, The pyramid of corporate social responsibility: Toward the moral management of organizational stakeholders 1991).

- Ethical Responsibilities.

  Despite seemingly similar to the legal responsibilities of a firm as for being related to "way of doing business" it is less about the mere following the requirements of law, but it encompass acting ethically and morally. The ethical responsibilities require a firm to be open minded regarding the new or evolving ethical/moral norms developing within society and, from another point of view, the ethical one is a dimension that is firmly pushing forward the legal responsibility category to broaden and formalize the evolving values of society.

- Philanthropic Responsibilities.

  Philanthropic responsibility is the most discretionary and voluntary form of responsibility for a firm, as well as the theoretically furthest one to the moral execution of the core business of an organization. This category pushes firm to become exemplary corporate citizen by engaging and actively support the promotion of human welfare and goodwill.

  From a literature point of view, it is to be underlined that the development of the framework in the recent years lead to a reconsideration of the domains composing it. In 2003 Schwartz and Carroll rearranged the original four categories framework and reduced them to three: economic, legal and ethical. The philanthropic dimension was incorporated in the ethical category arguing that philanthropy could be conceptualized in both ethical and discretionary terms (Carroll, A history of corporate social responsibility: Concepts and practices 2008).

An alternative theme to the one of CSR in tackling the role of firms within society was the Stakeholder Theory, conceptualized in 1984 by Edward Freeman in his publication *Strategic Management – A Stakeholder Approach*. The theory from Freeman has over the years become a referment for research in the field of business ethics, despite its early classification as a theory focusing on strategic management, and has to be considered in regard to the modern evolution of sustainability within the firm.

As the title of the theory suggests, its central focus is represented by a firm's stakeholders. Freeman points out the necessity for firms to strengthen their understanding and relationship with "non-traditional" or secondary groups of stakeholders such as governments, environmental organizations or other groups with specific interest, instead of simply focusing on traditional stakeholders like suppliers, employees and customers (Freeman 1984).

The Stakeholder Theory sees in shareholders' needs fulfilment the primary objective of a firm to achieve its long and sustainable long-term survival and to fulfil its strategic needs. The challenge for the firm lays consequently in being able to understand and respond to the pressures of every shareholder, social and non, that overtime interacts and gets involved in a relationship with the firm itself (by non-social stakeholders the reader shall refer to the natural environment and future generations).

From the 1990s on, the theme of CSR doesn't progress regarding the production of relevant additional contribution to its formalization. As the 1980s were characterized by the development of a complementary strand exploring the relationship between the firm and the external environment, also the 1990s see the development of additional themes and concepts that use the academic achievements in the study of CSR as a building block for their development (Carroll, A history of corporate social responsibility: Concepts and practices 2008).

The strengthening of the concept of sustainable development in the context of corporate sustainability comes after the release of the Brundtland report, *Our Common Future* in 1987 by the United Nations. The report, named after the former Norwegian Prime Minister Gro Harlem Brundtland, Chair at that time of the World Commission on Environment and Development (WCED), provides one of the most popular and acclaimed definitions of sustainable development (WCED 1987, 43)

> *"Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:*
>
> - *the concept of 'needs', in particular the essential needs of the world's poor, to which overriding priority should be given; and*

- *the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs."*

Our Common Future starts historically an explosion of studies on sustainability and development, and firmly points out the increasing importance of the environment as a crucial value-creation variable to be taken into account in international governance. Directly and not, the report indicates the important connection and co-dependence of ecological, economic and equity questions. It is a call to actions to national government, practitioners and companies to take on their responsibilities in achieving sustainable development. Here it comes again a concept presented over and over throughout the years: regulators and governments aren't the only actors involved in achieving sustainable development, but firms as well. Being the main engine of economic growth and prosperity, but on the other hand being also the cause of some of the unsustainable conditions existing within society, companies are called out to contribute to social equity and environmental protection (Sneddon 2006).

The operationalization of Corporate Sustainability, setting the path towards modern sustainability accounting, comes with the Triple Bottom Line (henceforward TBL). The TBL is an accounting framework conceptualized by John Elkington in 1997, constituted by three different performance variables: financial, social and environmental. Model commonly referred to as the 3Ps, the TBL changed the way firms (and no-profit or governments as well) would measure the performance and the sustainability of their activities.

Among scholars one of the most prominent definitions of the TBL is the one given by Savitz. The TBL *"captures the essence of sustainability by measuring the impact of an organization's activities on the world ... including both its profitability and shareholder values and its social, human and environmental capital"* (Savitz 2006).

The main metrics that are considered from the literature of the topic for each of the category are summarized below:

- Economic Measures.

  This cluster, or the economic bottom line, aims at calculating the economic value created by the company during the performance of its core business. It could aim at calculating the levels of personal income, the job growth, business climate or diversity factors.

- Environmental Measures.

Environmental variables are referred to all the ways in which the company interacts with the environment. It can incorporate for example the quantities and types of waste produced by the firm, the energy consumption or natural resources utilized.

- Social Measures.

  Social variables can be referred to the training hours invested per employee, the philanthropic behavior of the company through charity or welfare/career retention.

The strength of the model (arguably representing a weakness as well) is the lack of a universal standard for the performance measurement of each of the three categories. Elkington intended the framework as such to enhance its adoption thanks to the ease for the user to adapt the model to the specific needs of the entity. Each entity is supposed to define their scope of analysis by addressing the relevant variables for each of the three categories and create appropriate KPIs to assess and measure their performance (Slaper 2011).

In the year 1997, apart from the conceptualization of the TBL, there was as well the foundation of the Global Reporting Initiative (henceforward GRI) by the United States-based nonprofit Coalition for Environmentally Responsible Economies and the Tellus Institute. The GRI has over the years been extremely relevant in the discussion on Sustainability Reporting and its Sustainability Reporting Standards are nowadays used by over 10,000 organizations around the world in 110 countries.

The corporate practice therefore began to develop more and more heterogeneous practices of sustainability reporting. Heterogeneous in accordance to the many ways in which organizations were trying to integrate social, environmental and financial accounting information.

Consequently, the traditional corporate practice consisting in the production of financial reports was accompanied by the increasing adoption of extended financial reports tackling sustainability issues, and the production of specific reports such as environmental ones, social reports or corporate sustainability reports.

The extension of already existing financial reports upgraded financial reporting itself thanks to the introduction of non-financial data, aimed at tackling sustainability issues and responding to the increasing information needs from a wider group of stakeholders (Peršić 2017).

In parallel to business efforts a wide variety of initiatives has been as well developed by "professional" stakeholders with the goal to influence the direction that reporting will take in future.

The next paragraph will analyze the main initiatives from the last two decades in the area of sustainability reporting.

1.2 EXISTING SUSTAINABILITY FRAMEWORKS ANALYSIS

Over the past few decades the world has seen the growth of many different initiatives intended to achieve the Sustainable Development introduced by the WCED in the Brundtland Report in 1987.

A study conducted by Abbott and Snidal recognized the impressive growth of Multi-Stakeholder Initiatives (henceforward MSIs) related to CSR from the 1980s to the current years, from just a few to over 40 (Abbott 2010). The growth in the numbers has been accompanied as well by a growth in the scale of actions of such initiatives by gaining a solid international presence.

One of the variables recognized as a major driver for the expansion of MSIs is the perception of a lack in actions taken by governmental institutions, perceived to be unable, willingly or not, to properly address the raising concerns over CSR and provide organizations with relevant tools to track corporate behavior (Mena 2012). Moreover, the growth of global corporate brands has proceeded together with higher reputational risk for unsustainable and irresponsible behaviors of those firms whose businesses are based on large consumer markets. The technological development fostering global communications has therefore provided activists with strong means to get in touch with large audiences and share information on corporate behaviors.

The need for market understanding on social and environmental issues has consequently led firms to get closer with NGOs and other relevant stakeholders to respond properly to such raising expectations. On the other hand, the same NGOs have changed their approach towards enterprises, recognizing in the collaboration with the former the opportunity to achieve a substantial change from the inside of firms, moving away for an historical adverse approach towards a dialogical process with companies (Bäckstrand 2006).

MSIs are the synthesis of this dialogical process; bringing different groups of stakeholders together to tackle the issues determined by global corporate actions in the fields of environment, human rights, labor and corruption (Bäckstrand 2006).

MSIs are therefore institutions that propose a voluntary approach to regulation, based on collaboration between different stakeholders and the creation of practical guidelines and frameworks to overcome the above mentioned issues and generate a wide consensus over specific sets of values, norms, issues or strategies (D. U. Gilbert 2007).

This paragraph aims at providing an overview of the main standards, guidelines and frameworks produced over the last two decade to face the challenge of sustainable development and promote an internal change of firms towards more sustainable behaviors.

1.2.1 THE GRI FRAMEWORK

In 1997, same year of the publication of the TBL, there is the foundation of the Global Reporting Initiative, an international not-for-profit organization, currently based in the Netherlands in Amsterdam. The foundation of the GRI happened for initiative of the Coalition for Environmentally Responsible Economies (CERES) and the Tellus Institute, two American no-profit institution that had as the core of their activities the promotion of sustainability investment policies and research.

Since its foundation, the GRI has been actively involved in the development of Sustainability Reporting Standards, the very first global standards in sustainability reporting. The strength of their work is evident by the spreading of their reporting standards and the vast diffusion of reporting on sustainability performance by the majority of the world's 250 largest corporations (GRI 2017). A study conducted by KPMG in 2017 highlighted the adoption rate of 75% for GRI's Framework by the 250 world's largest enterprises and 63% by the top 100 companies.

Over the years the GRI Reporting Standards have evolved and changed with the publication of four guidelines. The latest, the GRI G4 Guidelines have been officially presented in October 2016 and became effective, in substitution of the previous ones, from the first of July 2018. The main changes include rearranging of the structure of the guidelines, that over the years achieved a modular and interconnected architecture of the standards composing it and tried to "simplify" the standards in order for them to be as clear and straight forward as possible, to ease the reporting process for firms on one side, and increase the value for stakeholders. The overall objective of the newly published set of guidelines was to increase the relevance and assurance of the Standards globally to boost its adoption (P. D. Jones, Managing materiality: a preliminary examination of the adoption of the new GRI G4 guidelines on materiality within the business community. 2016).

Producing a report following the GRI Guidelines leads usually to the production of a stand-alone sustainability report and must be following the GRI context index.

In specific, the GRI Standards are divided in four series. The first one represented by the Universal Standards and three tackling specifically the fundamental dimensions of sustainability (economic, environmental and social) (GRI 2016).

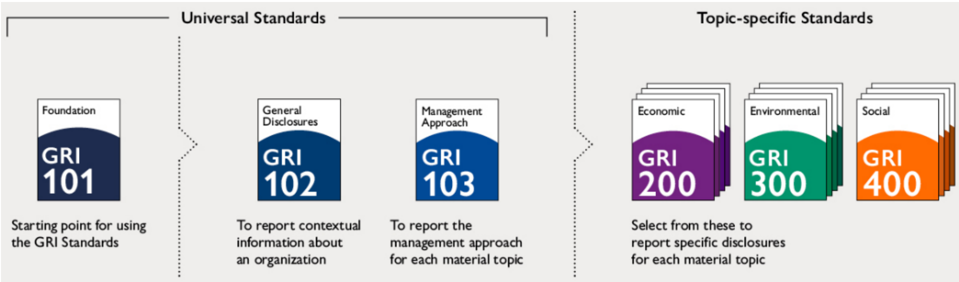


Figure 2: (source: www.globalreporting.org/standards/gri-standards-download-center/)

The Universal Standards, usually referred to as the 100 series, is composed by three different sections (101, 102 and 103) that provide information on the general approach that a firm should have when producing a sustainability report in accordance to the GRI Standards. The Universal Standards are therefore composed by a section setting the *Reporting Principles*, that will be soon analyzed, a section of *General Disclosure*, according to which an organization is supposed to provide general information that build up the firm's profile (strategy, ethics, integrity, governance, stakeholders, reporting processes) and a *Management Approach* section used by the firm to deepen her disclosure on the process of managing material topics (GRI 2016).

In the Universal Standards 101, similarly to the IIRC's Framework, the GRI provides reporting principles to be followed from companies in order to provide the most equilibrated and reasonable picture of the sustainable performance of the firm. These principles have two objectives: help companies decide on the information to be included in the report on one hand and ensuring the quality and presentation effectiveness on the other.

These the R*eporting Principles* for a sustainability report (GRI 2016):

- Stakeholder Inclusiveness: The stakeholders are the main target for the sustainability report and it is consequently fundamental for the firm to identify them promptly so to select and adapt the information disclosed to the information needs of each of them.
- Sustainability Context: the information presented by the firm in the sustainability report must be put in relation to broader themes of sustainability affecting the environment in which the firm is operating, at a local, regional or global level. The firm needs to clearly communicate

its organizational and sustainability strategy and its contribution to the improvement economic, social and environmental conditions.

- Materiality: it refers to the relevancy of information included in the report. It is important for firms to carefully choose, and report in order of importance, the topics to be included in the report, in order to put the accents to the main variables driving the economic, social and environmental impact of its activities.
- Completeness: There must be internal coherence from the firm when covering material topics, by defining the boundaries of the former and providing enough information for the stakeholders to have a proper overview of the actions taken during the whole period of interest.

The *Reporting Principles* propaedeutic to the quality of the produced reports (Accuracy, Balance, Clarity, Comparability, Reliability and Timeliness) are all inspired by the principle of transparency. The firm is expected to report with accuracy and clarity, impartially showing the sustainability performance of the firm and allowing the stakeholders to compare overtime the actions taken by the organization (GRI 2016).

Reporting Principles for defining report content	Reporting Principles for defining report quality
• Stakeholder Inclusiveness	• Accuracy
• Sustainability Context	• Balance
• Materiality	• Clarity
• Completeness	• Comparability
	• Reliability
	• Timeliness

Figure 3: (source: https://www. globalreporting. org/standards/media/1036/gri-101-foundation-2016. pdf)

The evolution of GRI Standards, resulting in the new G4 Guidelines, lead to a strong focus on the Principle of Materiality. GRI emphasized the importance of Materiality in encouraging organizations to share in their sustainability reports only disclosures and indicators that reflect their true economic, environmental and social impacts (GRI 2015). On Materiality, an analysis from KPMG suggested that the new G4 guidelines would cause organizations to produce reports that, trying to be more focused on a list of material aspects, would be shorter in length. This represents a positive aspects in increasing the understanding and analysis of the report from stakeholders, but it implies organizations to make an effort to formalize and document their materiality processes (KPMG 2013).

The Universal Standards are followed by three series of Topic Specific Standards (series 200, 300, 400). These series are used by firms to report the impacts generated by the company's activities in the three dimensions of sustainability:

- 200 Series: Economic Dimension. These cluster of standards is intended for the reporting of the economic performance of the firm from the impacts on the economic condition of the firm's stakeholders and on the economic systems from the small and local level to the national and global one. For this reason, the purpose of this group of standards is to identify the flow of capitals between stakeholders, the market presence of the firm, economic performance and indirect economic impact (GRI 2016).
- 300 Series: Environmental Dimension. The analysis of the environmental dimension focuses on the use of natural resources by the organization. A firm has a wide influence over the environment considering the many touchpoints with it. The analysis considers the resources used as inputs (the intake of raw materials, water, energy), those produced as outputs (in the form of wastes and pollution) and the consequential effects on biodiversity (GRI 2016).
- 400 Series: Social Dimension. The evaluation of the impact from the firm on the social systems in which it operates has its premises in all the universal treaties produced over the years (Universal Declaration of Human Rights, International Covenant on Civil and Political Rights or the Vienna Declaration and Program of Action). Some of the specific requirements in the series include employment, public policy, customer health safety, child labor, non-discrimination and customer privacy (GRI 401: Employment 2016 - Global Reporting Initiative 2016).

In conclusion the GRI Standards potentially produce positive externalities for the companies adopting them; they provide a guide for firms to assess their impact on social dimensions and, considering their extremely wide adoptions worldwide, give a chance to firms to benchmark their performance not only against their past achievements, but also against the performance of other firms (D. U. Gilbert 2011).

On the other hand, despite the wide adoptions, the GRI Standards have been criticized for failing to address explicitly the need to promote more sustainable patterns of consumption against the most common quest of firms for continuous economic growth (P. D. Jones 2016). As such, the real impact of the adoption of the Standards seem low when benchmarked against the exploitation of natural resources or the environmental impact of a firm's activities.

Despite the robust development of sustainability standards, one of the main criticisms made over the years lays in the interpretation of the concept of Sustainable Development by the GRI in its guidelines, that reduces SD to the three main pillars of the TBL and leaves little space to the integration and correlation among the three dimensions (Moneva 2006). This prevents firms from acquiring the integrated approach towards their businesses that is a necessary to ensure the achievement of corporate sustainability in the long term.

However, considering the last two decades, GRI has been a pioneer in the development of sustainability standards and has actively contributed to the dialogue over sustainability. The support of an integrated view of reporting has been recognized as a fundamental and necessary innovation of corporate reporting and led to the foundation of the IIRC in 2011 by the GRI itself, strongly asserting the importance of connectivity of resources to deep dive into an organization's story of impacts and value creation.

1.2.2 THE UNITED NATIONS GLOBAL COMPACT

Among the largest voluntary sustainability initiatives, it is important to mention the United Nations Global Compact (here forward UNGC).

The inspiration for the UNGC came from UN Secretary-General Kofi Annan, who, during the 1999 World Economic Forum, announced his intention and officially launched one year later the Global Compact with the objective to create a global coalition between the private sector and the United Nations for the promotion of human rights, environmental protection and improvement of labor conditions (Sethi, United Nations global compact: The promise–performance gap 2014).

As displayed in the chart below from the 2018 UNGC Annual Management Report, since its foundation over 9500 businesses joined the UNGC, the majority of which is based in Europe (52%), with a significant growth coming from the USA and Canada. Even considering the changes in geographic prevalence of businesses taking part in the network, most of them are still based in developing countries. Of the total number of businesses in the network, 75% of them is represented by small medium-sized enterprises (SMEs), in coherence with the UNGC policy to attract more micro enterprises at a local level.

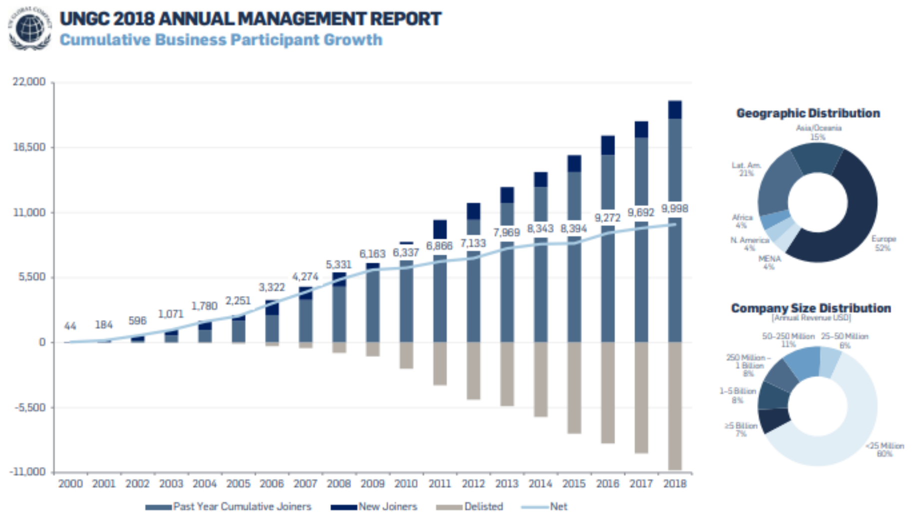


Figure 4 (source: https://www.unglobalcompact.org/docs/publications/UNGC-2018-Annual-Mgmt-Report.pdf)

The UNGC is also constituted by over 3400 non-business participants, mainly academic institutions, business and industry associations, non-governmental organizations, labor unions and public sector organizations.

The UNGC is a voluntary principle-based framework that seek to encourage companies to align their strategy with 10 principles that can be subcategorized in the areas of Human Rights, Labor, Environment and Anti-Corruption (United Nations 2010):

- Human Rights

  1) Businesses should support and respect the protection of internationally proclaimed human rights; and

  2) Make sure that they are not complicit in human rights abuses.

- Labor Standard

  3) Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;

  4) The elimination of all forms of forced and compulsory labor;

  5) The effective abolition of child labor; and

  6) The elimination of discrimination in respect of employment and occupation.

- Environment

7) Businesses should support a precautionary approach to environmental challenges;

8) Undertake initiative to promote greater environment responsibility; and

9) Encourage the development and diffusion of environmentally friendly technologies.

- Anti-Corruption

  10) Businesses should work against corruption in all its forms, including extortion and bribery

The mission of UNGC is therefore for companies to do business responsibly, aligning their strategies with the 10 principles promoted by the Global Compact, but at the same promote a secondary initiative coming from the United Nations: the 17 Sustainable Development Goals (Henceforward SDGs). The 17 SDGs came into force in the 1st of January 2016 as a Result of the UN Summit held in 2015 and became the main subject of the 2030 Agenda for Sustainable Development. In the number of 17, the SDGs represent a global call to fight against poverty, protect the planet and affirm peace and prosperity.

During the time of their release there was confusion among the business community regarding the way to align the 17 SDGs with the UNGC, until, in the White Pater Report, the UN clearly affirmed the relationship existing between the two frameworks: the 10 principles have to be seen as a necessary starting point for firms to effectively work on the achievement of the 17 SDGs.

An interesting study conducted by Cetindamar analyzed the reasons behind the adoption on the UNGC from companies and tried to assess the impact of the former on firms' performance. Becoming a UNGC participant showed that ethical reasons aside, the adoption of the Global Compact is driven by economic reasons such as the empowerment of the corporate image, benefit from being part of a global network, allow firms to more easily expand their business internationally and better compete with other firms globally. The economic benefits deriving from the adoption of the Global Compact were related to the reduction of waste produced and the lowering of labor costs (Cetindamar 2007).

On the other hand, however the UNGC has been criticized for the low level of commitment from firms adhering to it. This has led the Global Compact office to delist starting from 2008 the companies that were failing to meet the Compact's mandatory reporting requirements. Moreover, the majority of the delisted companies didn't sign up to the network again, indicating a lack of dedication from very same the network members (Bitanga 2010).

The voluntary nature of the reporting poses an additional limitation to the effectiveness of the Global Compact itself, as it determines minimum accountability for business members. There are no legal actions that can be taken from the UN against companies that don't adhere to the principles and same goes for an acceptable assessment to evaluate the adherence to the framework (Bitanga 2010).

The UNGC can still be seen as a relevant step forward to the creation of a global forum for CSR. It represents an embryo necessary for the creation of strong relationships between governments, society organizations and institutions that didn't exist before, and therefore there is optimism for its future developments.

1.2.3 THE SUSTAINABILITY ACCOUNTING STANDARDS BOARD

Founded in 2011 and based in the USA, the Sustainability Accounting Standards Board (here forward SASB) is a non for profit organization born to develop industry based sustainability standards for the recognition and disclosure by American companies on their environmental, social and governance impacts (The New York Times 2016).

In November 2018 SASB published, after six years of study and market analysis, a complete set of 77 industry-specific accounting standards in 11 different sectors, whose main objective is allowing providers of financial capital an analysis of the linkage existing between sustainability and the financial performance of the firm, through the concept of materiality.

Despite most commonly related to the financial world, especially in the accounting or auditing processes of financial reporting, the one of materiality is a topic that has gained increasing attention in developing non-financial reporting practices (PGS 2013). In support to the SASB's declination of materiality as dependent to the specific industry of analysis, the Governance and Accountability Institute in a research involving over 1200 organizations operating in 35 different sectors worldwide, revealed how the value of materiality changes across industries and companies: product responsibility was for instance seen as the top ranked material variable in food & beverage and commercial service sector, while environment was the main one in the energy sector (P. D. Jones, Materiality in corporate sustainability reporting within UK retailing 2016).

Definitions of materiality mostly focus on investors and shareholders. The IIRC affirms that a certain variable gains a materiality relevance when able to influence the value creation of a firm for its investors in the short, medium and long term, while the GRI, taking into account a wider range of the stakeholders of a firm, relates the materiality relevance to those topics that can affect the economic, environmental and social value for itself, its stakeholders and society (P. D. Jones, Materiality in corporate sustainability reporting within UK retailing 2016).

The very interesting tool developed by the SASB in relation to materiality is the Materiality Map, an interactive tool that in accordance to the sustainability issues identified in the Standards, provides an online assessment of the ESG performance of the organization in relation to the industry in which it operates, allowing therefore benchmarking across different enterprises.

In their Materiality Map, the SASB clustered into 5 categories the topics by which sustainability interacts with the financial performance of a firm, consequently becoming very material to investors: Environment, Social Capital, Human Capital, Business Model and Innovation, Leadership and Governance. Each map prioritizes 43 ESG issues, ranking their materiality for a specific industry on a scale from 0.5 to 5, with 5 being the highest level of materiality, as the issue has a greater chance to influence the organization's financial performance.

In conclusion, the main element of distinction between the SABS standards and the frameworks previously analyzed is the focus on financially material information, in coherence with SABS mission to help companies disclose on ESG issues accordingly to investors interests (SASB 2018).

1.2.4 THE ISO 26000

The ISO 26000 is a voluntary standard developed by the International Organization for Standardization (ISO) and published in November 2010.

The ISO is an independent non-governmental organization that since its foundation in 1947 has worked on the creation of a global network with today 164 national standards bodies around the world, for the development of International Standards, containing best practices, practical information and management solutions across different industries (ISO 2018).

As the MSIs previously mentioned, the ISO brings together experts from consumers, governments, academics, NGOs and others, by creating specific ISO technical committees called to define Standards on a specific matter.

The ISO 26000 aims specifically at helping organizations in contributing to sustainable development beyond the formal legal compliance. The ISO itself points out that the 26000 standard doesn't constitute a certification as it is not a management system standard, but, as in the case of previously analyzed frameworks, a guidance towards sustainable business conducts (ISO 2018). The component of certification is a relevant difference between the ISO 26000 and the other well-known ISO 9000 and ISO 14001 standards. The last two are in fact two management systems standards, respectively a quality management standard and environmental management system standard, that provide organizations adopting them with a certification seen from the business community and institutional investors as a tangible and concrete signal of their commitment to responsible behaviors (Zinenko 2015). Interestingly however, previous studies found out that the adoption of the ISO 14001 was positively influenced by the earlier issuance of the ISO 9000, so that the understanding and adoption of ISO 26000, despite the lacking nature of a management system standard, can still benefit from its predecessors in their spread (Delmas 2008).

As displayed in the figure below, the ISO 26000 is composed by 7 Clauses, the 7 core subjects, a Bibliography and two Annexes:

- The 7 Clauses are meant to give organizations an overview of the scope of the ISO 26000, providing definitions of key terms and reporting principles of social responsibility, as well as guidance on the recognition of a firm's social responsibility, of its key stakeholders and the way an organization interacts with them. The Clause 7 represent one in the most important ones as its aimed at guiding organizations in putting into practice social responsibility within its inner and outer processes. Finally, the Clause 6 provides the starting point for the analysis of the 7 core subjects, the macro categories of social responsibility according to the ISO 2600.
- The Core Subjects are the main themes of the standard: human rights, labor practices, the environment, fair operating practices, consumer issues, community involvement and development, organizational governance. Each of them is subsequently divided into different issues deepening the various dimensions of each variable. Fair operating practices is for example composed by the anti-corruption, responsible political involvement, fair competition, promotion of social responsibility in the value chain and respect for property rights issues.
- Bibliography and Annexes provide references to international authoritative instruments used by the ISO 26000 itself as source material for the production of the standard, as well as many examples of voluntary initiatives taken by firms to address the issues analyzed in the core subjects. This represents a strong similarity with the UNCG, that is also very much dependent on examples of best CSR practices (Zinenko 2015).

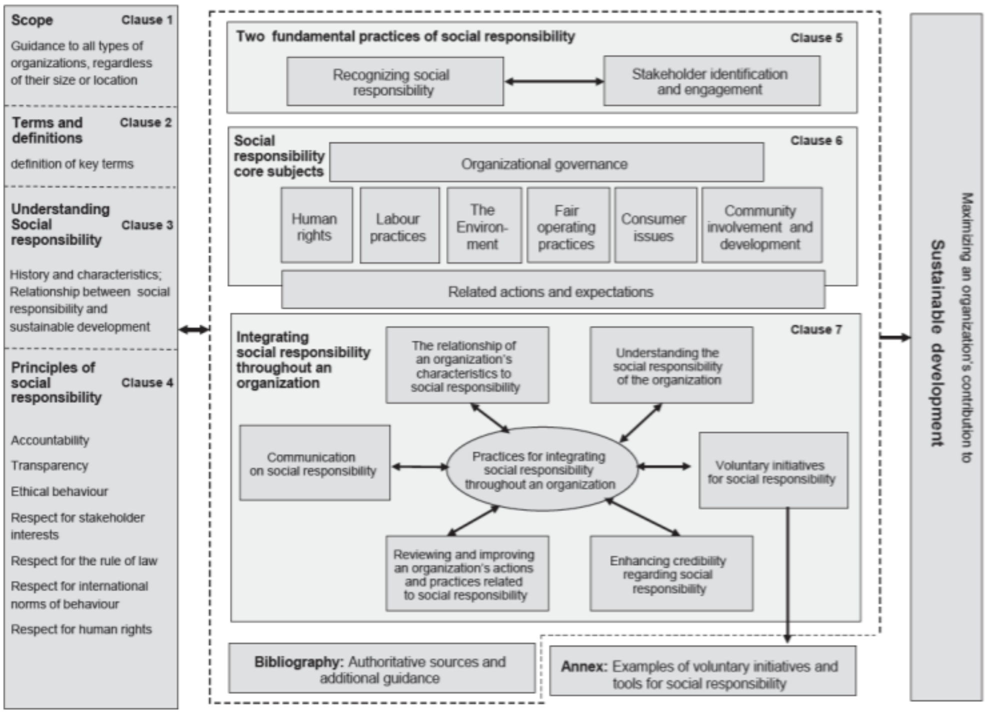


Figure 5 (source: https://www.iso.org/files/live/sites/isoorg/files/store/en/PUB100258.pdf)

There have been contrasting views on the effectiveness of the ISO 26000 standards among scholars.

Those defending it, mainly point out the richness and completeness of CSR topics thanks to its multi stakeholder approach and the business-to-society (B2S) orientation in the analysis of organizations (Castka 2008). The ISO 26000 serves very well in describing the context in which organizations operate, the SR issues and principles. The adoption of the standard, as it doesn't constitute a third party certification, can represent a good chance for firms to show their voluntary commitment towards social responsibility and disclosure to its stakeholders (Zinenko 2015).

On the other hand however scholars analyzing in dept the concrete applications of ISO 26000 point out the focus of ISO 26000 on standardizing processes and definitions instead of putting a concrete focus on the achievement of performance results related to CSR (Zinenko 2015). On this matter Hahn (2015) in focusing on the standardization of strategic management processes for CSR thanks to ISO 26000, highlights the little guidance that is given by ISO on the creation of CSSR strategies. It is not surprising considering the strong dependence of a strategy definition on the context in which the firm operates (Hahn 2013). In terms of usefulness Hahn asserts the usefulness of ISO 26000 for companies that are starting to implement actions on CSR, while much fewer benefits are seen for companies that have already tailored and implemented CSR strategies (Hahn 2013).

In conclusion Castka (2008) indicates optimism towards the potential of ISO 26000 to be a prominent platform among self-regulatory regimes on CSR. On this matter Castka points out the importance of governments worldwide to not only promote the adoption of standards such as the ISO 26000, but the necessity for them to reinforce national regulations on ESG corporate conducts and to focus on international cooperation to make firms more keen on the adoption of sustainability reporting standards (Castka 2008).

2 THE JOURNEY TO <IR>

This chapter will guide the reader on Integrated Reporting and specifically on the International <IR> Framework created by the IIRC (forward referred as *Framework* or <IR>).

Starting from an overview on the idea of Integrated Reporting and the foundation of IIRC itself, we'll analyze the Framework, evaluate the current global spread of Integrated Reporting and review the existing literature from Academics, the Association of Chartered Certified Accountants (ACCA) and the IIRC itself to extract the challenges, criticisms and evolution that the Framework has faced since its introduction.

2.1 THE IR IDEA AND THE IIRC

Integrated Reporting is defined by the International Integrated Reporting Council (2013) as a (IIRC 2013, 33):

> *"Concise communication about how an organization's strategy, governance, performance and prospects, in the context of its external environment, lead to the creation of value in the short, medium and long term".*

The definition by the IIRC represents, from a literature point of view, one among different ways in which Integrated Reporting has been defined over the years. More specifically, scholars have been overtime referring to three different models of Integrated Reporting.

A first version of IR was created as a mandatory approach to reporting by the Institute of Directors in Southern Africa (IoDSA) with the issuance of the 2009 King III Report, and had, as its recipients, all the listed companies in the Johannesburg Stock Exchange (JSE) in 2010 in South Africa. Such a decision was coherent within a country recognized worldwide as a pioneer in promoting corporate governance reforms as a response to the political, environmental and social challenges (Integrated reporting: the influence of King III on social, ethical and environmental reporting 2012). What the King III intended as integrated reporting was a stakeholder's inclusive approach to governance (Dumay, Bernardi e Guthrie 2017). It established standards of conduct for listed companies, through the issuance of an Integrated Report, instead of the traditional Annual

Report and separate Sustainability Report. The code didn't compel companies to follow a specific framework but was basically a policy on corporate governance. King III was drafted on a "apply or explain" basis, compelling management to explain the way the code was applied and, in the event of lack of compliance to it, the reason why it had not been applied.

The second IR model was the one formalized by Eccles and Krzus (2010) in their book, "One Report". The framework, ideated before the International <IR> Framework from the IIRC, represented a step forward than the traditional combination of financial and non-financial information in a single annual document. At the core of it there was the use of the Internet in order to allow, for instance, a user to do his own analysis of financial and non-financial information or provide specific information of a particular matter to different stakeholders.

The third model, and the most recent one, is the one outlined in the International <IR> Framework (IIRC, 2013). At the core of it, the combination of Integrated Thinking and Integrated Reporting represent a pragmatic solution to today's growing concern for firms to combine competitiveness and sustainable growth. The main concepts of the Framework are constituted by the capitals, dynamically involved in the value creation process of companies over time.

As previously mentioned, before the introduction of IR, there were two ways of reporting used by firms to communicate with their stakeholders: the Annual Report, comprehensive report regarding the activities performed by a company throughout the precedent year, for financial and economic disclosure, and the Sustainability Report (henceforward SR), to share the economic, environmental and social impacts deriving from the company's activities. Important part of the SR is presenting the organization's values, governance model, and highlight the link existing between its strategy and its commitment to the achievement of a global and sustainable economy. Both the IR Framework and SR have in common a very high degree of customization. Differently from an Annual Report, which complies with the IAS/IFRS, the SR and IR are issued by companies on a voluntary basis, depending on the benefits they believe that they can get.

IR is believed to produce better externalities for organizations as it enables them to focus on the connections existing between CSR and their value creation activities (Velte 2016). The purpose is therefore a first relevant difference between the two, because, while the SR is a communication about the firm's broader social and environmental outcomes, strategies and objectives, the IIRC Integrated Report's goal is to describe the providers of financial capital the way value is created overtime. As stated by the IIRC, the aim of an Integrated Report is to allow a better communication of the company's short, medium and long-term value creation propositions through providing "a concise communication about how a company's strategy, governance, performance and prospects, in the context of its external environment, lead to the creation of value over the short, medium, and long term" (IIRC 2013).

Furthermore, unlike the SR, that doesn't require firms to follow any sort of structural or content requirement, the IR created by the IIRC suggests a series of content elements and principles, gives an overall structure to the reporting, though making it clear that such guidelines do not have to be followed literally.

At the heart of the idea of IIRC's Integrated Reporting stands the concept of *Integrated Thinking*, defined by the IIRC 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 of value over the short, medium and long term" (IIRC 2013). Being a newly invented and abstract concept, the one of *Integrated Thinking* is a definition subject to different interpretations to different observers. Still, one of the strengths of its "open" definition, stands in its general nature itself, as overtime there is an evolving acceptance of it within practice (Feng 2017). The beauty of Integrated Thinking lays in the transformation of corporate processes by eliminating the commonly existing information and reporting silos inside organizations (Phillips 2011) and leading to better resources allocation, internal processes and decision making.

2.1.2 ORIGINS OF THE IRRC

The beginning of IIRC lays on the increasing concerns regarding the incapability of the Annual Report and other traditional corporate reporting practices to capture the information needs of a variety of stakeholders (S. J. Adams 2011).

As previously stated, the physiological reaction from companies has been improving the information shared with their shareholders by disclosing NFI, usually in a variety of different documents: stand-alone sustainability reports, CSR reports or inside the annual report itself (Cohen 2012). This type of reporting though, despite determining steps forward in the disclosure of NFI, has shown to have two different weaknesses: being in the first place overwhelming in quantity, with extremely long reports (up to 200 pages in length), and being secondly unable to provide a simple understanding key for the stakeholders to whom they are addressed, because of the lack of a standard framework to be displayed in. Natural consequence of this methodology of reporting is the strongly reduced effectiveness in reaching their target audience.

The attempt to overcome this reporting need, took place in August 2010 with the foundation of IIRC by a decisive initiative of two amongst the leading organizations in the grounds of sustainability and accounting: the GRI and the Accounting for Sustainability Project (henceforward A4S).

While GRI and their Guidelines have been briefly analyzed before, nothing has been said about A4S.

A4S is a Project established by the Prince of Wales, Sir Charles, in 2004, aimed at inspiring a global shift by finance leaders towards sustainability in decision making and reporting systems. The declination of the aims of A4S includes the transformation of decision making to be more inclusive of integrated thinking, the inspiration of finance leaders to implement business models that take sustainability as a major variable, envisioning such approaches to be scaled across the whole finance and accounting community (A4S 2016).

The creation of the IIRC represented obviously a milestone leaning forward the International <IR> Framework and could benefit, regarding its visibility to the world, to name among its 40 initial members, very notable institutions and professionals, such as the heads of the IASB, the CEOs of the Big Four, the heads of the major British professional accountancy bodies and the CFOs of major multinational firms (Flower 2015).

2.2 THE INTERNATIONAL <IR> FRAMEWORK

Before deep diving into the *International Integrated Reporting Framework* (hereafter called '*Framework'*), it is worth it to mention the *Discussion Paper*, a document released by the IIRC in September 2011. The Discussion Paper illustrates in general terms the role of the <IR>, and it also provides a general checklist of the necessary steps to righteously develop the <IR> itself. The importance of the Discussion Paper lays on the fact that it serves as an early embryo of the *Framework.* At this stage, the IIRC states it clearly that the <IR> (IIRC 2011):

> *"brings together material information about an organization's strategy, governance, performance [...] in a way that reflects the commercial, social and environmental context within which it operates".*

Moreover, the Discussion Paper reaffirms the role of the <IR>, stating that (IIRC 2011, 3):

> *"[The IR] provides a clear and concise representation of how an organization demonstrates stewardship and how it creates and sustains value. […] An Integrated Report should be an organization's primary reporting vehicle".*

At the end of the same year when the IIRC published the Discussion Paper, finally the IIRC invited some stakeholders interested in the IIRC cause to discuss the IR. Eventually, two years after those preliminary discussions, in April 2013 the IIRC published the final Consultation Draft of the *Framework.* The *Framework* is a document that explains the aims of the IR, going through the *six capitals,* and it also presents for the first time two fundamental papers for redacting the IR in an accurate manner: the Content Elements, and the Guiding Principles.

In the Discussion Paper the IIRC had already stated back in 2011 what the aim of the <IR> is: comprehensively understand and explain the whole value created by a firm. However, that same vale is not created by or within the organization alone (IIRC 2011), there are multiple factors that come into play, such as:

- **External variables**: the economic, technological and macroeconomic conditions, presenting a certain extent of risks and opportunities;
- **Relational variables**: manning the relational ties between a given organization and its internal (e.g., employees) and external stakeholders (e.g., customers, suppliers, local authorities, and commercial partners);
- **The six capitals:** those are six various types of resources/capabilities, and their availability, affordability, quality and management.

The IIRC identifies six categories of capital (IIRC 2013, 11-12):

> ***Financial capital:*** *The pool of funds that is:*
> - *available to the organization for use in the production of goods or the provision of services, and*
> - *obtained through financing, such as debt, equity or grants, or generated through operations or investments.*
>
> ***Manufactured capital:*** *Manufactured physical objects (as distinct from natural*

physical objects) that are available to the organization for use in the production of goods or the provision of services, including:

- *buildings,*
- *equipment, and*
- *infrastructure (such as roads, ports, bridges and waste and water treatment plants).*

Human capital: *People's skills and experience, and their motivations to innovate, including their:*

- *alignment with and support of the organization's governance framework and ethical values such as its recognition of human rights,*
- *ability to understand and implement an organization's strategies, and*
- *loyalties and motivations for improving processes, goods and services, including their ability to lead and to collaborate.*

Intellectual capital: *Intangibles that provide competitive advantage, including:*

- *intellectual property, such as patents, copyrights, software and organizational systems, procedures and protocols, and*
- *the intangibles that are associated with the brand and reputation that an organization has developed.*

Natural capital: *Natural capital is an input to the production of goods or the provision of services. An organization's activities also impact, positively or negatively, on natural capital. It includes:*

- *water, land, minerals and forests, and*
- *biodiversity and eco-system health.*

Social and relationship capital: *The institutions and relationships established within and between each community, group of stakeholders and other networks to enhance individual and collective well-being. Social capital includes:*

- *common values and behaviors,*
- *key relationships, and the trust and loyalty that an organization has developed and strives to build and protect with customers, suppliers and business partners, and*
- *an organization's social license to operate".*

The reader shall be aware that these *six capitals* have to be intended as inputs, transformed by firm's activities into outputs (finished goods and services offered to the customers) and outcomes (affecting the six capitals). Thus, value is created via the interaction between the firm's six capitals (IIRC 2017). The value creation process must be put into a wider timeframe that regards not only the present state, but also the company's viability in the long run (IIRC 2011). The Discussion Paper first and then the *Framework*, relate the *six capitals* to a company's business model, which constitutes a whole integral part of the <IR> itself.

The *six capitals* constitute one of the three elements that compose the Fundamental Concepts of the Framework, whose objective is the one of reinforcing and better explaining of the idea of Integrated Reporting proposed by the IIRC: *value creation for the organization and for others*, the *six capitals*, *the value creation process* (IIRC 2013).

On the *value creation for the organizations and for others*, it is interesting to note that the *Framework* doesn't give a definition of value, but speaks out about the manifestation of value through the increase, reduction and transformation of the previously discusses capitals, representing the resources available to the organization.

The value therefore created has two different recipients (IIRC 2013):

- value created for and from the organization itself, consequentially leading to the financial return to financial investors.
- Value created for other entities (such as society and other stakeholders).

Remarkable is the reflection on the link existing between the ability of an organization to create value for its own sustainment and the value created for other stakeholders. The relationships and interactions that the firm is able to build with its stakeholders are directly related to variations in the financial capital created by the firm. Value is therefore determined by an ongoing dialectic process existing between a firm and its stakeholders and determines the crucial importance of these interactions, activities and relationships for the overall value creation process. When material, these relationships need therefore to be included in the Integrated Report itself.

The *value creation process*, third section of the Fundamental Concepts, is then described as a dynamic system in which inputs, business activities, outputs and outcomes are involved in the creation of value over time. As evident from the table below, the business model represents the core of the value creation process, for its fundamental role in capturing the capitals, representing the inputs and stores of value available to the firm, transforming them thanks to its business activities into outputs (different in accordance to the different business areas of the organization in analysis) and consequently outcomes (increase or decrease in the value of the capitals as result of the firm's business activities and outputs) (IIRC 2013).

Pag 13 framework

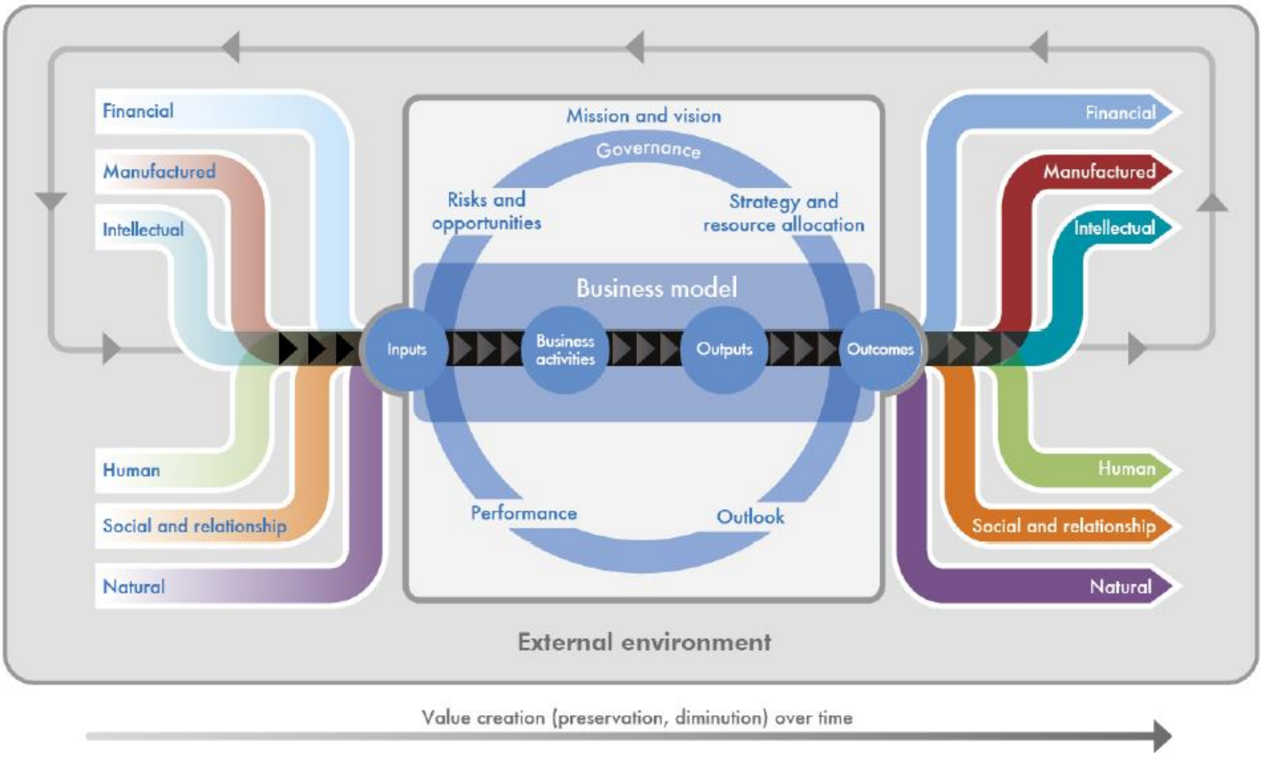


Figure 6 (source: https://integratedreporting.org/wp-content/uploads/2013/12/13-12-08-THE-INTERNATIONAL-IR-FRAMEWORK-2-1.pdf)

As mentioned earlier in this paragraph, there are two important papers that are part of the *Framework*: the Content Elements, and Guiding Principles.

The Content Elements are the requirements that any report has to fulfill to be considered an <IR>; those are (IIRC 2013):

1. Organization overview and external environment;
   This first element tackles the main features of an organization: what it does, and which is the external environment in which it operates. The entity is expected to disclose on its mission and vision, providing information about its internal culture, proprietary asset and main businesses performed. At the same time it is supposed to disclose on the competitive environment in which it operates, on macro and micro economic conditions affecting its activity, the legislative and regulatory environment, and any other relevant external variable able to influence the firm itself (IIRC 2013, 24-25).

2. Governance;

   The disclosure on Governance implies explaining not only the governance structure existing within the organization, but as well on the way that governance itself is supporting the creation of value in the short, medium and long term. The entity should describe specific processes used to take strategic decisions, how the culture and values of the organization are reflected in the relationship with its key stakeholders, how those charged with governance support innovation or promote practices exceeding the normative requirements (IIRC 2013, 25).

3. Business model;

   As previously said, the business model is at the core of the value creation process for its responsibility in transforming the capitals and creating value overtime. Describing the business model implies therefore disclosing on the inputs, business activities, outputs and outcomes (both internal and external). It is important to note that the Framework doesn't require organizations to disclose on all inputs utilized, but on those that have a material relevance in the ability of the organization to create value in the short, medium and long term. In the case of organizations operating with multiple business models it is relevant to consider each material business model as propaedeutic to the best understanding possible from external stakeholders (IIRC 2013, 25-27).

4. Risks and opportunities;

   An integrated report needs to talk about the risks and opportunities (internal, external or both) that can influence the organization's potential to create value. This implies a careful assessment of the likelihood of the risks, consideration of the circumstances that could determine their manifestation and the strategies undertaken by the organization to mitigate them (IIRC 2013, 27).

5. Strategy and resource allocation;

   To adequately disclose on its strategy and resource allocation, an integrated report needs to analyze four topics: the strategic objectives of the firm, the actual strategies already implemented or that it intends to implement, the plan to allocate the resources available for the achievement of its goals, and the KPIs and MOS by which the organization will evaluate the results obtained against the original plan (IIRC 2013, 27-28).

6. Performance;

   Has the organization managed to achieve the objectives defined in its strategy? An accurate analysis of the performance of a firm implies looking at the outputs of its strategic efforts and the consequences on the capitals utilized. For the best user understanding describing the performance an integrated report needs to include both quantitative and qualitative information, connective the financial performances with other capitals (IIRC 2013, 28).

7. Outlook;

   An integrated report needs to look at the future at the organization and predict the challenges that it could be facing while working on the achievement of its strategic objectives. It's important to understand how the external environment may affect the company's activities and if the entity is prepared to face such upcoming challenges (IIRC 2013, 28-29)

8. Basis of preparation and presentation;

   Finally, an integrated report in accordance to the IIRC content elements, should describe the internal process by which the entity has determined the material matters to be included in the integrated report, the reporting boundaries and the definition of the characteristic that determine the adequateness of the quantitative indicators used (IIRC 2013, 29-30).

The 2013 *Framework* identifies seven Guiding Principles to write an <IR> (IIRC 2013):

1. Strategic focus and future orientation;

   In accordance to the IIRC indications, an integrated report should provide information on the strategy of the entity, its capability to create value overtime and the way it affects the capitals used. Moreover, the organization should disclose on the relationship existing between past and future performance and the learnings from past experiences driving the future strategic directions (IIRC 2013, 16).

2. Connectivity of information;

   This guiding principle refers to the aggregated picture that an integrated report should provide to its users. It is fundamental for the report to highlight the connections, relations and dependencies existing between its elements in allowing the reader to understand holistically the value creation processes within the entity (IIRC 2013, 16-17).

3. Stakeholder relationships;

   An integrated report should describe effectively the nature and quality of the relationships of the organization with its key stakeholders. It has crucial for a firm to understand the perception of value from its stakeholders and the material matters to them in order to capture upcoming trends with increasing importance in the competitive environment in which it operates and therefore develop new effective strategies (IIRC 2013, 17-18).

4. Materiality;

   The matters disclosed in the integrated report should have material relevance, as being concretely able to affect the ability of the firm to create sustained value spanning the three different time horizons (IIRC 2013, 18-19).

5. Conciseness;

   A priority to entities willing to produce integrated reports according to the *Framework* should be the focus of quality of quantity of information disclosed. The report should be consequently composed by a enough data able to transmit to the reader the entity's strategy, governance, performance and future prospective without being overcrowded with less relevant information (IIRC 2013, 21).

6. Reliability and completeness;

   For reliability purposes the entity should adopt mechanisms of internal control and reporting systems, internal audit and independent, external assurance. For completeness purposes a report should not discriminate in the disclosure of material matters to the entity between positive and negative information. They should all be included in it (IIRC 2013, 21-22).

7. Consistency and comparability;

   Finally, an integrated report should be consistent overtime so to allow the organization itself, but external stakeholders as well, to compare the information presented with the integrated reports produced in different time periods. This can be achieved by adopting the same KPIs. Comparability has to be eventually intended not as the simple comparison of reports from the same organization, but also in the regards of other organizations (IIRC 2013, 23).

In summary, the *Framework* advices companies to create a concise and credible IR, reliable and focused only on what is meaningful and on what matters. The IR should also be comparable, allowing investors and other stakeholders to better set benchmarks and conduct analysis. According to the Guiding Principles, the IR should also give evidence to the correlation between the corporate strategy and the value creation process over time. Last but not least, the IIRC's Guiding Principles emphasize the relevance of highlighting the company's engagement with its wide variety of stakeholders, something some scholars regarded as not sufficiently in the NFI reporting practices (O'Dwyer 2007).

2.3 MAIN CHALLENGES AND OPPORTUNITIES

2.3.1 CURRENT SPREAD OF THE IR GLOBALLY

Despite the publication of first integrated reports occurred in the early 2000s, the idea of "integrated reporting" has fascinated the thoughts of organizations for almost 40 years. However, only recently integrated reporting has been spreading with concrete and decisive vigor. Such trend, from 2010 on, has been coherent with the publication, among the other existing ones, of the IIRC Framework in December 2013, answering the loud call for action in terms of creating a clear framework to serve as an example (C. A. Adams, The International Integrated Reporting Council: A call to action 2015). It is therefore interesting on this matter, before going through the main criticisms, opportunities and challenges that the *Framework* is facing, to analyze the magnitude of the integrated reporting diffusion and adoption worldwide.

In the 2017 Framework implementation feedback, Richard Howitt, CEO of the IIRC said (IIRC 2017):

> *"We have seen 1,500 global companies adopt Integrated Reporting around the world, with its implementation already becoming mainstream in countries such as Japan and South Africa. This rapid adoption demonstrates the market view of the International <IR> Framework as a ground-breaking and beneficial tool".*

Since the declaration from Richard Howitt, many more organizations have adhered to the IIRC project, so that most recent data available from the website of the IIRC (integratedreporting.com) refers to over 1750 participants in the <IR> network worldwide (November 2019).

An interesting analysis of the worldwide spread of integrated reporting and <IR> Framework comes from a research, commissioned by the French Autorité des Normes Comptables (ANC, French Accounting Standardization Setter) to academics of the caliber of Carol Adams (Durham University Business School and Swinburne Business School), Delphine Gibassier (Audencia Business School) and Tiphaine Jerome (University of Grenobles Alpes). As stated by Howitt, the research revealed an uptake and increasing diffusion speed of integrated reporting globally (Gibassier 2019).

The research method, based on the assumption that the simple report label “integrated report” doesn’t include the variety of integrated report that are issued by organizations, took into account the GRI database, the Corporate Register, the IIRC itself (containing samples of the best integrated reports produced according to the framework in the number of around 200 reports), the list of JSE listed firms, KPMG’s database of Japanese firms issuing Integrated Reports and lastly, an “online-report” containing additional integrated reports.

The main findings help <IR> users and scholars understand the size of IR globally, considering its geographical distribution, main industry of interest and company sizes:

- **Geographically**, 21 are the countries producing more than 85% of integrated reports worldwide. Countries with the highest concentration of produced reports are South Africa and Japan, accounting together for a great 43% or reports identified. Up to the current years these two countries are also the ones with the highest prevalence of reports produced according to IIRC’s *Framework* (R. G. Eccles 2019).

  Coherently with what disclosed by the IIRC, the second biggest cluster of integrated reporters, is represented by European countries (The UK, The Netherlands, Spain, Switzerland, Finland, France, Germany, Sweden).

  Outside the European continents, Australia is a relevant producer of Integrated Reports, a country with a very vivid academic discussion over the topics of Integrated Reporting and the IIRC’s *Framework*, while in the South East Asia, a surprisingly positive remark goes to Sri Lanka, whose new and growing attention towards IR may be connected to the hosting in 2012 of the international conference on Integrated Reporting <IR>.

  Increasing interest is also coming from the US, following the actions taken from relevant multinationals such as Intel, General Electric, Pfizer, American Electric Power o produce Integrated Reports and considering the globally increasing number of businesses turning to the *Framework*.

- **Industry**. The composition of companies adopting integrated reports sees a vast majority constituted by firms involved in the financial sectors followed by industrials, consumer goods, utilities and oil & gas companies. The relative weight of industrial sectors producing integrated reports has remained almost unchanged if compared to the companies that piloted first the *Framework* after its release on December 2013 (Gibassier 2019).

- **Company Size**. It is interesting to look at the prevalence of firms publishing integrated reports depending on their size; 42% of companies have less than 5,000 employees (thus classified as medium-sized firms), regardless of previous researches highlighting that only large firms were the ones producing integrated reports (Gibassier 2019). Such previous empirical studies were based on the assumption that large firms were approaching integrated reporting because of their visibility and higher means available if compared to smaller firms.

Considering the current state of the IIRC's *Framework* out of all the organizations producing integrated reports, 39% of them mention the *Framework* and, inside this sample, the dept of adoption is considerably high (57%) (Gibassier 2019). The evidence suggests that together with an increasing trend for companies to disclose with integrated reports on non-financial information, the <IR> Framework is taken into account in a relevant share of the total and that, in the cases in which it is mentioned, firms related to many of the content elements present in the *Framework*.

2.3.2 THE ACADEMICS AND THE ACCA ON THE FRAMEWORK

This paragraph illustrates an analysis of the main challenges and opportunities that the *Framework* has faced from the point of view of the Academics and from the Association of Chartered Certified Accountants (henceforward ACCA), the global professional accounting body offering the Chartered Certified Accountant qualification.

Since the first release of *Framework* there have been questions regarding the efforts put in place by the IIRC to allow the spreading and worldwide adoption of the *Framework*. It has been observed the importance of the standardization of a practice, methodology or technology, for it to be able to spread across its users and be utilized by most organizations, becoming a common reporting practice

(Bonaccorsi 2003). The effect of positive network externalities is fundamental as the value of a standard increases at the increases of the number of its users.

One of the early criticisms from the academics has been the lack of regulation. The information disclosure of the *Framework* is, indeed, voluntary. This represents a strong pitfall to the IIRC's ambitions that undermine the *Framework's* effectiveness to change and impact the organizations' corporate reporting practices (Flower 2015). Thomson, on a commentary to Flower's article, points out the same weaknesses to the emerging unregulated integrated reporting practices, as they seemed to be more likely to rearrange unsustainable corporate practices as sustainable, instead of being a catalyzer for governmental sustainability reforms (Thomson 2015).

An analysis conducted on the perspective of <IR> users regarding the struggle between a voluntary or a mandatory approach to the <IR> was conducted by Stubbs and Higgins, pointing out that participants saw as negative the practice of a mandatory reporting, as it would result in a tick the box mentality and not in a true analysis of the value creation processes within the firm (Stubbs 2018). Interestingly, the opinion in favor of a voluntary approach to integrated reporting was the one supported from reports preparers, whereas most investors would be in favor of a compulsory approach, cause seen an enabler of reporting quality.

The discretion left to companies on their disclosing practices within the *Framework* is analyzed also by Tweedie and Martinov-Bennie. Leaving to companies the discretion to decide on the issues to be disclosed in the <IR> reduces the effectiveness of Integrated Reporting itself: there is a focus shift to reporting what makes organizations sustainable rather than focusing on society themselves and what can make them more sustainable (Tweedie 2015).

Even With such criticisms, the European Directive on the disclosure of non-financial and diversity information (2014/95/EU) represented since its coming into force in 2017 a strong opportunity to promote integrated reporting practices and in specific the use of the *Framework* (Dumay, Bernardi e Guthrie 2017). The directive, to be applied from 2018 on, makes it compulsory for large public-interest firms with a number of employees higher than 500, to include non-financial statements in their annual report.

Another very discussed theme on the *Framework* is the one of assurance. Assurance is fundamental to assess the credibility of non-financial information and integrated reporting. The way assurance challenges the *Framework* derives from the lack of mature reporting systems for the disclosure of non-financial information and the subjective nature of some of the contents of integrated reports. The evolution and improvements of non-financial information reporting depends primarily from its credibility and usefulness, so that stakeholders, to whom the integrated reports are addressed, can have on non-financial information the same guarantees as for traditional financial ones.

The major challenges standing in the way of the achievement of mature assurance practices in <IR> are listed below (Cheng 2014):

- Lack of consensus on the concept of "true and fair" in an integrated report.
- Discussion if the current form of the framework provides sufficient and appropriate guidelines to facilitate assurance of integrated reports.

Over the past years integrated reports have met a higher level of assurance. As reported by the ACCA, few organizations managed to achieve a reasonable assurance on elements of their integrated reports against the usual limited assurance associated with integrated reports (ACCA 2019).

The reason for it lays in the opportunity, as integrated reporting becomes more mature, for audit firms to collect a sufficient amount of information on integrated reports so to express a positive opinion on non-financial information disclosure (ACCA 2019).

A relevant analysis regarding the current reporting practices in the IIRC Business Network, was recently conducted by the ACCA. It reviewed a cluster of organizations' integrated reports to identify development trends, challenges, relative shifts in quality of their content elements over the years and it provided some useful insights on how to improve the reporting in accordance with the international <IR> Framework.

Coherently with previous findings, many organizations recognized in the use of Integrated Reporting the opportunity to deep dive into the company's internal processes and understand the dynamics underlaying the various dimension that contribute to the overall value creation process (ACCA 2019). Despite the criticism moved by Stubbs and Higgins, on the nature of internal changes determined by the adoption of integrated reporting, stating that the transformational nature of <IR> was more incremental, rather than radical and transformative (Stubbs 2018), Adams, pointed out the strong benefits of the adoption of <IR> in determining this exact internal change, in the cognitive frames of people involved in the higher management firms to enable a broader view of value creation (C. A. Adams, Conceptualising the contemporary corporate value creation process 2017).

The study conducted by the ACCA in 2018 highlighted the main challenges to the progress of integrated reporting, in order of importance:

- Organizational / functional silos within the firm.
- Lack of adequate internal systems to monitor performance.

- Limited experience of organizations in the extraction of non-financial information.
- Low internal management / executive support.
- Internal resistance to change.

Regardless of the barriers to <IR> adoption pointed out by the ACCA, it is out of doubt the positive attitude of the main accounting body towards integrated reporting. It is believed that the journey towards integrated reporting will have bigger benefits, as long as more and more efforts are put into this practice.

2.3.3 THE IIRC FEEDBACK REPORT

In 2015 the IIRC itself recognized the existence of relevant issues to be faced in the delivery of its 2014-2017 Breakthrough Phase Strategy. Some of these challenges included the lack of credibility of integrated reports (having a negative impact on the <IR>), lack of evidence regarding the real impacts deriving from the application of the *Framework* and the failure to keep the International <IR> Framework updated with technical and non-technical outputs.

A strong initiative taken from the IIRC is undoubtfully the “Invitation to comment: <IR> Framework Implementation Feedback” with the opening, on the 27^{th} of February 2017, of a two-month comment period to gather valuable insights on the current stage of the <IR> from all the stakeholders involved in the process. The comment was addressed to a variety of users of IR: companies, providers of financial capital, policy makers, regulators, standard setters, assurance providers and academics.

The data collected and analyzed by the IIRC resulted in the International <IR> Framework Implementation Feedback, a document aimed not only to share these feedbacks with the addresses of the initiative, but also to inform stakeholders on the next steps that the IIRC intended to take, namely, its strategy development and policy efforts (IIRC 2018).

Below the reader shall see some of the main issues identified in the International <IR> Framework Implementation Feedback (IIRC 2018):

- Lack of guidance and understanding of the multiple capitals approach and the way capitals integrate with each other.

- Strong challenge in implementing connectivity of information and integrated thinking in the organization.
- Confusion regarding the specific audience and purpose of the guiding principle “Stakeholder relationships”.
- Lack of concreteness on the topics of materiality and value creation, main variables around which the integrated report is created.
- Confusion on IIRC’s expectations about conciseness.
- Difficulties to properly tackle the disclosure over organizations’ business models, having to link the business model’s outcomes and outputs with value creation and the capitals.
- Obstacles in involving people charged with governance in the implementation of Integrated Reporting.
- Challenges were as well seen in the shift towards long term thinking and reporting and alignment within reporting frameworks.

All these issues have a common denominator underlaying the difficulties met by organizations in applying the *Framework*: a lack of guidance and leading practices to be taken as examples (Rinaldi 2018).

The IIRC demonstrated to be willing to take concrete actions to enhance the <IR> positioning and clarify the *Framework* content elements, purpose and guiding principles. Seemingly optimistic regarding the current structure of the *Framework* is the choice of the IIRC not to modify the original *Framework*. IIRC declared the lack of new or compelling arguments pushing towards a revision of the *Framework* in the very near future (IIRC 2018). Two relevant actions taken from the IIRC include: the creation of a FAQ section in the IIRC website (IIRC s.d.) in which many of the critical elements outlined in their analysis of the “invitation to comment” are addressed, and the creation of a database (<IR> Examples Database) containing most relevant examples of integrated reports produced. These actions show that the IIRC wants to provide its users with a clear guidance for all those firms facing difficulties in addressing critical themes such as the connectivity of information, relationship with stakeholders or with disclosing information on value creation processes.

Lastly, a “leap forward” on a relevant topic such as the one of assurance, has been the very recent release (in the 19th of September 2019) of IIRC’s 2018 Integrated Report with, for a first time, limited assurance from an independent auditor.

Despite having received a limited assurance on the report, auditors confirmed the correctness on the more significant data within the report, posing the right foot forward to obtaining a reasonable assurance.

2.4 CONCLUDING NOTES

The chapter made it evident the rising importance of disclosing non-financial information in today's business environment to meet the increasing information needs from stakeholders and regulators.

IIRC's *Framework* managed to immediately capture the attention thanks to the strong network of supporters within its foundation and to the combination of a structured form, but still a relatively high degree of discretion to meet the different needs of reporting organizations.

Despite the growth of the *Framework* adoption over the years, many challenges remained open regarding its credibility, institutional regulation, vague definitions and potential to win internal barriers to be a concrete catalyzer for organizations to evaluate and improve the value creation processes within the company itself.

The actions recently taken by the IIRC to enhance clarity and give support on the *Framework* and its application represent positive inputs in response to the criticisms coming from the academic environment and the concrete experience of firms in producing their Integrated Reports, giving positive hopes for its future scalability.

3. CASE STUDIES, THE ITALIAN CONTEST: ATLANTIA AND TERNA

The fourth chapter will study the reports produced by two listed companies from the Italian contest: Atlantia SpA and Terna SpA. They are both large companies in accordance to the European Union Directive 2013/34's requirements and belong to the *Star* and *FTSE MIB* Segments of the Milan Stock Exchange.

Such analysis highlights the flexibility of the IIRC's International <IR> Framework, which, instead of proposing a strict methodology for its adoption, has a principle-based nature coherent with its intention to be applicable across different entities and industries in accordance with their very personal and unique value creation processes.

Both Atlantia and Terna have produced integrated reports since the first publication of the Framework in 2013 and previously took part in the IIRC Pilot Program started during 2011 as an answer to a cultural incentive in terms of sustainability and corporate responsibility. Interviews conducted with the selected companies' managers (sustainability and investor relations managers) pointed out the belief that the adoption of integrated reports was a better choice to transmit investors information on how the company creates value in comparison to the issuance of two stand-alone documents (financial report and sustainability report) (Camodeca 2017).

The interest in the choice of Atlantia and Terna has therefore two different motives:

- On one hand they are both Italian organizations that in their industry, respectively infrastructure and utilities sector, are top players not only nationally, but on an international level, with a long history of sustainability reporting.
- On the other hand, in their concrete and correct application of the Framework, they adopt two different approaches to it: Atlantia SpA produces an analysis centered on the six capitals utilized as inputs for the business model, demonstrating a strong compliance to the capitals model proposed by the IIRC, and an analysis based on the different business areas in the case of Terna SpA.

It is important to underline that both companies are subject to the Legislative Decree No 254/2016 approved by the Italian government on December 30th 2016, in implementation of the Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 and amending

Directive 2013/34/EU as regards the communication of information to non-financial information and information on diversity by certain companies and certain large groups.

Specifically, the Decree makes it compulsory for public interest entities, such as Atlantia SpA and Terna SpA, to produce an annual statement disclosing nonfinancial information regarding the general features, performance and evolution of the firm overtime, together with the impacts determined by the activities performed on social, environmental, human rights and anticorruption matters.

3.1 COMPANY OVERVIEW – ATLANTIA

Atlantia SpA is an Italian holding company operating in the infrastructure sector with headquarters in Rome, Italy.

Today, after the acquisition of Albertis, finalized in October 2018, it is the global leading operator of transport infrastructure, thanks to the management of over 14.000 km of toll motorway in 23 countries across Europe, the Americas and Asia, and the management of the 2 airports of Rome and the 3 airports of the French Riviera in Côte d'Azur that, in total, allow over 60 million passengers to fly every year (Atlantia 2018).

The acquisition of Albertis, a company with similar figures and an extensive and diversified asset portfolio, doubled the main figures of Atlantia, that in 2018 produced Revenues for €11.344 billion with an EBITDA of €7.307 billion and a Capital expenditure of €1.728 billion. Atlantia, with a workforce of 31,000 people around the world, has overtime showed a strong entrepreneurial and financial discipline with a decisive commitment to operate in accordance with ethical, environmental and governance principles.

The history of Atlantia SpA starts back in 1950 when the Italian Institute for Industrial Reconstruction (IRI) in order to enter the motorway business created the company Autostrade Concessioni e Costruzioni SpA, that in 1956 collaborated with ANAS for the realization (financing, building and management) of the oldest in Europe and most prominent Italian highway: the Autostrada del Sole (Atlantia 2018).

During the 60s the company gained the concession to operate and build additional motorways and in the 1999 the company, previously state owned, was eventually privatized. The IRI was replaced with a group of stakeholders led by the Edizione (a company of the Benetton Group) and followed by Fondazione CRT, Generali Insurance and Italian Unicredito. An important milestone and matter of pride of the firm in the 90s is the introduction in its highway of the Telepass, the world's first electronic toll system.

The geographical diversification of the holding started in 2005 when the firm started a series of acquisitions in Chile, Brazil, India and Poland of 2000 km of toll motorway to manage.

In 2007 the Board of Directors deliberated for a change in the company name from Autostrade Concessioni e Costruzioni SpA to the current name of Atlantia SpA.

In 2013 another period of diversification led to the expansion of the holding in the airport infrastructure sector, with the control of the two airports of Rome (Fiumicino and Ciampino) and in 2016 of the airports of Nice, Cannes-Mandelieu and Saint Tropez, in the French Riviera.

In the most recent period Atlantia attracted a relevant press attention with the tragic collapse of the Morandi Bridge of Genova on the 14^{th} of August 2018. The management of the bridge was responsibility of Autostrade per l'Italia, main Italian asset of the holding and investigations are proceeding to assess the responsibilities for such disaster. The holding was also involved in the consortium for the liquidation of the Italian airline company Alitalia together with players such as Ferrovie dello Stato Italiane SpA (FS) and Lufthansa AG, but in November bailed out from the participation to a potential investment plan in the attempt to prevent Alitalia from bankruptcy (Bloomberg 2019).

The commitment of the group towards sustainability derives from the increasing complexity of the sustainability reporting itself, and in order to produce reports far from being self-referential and hardly allow a comparability with other firms in the same sector and across industries, Atlantia assess to be nowadays following the international guidelines produced by the GRI and the IIRC.

The history of reporting of Atlantia that lead to the current reporting documents starts back in 1997 with the publication of a first environmental report and CSR report by Autostrade per l'Italia SpA, principal Italian asset of the group.

The following years see an integration of the two report in a single social and environmental report, with the objective to integrate and highlight the correlations between the two in the year 2000.

Consequently Atlantia decided to adopt the GRI guidelines G3 (with a maximum level of compliance to the GRI framework – A+ Level) in their sustainability report in 2007, two years prior the impressive performance of Atlantia with the inclusion in the Dow Jones Sustainability Index (Atlantia 2009).

Eventually Atlantia joined the pilot program for the <IR>, together with Terna among the others, and produced in 2013 the first integrated report, carried on till the current year with its seventh edition.

3.2 <IR> ANALYSIS

In order to have a deeper understanding of the meaning of sustainability for Atlantia SpA and the methodology according to which the company has implemented integrated thinking in its core processes, this paragraph will analyze the latest Integrated Report (2018) produced by Atlantia in accordance to the guidelines on concepts, principles and elements provided by the IIRC for the production of an Integrated Report.

The Integrated Report produced by Atlantia is interestingly structured in a very different way from the one developed by Terna. In fact, as the former elaborates on the capitals and the value creation processes of the Group by having as a starting point the different business areas in which the Group operates, Atlantia's Integrated Report immediately analyzes the Group's integrated performance in accordance to the capitals defined by the IIRC's Framework.

3.2.1 LETTER TO STAKEHOLDERS – ATLANTIA FOR GENOA

It is interesting to start from the Letter to Stakeholders in Atlantia's analysis because of the previously mentioned tragic event that involved the Group in August 2018. In the morning of the 14th of August 2018, a portion of 200 meters of the Morandi Bridge of the A10 collapsed causing the death of 43 people and injured 14 other civilians. The company responsible for the maintenance of the bridge, Autostrade per l'Italia SpA, controlled by Atlantia (88.06% of the share capital) and representing the main asset of the group in the Italian Peninsula, is currently under investigation for the assessment of the causes and consequent responsibilities for the tragic happening (la Repubblica 2019).

In the letter to its stakeholders Atlantia reiterates the condolences of the group to the family of the victims involved in the tragic collapse of the Morandi Bridge and underlines how since the immediate moments following the event, Autostrade per l'Italia, supported by the whole Atlantia Group, has provided resources to be of support to the families of the victims, firms and local institutions to find a solution to allow the road network to not be badly weakened by the unavailability of the bridge, part of one of the main highways of Italy (Atlantia 2019).

The following section, named Atlantia For Genoa, presents the initiatives undertaken by the Group to demonstrate the commitment of the firm towards safety and the community of Genoa, coherently with the nature of the Group as a socially responsible organization.

Atlantia claims that immediately after the tragedy in Genova, its controlled company, Autostrade per l'Italia, worked to preform monitoring and quality control over other 130 among the most important infrastructures on its network to assess the its security. The controls were executed by Spea Engineering, company controlled by Autostradale, that is nowadays, months after the publication of the Integrated Report here analyzed, also involved in investigations for the collapse of the Morandi Bridge and the falsification of reports on the actual quality of the other infrastructures (Il Fatto Quotidiano 2019).

Despite the very latest events, Atlantia claims how the safety of its assets has been a priority of the Group over the years, thanks to constant interventions aimed at increasing the quality of infrastructures and travelers as well. Among them, the section quotes the total coverage of the Italian network with self-draining asphalt, or the installation of high capacity containment barriers, the implementation of over 1800 signs all around the network to promptly increase travel awareness of contingent issues or promote safe traveling behaviors.

Data sustaining such commitment is reported regarding the decrease of the mortality rate of 77% and the decrease of 55% of accident rates considering a time frame of almost 20 years from 1999 to 2017, as well as the considerable investments from the Group in maintenance for over €5 billion, around €195 million more than the expenditure commitment set in the previous Agreement (Atlantia 2019).

The involvement of the firm in support to the family of the victims and the community of Genoa as a whole was addressed towards the inhabitants of the so called "Red Zone", directly affected by the collapse of the bridge to cover primary expenses related to payment of rents, mortgage loan installments, renovation of buildings and costs for the upcoming school year. Support has been provided as well to commercial activities present in the Red and Orange Zone to help them continue their core activities despite the difficulties arising by the collapse of the bridge (Atlantia 2019).

3.2.2 GROUP PROFILE

This paragraph of the integrated report describes some of the content elements of an integrated report regarding the Organizational Overview and External Environment, by describing the group structure, the assets and their geographical distribution worldwide, together with the business model and the strategy adopted by the Group in the value creation process.

As previously said in the company overview, with the acquisition of Albertis in October 2018, Atlantia has become the global leader in the management of transportation infrastructures.

The activities of the group are conducted in 16 countries worldwide and imply the management of over 14.000 km of toll motorway in concession, together with the 5 airports across Rome and the south of France (Atlantia 2019, 10).

The business model of the Group is composed by three different directives that are supported and inspired by guidelines aimed at a sustainable behavior thanks to the attention to the stakeholders of the group that are directly affected by the business conduct of the former. Once again the customer centricity appears fundamental for the firm, that seeking safety and security of the assets managed wants to be open to communication and dialogue with the local communities and act in an environmentally sustainable way.

The three main directions on which the business model develops are (Atlantia 2019, 19):

- Services, expressed in the ability to provide to the final customers always a high-quality service, by disseminating information about traffic or safety issues in highways and airports, and by operating an ongoing maintenance and monitoring of the infrastructures managed.

- Technology, variable that has always represented a matter of pride for Atlantia and that implies on one hand the design and implementation of the necessary infrastructures for the automation of toll payments and mobility management systems and on the other hand in the research for the production of innovative technologies in the fields of telematics and infomobility, road safety, and to increase the efficiency in the management of airports, the environmental sustainability, energy and traffic control.

- Capital Expenditures, for the design and development of expansions with the objective to increase service capacity and level; the development of internal know-how to meet the increasing information needs arising in each department.

The report goes on by describing very synthetically the outcomes expected in the long term, related to the contribution to a sustainable and safe mobility, to the best exploitation of infrastructural capital as a major asset for the economic and social development of the regions in which the Group operates and in the development of technologies able to reduce the environmental impact of the activities performed by the group, both in the highway and airport management.

3.2.3 RISK MANAGEMENT

This section describes the risk management processes undertaken within Atlantia. Atlantia points out the implementation in the year 2005 of a Enterprise Risk Management (ERM) model together with the Risk Appetite framework, aimed at evaluating the nature and level or risk that is acceptable in accordance to the strategic objectives of the group (Atlantia 2019, 24).

Being Atlantia an holding, the risk management processes start from the board of directors with the definition of methodologic guidelines that are forwarded to the boards of individual companies within the Group for them to prepare and update their specific risk catalogues, that need to be eventually submitted to Atlantia's board of directors for approval.

The four different risk categories are below represented:

Figure 7 (source: https://www.atlantia.it/documents/20184/509291/2018_Atlantia_integrated_Eng.pdf/7236d9dc-f016-4e3e-90bf-26ed143328ec)

In accordance to the Italian law decree 254/16 on the disclosure of non-financial information, the report describes afterwards the risks that are produced or that are able to affect the business operations conducted that are not strictly financial risks. The report identifies therefore 8 additional risk categories and analyzes them in accordance to the internal guidelines and procedure implemented for their precise risk management:

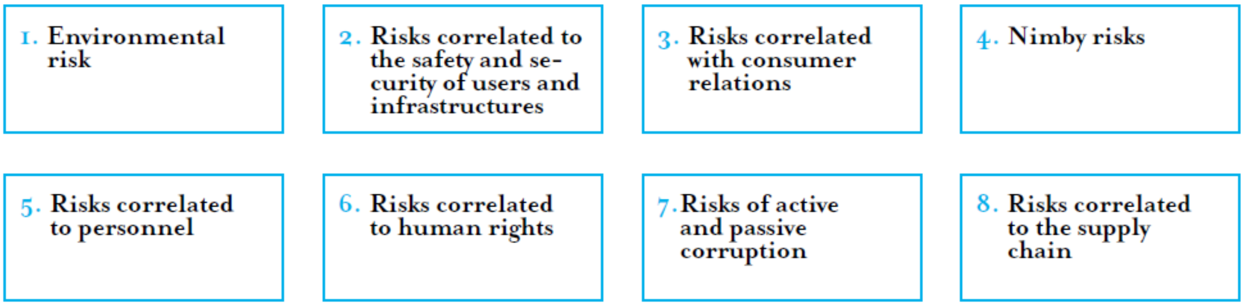


Figure 8 (source: https://www.atlantia.it/documents/20184/509291/2018_Atlantia_integrated_Eng.pdf/7236d9dc-f016-4e3e-90bf-26ed143328ec)

3.2.4 GOVERNANCE

The group presents a traditional governance system. The corporate governance system has been designed to allow the best interaction possible of stakeholders with the strategic orientation of the company. Atlantia, in describing the values by which the work of the board of directors, endowed with exclusive competency and full powers over the company’s management, quotes two of the sustainable development goals of the UN agenda: the SDG number 8 aimed at promoting a sustainable economic growth with decent work conditions and productive employment, and the SDG number 16, that sees in the promotion of law and justice level a key for peaceful and sustainable societies.

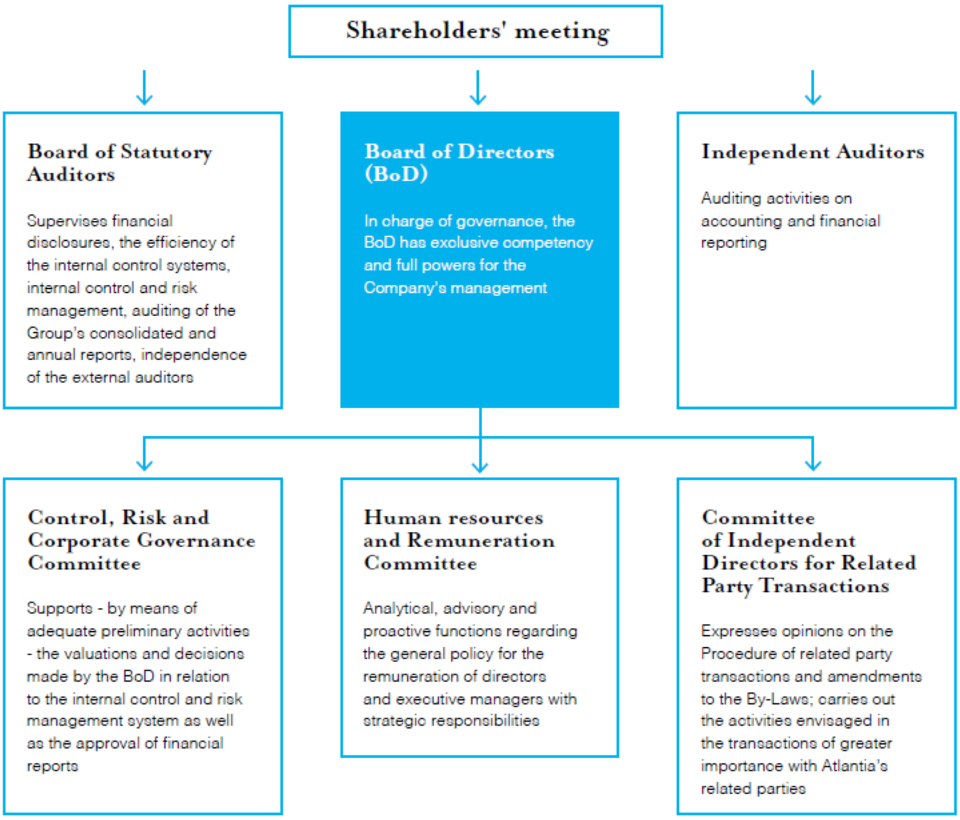


Figure 9 (source: https://www.atlantia.it/documents/20184/509291/2018_Atlantia_integrated_Eng.pdf/7236d9dc-f016-4e3e-90bf-26ed143328ec)

In dealing with sustainability at a corporate governance level there are few initiatives undertaken by Atlantia to foster the adoption of sustainable and lawful behaviors within the firm (Atlantia 2019, 40):

- Anti-Corruption Policy.

  Apart from being a compulsory obligation for Atlantia to be fighting against unlawful behaviors, the Group shows interest on this topic, seen as a founding value of Atlantia. Specifically, apart from the adoption and promotion of an Ethics Code, concrete commitment on the matter of anti-corruption, has as well adopted an anti-corruption policy to stress more and more the internal awareness on such standards and promote an ethical conduct.

- Protection of human rights

  Showing attention towards the 10 principles of the UN Global Compact on the protection of human rights, working conditions and environmental protection, Atlantia adopted a code of conduct aimed at creating a workplace without discriminations, where employees are well aware of their rights and their dignity, and in which disciplinary actions are taken when discriminatory behaviors manifest themselves.

- Remuneration Policy
  An additional tool for the corporate governance for the pursuance of a sustainable working environment based on equity and merit is the remuneration policy, that rewards employees' merit and motivation on the basis of their achievements.

- Sustainable Governance
  Atlantia instituted as well a Sustainable Committee, both at a central level and in the different subsidiaries, for the active promotion of the values and principles that seek sustainable development within the Group, controlling the reporting produced towards stakeholders and the achievement of the Group's goals annually.

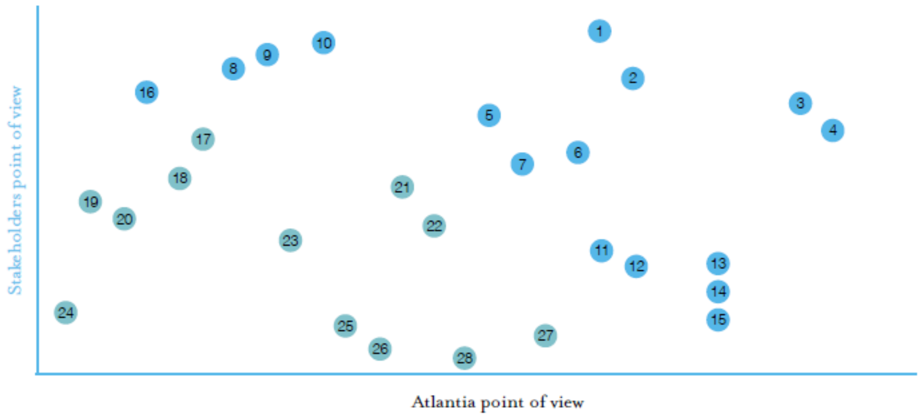
3.2.5 ANALYSIS OF MATERIALITY AND STAKEHOLDER ENGAGEMENT

Atlantia conducted a materiality analysis to understand the most relevant topics for the group, both from the point of view of stakeholders and from the internal one.

The internal analysis was conducted with 7 interviews to the Group's top management for the main departments, while the analysis on stakeholders was conducted on three different directives: by analyzing the regulatory area, as the main directives and laws that impact Atlantia's transportation management business, by gathering data from the media and social networks, and eventually studying the competitive environment of Atlantia, with attention to companies operating in the same business and in ancillary ones (Atlantia 2019, 44).

The result is reported in the figure below.

2018 Materiality matrix



Material aspects	
1 - Anti-corruption and bribery	9 - Customer privacy & information security
2 - Health & safety and wellbeing	10 - Climate change & air quality
3 - Product and service safety	11 - Stakeholder inclusion
4 - Customer satisfaction	12 - Talent & development
5 - Energy efficiency	13 - Talent attraction & retention
6 - Waste management	14 - Long term value and business development
7 - Governance	15 - Transparency
8 - Labor rights	16 - Water management

Other aspects
17 - Equal opportunity and diversity
18 - Competitive pressure
19 - Materials management
20 - Geopolitical events
21 - Noise pollution
22 - Land protection
23 - Innovation & digitalization
24 - Human rights
25 - Responsible supply chain
26 - Sustainable mobility
27 - Local community support
28 - Responsible investment

Material aspects
Other aspects

Figure 10 (source: https://www.atlantia.it/documents/20184/509291/2018_Atlantia_integrated_Eng.pdf/7236d9dc-f016-4e3e-90bf-26ed143328ec)

The materiality analysis is followed by a section focused on the stakeholder engagement strategies of Atlantia. The main stakeholders are represented by the ministries of transport and infrastructures, of the environment, of the cultural heritage, the parliamentary committees on the sector and of course the local, regional and municipal authorities for the sharing of the development plans with the local communities.

On the topic of the collapse of the Morandi Bridge it is interesting to note how Autostrade per l’Italia created an ad hoc section on its website named “Autostrade for Genoa”, aimed at the disclosure of information about the Morandi bridge and in general terms the concessions that Autostrade per l’Italia has in the management of the Italian transportation infrastructures.

3.2.6 CAPITALS: FINANCIAL CAPITAL

The financial capital is defined in the Framework as the (IIRC 2013, 11):

“The pool of funds that is:

- *available to an organization for use in the production of goods or the provision of services.*

- *obtained through financing, such as debt, equity or grants, or generated through operations or investments.”*

The paragraph goes through the main economic metrics of the Group divided per geographical area (Italy and abroad) and type of business (motorway and airport activities). The performance of Albertis is reported separately as the consolidation of October 31st 2018.

Following the guidance of the GRI 201 standard, first among the specific standards from the Economic series (200), the paragraph on financial capital goes on analyzing the economic performance of the Group with the Economic Value Generated and Distributed (EVG&D), aimed at providing a basic indication on the way the organizations are generating and distributing economic value to their stakeholders.

The Value Added created in the year 2018 (€3,329 million) decreased of a 9% in comparison to 2017, mainly because of higher provisions allocated to Genoa after the collapse of the Morandi Bridge and determined, in its distribution to the Group’s stakeholders, a relevant decrease of the dividend payout to shareholders (Atlantia 2019, 54).

Finally, the paragraph analyzes the various tariffs policies adopted in Italy and in the markets abroad in which the Group operates, describing the absolute percentual change in the tariffs worldwide and the main drivers influencing such variations.

3.2.7 INFRASTRUCTURAL CAPITAL

The infrastructural capital, despite having a different denomination in the Framework is to be identified with the Manufactured Capital, composed by all the material assets as physical objects that are used by the organization to execute its core business.

In the case of Atlantia the Infrastructural Capital is constituted by the motorway network managed in Italy, under concessions, and abroad in Brazil, Chile, India and Poland. Moreover, as previously stated, the Group manages 5 airports between Rome and the south of France.

The Italian network is the biggest asset of the Group, with 3,020 km managed in comparison to the 2,022 km of motorways managed aggregately in the rest of the world.

Together with the description of each of the asset managed by the Group in each of the countries above mentioned, this section illustrates the investments done with a specific focus on the Italian region. The investments in the motorway business are intended at improving the level of service of the network, by ensuring fluidity and safety of mobility.

On regards of the Airports of Fiumicino and Ciampino the investments amounted to €183 million in 2018 and mainly focused on the much bigger Fiumicino Airport, that is expected to be increasing its traffic capacity to over 50 million passengers per year, in alignment with the main European airports.

Among the foreign motorways managed Brazil represents the biggest asset accounting for over two third of the motorway network managed outside Italy (1,538 km).

3.2.8 HUMAN CAPITAL

Very much in line with the Framework, this section describes the human capital, represented by its employees, by providing at first general data and trend figures regarding the variation in the number of employees, the causes for contract terminations, the distribution by age and education, and salary ratios between men and women.

For the scope of the analysis in accordance to the definition of human capital from the IIRC, it is relevant to mention the initiatives assumed by Atlantia to increase the value of its employees' competencies, motivation, experience and alignment with the organization governance and strategy (increase in the value of its human capital).

In brief the report highlights the main pillars of the Group's policy towards the enhancement of human capital (Atlantia 2019, 74):

- "Diversity", that given the international nature of the holding is consider as an asset for the enhancement of knowhow and innovation.
- "Talent Management", as the Group sees crucial the attraction or right talents and their development with diversified experiences such as the ones provided with intercompany mobility tools, allowing employees to exploit internal mobility as a professional upgrade.
- "Remuneration" based on performance incentives to retain the best qualified resources.

The long-term goals identified in this sense by Atlantia are the achievement of safety at work, on which data shows a relevant reduction of accidents of any sort from the previous years, and the ensuring the development of employees' wellbeing at work.

Atlantia is then active in the promotion of initiatives aimed at supporting the employee welfare, mainly divided in three main areas summarized in the chart below.

HEALTH CARE
Initiatives for employee health and wellness

- Supplementary health insurance policies (only for employees with a permanent employment contract)
- Professional and extra-professional life and accident insurance policies valid in Italy and abroad
- Insurance coverage for permanent illness-related disability (only for employees with a permanent employment contract)
- Preventive specialist visits and free health screening
- Anti-flu vaccines
- Corporate Wellness initiative to raise employee awareness on wellness and active life approaches

PEOPLE CARE
Engagement and "time saving" initiatives

- Conventions and income support tools in terms of utilities and services
- Intranet/internet portals dedicated to the distribution of all organizational and service information to employees
- Legal and fiscal advisory services for individual and family related issues
- Engagement and active involvement initiatives on themes regarding social promotion, voluntary work and wellness
- Facilities for public transport, corporate carpooling and car sharing
- Company canteen and/or meal vouchers
- Flexible benefits (welfare plan structured on custom services)

FAMILY CARE
Initiatives for the family and employees' children

- Innovative actions and services supporting life-work balance
- Facilitations regarding supplementary social security funds
- Civil liability policy insurance for family members
- Organization of summer camps in Italy and abroad for the children of employees, including sports, recreational activities and foreign language learning
- Flexible working tool also in support of parenting and support for post leave reintegration (average rate of return[18] from parental leave is equal to approximately 87%)
- Agreements with nurseries and schools
- School and university orientation for the children of employees and study grants
- Personalized counseling in case of employee return after long periods of absence due to illness, pregnancy, etc. and/or aimed at improving employee life/work balance
- Family day
- Agreements for assistance and care of the elderly (elder care)

Figure 11 (source: https://www.atlantia.it/documents/20184/509291/2018_Atlantia_integrated_Eng.pdf/7236d9dc-f016-4e3e-90bf-26ed143328ec)

3.2.9 SOCIAL CAPITAL

The Social and Relational Capital is referred to the ability of the organization to contribute to the individual and collective well-being of the local communities, to share information and build a constructive relationship with institutions and groups of stakeholders. It is usually pictured internally in the norms and common values of the firm and is reflected outside in the brand and reputation that an organization manages to develop thanks to its interactions with the external environment.

Atlantia indicates at first the main stakeholders with which the Group has interaction in the performance of its core business: clients, community, suppliers (Atlantia 2019, 88):

- Clients

  Both in the case of motorway and airport clients the main goal of Atlantia is the improvement of quality and safety standards thanks to infrastructural investments and communication aimed at raising awareness over relevant safety issues. Since the privatization of Atlantia, the Group claims strong investments in the Italian motorways that over the years are leading to a relevant decrease of the mortality rate and increase in customer satisfaction.

The report stresses the decreasing trend of the death rate in the long term despite the increase from the last year due to the Genoa Tragic event (0.32 in 2018 against 0.24 in 2017, calculated as number of victims / 100 km traveled).

The Genoa event has repercussions also in the Customer Satisfaction Index, measure based on Customer Satisfaction Surveys conducted twice a year on a heterogeneous group of customers. The results of the year 2018 show a decrease of the Index against the growing trend existing since the year 2012.

- Community

  The relationship with the community is managed in three different directions: the production of information campaigns for higher awareness on issues connected with the main business of Atlantia; sharing with the communities information on the infrastructural plans that the Group is developing both in the motorway and airport business; development of initiatives for the support of local culture and environmental protection (in the year 2018 Atlantia devoted approximately €1.2 million in initiatives for the community).

- Suppliers

  Considering the multiple business operated by Atlantia, the suppliers play necessarily an important role and represent a very diversified group of heterogeneous companies. Data reported refers to around 9400 active suppliers present for the largest relative share in Italy (71%) (Atlantia 2019, 106).

3.2.10 NATURAL CAPITAL

This paragraph presents the environmental strategy of Atlantia in relation to the Natural Capital, the sum of all the renewable and non-renewable resources and processes supporting the activities performed within the organization (IIRC 2013).

The Integrated Report therefore disclose in detail information relative to the energy consumption, water consumption, waste withdrawals, noise pollution and carbon footprint of the Group.

The long-term goals identified by Atlantia are correlated with the UN SDGs number 6, 9, 11, 12 and 13, respectively aimed at the achievement of clean water, industrial innovation, sustainability of cities and communities, responsible consumption and production, climate action.

The environmental strategy of Atlantia aims specifically at the reduction of its environmental impact (in water withdrawal or waste production), reduction of its carbon footprint and reducing the noise pollution caused by its businesses (Atlantia 2019, 112).

Data on the energy policy of the Group shows an increase in the total consumption of energy (9.5% more in comparison to the one in 2017) mainly due to the increased energy generation needs of the Fiumicino Airport (17% more than the previous year). The relevance of the Italian airport in contributing to the aggregate energy consumption of the Group reflects the relative weight of the Italian market in the energy consumption. The Italian peninsula accounts in fact for 85% of the total Group's consumptions.

The increase of energy consumption is reflected in the increase of the carbon footprint of Atlantia. The increase, lower than the total increase in energy consumption (4.5% increase in CO2 equivalents against 9.5% increase in energy consumption) is determined by the specific policies adopted by Atlantia to mitigate its carbon footprint and adapt to the arising climate changes. In demonstration of its commitment Group has since the year 2004 participated in the Carbon Disclosure Project (CDP), a worldwide relevant platform for the collection of data regarding the environmental performance of companies worldwide. Among the Group businesses, it's interesting to report the "carbon neutrality" of the Airports of Rome and South of France managed by Atlantia.

3.2.11 ANNEX

The last section of the Integrated Report of Atlantia describes the process for the drafting of the report.

The references to produce the Integrated Report are:

- The Legislative Decree No. 254/2016, in implementation of the European Directive 2014/95/EU on non-financial reporting, being Atlantia SpA a Public Interest Entity.
- The International <IR> Framework set out by the IIRC.
- The GRI Sustainability Reporting Standards (G4) following the "in accordance core" option.
- Corporate documents from which information presented in the report were extracted: Code of Ethics, Remuneration Report, Report on Corporate Governance and Ownership Structure, Annual Report.

The report was as well submitted to an independent auditor, Deloitte & Touche SpA and subject to "limited assurance engagement".

A final summary table provides guidance on the indicators utilized within the report in accordance to the G4 GRI standards and is followed by a table drafted as part of the SDG Compass, with the objective to highlight the Sustainable Development Goals on which the activities conducted by Atlantia have the most relevant impact.

3.3 COMPANY OVERVIEW – TERNA

Terna is Transmission System Operator (TSO) based in Rome, Italy.

The company represents one of the main European electricity transmission grid operators and it is the majority owner of the Italian high voltage and extra high voltage transmission grid, services carried out in a monopoly arrangement based on governmental concessions.

Terna is a constituent of the FTSE MIB, as Atlanti, and a recognized leader in the sustainable conduct of its business. Included in the prestigious Dow Jones World Sustainability Index (DJSI) since 2009, an Index evaluating globally the best performing companies in matter of sustainability, Terna placed in the 2018 Ranking at the top worldwide in the Electric Utilities Sector. The result is extremely important also considering that only 6 are the Italian companies present in the Index (Terna 2019).

In addition to the DJSI, Terna is also present in other notorious international sustainability indices, such as: ECPI, Ethibel Sustainability Index (ESI) Excellence Europe, FTSE4Good (Global and Europe) and the United Nations Global Compact (“GC100”).

The main operations of Terna can be summarized in three macro-categories: Regulated Activities in Italy, Non-regulated Activities and International Activities (analyzed in depth in the following paragraphs):

- Regulated Activities in Italy are constituted by the transmission and dispatching of electricity across Italy and make up for most of the revenues of the company (€1.989 billion, 90.5% of revenues in 2018).
- Non-regulated Activities are activities with strong innovative impact in terms of connectivity and energy solutions, in Italy and Europe, to support the launch of new services for a global sustainable energy transition.

- International Activities in Brazil, Uruguay and Peru, consisting of infrastructural development, system integration and technical advisory the firm Terna is collaborating with in South America.

Terna was established within the Enel Group in March 1999, in implementation of the Law Decree 79 determining the liberalization of the Italian Electric Sector and, in specific, the separation of ownership between the National Transmission Grid from the control of the Grid itself. Two companies were consequently established: Terna, as the owner of the Italian transmission grid, and the National Transmission Grid Operator (GRTN) (Terna 2019).

The company evolved in the years to come with the introduction of a new management system to ensure the impartiality and neutrality of Terna itself, in 2004 50% of Terna's share capital is floated on the Italian Stock Exchange and eventually, in 2005, there is a reconciliation between management and ownership of the grip, giving Terna a new mission to serve.

From the year 2009 on, Terna sees a period of expansions with the initiation of new infrastructural projects and investments in Non-regulated activities, and the acquisition of 18,600 km of high voltage lines from Enel, becoming therefore the European independent grip operator and the 7th in the world (Terna 2019).

In 2015 Terna acquires additional high voltage grid from the Italian Ferrovie dello Stato for € 757 million therefore consolidating its already established leadership in Europe with a total of 72,600 km of grid management.

In 2018 the Terna performs a partial demerger of Terna Plus Srl (a subsidiary company wholly-owned by Terna) to focus on the international development of the group in South America at its and more generally around the world, and establishes a new company Terna Energy Solutions Srl, to focus on non-regulated and energy solutions activities.

The main steps of Terna towards the participation to the IIRC Pilot program in 2011 for experimenting the drafting of an integrated report, resulting in the publication of the first integrated report in 2013 started before the 2011. The commitment of the firm towards sustainability is clear from the mission stated in the 2017 Sustainability Report (Terna 2017, 3):

"To play a leading role in the coming sustainable energy transition, by leveraging our distinctive innovation capabilities, competencies and technologies for the benefit of all stakeholders"

In the year 2009 Terna joined the UN Global Compact, to foster compliance on the 10 principles related to human rights, employment, the environment and fight against corruption, and since 2006 it has adopted the Guidelines of the GRI (application level: Core).

The form chosen for disclosure of non-financial information by Terna before the formal adoption of the *Framework*, has been the one of a stand-alone sustainability report.

3.4 <IR> ANALYSIS

In order to have a deeper understanding of the meaning of sustainability for Terna SpA and the methodology according to which the company has implemented integrated thinking in its core processes, this paragraph will analyze the latest Integrated Report (2018) produced by Terna in accordance to the guidelines on concepts, principles and elements provided by the IIRC for the production of an Integrated Report.

The 2018 Integrated Report is divided in five parts:

1. The Terna Group.
2. The energy environment.
3. The Group's strategy and businesses.
4. Performance.
5. Annexes.

3.4.1 THE TERNA GROUP

The first part of the report illustrates the business model of the company highlighting the cascade of relationships existing between the activities conducted by Terna (regulated, non-regulated and international) and the value creation process that progressively leads to a sustainable business conduct.

The business model of Terna is primarily focused on the Regulated Activities, accounting for most of the business and consisting in the transmission and dispatching of electricity. The Non-regulated and International Activities are ancillary to the Regulated ones, aimed at taking advantage of the opportunities generated by the technological discontinuities of the energy sector worldwide and that use as a leverage the expertise developed in managing the core business.

For the achievement of Terna's mission as a global player in transmission and dispatching of energy, Terna identifies the key enablers and assets firstly in people, whose experience, skills and ethical conduct are a major driver for the increment of the value created by the firm, and secondly in innovation, seen as the answer to the increasing complexity of the energy sector, fostered by new technologies, digital solutions and open innovations (Terna 2019).

The achievement of sustainability for Terna implies working actively for a progressive cut of the carbon intensity, to prevent a worsening of the global warming, the growing integrations of renewables, to gradually reduce the overall energy demand and increase the energy efficiency, and to contribute to the achieving of the Sustainable Development Goals set for the year 2030 by the United Nations.

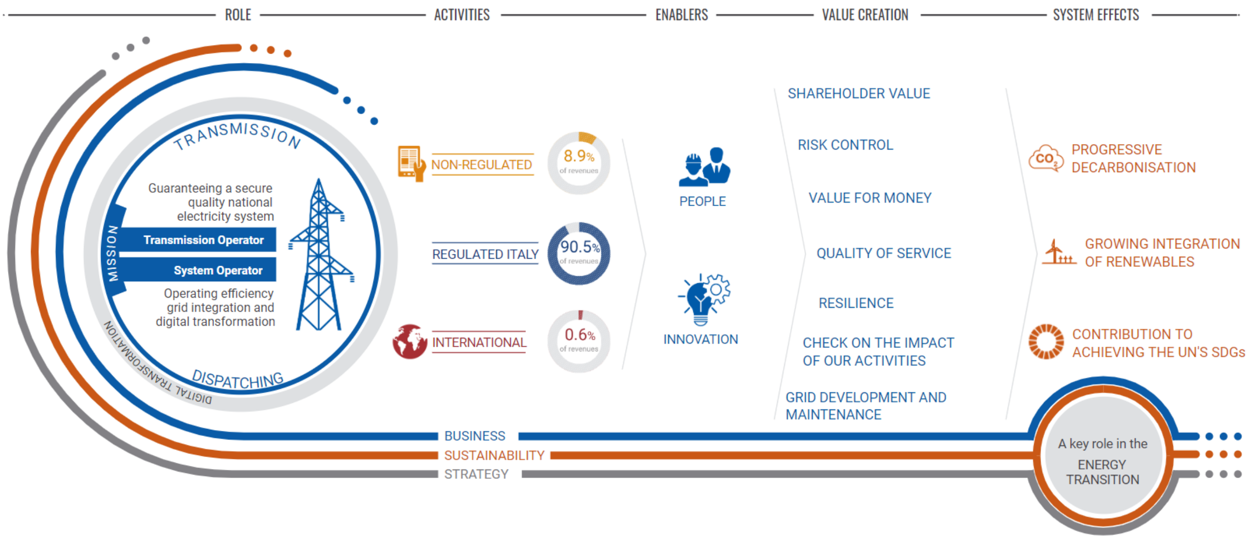


Figure 12 (source: https://download.terna.it/terna/0000/1201/76.PDF)

All the activities conducted nationally and worldwide by Terna SpA are executed through an intricated net of national and international subsidiary companies reported in the figure below.

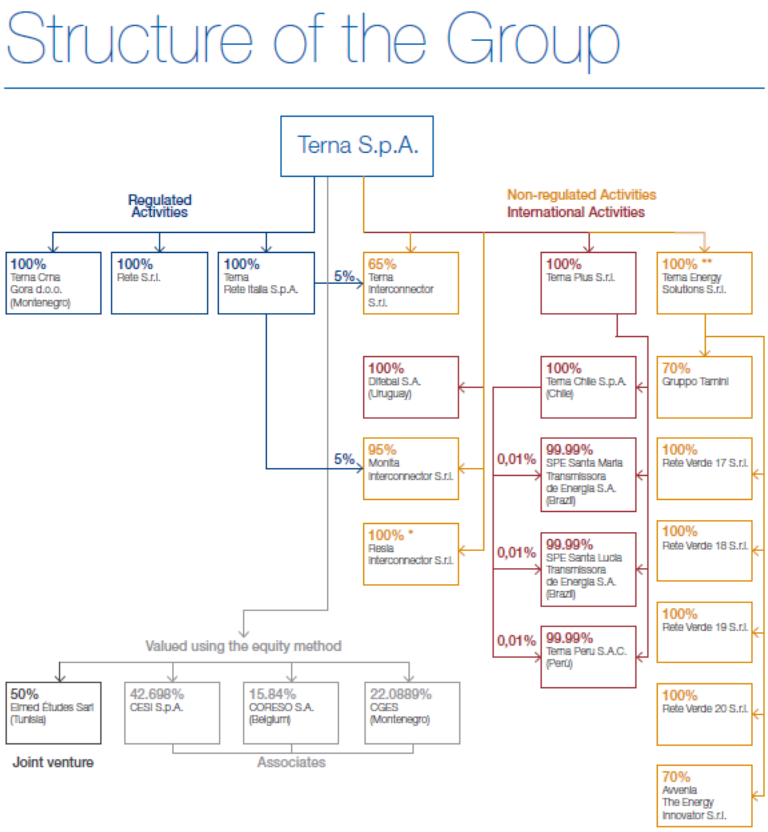


Figure 13 (source: https://download.terna.it/terna/0000/1201/76.PDF)

The section goes on identifying the shareholder structure of Terna SpA, with 52.7% of the shares held by Italian investors, among which CDP Reti SpA (a company controlled by Cassa Depositi e Prestiti SpA) is the major one with shares for 29.85%, and the remaining 47.3% held by investors abroad, mainly in the USA and Europe (Terna 2019, 14).

The governance structure is then described, pointing out how its design has been intended to tackle at best the interest needs of the different shareholders. Same goes for the code of ethics, the ultimate internal guide in terms of sustainability drafted in accordance the 10 principles of the UN Global Compact, network of which Terna has been part as previously mentioned since 2009.

Also, the internal Risk Management has been shaped to monitor the different types of risk the business could encounter together with very specific indications on the solutions and internal mechanisms to minimize the risk having sustainability always in mind. Considering that Terna operates its core business in an environment regulated by government concession arrangement and by the Regulatory Authority for Energy, there is no traditional risks such as the price or market related ones, but risks connected to governance and compliance.

The three main risk classes identified by Terna are therefore (Terna 2019, 20):

- Governance and Compliance Risk.
- Operational Risk.
- Strategy and Financial Risk.

In accordance to the Framework, Terna Clearly identifies the categories of risk faced by the company and the models implemented for each to tackle each of them. Each risk faced by the company is well categorized thanks to the Enterprise Risk Management (ERM) methodology that, tailored on the specific needs of Terna, provides the group with a clear overview of the over 1,000 operational risks and their relative impact.

Figure 14 (source: https://download.terna.it/terna/0000/1201/76.PDF)

3.4.2 THE ENERGY ENVIRONMENT

Coherently with the content element of the Framework, External Environment, this section of the Annual Report dives into the microeconomic environment in which Terna is placed, the energy sector, the European and international relations of the firm, and finally the regulatory environment. Each topic is concisely and clearly faced, with a very analytical approach that allows the reader to understand the evolution of the sector in which Terna operates throughout the years.

After talking in brief about the global economic growth and the evolution of key economic indicators for Italy in relation to the GDP growth and the evolution of the volumes of industrial production since 2012, the report explore the future scenario of the energy sector, that see transformations of the energy generation technologies and consumption patterns, together with the regulatory guidelines produced internationally and nationally.

In relation to the energy sector, a strong challenge that businesses included Terna have to face in the period 2019 to 2023 is to keep the increase of global temperature below 2°C. This has a necessary step the reduction of carbon intensity by 6.4% per year until the year 2100 and enters, as said in the previous paragraph, regarding the main sustainability objectives set by Terna in its business model (Terna 2019, 27). Terna explicates as well the commitment of the group towards the achievement of 3 of the 17 Sustainable Development Goals set by the United Nations: the number 7, related to ensuring access to affordable, reliable, sustainable and modern energy for everyone; the number 9, according to which organizations commit to an inclusive and sustainable industrialization, pushed by innovation; the number 13, aimed at taking urgent actions to prevent climate change and its damaging impacts (Terna 2019, 28).

Terna is then more concrete in highlighting the precise initiatives that the company has to undertake for the future in relation to the Proposal for an Integrated National Plan for Energy and Climate (PNIEC). The plan was produced by the Italian government 3 years after the publication of the UN's SDGs that, despite not differing from the original national energy strategy, implemented some very important adaptations of its benchmark targets reported in the table below.

PROPOSAL FOR AN INTEGRATED NATIONAL PLAN FOR ENERGY AND CLIMATE - PNIEC
• For final energy consumption: 116.6 Mtep by 2020 and 103.8 Mtep by 2030.
• RES to increase from 18.6% in 2020 to 30% in 2030 as a share of total energy consumption. • In the electricity sector, the increase will be from 34.1% in 2017 to 55.4%, compared to expected gross domestic electricity consumption.
• Competitive auction mechanisms. • Promotion of self-consumption for smaller power plants and renewable energy communities. • Full deregulation of the retail market.
• Introduction of the Capacity Market. • Development of the grid to facilitate integration with renewable production plants and resolve congestion. • 6,000 MW expansion of central storage, pumping and electrochemical plants.
• In the industrial sector, reconversion of infrastructure to improve sustainability. • Additional measures to combat energy poverty.

Figure 15 (source: https://download.terna.it/terna/0000/1201/76.PDF)

The international relations built by Terna are evidence of the attention of the firm towards the topics of innovation and sustainability. Apart from the membership in the European Network of Transmission System Operators for Energy and in the European Association for Storage of Energy, Terna is member of the Renewable Grid Initiative, an association composed by nine European TSOs and eight environmental NGOs whose main goal is the promotion of the integration of renewable energy sources thanks to the development of electricity grids (Terna 2019, 33).

Furthermore, Terna keeps relationships with senior management of European and Non-European system operators to cooperate on technological innovation and grid development.

Being Terna operating in a natural monopoly in a market regulated by the Regulatory Authority for Energy, Networks and the Environment (ARERA), the section ends describing the evolution of the regulatory environment because of the initiatives undertaken by ARERA.

3.4.3 THE GROUP'S STRATEGY AND BUSINESS

The regulated activities in Italy are those defining the core business and the highest source of revenues for the Group.

The presentation of the group capital expenditure shows the main dimensions in which the group is expected to invest on the regulated activities: development plan, security plan, projects to renovate electricity assets.

The Development Plan constitutes the one requiring the highest amount of investments by the group (€471.7 million against €135.9 million devoted to the security plan and €296 million for the renovation of electricity assets).

In describing the development plan the report identifies the main drivers in terms of output/outcome (Terna 2019, 48):

1. Decarbonization: the electrical system transition happening with the development plan aims at integrating renewable production plants with the objective to reduce the CO2 and other polluting gas in the long term.
2. Market Efficiency: following the new European directives on Market Design, the plan aims at reshaping the development of the electricity system thanks to new mechanisms such as the Capacity Market and the reform of the dispatching services.

3. Security of Supply: major priority in conducting the regulated activities, implies making sure of the reliability of the electricity systems in normal conditions as well as in the event of criticalities.
4. Systemic sustainability: ability to have always as a priority the maximization of sustainable and economic benefits in system management.

The development plan includes projects aimed at creating interconnections between Italy and other European countries (main ones to Montenegro, France, Austria, Switzerland and Slovenia) and the construction of power to improve the national efficiency, security and reliability of the grip.

Among them, the report puts attention to the main projects carried out throughout the years, like the Italy-Montenegro Interconnector, the Italy-France Interconnector, the power line between Quartu and Qaurtucciu and the Venetian Lagoon Cables.

For each of them expected benefits are described in specific dimensions that point out the sustainability outcome expected, respectively for the electricity system as a whole, for the country as a whole, and the benefits expected for the local communities.

Innovation, as a key enabler for the group's success, represents a fundamental variable of in the infrastructure maintenance, thanks to the use of predictive engineering models such as the MBI (Monitoring and Business Intelligence), a decision support system used for predictive and conditional maintenance processes.

The section proceeds by describing the set of activities conducted for the dispatching of electricity, as the set of activities undertaken to ensure the balance between supply and demand across the country, and ends up with analyzing the fluctuation of electricity price overtime in Italy and the relative price performance of European countries.

Moving on to another area of business for Terna, the Non-regulated activities are the ones that together with the international activities show the attention of Terna Group towards the themes of sustainability and innovation, as they have an higher freedom of execution in comparison to the regulated activities, that have to mostly follow very precise guidelines in their implementation.

In specific, the main areas in which the Non-regulated activities are developed are (Terna 2019, 66):

1. *Connectivity.*
2. *Energy solutions.*
3. *Private interconnectors (in compliance with the Law 99/2009).*
4. *Transformers – Tamini Group.*

1. On the area of connectivity Terna is working on three different projects: *Fibre, Smart Towers* and *5G Pilons*. For each of them the report presents a brief description of the projects and subsequently highlights in two different paragraphs the value that is created respectively for the final customer and for the Group.
   - The *Fibre* project imply the development and acquisition of fiber optic sessions, with benefits for the final consumers thanks to better and new infrastructure in terms of reliability and quality. The projects outcome are as well associated with significant savings in underground cables length and therefore a reduced environmental impact.
   - *Smart Towers* project aims at the offering of value-added applications and services thanks to the use of high voltage pilons. The Group aims at expanding the potential of the National Transition Grid from an infrastructure devoted exclusively to the transmission of HV power to exploiting the potentials deriving by the internet of things to become Integrated Monitoring and Environmental Protection Systems.
   - The final project of connectivity is related to the implementation of *5G Pilons*, meaning the applications of antennas by telecommunication providers on Terna's infrastructures (pilons). The value created for the customer is related to the increased and reinforced coverage of telecommunication services around the country, especially in rural and reduced access areas.

2. Moving on to *Energy Solutions,* Terna's strategy aims at confirming the strength position of the Group at the national level, by leveraging on the established brand and know-how to operate plant maintenance for third parties, and work on establishing the Group presence in the energy efficiency sector. This is achieved with the design and construction for third parties of heat recovery, cogeneration plants and heat generators for thermal recovery, solutions all aimed at decreasing the environmental impact of plant activities by the recovery of heats produced in industrial processes or the reduction of natural gas consumption and, consequently, on CO2 emissions (Terna 2019, 70).

   A very notable initiative in the area of Energy Solution that awarded the Group with prizes for "Sustainable Development 2018" and "Good Practice of the year 2018 – Environmental Protection" is the so-called Smart Island (Terna 2019, 72).

   The project, built and tested during 2018, is the first in Italy of its kind in the promotion of a complete transformation to a totally renewable power generation in the island of Pantelleria. The activities conducted were targeted at the construction of a photovoltaic plant in an industrial area of the island together with the development of photovoltaic systems on the buildings in the town of Pantelleria. This notable initiative allowed the implementation of an energy procurement system with extremely low environmental impact and a higher level of electrical reliability.

3. As previously stated, the *private interconnectors* refer to cross-border interconnectors built by Terna and connecting Italy with 5 European countries: Montenegro, France, Switzerland, Austria and Slovenia. These initiatives are undertaken to support the development of a single electricity European market. While the Italy-Switzerland and Italy-Slovenia projects haven't started yet, the lines connecting Italy with Montenegro, France and Austria are already progressing steadily.

4. Finally, the section on regulated activities closes by addressing the commercial relationship with *Tamini Group*, an Italian company (one of Terna's suppliers) leader in the production of power transformers for electricity transmission and distribution grids. In the report, Terna highlights the 9% increase in the procurement of transformers from Tamini Group pointing out the value created by such relationship, since such components are produced using vegetable oil and cause a reduced environmental impact.

The final cluster of activities conducted by Terna is represented by the *International Activities*, an opportunity for the Group to use the expertise gained in Italy as a TSO, able to integrate renewables and develop power lines (Terna 2019, 78).

The focuses in the internationalization of Terna can be summarized in:

- Europe, to create a stronger leadership in the whole market.
- Latin America, for the development of projects to restructure the energy transmission in the countries of Brazil, Uruguay and Peru.
- Other regions: all other activities conducted by Terna abroad as a tool to leverage the expertise deriving from the Italian market, chosen as being low risk and low capital intensity.

Our People

A whole section of the report is focused on Terna's people, the human capital defined as the (Terna 2019, 88):

"most important asset, and one of the enabling factors in the Strategic Plan. Each of us brings skills and experience that can help to increase the value of the Company. Trust, passion and responsibility are our values."

People represent a fundamental driver of the Company's value and Terna summarize in the chart below the main processes meant for the valorization of such capital.

Figure 16 (source: https://download.terna.it/terna/0000/1201/76.PDF)

Terna show a high willingness of employees to remain in the company (turnover rate of 2.42%) and the prevalence of high skilled people among its recruits. Furthermore, gender equality, one of the goals of sustainable development set in the SDGs of the UN is reflected in the increase of women over the years from a 9% of the total workforce in 2005 to over 13% in 2018 (Terna 2019, 83).

Having people as a major variable for business success, Terna stresses the importance of occupational safety among the company's main priorities of 2018 with the creation of the "Zero Accidents" project aimed at achieving in the years to reach a 0% injury rate.

Training of employees is also extremely important and primarily focused on professional and technical skills. The investment in the human capital of the firm supports the creation of value overtime thanks to the increase and diversification of employees' skills and consequently their employability.

Local Stakeholders

Terna introduces an interesting section that focuses on the Social and Relational capital of the Framework: the local communities, crucial stakeholders for a virtuous development of the firm and an effective grid development.

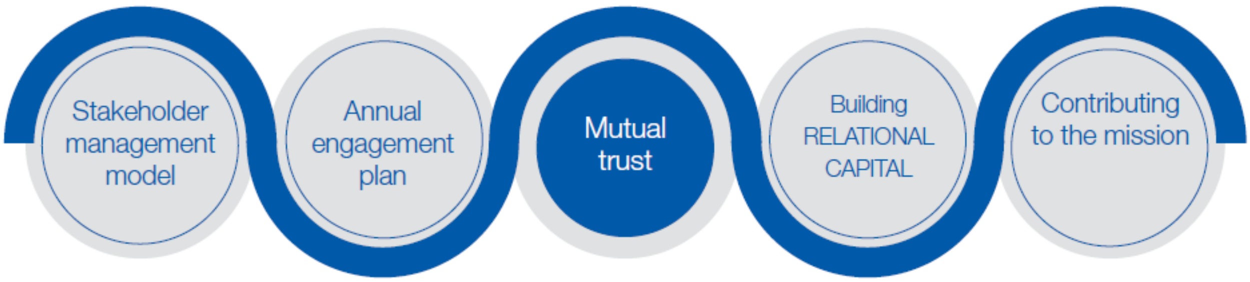


Figure 17 (source: https://download.terna.it/terna/0000/1201/76.PDF)

As shown in the figure on top, building mutual trust with the local communities is achieved thanks to the stakeholder management model (Terna 2019, 88).

Part of the model is the annual engagement plan: a program conducted each year for the company to identify which are the strategies to pursue to an active listening of its stakeholders and reshape the best practices of engagement.

Remarkable are in the relationship with local stakeholders the conceptualization of public meetings named "Terna Incontra" to understand local concerns and brainstorm on design ideas to sustain an efficient and sustainable development of the national grid together with local communities and governments.

Innovation

As previously stated, innovation and people are key variables in Terna's business model and constitute a strong asset of the Group. Innovation and digital transformation seen as fundamental for the support of an energy transition process towards more sustainable practices.

Terna identifies three key elements that internally support and promote the development of new innovative solutions (Terna 2019, 92):

- Existence of systems to support the development of internal assets and know-how, meaning actual tools deputized to the enhancement of intellectual capital and sharing of know how horizontally in the Group.
- Open Innovation, based on the development of constructive relationships with external entities for the promotion and conduction of studies, researches and partnerships. Main actors with which Terna collaborates are represented by Universities and Research Centers, as well

as Start-ups, Small and Medium Enterprises (SMEs), Venture Capital and international bodies involved in the energy sector and innovation.

- Soft financing mechanisms, as Terna promotes specific funding programs for firms investing in research and development at a national and international level.

3.4.4 PERFORMANCE

The performance section of the Annual Report focuses on the financial review for the year 2018.

It analyzes the performance of the Group as a whole, of the Terna Shares and Terna SpA determining consequently the production of separate reclassified statements for the different areas of interest.

The financial statements of the parent company Terna SpA and the consolidated financial statements of the Terna Group for the year ending on the 31st of December 2018 were prepared in compliance with the International Financial Reporting Standards (IFRS) endorsed by the European Commission and produced by the International Accounting Standard Board.

The presentation of the statements is followed by the analysis of the performance of Terna's Shares that, despite the negative performances of the main European Stock Markets for the worries of a global recession, have ended the 2018 with an increase of 2.25% to the value of €4.953 per share (Terna 2019, 112).

Finally, looking into the use of financial resources by the management of the firm, Terna assess the attention put to a maximization of the efficiency and maintenance of a solid financial structure, determining a financial strategy based on:

- Diversification of the financing means utilized by the Group.
- Balance between short and medium-term instruments.
- Commitment to a proactive management of the internal debt and of the financial risks to which Terna is exposed.

3.4.5 ANNEXES

The last section of the Integrated Report presents at first an analysis of materiality with a Materiality Matrix. In the notes to the reader at the beginning of the Annual Report it is stressed the importance of the adoption of the materiality principle in the choice of information to be included throughout he report, to accurately display to stakeholders the way the creation of value from the Group relate to the social, environmental and governance aspects in the conduction of the business by Terna (Terna 2019, 6).

The materiality matrix below therefore evaluates, for the significance for financial stakeholders on one axis, and for the internal significance on the other, the relative significance of main topics, divided into: Ethics and Governance Model, Transmission Service, People and Community, Business Management, Management of Environmental Impact.

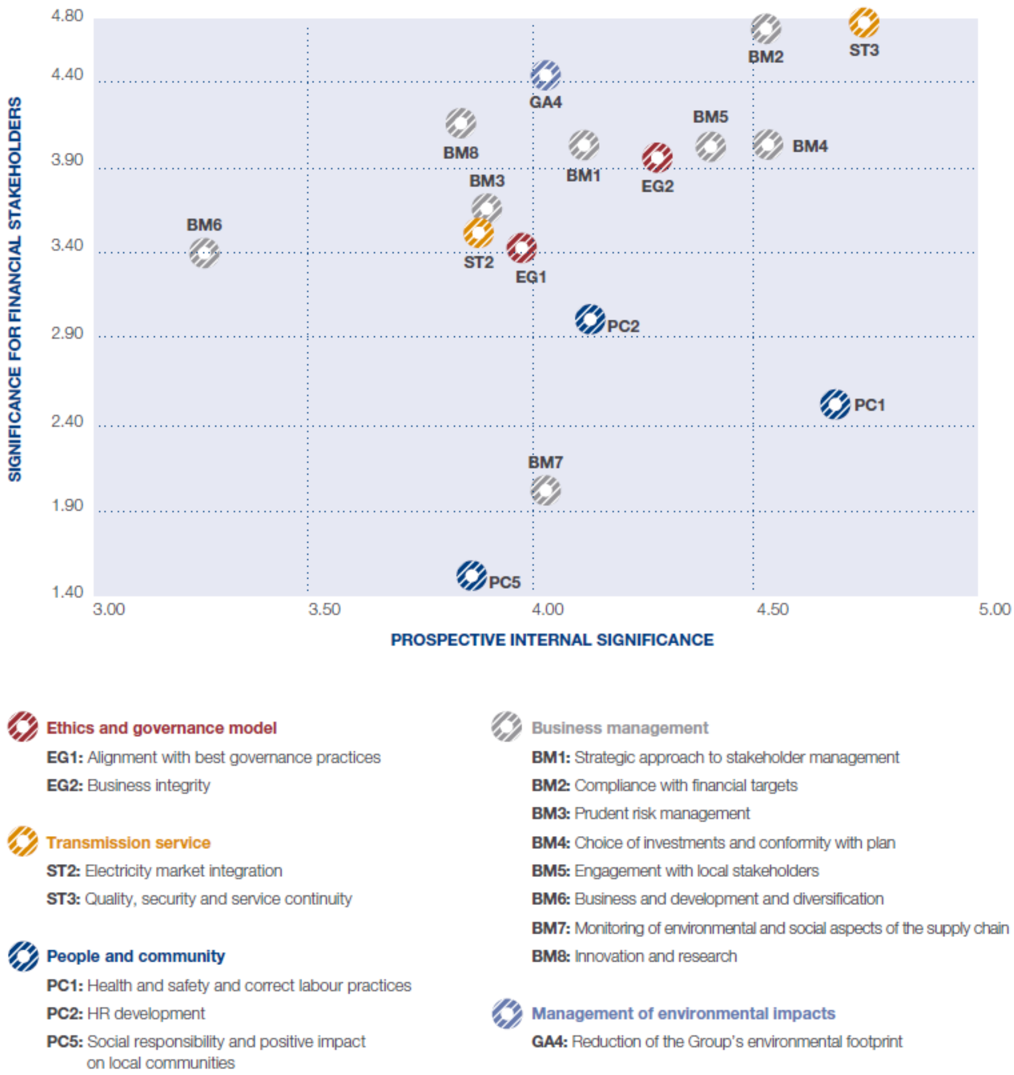


Figure 18 (source: https://download.terna.it/terna/0000/1201/76.PDF)

On these topics the Group commits to strengthen their sustainability strategy and disclosing processes.

The section proceeds by enumerating the main legislative measure that are fundamental to the righteous execution of Terna's activities and in displaying the evolution of Terna's assets in the past two years, considering the latest grid implementations and demolitions.

4 ATLANTIA AND TERNA – CASES COMPARISON

This chapter will focus on the comparison between the two in accordance to the principles of the IIRC International <IR> Framework.

The value of the comparison has as fundamental premise the principle-based approach of the Framework that with an equilibrated combination of reporting freedom and compulsory elements, allows different organizations to embrace the framework with a personal approach and meet the different information needs deriving from the different circumstances in which they operate.

4.1 FORM OF THE REPORT

The first aspect to be analyzed is the form of the reports produced. As previously stated, there’s no compulsory format that companies need to follow when adhering to the IIRC project. Firms have freedom to produce either an autonomous document constituting an Integrated Report or include it within another report of the firm, at the condition to be distinguishable and easily accessible. This allows firms to operate in accordance to the most prominent rationale behind the existence of integrated reporting itself: Integrated Thinking, the proactive approach by which organizations consider the way their business units create value overtime thanks to the different capitals exploited (Busco 2014).

In the case of Atlantia, the report is produced in accordance to the IIRC’s International Integrated Reporting Framework with the production of a unique and autonomous document combining traditional financial information with disclosure on corporate social responsibility topics. The Report is produced in accordance as well to the GRI Sustainability Reporting Standards (G4), with a *core* degree of compliance.

Terna on the other hand doesn’t produce a unique document as integrated report, but includes it within the annual report itself, as a distinct section from the consolidated and separate financial statements. Terna, applies the principles contained in the IIRC’s International Integrated Reporting Framework, as well as the GRI Standards with a *core* level of application.

4.2 ADHERENCE TO THE FUNDAMENTAL CONCEPTS

The *Fundamental Concepts* are related to the very core of the Integrated Report itself and more specifically to its Integrated Thinking.

The three fundamental concepts are, as previously stated, the *Capitals* (Financial, Manufactured, Intellectual, Human, Social and Relationship, Natural) the *Value creation process* and the *Value creation for the organization and for others* (IIRC 2013). It is to be said that the six capitals, inputs of the organization's business model, subsequentially transformed into outputs and relative outcomes, aren't mandatory for a firm to be comprehensively adopted and explicated in the integrated report.

Atlantia shows a very high level of conformity to the capitals model proposed by the IIRC, as the report identifies all the six categories suggested. Even if there are some changes in the denomination of two capitals (infrastructural capital instead of manufactured capital, and social capital in place of social and relationship capital), there is a total correspondence of meaning.

The case of Terna on the other hand very different, as the Integrated Report produced isn't structured in considerations of the different capitals with which the firm interacts, but according to the different areas of business of the Group. Still the report makes understandable to the reader the main capitals to Terna: *human capital*, described as the most important asset for the achievement of the Group's strategic plan; *Social and relationship* capital, crucial for the achievement of a long-term value creation process; *Intellectual capital*, fundamental for the development of new innovative solutions; *natural capital* that wants to be preserved and protected by the Group thanks to a sustainable growth and global sustainable energy transition. The main *infrastructural capital* is clearly identifiable in the high voltage and very high voltage transmission grid operated by Terna as well as the *Financial capital*, constituted by the diversified financial instruments owned by Terna in support of its development plan.

The *Value creation process* and the *Value creation for the organization and for others* will be better described in the analysis of the content elements of the Framework that, in accordance with the guiding principles of the <IR>, allow a deep understanding of the variables allowing an organization to create value overtime. Key among them, the business model, the internal system that allows the entity to combine the capitals utilized as inputs and transform them into output and outcomes thanks to its business activities.

4.3 ADHERENCE TO THE GUIDING PRINCIPLES

The Guiding Principles are crucial for the preparation of an Integrated Report as, despite not describing the precise Content Elements to be included in the report itself, they represent a guide for organizations to implement the Framework as not simply a mechanical exercise of data collection and presentation, but are intended to make organizations really consider and reflect on Integrated Thinking, core principle of the Framework itself.

To quickly recap, the Guiding Principles of the Framework are in number of seven and presented in the following order: *Strategic focus and future orientation, Connectivity of information, Stakeholder relationships, Materiality, Conciseness, Reliability and completeness, Consistency and comparability.*

First among them, the principle *Strategic focus and future orientation* is referred to the organization's strategy and ability to create value overtime thanks to the use of the capitals not just in the short term, but in the medium and long one as well (IIRC 2013).

On this topic the report from Atlantia seems to be lacking in the strategic concretization of the long-term goals for the Group. The definition of business model and the strategies put in place to achieve the mission of the Group in the long-term are described in a very general way without going much into details on timelines and specific objectives set. A better analysis can be seen on the presentation of the various capitals that serve as inputs and determine the outputs of Atlantia's activities, but the analysis seems to be more oriented to the past performance of the Group than to the future prospective. Still, the clear and concise distinction of the various capitals allows to have a clear understanding of the main variables and ongoing projects contributing to the aggregated value creation process of the group in the different businesses operated.

Terna SpA presents on the other hand a better overview of the business model of the Group and the strategies undertaken to enhance the value creation processes thanks to enablers such as people, the human capital of the Group, and innovation. The Strategic Plan for the years 2019-2013 is well and concisely disclosed without losing sight of the long-terms objectives of the Group.

On the *Connectivity of information* both reports appear to be well structured by allowing the reader to easily navigate through the different sections without losing sight of the general architecture of the report itself. In both cases, the specific analysis of the different areas of business and capitals utilized are very logically structured and presented in a clear language with continuous referments to the general expected outcomes of the Groups.

Stakeholder relationships principle is fully satisfied in both the reports. Atlantia, thanks to the structure of the report itself per capitals, dedicates an entire section to the Social Capital, defining clearly the stakeholders of the Group (clients, community and suppliers) and describing very well the many touchpoints with which Atlantia interacts with all of them, both in qualitative and quantitative way. The same attention to stakeholders can be pointed out about Terna. Despite lacking a specific section for the Social Capital, the report clearly identifies the international al local stakeholders, highlighting, for the different projects undertaken in the regulated, non-regulated and international activities, the benefits for the customers and local communities. The importance of the relationship with local stakeholders is clearly highlighted in the in the description of the "Terna Incontra": initiatives, designed to foster the involvement of local communities.

Proceeding, the *Materiality* principle is extremely well tackled by the two organizations, both adopting a whole section dedicated to the presentation of the materiality matrix aimed at assessing the significance of material matters for the organizations and their stakeholders.

Terna stresses the importance of the Materiality principle in the choice of matters to be included within the report itself to accurate display, to its financial stakeholders, the main variables influencing the long-term value creation process. The material topics identified by Terna are divided into five categories: Ethics and governance model, Transmission service, People and community, Business management, Management of environmental impacts.

Atlantia, updated in 2018 year the methodology adopted for the analysis of materiality in order to comply not only with the International <IR> Framework of the IIRC, but with the indications of the Global Reporting Initiatives Standards as well. The Materiality matrix produced puts therefore emphasis on the material aspects identified both by Atlantia and its Stakeholders' point of view in relation with the respective GRI Standards Indicators in a summary table present in the Annex section of the report.

The principle of *Conciseness* is well applied in both reports. Despite presenting topics with a very different approach, both Atlantia SpA and Terna SpA produce reports with a logical structure, expressing clearly the various business areas in which the two Group operates and highlighting the implications of the former in the value creation process of the organizations as a whole. Same reflections can be made for the analysis presented of the Group's governance and Performance overtime. Information is presented always in a schematic and concise way.

The *Reliability and completeness* can be associated with an ethical internal approach by the firm in addressing every relevant material matter, either it being positive or negative. Both firms refer to their internal audit and control systems aimed at ensuring a rightful business behavior within the organizations. There is as well external assurance to certify the veracity of the reported information, provided by Deloitte & Touche SpA in the case of Atlantia, and by PricewaterhouseCoopers SpA for Terna.

Completeness is as well satisfied by both entities by dealing with all the material matters observed in the respective materiality matrix. Important to highlight in the report of Atlantia SpA the numerous referments to the Morandi Bridge tragedy in the letter to stakeholders, but also the negative performance registered in comparison to the previous year (2017) on the increased fatality rate (Atlantia 2019, 87).

Finally, on *Consistency and comparability* both reports show strong compliance thanks to the many charts and tables that allow the reader to easily compare the internal performance of the entities in the multitude of variables analyzed. It is interesting to point out that the many variables presented allow also comparability with other firms operating in the same respective industries, despite the lack of an explicit comparison with external players.

4.4 ADHERENCE TO THE CONTENT ELEMENTS

As previously stated, the *Framework* requires organizations voluntary willing to adopt it, to disclose on the eight *Content Elements*, intended to address all the dimensions implicated in the organizations' ability to create value overtime. These dimensions are: *Organizational overview and external environment; Governance; Business model; Risks and opportunities; Strategy and resource allocation; Performance; Outlook; Basis of preparation and presentation* (IIRC 2013).

It's important to remember the importance of Integrated Thinking, as a holistic approach to Integrated Reporting when looking at the Content Elements of the Framework: the dimensions considered are fundamentally linked with each other and not to be considered as mutually exclusive. Information should be presented highlighting the connection existing between the *content elements* without falling in the mistake of disclosing on the various topics as if they were isolated clusters of analysis.

In tackling the first topic *Organizational overview and external environment* both Groups present information in a concise and effective way, delivering to the reader a clear picture of the ownership and operating structure, of the main areas of business and of the markets in which they operate. Atlantia clearly highlights the assets managed in the different markets, keeping separated the information on the assets owned by Albertis group, acquired throughout the year 2018. Atlantia briefly presents the ownership structure and the operating context of the Group, focusing mainly on data regarding the motorways managed than on the five airports complementary to its core assets.

Differently from Atlantia, Terna dedicates a full chapter to the presentation of the external environment in which the Group operates, going more in depth in the analysis of the macroeconomic variables affecting the energy sector, in the analysis of the energy sector itself and the regulatory environment. The presentation of the Group profile from Terna is as well done in a very schematic yet exhaustive and complete way.

The topic of *Governance* is differently tackled by the two organizations as Atlantia dedicates to it an entire chapter very detailed in the explanation of the administrative structure and control system, the anti-corruption internal policy, protection of human rights, the remuneration policy and sustainability governance. Terna's report is much more synthetic and schematic in describing the corporate governance system within the governance section present in the chapter "The Terna Group". Terna focuses on the presentation of the management team and the different boards, and discloses on the different governance and compliance models applied internally to mitigate upcoming risks. Both organizations adopt an internal Code of Ethics referencing the ten principles of the UN Global Compact.

The mandatory element of *Business Model* refers, as previously stated, to the ability of a firm to transform the inputs necessary for the realization of its business activities, and represented by the different types of capitals used uniquely in accordance to the specificity of the organization, into outputs and outcomes, ultimate results in terms of value creation.

In describing the *Business Model*, Atlantia despite structuring the Integrated Report around the different capitals utilized in the business activities, seems to be lacking in the explicit expression of the connectivity existing between the inputs, business activities, outputs and outcomes. The structure of the report appears to be very careful in following the indications provided by the IIRC and less focused on providing a narrative flow to the aggregated value creation process. However, the guidelines, business model and outcomes presented in the Group profile section are logically connected among each other and in coherence with the Group's mission. Moreover, the data displayed in the report throughout each of the chapters dedicated to the description of the capitals utilized can be logically related to the guidelines and outcomes expected in the performance of the business activities.

Terna's report seems to provide a better description of the *Business Model*, by clearly identifying from the beginning the business areas of the Group, the activities involved in the value creation process and the outcome expected in the long term as: decarbonization, increasing integration of the renewables and achievement of the specific SDGs of the United Nations presented throughout the report. Even if the report doesn't explicitly refer to the capitals involved in the value creation process, they can be by the reader extracted along with the presentation of the business activities conducted, that Terna always connect to the value creation process and the expected outcomes of the Group.

Despite the differences in the reporting methodology both organizations present the *Business Model* in an acceptable way against the indications provided by the IIRC.

Moving on to *Risks and opportunities*, both entities dedicate a specific section to the analysis of the risks affecting their ability to create value overtime and describe the risk management strategies put in place to mitigate them. The only observation that can be made is the lacking description of the opportunities enhancing the value creation process and the strategies put in place to deal with it. Still, the content element is successfully tackled by both organizations.

On *Strategy and resource allocation*, entities are expected to clearly identify they strategic objectives and relate them to the resource allocation plans to support them. The topic is better tackled by Terna that dedicates a specific paragraph to its strategic plan for the years 2019-2023, setting clear objectives and describing the investments planned for the development of the Italian electricity grid in response to the upcoming needs of the system (Terna 2019, 38). The strategic plan sees as main variables for its enhancement innovation, people and digital transformation. On the other hand, Atlantia struggles to provide an integrated view of its strategic plan for the future, as the information on the upcoming projects needs to be extracted from the chapters dedicated to the various capitals involved in the entity's business model.

The content element of *Performance*, connected to the extent to which organizations have managed to achieved their very own strategic objectives for the period in analysis and consequently affected the various capitals with which they interact in their value creation process, is faced once again in a different way by the two organization given the already described different structure of the reports.

Atlantia analyzes very well the past performance of the Group in relation to each of the capitals considered (Financial, Infrastructural, Human, Social, Natural). Every chapter referred to the capitals displays key figures at the very beginning of each one of them, and presents additional tables with disclosing additional information throughout the discussion. The data is presented for the year 2018 in comparison to the performance of the previous year, allowing the reader to have at first glance on its variations overtime. Interesting to note the evaluation of the performance in relation to the Group's stakeholders: in the chapter dedicated to the social capital, Atlantia shares the results of the customers satisfaction surveys on the quality perception for the services provided within motorways and airports managed by Atlantia. The data, reported for the year 2018 in comparison to the previous one, allows the reader to have an idea of the evolution of the Group's performance in service quality.

Terna's analysis of the *Performance* is provided in a dedicated chapter containing the reclassified statements of income and financial position for Terna SpA and the Terna Group. The reclassified statements present alternative performance indicators that differ those resulting directly from separate and consolidated financial statements. Additional performance indicators are also included in the report in the presentation of the activities performed by the Group (regulated activities in Italy, non-regulated activities and international activities) in the third chapter of the report. The data displayed within the third chapter provides quantitative summaries of the performance as well as qualitative comments for better comprehension to the reader. Differently from Atlantia, the information disclosed on the Performance by Terna doesn't address the specific capitals involved in the conduction of the business activities of the Group, apart from the section dedicated to the development plan for Italy (Terna 2019, 58) in which, next to the status of progression of interconnectors, lines, substations and projects from the development and security plan, Terna identifies the main outcomes expected with their realization (decarbonization, market efficiency, security of supply, systemic sustainability).

The content element *Outlook*, looking into the challenges that the external environment could determine for the entity affecting the effectiveness of its value creation processes, is interestingly and concisely faced by Terna in the chapter number two of the report, dedicated to the external environment. In describing the macroeconomic environment and in specific the energy sector, Terna puts a strong accent to the relevance of the energy transition taking place in the world. The global warming is a major variable driving international climate and energy agreements aimed at keeping the raise in global temperature below a precise threshold. Terna recognizes the important role the company itself plays in the energy transition and demonstrates its commitment in the development of its international activities aware that "the radical transformation the world is experiencing is a shared responsibility" (Terna 2019, 78).

In the case of Atlantia, the analysis on the challenges that could affect the organizations in the future is present in the chapter dedicated to the risk management put in place, and specifically in the paragraph dedicated to the non-strictly financial risks. Atlantia recognizes the environmental challenges deriving by waste management, climate changes and biodiversity loss, and those deriving by natural events, and describes the internal mechanism and strategies adopted to react to them (Atlantia 2019, 26).

Moving to the last content element *Basis of preparation and presentation*, both organizations provide an analysis of their materiality determination process and a materiality matrix highlighting the matters relevant internally and for the organizations' stakeholders. Moreover, both organizations describe the principles underpinning the preparation of the documents. Atlantia SpA references the utilization of the International <IR> Framework and the GRI Sustainability Reporting Standards (G4) with a "core" level of application. Terna, apart from the regulatory framework constituted by the principal legislation of interest to the Group only refers in the integrated report to the International <IR> Framework. Terna doesn't mention the GRI Sustainability Reporting Standards, analyzed in a separate sustainability report.

5 CONCLUSIONS

This research was aimed at evaluating the solidity of the <IR> in the case of organizations belonging to two different industries operating in the Italian market, while considering relevant criticisms and limitations of the academics and other external stakeholders to this reporting method. The data collected and reported in this paper contributes to the literature and gives meaningful insights into the future of <IR> not only in the Italian context, but also internationally. Initially, the <IR> was welcomed by most scholars, and accounting firms; however, there has been growing doubts on the significance and utility of this practice over time.

The study of the two Italian companies showed the very different approaches that firms can take in the adoption of <IR>, in accordance to the principle-based nature of the Framework itself. Flexibility is a major feature of the Framework, able to be easily adapted to the unique value creation processes of different entities. The analysis of the integrated reports of Atlantia and Terna confirmed the value of the <IR> in providing external stakeholders with an enriched and integrated information over the firm's activities in comparison to the traditional reporting.

This study showed however that although some <IR> adopters correctly follow the guidelines of the *Framework* and produce a seemingly significant report for the stakeholders, the <IR> does not necessarily lead to internal changes in the company's processes and practices. Indeed, unlike Terna, a leader in the utilities industry, ranked at the top worldwide in the Electric Utilities Sector in the DJSI, Atlantia, has been recently involved in a highly relevant scandal because of the bad management and false reports of the concessions over the Italian motorway system, operated by the controlled Autostrade per l'Italia and Spea Engineering. This despite being part of the IIRC Pilot Program in 2011 and producer of integrated report in high compliance to the <IR> since the year 2012 with high conformity to the capitals model suggested by the IIRC (Salvioni 2014). Considering the still ongoing investigations over the Atlantia case, and considering the purpose of this study, the important reflection emerging in the analysis of effectiveness of the <IR> is about its capability to go beyond the reporting outputs combining financial and NFI, and induce the internal change towards more sustainable practices in the organizations adhering to the proposed *Framework.*

Regardless of the recent efforts and feedback of the IIRC, there is still a risk that companies are unable to respond effectively to the proposed ambitions of the <IR>, leading to an uncertain path for

this practice in the future, especially considering the vast choices of corporate reporting practices that companies can follow, as mentioned in the chapter 2.2.
At the time this study is being written, on one side there are accounting firms and professional bodies enthusiastic of <IR>, but on the other side the same institutions publicly speak out about its pitfalls. As a result, a key challenge for <IR> remains the effective application of national reporting regulations commanding the reporting of NFI. Understandably, national or international regulatory bodies together with financial reporting standard setters can create new opportunities for a more concrete application of <IR>.

The reader shall be aware that this study considers only entities from the Italian market. In the European and global context there are many more <IR> adopters, whose analysis could lead to a different conclusion. Scholars shall wait for the next response and feedback from the IIRC to determine whether the <IR> is another fad, or if it is a realistic and effective reporting practice of NFI, capable of inducing firms to fully implement *Integrated Thinking*.

5.1 CONTRIBUTIONS, LIMITATIONS AND FUTURE RESEARCH

This study provides a concise outline of the main challenges and criticisms of the <IR>, whose very recent appearance in the reporting environment happened parallel with the increasing number of reporting choices that organizations are facing.
The findings of this study will be of interest to Italian as well to overseas companies considering adopting <IR>, thanks to the schematization and analysis of the Integrated Reports produced by two leading companies from the Italian landscape. An additional contribution is for the IIRC, who can benefit from this feedback in relation to the future developments and spread of its initiative.

It has to be highlighted the limitations that this study has as well. First and foremost, the size of the sample considered for the analysis. An analysis conducted on a higher number of firms would be more representative in the evaluation of the possible methods by which organizations produce integrated reports.
Another limitation is represented by the nature of the companies chosen. In this study were considered only Italian public interest entities that execute their core businesses under governmental concessions and are subject nowadays to reporting requirements on the disclosure of NFI. Opportunities for future research lays primarily in the potential for the *Framework* to provide stronger transparency and assurance to external stakeholder together with keeping its principle-based and flexible nature.

Summary

Sustainability and sustainable development are themes that started to gain the attention of research in social sciences starting from the second half of the 20th century.

Already in the 1800s of the industrial revolution firms were facing challenges in the attempt to increase their workers' productivity when social issues like poverty, exploitation children and women and labor unrest were showing the dark sides of a still very unregulated market. On this topic, Adam Smith, represented a first important observer of the British society. In its 1759 *Theory of Moral Sentiments* Smith pointed out the importance of sentiments of justice and measure for the development and achievement of a sustainable liberal society.

The first theorizations of the relationship between firms and society came only after the 1950s with a first document represented by the study *Social Responsibilities of the Businessman* from Howard Bowen published in 1953. In his study, Bowen provided a first definition of Social Responsibility as the obligation of businessmen to pursue policies and make decisions in accordance to the objectives and values of society. Such idea found many criticisms by the academic world of the time that still considered the creation of monetary value as the fundamental variable fostering societal progress and growth.

In the past two decades there have been various initiatives in the area of sustainability reporting. The main ones that will be in this study analyzed are: the Global Reporting Initiative (GRI) Framework; the United Nations Global Compact; the Sustainability Accounting Standards Board; the ISO 26000.

Since its foundation, the GRI has been actively involved in the development of Sustainability Reporting Standards, the very first global standards in sustainability reporting. The strength of their work is evident by the spreading of their reporting standards and the vast diffusion of reporting on sustainability performance by the majority of the world's 250 largest corporations (GRI 2017).

Producing a report following the GRI Guidelines leads usually to the production of a stand-alone sustainability report and must be following the GRI context index. In specific, the GRI Standards are divided in four series. The first one represented by the Universal Standards and three tackling specifically the fundamental dimensions of sustainability (economic, environmental and social) (GRI 2016). The evolution of GRI Standards, resulting in the new G4 Guidelines, lead to a strong focus on the Principle of Materiality. GRI emphasized the importance of Materiality encouraging organizations to share in their sustainability reports only disclosures and indicators that reflect their true economic, environmental and social impacts (GRI 2015). The GRI Standards potentially produce

positive externalities for the companies adopting them; they provide a guide for firms to assess their impact on social dimensions and, considering their extremely wide adoptions worldwide, give a chance to firms to benchmark their performance.

The United Nations Global Compact (UNGC) represents a global coalition between the private sector and the United Nations for the promotion of human rights, environmental protection and improvement of labor conditions (Sethi, United Nations global compact: The promise–performance gap 2014).

The UNGC is a voluntary principle-based framework that seek to encourage companies to align their strategy with 10 principles that can be subcategorized in the areas of Human Rights, Labor, Environment and Anti-Corruption (United Nations 2010). The mission of UNGC is therefore for companies to do business responsibly, aligning their strategies with the 10 principles promoted by the Global Compact, but at the same promote a secondary initiative coming from the United Nations: the 17 Sustainable Development Goals (Henceforward SDGs).

In regards to the outcomes related to the adoption of the UNGC, a study by Cetindimar pointed how that apart from ethical reasons, entities seek benefits related to the empowerment of corporate image and being part of a global network, able to boost the international expansion of the former. The UNGC has however been criticized for the low level of commitment from firms taking part to it. A natural consequence of it has been the progressive delisting of companies failing to meet the mandatory reporting requirements by the Global Compact office. Still, the UNGC is a relevant step forward to the creation of a global forum for CSR; a necessary step for the creation of a strong dialogue involving governments, society, institutions and private organizations.

The Sustainability Accounting Standards Board (SASB) is a nonprofit organization seeking the development of industry-based sustainability standards focused on the disclosure of American companies on their environmental, social and governance impacts (The New York Times 2016).

The very interesting tool developed by the SASB in relation to materiality is the Materiality Map, an interactive tool that in accordance to the sustainability issues identified in the Standards, provides an online assessment of the ESG performance of the organization in relation to the industry in which it operates, allowing therefore benchmarking across different enterprises. In their Materiality Map, the SASB clustered into 5 categories the topics by which sustainability interacts with the financial performance of a firm, consequently becoming very material to investors: Environment, Social Capital, Human Capital, Business Model and Innovation, Leadership and Governance.

The ISO 26000 is a voluntary standard developed by the International Organization for Standardization (ISO) and published in November 2010.

The ISO is an independent organization working since the 1947 on the creation of a global network with over 160 national standard bodies around the world, aimed at the development of best practices standards across different industries. The ISO 26000 aims specifically at helping organizations in contributing to sustainable development beyond the formal legal compliance. The ISO itself points out that the 26000 standard doesn’t constitute a certification as it is not a management system standard, but, as in the case of previously analyzed frameworks, a guidance towards sustainable business conducts (ISO 2018). The ISO 26000 is composed by 7 Clauses, the 7 core subjects, a Bibliography and two Annexes: the 7 Clauses are meant to give organizations an overview of the scope of the ISO 26000, providing definitions of key terms and reporting principles of social responsibility, as well as guidance on the recognition of a firm’s social responsibility, of its key stakeholders and the way an organization interacts with them; the Core Subjects are the main themes of the standard: human rights, labor practices, the environment, fair operating practices, consumer issues, community involvement and development, organizational governance; bibliography and Annexes provide references to international authoritative instruments used by the ISO 26000 itself as source material for the production of the standard.

Moving on, the main theme of this study in the IIRC’s International <IR> Framework. The beginning of IIRC lays on the increasing concerns regarding the incapability of the Annual Report and other traditional corporate reporting practices to capture the information needs of a variety of stakeholders (S. J. Adams 2011).

The attempt to overcome this reporting need, took place in August 2010 with the foundation of IIRC by a decisive initiative of two amongst the leading organizations in the grounds of sustainability and accounting: the GRI and the Accounting for Sustainability Project (henceforward A4S). While GRI and their Guidelines have been briefly analyzed before, nothing has been said about A4S. A4S is a Project established by the Prince of Wales, Sir Charles, in 2004, aimed at inspiring a global shift by finance leaders towards sustainability in decision making and reporting systems.

The International <IR> Framework created by the IIRC is composed by:

- The Fundamental Concepts.
- The Content Elements.
- The Guiding Principles.

The Fundamental concepts aim at reinforcing and better explaining the idea of Integrated Reporting proposed by the IIRC: *value creation for the organization and for others*, the *six capitals, the value creation process* (IIRC 2013).

The Content Elements are the requirements that any report has to fulfill to be considered an <IR>; those are (IIRC 2013):

1. Organization overview and external environment;

This first element tackles the main features of an organization: what it does, and which is the external environment in which it operates.

2. Governance;

The disclosure on Governance implies explaining not only the governance structure existing within the organization, but as well on the way that governance itself is supporting the creation of value in the short, medium and long term.

3. Business model;

As previously said, the business model is at the core of the value creation process for its responsibility in transforming the capitals and creating value overtime.

4. Risks and opportunities;

An integrated report needs to talk about the risks and opportunities (internal, external or both) that can influence the organization's potential to create value.

5. Strategy and resource allocation;

To adequately disclose on its strategy and resource allocation, an integrated report needs to analyze topics such as the strategic objectives of the firm, the actual strategies already implemented or that it intends to implement, as well as the KPIs by which the organization is going to assess its performance against plan.

6. Performance;

Has the organization managed to achieve the objectives defined in its strategy? An accurate analysis of the performance of a firm implies looking at the outputs of its strategic efforts and the consequences on the capitals utilized.

7. Outlook;

An integrated report needs to look at the future at the organization and predict the challenges that it could be facing while working on the achievement of its strategic objectives.

8. Basis of preparation and presentation;

Finally, an integrated report needs to describe the internal processes by which the entity has determined the material matters to be included in the report as well as its reporting boundaries and frameworks utilized.

The 2013 *Framework* identifies seven Guiding Principles to write an <IR> (IIRC 2013): Strategic focus and future orientation; Connectivity of information; stakeholder relationships; Materiality; Conciseness; Reliability and completeness; Consistency and comparability.

Since the first release of *Framework* there have been questions regarding the efforts put in place by the IIRC to allow the spreading and worldwide adoption of the *Framework*. It has been observed the importance of the standardization of a practice, methodology or technology, for it to be able to spread across its users and be utilized by most organizations, becoming a common reporting practice (Bonaccorsi 2003). One of the early criticisms from the academics has been the lack of regulation. The information disclosure of the *Framework* is, indeed, voluntary.

Another very discussed theme on the *Framework* is the one of assurance. Assurance is fundamental to assess the credibility of non-financial information and integrated reporting. The way assurance challenges the *Framework* derives from the lack of mature reporting systems for the disclosure of non-financial information and the subjective nature of some of the contents of integrated reports. The evolution and improvements of non-financial information reporting depends primarily from its credibility and usefulness, so that stakeholders, to whom the integrated reports are addressed, can have on non-financial information the same guarantees as for traditional financial ones.

Coherently with previous findings, many organizations recognized in the use of Integrated Reporting the opportunity to deep dive into the company's internal processes and understand the dynamics underlaying the various dimension that contribute to the overall value creation process (ACCA 2019).

A study conducted by the ACCA in 2018 highlighted the main challenges to the progress of integrated reporting, in order of importance:

- Organizational / functional silos within the firm.
- Lack of adequate internal systems to monitor performance.
- Limited experience of organizations in the extraction of non-financial information.
- Low internal management / executive support.
- Internal resistance to change.

In 2015 the IIRC itself recognized the existence of relevant issues to be faced in the delivery of its 2014-2017 Breakthrough Phase Strategy. Some of these challenges included the lack of credibility of integrated reports (having a negative impact on the <IR>), lack of evidence regarding the real impacts deriving from the application of the *Framework* and the failure to keep the International <IR> Framework updated with technical and non-technical outputs.

The actions recently taken by the IIRC to enhance clarity and give support on the *Framework* and its application represent positive inputs in response to the criticisms coming from the academic environment and the concrete experience of firms in producing their Integrated Reports, giving positive hopes for its future scalability.

The fourth chapter of this study analyzes the integrated reports produced by two listed companies from the Italian contest: Atlantia SpA and Terna SpA. They are both large companies in accordance to the European Union Directive 2013/34's requirements and belong to the *Star* and *FTSE MIB* Segments of the Milan Stock Exchange.

Such analysis highlights the flexibility of the IIRC's International <IR> Framework, which, instead of proposing a strict methodology for its adoption, has a principle-based nature coherent with its intention to be applicable across different entities and industries in accordance with their very personal and unique value creation processes.

Both Atlantia and Terna have produced integrated reports since the first publication of the Framework in 2013 and previously took part in the IIRC Pilot Program started during 2011 as an answer to a cultural incentive in terms of sustainability and corporate responsibility.
It is important to underline that both companies are subject to the Legislative Decree No 254/2016 approved by the Italian government on December 30th 2016, in implementation of the Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 and amending Directive 2013/34/EU as regards the communication of information to non-financial information and information on diversity by certain companies and certain large groups.

Atlantia SpA is an Italian holding company operating in the infrastructure sector with headquarters in Rome, Italy.

Today is the global leading operator of transport infrastructure, thanks to the management of over 14.000 km of toll motorway in 23 countries across Europe, the Americas and Asia, and the management of the 2 airports of Rome and the 3 airports of the French Riviera in Côte d'Azur (Atlantia 2018).

In the most recent period Atlantia attracted a relevant press attention with the tragic collapse of the Morandi Bridge of Genova on the 14th of August 2018. The management of the bridge was responsibility of Autostrade per l'Italia, main Italian asset of the holding and investigations are proceeding to assess the responsibilities for such disaster.
The commitment of the group towards sustainability derives from the increasing complexity of the sustainability reporting itself, and in order to produce reports far from being self-referential and hardly allow a comparability with other firms in the same sector and across industries, Atlantia assess to be nowadays following the international guidelines produced by the GRI and the IIRC.

The Integrated Report produced by Atlantia is interestingly structured in a very different way from the one developed by Terna. In fact, as the former elaborates on the capitals and the value creation processes of the Group by having as a starting point the different business areas in which the Group operates, Atlantia's Integrated Report immediately analyzes the Group's integrated performance in accordance to the capitals defined by the IIRC's Framework.

Terna is Transmission System Operator (TSO) based in Rome, Italy.

The company represents one of the main European electricity transmission grid operators and it is the majority owner of the Italian high voltage and extra high voltage transmission grid, services carried out in a monopoly arrangement based on governmental concessions.

Terna is a constituent of the FTSE MIB, as Atlanti, and a recognized leader in the sustainable conduct of its business. Included in the prestigious Dow Jones World Sustainability Index (DJSI) since 2009, an Index evaluating globally the best performing companies in matter of sustainability, Terna placed in the 2018 Ranking at the top worldwide in the Electric Utilities Sector. The result is extremely important also considering that only 6 are the Italian companies present in the Index (Terna 2019).

The main operations of Terna can be summarized in three macro-categories: Regulated Activities in Italy, Non-regulated Activities and International Activities:

- Regulated Activities in Italy are constituted by the transmission and dispatching of electricity across Italy and make up for most of the revenues of the company (€1.989 billion, 90.5% of revenues in 2018).
- Non-regulated Activities are activities with strong innovative impact in terms of connectivity and energy solutions, in Italy and Europe, to support the launch of new services for a global sustainable energy transition.

- International Activities in Brazil, Uruguay and Peru, consisting of infrastructural development, system integration and technical advisory the firm Terna is collaborating with in South America.

The 2018 Integrated Report is divided in five parts:

6. The Terna Group.
7. The energy environment.
8. The Group's strategy and businesses.
9. Performance.
10. Annexes.

After analyzing in dept the latest integrated reports produced by the two companies, the study focuses on the comparison between the two in accordance to all the principles of the International <IR> Framework: Form of the report; adherence to the Fundamental Concepts; adherence to the Guiding Principles; adherence to the Content Elements.

- Form of the report;

  In the case of Atlantia, the report is produced in accordance to the IIRC's International Integrated Reporting Framework with the production of a unique and autonomous document combining traditional financial information with disclosure on corporate social responsibility topics. The Report is produced in accordance as well to the GRI Sustainability Reporting Standards (G4), with a *core* degree of compliance.
  Terna on the other hand doesn't produce a unique document as integrated report, but includes it within the annual report itself, as a distinct section from the consolidated and separate financial statements. Terna, applies the principles contained in the IIRC's International Integrated Reporting Framework, as well as the GRI Standards with a *core* level of application.

- Adherence to the Fundamental Concepts;

  Atlantia shows a very high level of conformity to the capitals model proposed by the IIRC, as the report identifies all the six categories suggested. The case of Terna on the other hand very different, as the Integrated Report produced isn't structured in considerations of the different capitals with which the firm interacts, but according to the different areas of business of the Group.

The Value creation process and value creation for the organization and for others is better described in the analysis of the content elements of the Framework that, in accordance with the guiding principles of the <IR>, allow a deep understanding of the variables allowing an organization to create value overtime.

- Adherence to the Guiding Principles;

the Guiding Principles of the Framework are in number of seven and presented in the following order: *Strategic focus and future orientation, Connectivity of information, Stakeholder relationships, Materiality, Conciseness, Reliability and completeness, Consistency and comparability.*

On *Strategic focus and future orientation* the report from Atlantia seems to be lacking in the strategic concretization of the long-term goals for the Group. Terna SpA presents on the other hand a better overview of the business model of the Group and the strategies undertaken to enhance the value creation processes thanks to enablers such as people, the human capital of the Group, and innovation.

On the *Connectivity of information* both reports appear to be well structured by allowing the reader to easily navigate through the different sections without losing sight of the general architecture of the report itself.

Stakeholder relationships principle is fully satisfied in both the reports. Atlantia, thanks to the structure of the report itself per capitals, dedicates an entire section to the Social Capital, defining clearly the stakeholders of the Group (clients, community and suppliers) and describing very well the many touchpoints with which Atlantia interacts with all of them, both in qualitative and quantitative way. The same attention to stakeholders can be pointed out about Terna.

Proceeding, the *Materiality* principle is extremely well tackled by the two organizations, both adopting a whole section dedicated to the presentation of the materiality matrix aimed at assessing the significance of material matters for the organizations and their stakeholders.

The principle of *Conciseness* is well applied in both reports. Despite presenting topics with a very different approach, both Atlantia SpA and Terna SpA produce reports with a logical structure, expressing clearly the various business areas in which the two Group operates and highlighting the implications of the former in the value creation process of the organizations as a whole.

The *Reliability and completeness* can be associated with an ethical internal approach by the firm in addressing every relevant material matter, either it being positive or negative. Both firms refer to their internal audit and control systems aimed at ensuring a rightful business behavior within the organizations.

Completeness is as well satisfied by both entities by dealing with all the material matters observed in the respective materiality matrix.
Finally, on *Consistency and comparability* both reports show strong compliance thanks to the many charts and tables that allow the reader to easily compare the internal performance of the entities in the multitude of variables analyzed.

- Adherence to the Content Elements;

These dimensions are: *Organizational overview and external environment; Governance; Business model; Risks and opportunities; Strategy and resource allocation; Performance; Outlook; Basis of preparation and presentation* (IIRC 2013).

In tackling the first topic *Organizational overview and external environment* both Groups present information in a concise and effective way, delivering to the reader a clear picture of the ownership and operating structure, of the main areas of business and of the markets in which they operate.

The topic of *Governance* is differently tackled by the two organizations as Atlantia dedicates to it an entire chapter very detailed in the explanation of the administrative structure and control system, the anti-corruption internal policy, protection of human rights, the remuneration policy and sustainability governance. Terna's report is much more synthetic and schematic in describing the corporate governance system within the governance section present in the chapter "The Terna Group".

In describing the *Business Model*, Atlantia despite structuring the Integrated Report around the different capitals utilized in the business activities, seems to be lacking in the explicit expression of the connectivity existing between the inputs, business activities, outputs and outcomes. Terna's report seems to provide a better description of the *Business Model*, by clearly identifying from the beginning the business areas of the Group, the activities involved in the value creation process and the outcome expected in the long term as: decarbonization, increasing integration of the renewables and achievement of the specific SDGs of the United Nations presented throughout the report.

Moving on to *Risks and opportunities,* both entities dedicate a specific section to the analysis of the risks affecting their ability to create value overtime and describe the risk management strategies put in place to mitigate them.

On *Strategy and resource allocation* Terna that dedicates a specific paragraph to its strategic plan for the years 2019-2023, setting clear objectives and describing the investments planned for the development of the Italian electricity grid in response to the upcoming needs of the system (Terna 2019, 38). On the other hand, Atlantia struggles to provide an integrated view of its strategic plan for the future.

Atlantia analyzes very well the *Performance* of the Group in relation to each of the capitals considered (Financial, Infrastructural, Human, Social, Natural). Terna's analysis of the *Performance* is provided in a dedicated chapter containing the reclassified statements of income and financial position for Terna SpA and the Terna Group. Differently from Atlantia SpA, the information disclosed on the Performance by Terna doesn't address the specific capitals involved in the conduction of the business activities of the Group.

The content element *Outlook*, looking into the challenges that the external environment could determine for the entity affecting the effectiveness of its value creation processes, is interestingly and concisely faced by Terna in the chapter number two of the report, dedicated to the external environment. In the case of Atlantia, the analysis on the challenges that could affect the organizations in the future is present in the chapter dedicated to the risk management put in place, and specifically in the paragraph dedicated to the non-strictly financial risks.

Moving to the last content element *Basis of preparation and presentation,* both organizations provide an analysis of their materiality determination process and a materiality matrix highlighting the matters relevant internally and for the organizations' stakeholders. Moreover, both organizations describe the principles underpinning the preparation of the documents.

The study of the two Italian companies showed the very different approaches that firms can take in the adoption of <IR>, in accordance to the principle-based nature of the Framework itself.

Flexibility is a major feature of the Framework, able to be easily adapted to the unique value creation processes of different entities. The analysis of the integrated reports of Atlantia and Terna confirmed the value of the <IR> in providing external stakeholders with an enriched and integrated information over the firm's activities in comparison to the traditional reporting.

This study showed however that although some <IR> adopters correctly follow the guidelines of the *Framework* and produce a seemingly significant report for the stakeholders, the <IR> does not necessarily lead to internal changes in the company's processes and practices.

This study provides finally a concise outline of the main challenges and criticisms of the <IR>, whose very recent appearance in the reporting environment happened parallel with the increasing number of reporting choices that organizations are facing.

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