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Integrated reporting and sustainable development goals in universities

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Abstract

The United Nations (UN) is challenging organizations to integrate the 2030 Sustainable Development Goals (SDGs) into their strategies and operations. The International Integrated Reporting Framework (IIRC Framework) also supports these goals, enabling organizations to incorporate financial and non-financial disclosures in one report. We present a longitudinal analysis of an Italian university's adoption of both the UN SDGs and the IIRC Framework. The analysis allows us to understand the "why" and "how" of one organization's journey in constructing strategies, plans, and operations. Our findings are valuable for both academics and practitioners seeking insights into ways to conform with the SDGs and adopt the IIRC Framework.

Introduction

Integrated reporting (IR) aims to "improve the understanding of the relationship between financial and non-financial factors that determine an organization's performance and of how an organization creates sustainable value in the longer term, disclosing material information about an organization's strategy, governance and performance" (International Integrated Reporting Council (IIRC), 2013). The International Integrated Reporting Framework (IIRC Framework) is used by a range of organizations to assess and communicate their performance on sustainability-related aspects of their operations. In doing so, it aligns with the United Nations (UN) Sustainable Development Goals (SDGs) by communicating sustainability information within an integrated report. The UN SDGs are

a global plan for achieving a sustainable future, addressing global challenges including poverty, inequality, climate change, environmental degradation, prosperity, and peace and justice. The majority of countries worldwide have committed to achieving the 17 SDGs by 2030 (UN, 2016). Both private and public sector organizations have an essential role in achieving these goals. These organizations are required to prepare a report that outlines the process by which the organization has included the SDGs when developing strategies.

Public sector organizations have a responsibility to pursue the SDGs, because of their role in global economic activities, promoting welfare and equity, and because of their regulatory power (Bebbington and Unerman 2018; Dumay et al., 2010; Farneti and Guthrie, 2009; Farneti et al., 2019). Furthermore, while private sector organizations may be accused of adopting sustainability reporting for the purposes of “greenwashing”, for economic reasons, or for legitimizing their behaviour (Gray, 2010), public sector organizations work in the public interest for social good, and sustainability strategy should inform their everyday activities, affecting their performance and relationships with their stakeholders (Dumay et al., 2010).

In turn the IIRC Framework has a role in supporting the communication and operationalization of these goals. Organizations should be able to use the IIRC Framework to demonstrate a connection between selected SDGs and the capitals (i.e., financial, manufactured, intellectual, human, social and relationship, natural capital) that an organization manages in the pursuit of value creation (Adams, 2017a).

This research examines the adoption of the UN SDGs and the IIRC Framework by an Italian university. Universities, like other public sector organizations, work in the public interest to achieve societal good. In Italy, the social report has been used by different public sector organizations (Farneti et al. 2019), including universities. This non-financial report was introduced to conform with national guidelines issued in 2006 by the Prime Minister’s Office of Public Affairs, which specifically aimed to develop social reporting in public sector organizations.

In this research, a case approach was used to analyse the adoption of sustainable strategies by an Italian state university, which led it to embrace the UN SDGs and report on them. The university completed the integration of the UN SDGs into its strategy from 2016 and has published UN SDGs annual reports since then. The university faced challenges in reporting the UN SDGs because it had to integrate various SDGs into its organizational strategy, producing a link between strategy and results (reports). This chapter highlights why SDGs have been included in the university's strategy and operational documents and how the process was commenced.

Sustainable development and IR

In recent decades, there has been increasing attention to social and environmental sustainability (Bebbington, 2001). One such initiative is the announcement of the 2030 Agenda for Sustainable Development and its 17 SDGs. Public sector entities are expected to participate in meeting the sustainable development challenges, and incorporating the goals in their strategies and plans (UN, 2016).

Several accounting scholars have investigated managerial and disclosure practices in social and environmental goals (e.g., Mathews, 1984; Guthrie and Parker, 1990; Gray et al., 1988; Gray 1992). Gray (2010, p. 48) asked “what is this sustainability that we wish to account for and why would we wish to undertake such an accounting?” The question still requires academic consideration, perhaps even more so with the introduction of the UN SDGs.

Of particular interest to researchers are the limitations that stem from the separation of social, environmental and financial disclosure, as well as those resulting from a narrow approach to sustainability (Giovannoni and Fabietti, 2013). Sustainability reporting has gained momentum and reports have been published by both private and public sector entities (according to the GRI database, by May 2019, 54,080 reports had been produced worldwide, involving 13,781 organizations) in recent decades. For instance, Galpin et al. (2015) argue that sustainability is a journey throughout which different transformative stages in the organization might be identified, allowing a progressive alignment of attitudes and behaviours of people involved in the organization towards principles of sustainable development. Through this journey, a sustainability culture should be embedded in the organization's mission, values, goals, and strategies.

Busco (2018) considers the IIRC Framework an opportunity for any organization to extend this journey to develop strategies that align the SDGs with transformation of the capitals that will create value. According to the IIRC (2017, p. 6), IR is an accounting device to communicate “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”. This aspect of IR has been examined by scholars (e.g., Adams, 2015; Flower, 2015; de Villiers and Sharma, 2018; Rinaldi et al. 2019), global accounting bodies (e.g., ACCA and Eurosif, 2013), and accounting partnerships (PWC 2015; KPMG 2017). Several scholars consider the IIRC Framework “an evolution of the provision of social, environmental and financial information in a format where the different kind of disclosure are interconnected (de Villiers et al., 2017, p. 450). Adams (2017a) proposed a five-step model following a top-down approach to aligning the SDG to the IR value creation process. According to her model, organizations should identify sustainable issues relevant to their context, verify whether these issues affect their value creation process, then develop a strategy to introduce the SDGs, developing integrated thinking, connectivity, and governance.

However, research on the adoption of IR in the public sector context is still scarce (Dumay et al., 2016). In particular, research has not investigated the potential of the IIRC Framework in the context of universities (Adams, 2018; Brusca et al., 2018). The next section provides an overview of previous studies discussing sustainability reporting and IR in universities, which helps to frame our analysis.

Sustainability and IR in universities

Several universities have been involved in sustainable development initiatives (Adams et al., 2018; Ramos et al., 2015). Prior research on universities’ sustainability strategies highlights a more formal than substantial alignment of vision and mission to sustainability issues (Lee et al., 2013; Lozano, 2011). However, recent studies (Alonso-Almeida et al., 2015; Brusca et al., 2018) and initiatives (UniversitiesUK, 2011; GUNI, 2018), highlight efforts to define vision, mission, and future strategies and plans linked to sustainability.

Despite these efforts, the total number of universities producing sustainability reporting is still low (Ceulemans et al., 2015); universities preparing a specific report to address sustainability issues are considered early adopters and prior research has discussed the need for guidelines for universities. The main barriers to the adoption of sustainability reporting are universities' governance structures and bureaucracy (Lozano, 2011; Alonso-Almeida et al., 2015). To overcome these barriers a different approach is needed, in which mission, strategies, and plans are linked with governance. Governance is a crucial aspect as it can hinder or facilitate the reporting process (Adams, 2017a).

The British Universities Finance Directors Group (BUFDG) project encourages universities to adopt integrated thinking and reporting (BUFDG, 2016). In 2017 it published a joint report examining annual reports by four universities to identify their stages of integrated thinking (BUFDG and IIRC, 2017). Brusca et al. (2018) found that universities were reluctant to change the name of their annual report to "Integrated Report". It seems that even those universities that have adopted integrated thinking continue to publish their reports as annual reports, as required by law, or under the label "sustainability report". These results echo criticisms of the IIRC, which has been considered guilty of promoting integration of information rather than environmental, sustainability and governance disclosures (Dumay et al., 2017; La Torre et al., 2019).

Public universities – like other public organizations (Guthrie et al., 2017) – may make incremental changes to process and structure, rather than a radical change. A gap between strategies, operation, and what is in the report may result in a 'cosmetic change', with no discernible impact on society (Manes-Rossi, 2019).

Economic, social, and environmental sustainability and related forms of disclosure and report are recent phenomena (Alrazi et al., 2016). The number of different frameworks available for reporting non-financial information make it difficult to decide which is the most relevant to use (de Villiers, 1999), and there is a need for examples of good, bad or even ugly practice (Baard and Dumay, 2018).

Research method and case study organization

Making use of Adams' model (2017a), this chapter explores the path followed by the University of Bologna (UniBo) to incorporate various SDGs in its reporting, connecting strategies, actions, and goals. It investigates the “why” and “how” behind the strategy on adopting SDGs in a public sector university.

The research questions are:

RQ1. Why did UniBo incorporate the UN SDGs in its processes?

RQ2. How did a state university go about preparing a UN SDGs report?

To understand “why” a university decides to integrate the UN SDGs in its strategy, plans and reports and “how” it accounts for these, the chapter uses a case study approach. This longitudinal analysis focuses on the dynamics in a management situation (Eisenhardt and Graebner, 2007), and allows researchers to investigate the phenomenon in a real-life context when the boundaries between events are not evident and in which multiple sources of evidence are used (Yin, 2014). The aim of a longitudinal case study is to provide an understanding of how dynamic contexts affect subject matter over time (de Villiers et al., 2019).

Our case focuses on UniBo, the first and only Italian public sector university to publish a UN SDG report (in 2016). UniBo is the oldest university in Europe (founded in 1088), as well as one of the leading academic institutions in Italy and globally (2019 QS World University Rankings; 2019 THE World University Rankings). UniBo has 85,509 students and 5,715 EFT staff across 33 departments.

UniBo's reporting measures the contribution generated by the different institutional activities carried out to reach the SDGs set by the UN. The report presents the direct and indirect impact of UniBo's activities and how they contribute to the achievement of the SDGs. UniBo's UN SDGs report is the final step in a complex dynamic of change involving strategic plans prepared since 2007, and social reports developed since 2013.

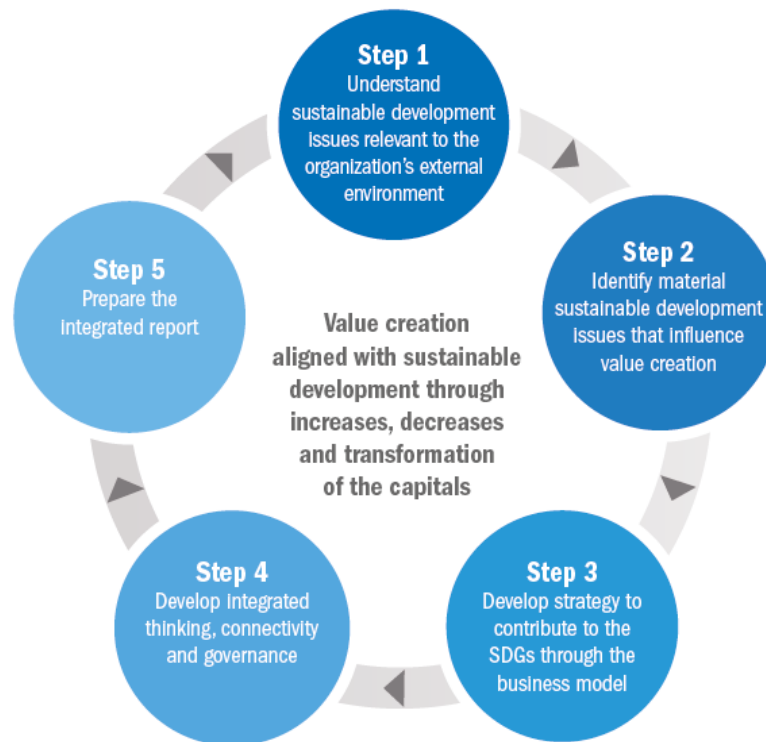
To develop insights, we triangulated sources of data available (Yin, 2014), including strategic plans, social reports, SDGs reports, and documents published on UniBo websites. The types and names of the documents analysed are illustrated in Table 28.1.

Table 28.1: List of documents analysed.

Type of document	Name of the document	Language	Date of publication
Strategic Plan	Piano strategico 2007–2009	IT	2007
	Piano strategico 2010–2014	IT	2011
	Strategic Plan 2013–2015	EN	2013
	Piano Strategico 2013–2015	IT	2013
	Strategic Plan 2016–2018	EN	2016
	Piano Strategico 2016–2018	IT	2016
	Piano Strategico 2019–2021	IT	2019
Social Report	Bilancio Sociale 2012 – Le persone al centro della conoscenza	IT	2013
	Bilancio Sociale 2013 – Un bilancio di persone, progetti e risultati	IT	2014
	Bilancio Sociale 2014 – Una eredità dal passato, molti progetti per il futuro	IT	2015
	Bilancio Sociale 2015 – Un impegno verso il futuro	IT	2016
	Bilancio Sociale 2016 – Un percorso verso la sostenibilità	IT	2017
	Bilancio Sociale 2017 – Valore d’uso della conoscenza per la comunità e il territorio	IT	2018
UN SDGs	Report on United Nations Sustainable Development Goals 2016	EN	2017
Report	Report on United Nations Sustainable Development Goals 2017	EN	2018
	Report on United Nations Sustainable Development Goals 2017	EN	2019

To answer the “why” and the “how” questions about the incorporation of UN SDGs in UniBo’ strategy and reports we used Adams’ five steps model (Figure 28.1). The first step will be used to shed light on both questions, while the other steps will be mainly used to understand the “how” question.

Figure 28.1: Adams' model to align the SDGs to the value creation process



Source: Adams (2017a, p. 22).

Adams' five steps model (2017a) is used as a framing device to understand UniBo's case. The first step, *Understand sustainable development issues relevant to the organization's external environment*, is about how "The sustainable development issues that the SDGs address impact on the organization's ability to create value for itself and its stakeholders" (Adams, 2017b, p. 23). There are many factors that can increase or decrease value created, one of which is the quality of relationships with stakeholders. Therefore, consideration of the SDGs, and the sustainable development issues that they address, should be incorporated into the wider consideration of the external environment relevant to the organization's ability to create value. The step requires a clear identification by management of environmental factors affecting the organization's ability to create value, through opportunities and threats. The step presents a link with the IIRC Framework because the identification of a strategy and resource allocation plans are influenced by the external environment and the identified risks and opportunities. They are also influenced by availability of capitals, which are in turn influenced by SDGs.

The second step, *Identify material sustainable development issues that influence value creation*, requires organizations to adjust their mission and strategies following those sustainable development issues that might allow the maximizing of outcomes for the different capitals involved in the value creation process, thus contributing to the achievement of SDGs. In this step, it is essential to identify which of the 17 SDGs are material for the organization, as few organizations are able to contribute to all 17 SDGs (Adams, 2017b, p. 26). Sound governance is critical throughout this step, and senior executives and board members can be engaged to evaluate and prioritize sustainable development or other issues that present risks and opportunities for value creation. The materiality determination implies economic, social and environmental issues are important for stakeholders and can affect the ability of an organization to create value (Adams, 2017b, p. 26).

The third step, *Develop a strategy to contribute to the SDGs through the business model*, involves management defining strategies attuned to support material SDGs through the organization's business model. This step implies the definition of activities, goals, and targets to be achieved in the short, medium, and long term. Having clarified the sustainable development issues relevant for the external environment (first step) and the material sustainable development issues that impact on value creation (second step), an organization can develop a strategy to address them via its business model. To ensure the achievement of strategic objectives, including the outcomes of SDGs, a resource allocation plan has to be prepared (Adams, 2017b, p. 28).

The fourth step, *Develop integrated thinking, connectivity and governance*, is a challenging phase that may require a long period of managerial changes inside the organization and changes in relationships with stakeholders. The IIRC Framework requires linking organizations' strategies to changes in the external environment, including evolving societal expectations and natural resources limitation. It also requires responding to stakeholders' expectations as value is created through relationships with others. Adams (2017b, p. 29) lists the main elements to be considered in the fourth step by those charged with an organization's governance. Those involved must identify material sustainable development issues and ensure that:

- these are incorporated into strategy;
- appropriate goals and targets have been developed;

- the organization develops and nurtures relationships with and between stakeholders in order to enhance collective well-being;
- the organization’s business model considers all material sustainable development issues impacting on inputs and outcomes in terms of the six capitals;
- the organization’s strategy and business model evolve to reflect past performance with respect to the SDGs.

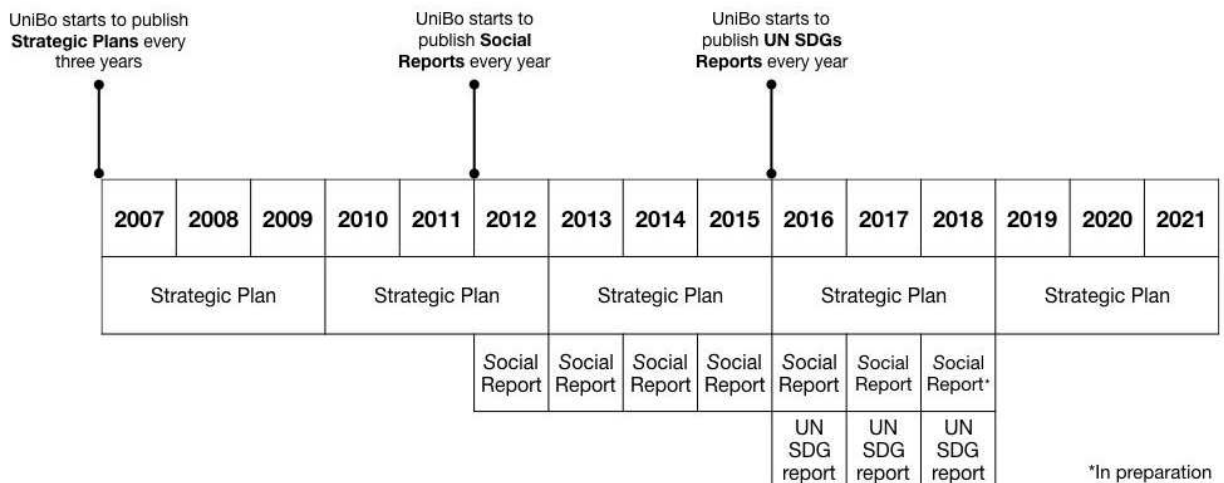
The fifth and last step consists of the *preparation of the integrated report*, clearly connecting each capital to the SDGs. Organizations are not expected to report on all six capitals; rather on all capitals that are material for them (Adams, 2017b, p. 32).

Results and discussion

“Why” of UN SDGs strategy and reports at UniBo

Before the first UN SDG Report in 2016, UniBo mainly issued Strategic Plans and Social Reports. To understand “why” UniBo incorporated the UN SDGs in its strategy and reports, we need to go back to the beginning of its pathway to integration between financial and non-financial information. Figure 28.2 presents this timeline.

Figure 28.2: Timeline of the development of UniBo reporting tools



Following Adams’ (2017a) first step, *Understand sustainable development issues relevant to the organization’s external environment*, at UniBo, the quality of relationships with stakeholders is a crucial factor in understanding the reasons behind the incorporation of SDGs in strategy and reports. The path started in 2007 when UniBo prepared and published a three-year voluntary

Strategic Plan, allowing UniBo to rethink its mission and fundamental values. The first Strategic Plan was focused on internal stakeholders, defining strategies for students and academics, with no sustainability elements.

We had to re-think our mission and values, and we defined some main paths, which represent UniBo's way to produce research, teaching, services to students and internationalisation ... We performed a strength and weakness analysis under both the Italian and European perspective (Strategic Plan 2007–2009, p. 6).

In 2009 the new Rector developed a new Strategic Plan (2010–2013), embedding considerations of a wider external environment extended to external stakeholders (students and society). Within this Strategic Plan, UniBo highlighted the influence of the external environment on the organization, and its impact on relationships with stakeholders (Adams, 2017b).

Our institution is ... an institution that is open to dialogue with people inside and outside its boundaries and that follows its aim with attention to the values of autonomy, respect of diversity and social responsibility (Strategic Plan 2010–2013, p. 8).

During the preparation of the second Strategic Plan it emerged that UniBo's information systems were not able to collect, analyze, and represent the link between the university's actions and sustainability (Strategic Plan, 2011, p. 14). For that reason, the Strategic Plan has strategic objectives for the creation of a system of communication with external stakeholders and a set of indicators to measure the results achieved (Strategic Plan, 2011, p. 4). The strategic objectives were achieved within a year and a half, and the Rector presented the first UniBo Social Report in 2012 as a mid-term product of his six-year mandate, to legitimize his past and future actions for sustainability and stakeholders. The Rector identified the main aim of the Social Report as:

To add a wider representation of the effects of activities in terms of economic, social and environmental sustainability to traditional forms of disclosure. The Social Report allows UniBo to demonstrate its responsibilities (Social Report 2012, p. 3).

Since 2012, UniBo has prepared an annual Social Report. The six Social Reports published so far use the GRI Guidelines. In 2013, the third UniBo Strategic Plan was prepared for the years 2013–2015.

A new Rector was elected in 2016, at the time of the fourth Strategic Report (2016–2018), and the fifth Social Report for 2016. The Rector decided to align the Strategic Plan 2016–2018 with the UN SDGs and to prepare a UN SDGs Report, as outlined below:

In order to implement a planning process for tackling the challenges posed by contemporary reality, particularly in relation to sustainable development, the University has decided to integrate the present Strategic Plan with a re-reading of the 17 basic sustainable development goals and their relative 169 targets, as proposed by the 2030 Agenda adopted on 25 September 2015 by the UN General Assembly (Strategic Plan 2016–2018, p. 11).

Consistent with the perspective adopted in the Strategic Plan 2016–2018, the University of Bologna proposes an innovative way to report on the contributions generated by its institutional activities, including training, research and social and public engagement, aimed at the achievement of the 17 Sustainable Development Goals (SDGs) of the U.N. 2030 Agenda ... [It] is fully aware that its activities can produce a significant impact, both direct and indirect, on the community and the region (UN SDGs Report 2016, p. 5).

The commitment of UniBo's Rector to the integration of SDGs into the university's activities was a key driver in the implementation of UN SDGs. This is consistent with the idea that leaders are responsible for driving the effort of internalizing sustainable development considerations (Adams, 2015).

The “How” of UN SDGs strategy and reports at UniBo

The Strategic Plan 2016–2018 gathered information around three main areas of activities: teaching; research; and third mission (to engage with societal needs and market demands by linking the university's activity with its own socio-economic context). The last dimension is a new area that UniBo decided to add after reflecting on those of its activities that have a direct effect on society (Adams et al., 2018; Ramos et al., 2015).

To understand the sustainable development issues relevant to the external environment as required in the first step of Adams' model, *Understand sustainable development issues relevant to the organization's external environment*, UniBo considered the theme of quality of education, as well as other external environmental aspects that affected its operations:

The University of Bologna is committed to the values of sustainability, such as enhancing and safeguarding the territory, improving community wellbeing, promoting a knowledge-based development economy, social equity, and the ability of those involved to work effectively together for the common good ... not only the connection between the university and the theme of the quality of education but also the possible interconnections with the goals of the U.N. 2030 Agenda (UN SDGs Report 2016, p. 5).

The Strategic Plan included UniBo's mission and vision, a positioning analysis, and a SWOT analysis to understand the sustainable development issues relevant to the organization's external environment and identify risks and opportunities (Adams, 2017a).

The analysis of our positioning represents the first step in the entire strategic planning process. It facilitates a fuller understanding of the reality within which an organisation operates, and the resources it can count upon to optimise its results. It is also fundamental for understanding the nature of the organisation's external commitments and internal limits, and for ensuring that its planning is concrete and feasible (Strategic Plan 2016-18, p. 17).

In relation to the second step, *Identify material sustainable development issues that influence value creation*, in 2016 it was possible to identify the material SDGs for UniBo to include in the Strategic Plan. Seven SDGs were included: *SDG 3 Health and Well-being*, to ensure healthy lives and promote well-being for all, at all ages; *SDG 4 Quality Education*, to provide inclusive and equitable quality education and promote lifelong learning opportunities for all; *SDG 5 Gender Equality*, to achieve gender equality and empower all women and girls; *SDG 8 Decent Work and Economic Growth*, to promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all; *SDG 9 Industry, Innovation and Infrastructure*, to build

resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation; *SDG 10 Reduced Inequalities*, to reduce inequality within and among countries; *SDG 11 Sustainable Cities and Communities*, to make cities and human settlements inclusive, safe, resilient and sustainable; and *SDG 17 Partnerships for the Goals*, to strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development.

The SDGs were reconsidered for the preparation of the second Strategic Plan 2019–2021 and *SDG 10 Peace, Justice and Strong Institutions*, to promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels, was added.

A vulnerability in the UniBo pathway towards the SDGs is that it is not possible to connect the material SDGs with the IIRC Framework's six capitals. To understand that link, consider UniBo's Social Reports, prepared to show how public resources (beyond financial) are used to achieve specific results to internal and external stakeholders. The Social Reports have been prepared following the guidelines from the Italian Prime Minister's Office of Public Affairs, which refers to social reporting for public administration and the GRI guidelines on sustainability reporting, as well as the research report on social reporting in universities, issued by the Italian Study Group on Social Reports (GBS, 2008). The data disclosed in the Social Reports (e.g. gender equality, work environment, environmental policies related to energy and consumption of resources) link to intellectual capital, and to human, relational and structural capitals, but not to the other IIRC Framework capitals.

The Social Report also represents the intellectual capital of the university, which is human capital, structural capital and relational capital, and the three elements are distributed in the different sections of the report (Social Report 2017, p. 179).

The choice to prepare two separate documents per year; a Social Report and a UN SDGs Report, fragmented the disclosure and the understanding of UniBo's activities. This lack of integrated thinking undermines the organization's strategy and value creation potential.

UniBo developed a strategy to contribute to the UN SDGs based on the three dimensions (i.e. teaching, research, third mission), consistent with step 3 of Adams’ model, *Develop strategy to contribute to the SDGs through the business model*. After defining its mission and vision, and performing a positioning analysis, UniBo selected goals, indicators, and targets to support its action (Figure 28.3).











Figure 28.3: UN SDGs included in the UniBo Strategic Plan 2016–2018































Source: UniBo Strategic Plan 2016–2018, p. 11.

UniBo presents a definition of strategic goals/targets, specific goals/targets and performance indicators to contribute to the SDGs considering the dimensions of teaching, research, and third mission, consistent with Step 3 in Adams’ model (Table 28.2).

Table 28.2: The relationship between strategic goals, specific goals, performance indicators, and UN SDGs

Strategic goal	Specific goal	Performance Indicators	UN SDGs
<i>Strategic area: Research</i>			
1. To support basic and applied research, in order to confront major challenges in an international context.	1.1 To qualify and highlight PhD degree programmes in an international perspective	I.1 PhD students with degrees from other Italian or foreign universities I.2 Overall investment in PhD degree programmes	
	1.2 To reinforce the priority of merit in recruitment and career advancement	I.3 Number of new recruits in charge of competitive projects compared to the total number of new recruits I.4 Percentage of new recruits with a VRA (University Research Evaluation) score higher than the median	
	1.3 To improve research quality and productivity	I.5 Comparison of the distribution of UNIBO publications per Single Index compared with total products for VQR Groups 2011/14 (Bibliometric areas) I.6 a) Percentage of Group A publications according to VRA criteria; b) Percentage of publications presented for VRA in proportion to the maximum number of publications allowed per VRA scientific area (NON-bibliometric areas)	
	1.4 Reinforce the infrastructures needed for research purposes	I.7 Investment in research infrastructure and equipment	
2. To invest in distinctive and multidisciplinary fields for our university, on national and international levels	2.1 To enhance the ability to collaborate and to attract research funding from national and international sources	I.8 Per capita funding for Italian and international projects	
	2.2 To develop new projects that will attract international competences, thereby enhancing the university's multidisciplinary heritage	I.9 Degree of implementation of programmed initiatives	
<i>Strategic area: Teaching</i>			
3. To promote the quality of the programme catalogue and invest in distinctive and multidisciplinary fields related to people's needs and society's needs	3.1 To improve the competences acquired during degree courses in order to help graduates enter the world of work, and remain there	I.10 The number of students using Career Guidance Services I.11 Employment/unemployment after 1/3/5 years	 
	3.2 To consolidate the regularity of studies while respecting strict evaluation procedures	I.12 Graduates in stable regular employment (number of years) I.13 Continuations with >39 ECTS achieved in the 1st year	
	3.3 To improve teaching quality by adopting	I.14 Number of hours of training initiatives for teachers per number of teachers	

	innovative methods and by training teachers	I.15 Attending students' satisfaction with teaching methods – Opinion Poll of students	
	3.4 To encourage synergies between studies and research in distinctive fields, and in tune with society's needs	I.16 Reports on results of new initiatives programmed in <i>distinctive</i> fields (Advanced manufacturing; Health and wellbeing, Agriculture and food, Sustainability and circular economy, Arts and Humanities in the digital era, Cultural interaction, inclusion and social security, Big data & industry 4.0, Creativity)	
4. To improve the attractiveness and the international dimension of our teaching offer	4.1 To attract talented students, thanks also to specific career orientation activities	I.17 MA students with 1st level degrees from other universities I.18 Extra-regional mobility I.19 Value of resources committed to rewarding merit	
	4.2 To increase the number of talented international students and further diversify their geographical provenance	I.20 Incoming exchange students I.21 Students with previous degrees obtained outside Italy	 
	4.3 To increase the number of graduates who have received an educational experience outside Italy	I.22 Graduates with at least 12 ECTS credits obtained outside Italy I.23 Outgoing Students	 
	4.4 To strengthen the international dimension of teaching situations and also by developing students' linguistic skills	I.24 Number of months (per person) spent in the university by teachers and researchers from foreign research institutes	 
5. To enhance the services available to students and actively support policies on the right to higher education	5.1 To reinforce the services intended to ensure improved study and living conditions for students, partly through partnerships with public and private actors	I.25 Qualitative indicators on initiatives in favour of students I.26 Percentage of students satisfied with university infrastructures	  
	5.2 To promote study opportunities for disadvantaged students, consolidating coordinated action with local institutions and communities on 'right to higher education' issues	I.27 Per capita cost of resources used to facilitate students on the basis of their economic condition and their talent	 
	5.3 To improve activities relating to career orientation, for incoming, resident and outgoing students, on the basis of their specific needs	I.28 Number of companies involved in Job placement initiatives I.29 Percentage of graduates with curricular internships I.30 Studies abandoned before the end of the second year	 
Strategic area: Third Mission			
6. To promote cultural development, plus	6.1 To qualify and enhance professionalizing and	I.31 Number of students involved in professionalizing and lifelong learning programmes	 

economic and social innovation	permanent study processes and courses		
	6.2 To improve the impact of research and upgrade technological transfer at regional, national and international levels, partly through entrepreneurial projects	I.32 Number of patents obtained by the entire permanent teaching body I.33 Number of spin-offs and start-ups accredited/active	 
	6.3 To promote processes that enhance the environmental and social sustainability of the university's buildings, facilities and community, while also revitalizing the area in synergy with all local institutions	I.34 Qualitative indicator on initiatives carried out on "social" and "green" issues	  
	6.4 To promote activities offering scientific and cultural popularization	I.35 Qualitative indicator: obtain tools for measuring the impact and send back to be included in the Social Report	
7. To improve relationships with our numerous stakeholders at national and international levels	7.1 To develop and highlight the heritage of knowledge and skill of our graduates and personnel, in order to develop connections and synergies between the university and society	I.36 Qualitative report on activities carried out	
	7.2 To strengthen support structures and interfaces between the world of production and the academic community	I.37 Turnover from commissioned scientific activities involving permanent teaching personnel I.38 Qualitative indicator: actions taken to strengthen support and interface structures	  
	7.3 To create a system for evolving development cooperation activities	I.39 Degree of implementation of planned initiatives, and the need to use instruments for measuring the impact achievement	

Source: Adapted from Strategic Plan 2016–2018, University of Bologna, 2016b

In the Strategic Plan 2019–2021, all the targets and indicators identified in the previous Strategic Plan 2016–2018 are measured and new targets for 2019–2021 are set (Table 28.3). For each performance indicator the 2015 and 2018 achievements and the 2019 targets are presented.

Table 28.3: The measurement of UniBo's SDGs achievement over time

Strategic area: Teaching		
Strategic goal/target	Specific goal/target	UN SDG

4. To improve the attractiveness and the international dimension of our teaching offer

4.1 To attract talented students, thanks also to specific career orientation activities



Performance indicator

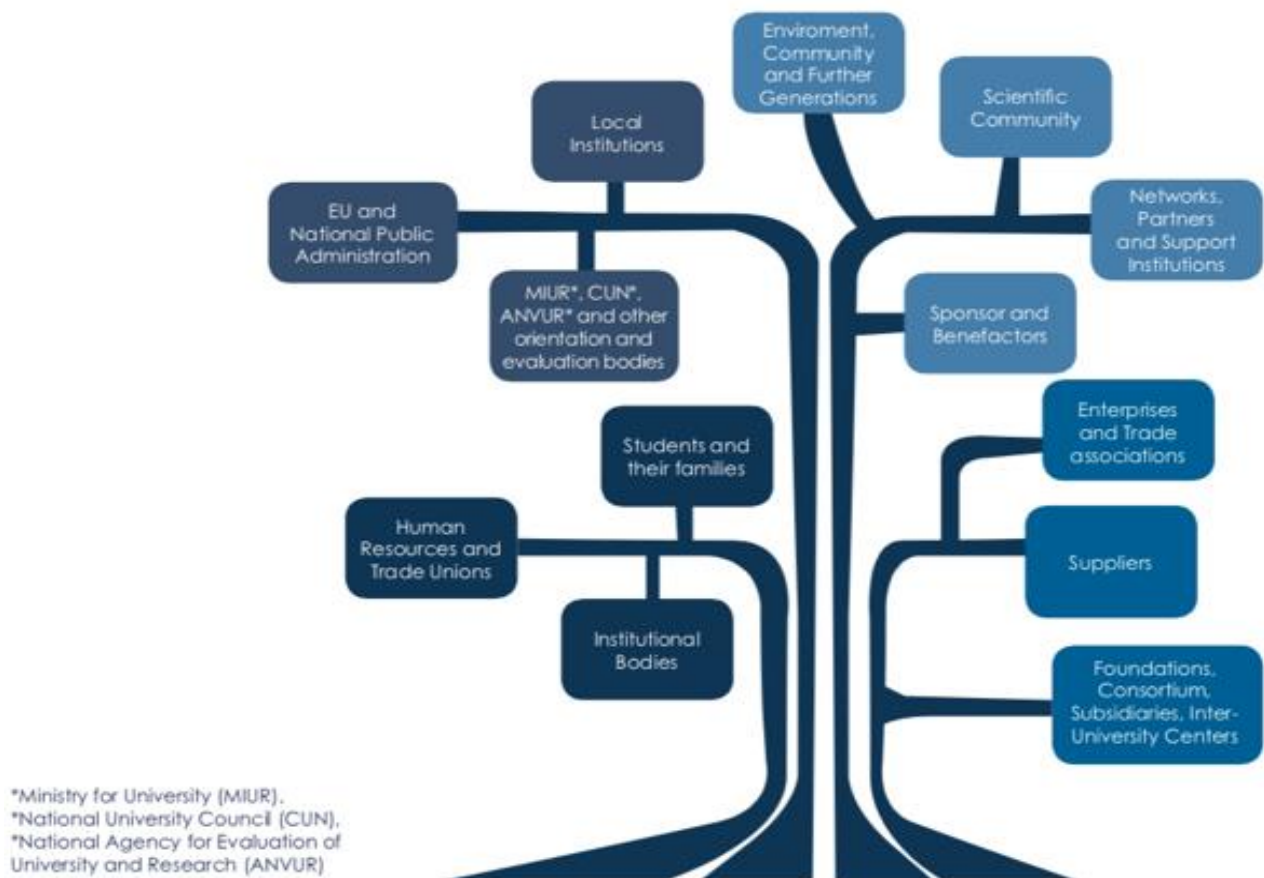
	2015	2018	2019
I.19 Value of resources committed to rewarding merit	10.8 Mln €	12.2 Mln €	> 12.2 Mln €

Source: Strategic Plan 2019–2021, University of Bologna, 2019, p. 33.

To *Develop Integrated Thinking, Connectivity and Governance*, as in Adams’ step 4, requires change inside the organization. Inside UniBo, a change took place with the Social Report preparation as, for the first time, it disclosed the impact of UniBo’s activities on the external environment. UniBo’s Strategic Plan 2016–2018 was created with the engagement of the academic community and the administration of the university to show how the activities developed in teaching, research, and third mission contributed towards the achievement of the selected SDGs. Mainly internal stakeholders (e.g. researchers, professors, Vice-Rectors and Rector, and administrative staff) were involved in the planning, assessing, and reporting stages of this process. These groups are key stakeholders for the university (Mitchell et al., 1997).

Other stakeholder groups were not directly engaged in the development of the report, but they are considered relevant to the development of the university’s Strategic Plans and SDGs Reports. UniBo’s governance recently fostered a new approach to stakeholders. The 2017 Social Report (see Figure 28.4) engaged new categories of stakeholders, mainly external to UniBo. This approach can be extended to UniBo’s start-up and owned or participated organizations (libraries and museums) at the regional level, beyond their organizational border of a single organization (Dumay et al., 2010). These incremental changes to process and structure were among the drivers of the adoption of integrating thinking at UniBo, instead of a radical change. Similar findings have been reported for other public entities in Italy (Guthrie et al., 2017).

Figure 28.4: Stakeholder groups related to the University of Bologna in the Social Report 2017



Source: Social Report 2017, p. 16.

Three reports on UN SDGs for the years 2016, 2017 and 2018 have been published so far, following the same structure (step 5 *Prepare the integrated report*). They include the university's context and critical features on teaching, research, and third mission and the main outputs of the related-activities for each SDG using indicators (Figure 28.5).

Figure 28.5: UN SDGs Report at UniBo (section)



UNIVERSITY QUALITY ASSURANCE

The University of Bologna has an **Internal Quality Assurance System** involving a self-assessment that allow the University to improve the quality of its study programmes. This process provides an adequate response to the expectations of all actors who have an interest in the offered training service: students, families, companies, institutions, etc.

The system envisages the periodic analysis of significant data (such as the number of graduates in the course, the opinions of the students and the employment status of the graduates) collected both by the University and by the **National Agency for the Evaluation of the University and Research System (ANVUR)**.

TEACHING



PARAMETERS FOR QUALITY EDUCATION

STUDENT ATTRACTIVENESS	
Students enrolled in Second cycle degree programmes (from other universities)	47.4%
Incoming exchange students	3,100
International students (UE and Extra-UE)	7.2%
SOCIAL INCLUSION	
Value of scholarships (merit and status based) Per Capita	510 €
Students followed by the Service for disabled	654
Enrolled University students by gender (first, second and single cycle degrees)	36,726 M 46,273 F
PROGRAMMES OFFERED AND MAIN RESULTS	
Degree programmes	219
Degree programmes taught in English	52
Masters' programmes and post-graduate/lifelong learning programmes	109
Courses with at least three quarters of students satisfied with the course	76.7 %
Graduates	18,380
Graduates within regular enrollment	67%

Source: University of Bologna UN SDGs report (University of Bologna, 2019), p. 19.

In summary, the UniBo UN SDG Report identifies the different resources used and the impact of its activities, particularly for stakeholders (Busco, 2018), and therefore has significant potential to support organizational learning and change in universities (Ceulemans et al., 2015). As outlined above, incremental changes to process and structure were among the drivers of incorporation of SDGs in Strategy Plans and Social Reports at UniBo and offered the chance to commit to sustainable development through changes to organizational strategy and operational activities. The value created by universities like UniBo is related to their context, and it is vital to understand it to achieve a transition to sustainable development (Godeman et al., 2014). Despite some limitations

due to the indirect link between the capitals and the UN SDGs, the UniBo approach offers stakeholders a view of the impact of the university's activities (teaching, research and third mission) in relation to each UN SDG. Both the Strategic Plans and UN SDGs Reports show the adoption of integrated thinking as encouraged by BUFDG (2016).

Conclusions

Organizations are challenged to integrate sustainable development considerations into their organization and reporting (Adams, 2014). The IIRC Framework may provide appropriate guidance for introducing integrated thinking, embedding SDGs in organization strategies and, in turn, fostering SDG achievements.

This chapter sheds light on the journey of UniBo, an Italian public university, which has been a pioneer in the integration and reporting of SDGs. The longitudinal case study of UniBo illustrates integrated thinking in action – its journey enabled it to connect the resources used and outcomes achieved concerning sustainable development and to develop plans and reports according to both SDGs and IR capitals. In the UniBo experience, the antecedents of the reporting of the SDGs were its social reports and the driver was the strong commitment of UniBo's governance to sustainable development. UniBo implemented the UN SDGs by focusing on integrating the SDGs into the strategy of the organization, producing a link between strategy and results (reports).

Using Adams' (2017a) model, this case study sheds light on the path that might be followed to align sustainable development through increases, decreases, and transformations of capital. The introduction of SDGs at UniBo required a change in thinking and a revision of strategy, which then allowed it to develop both a three-year strategic plan and a year-end report based on the SDGs.

The UniBo experience highlights the challenges and issues arising from a sustainable development approach using the SDGs and, to a lesser extent, transformations of the organization's capitals. UniBo's journey has lessons for other public sector organizations embarking on this journey, as well as for academics and practitioners who would like a better understanding of the path of

transition from more traditional forms of reporting to the SDGs and its impact on the value creation process and capitals.

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