OBSERVATORY ON SUSTAINABLE DEVELOPMENT REPORT 1

BOLOGNA BUSINESS SCHOOL | CENTRE FOR SUSTAINABILITY AND CLIMATE CHANGE

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REPORT 1: FRAMEWORK DEVELOPMENT AND DATASET CONSTRUCTION

SuMMLab in a nutshell

WHAT	• Environmental and social practices • 3928 italian companies mapped
WHY	• Provide a standardised framework for assessing companies' sustainability practices • Map LEs and SMEs under the same framework • Benchmarking
HOW	• 11 sustainability-oriented processes • 69 KPI reporting on sustainability practices
WHEN	• Two rounds of data collection: 2018-2020
WHERE	• Websites • Official reporting

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INTRODUCTION

In the last decade sustainability has gained significant attention in the agendas of organizations and policy makers. Sustainability practices have been introduced by companies through more efficient processes, new "green" product lines, and as leverage for innovative business models. Business innovations have thus urged companies to equip themselves with proper reporting tools able to depict their performance according to the triple bottom line principles of economic, social, and environmental sustainability. Existing frameworks for sustainability assessment at company level (e.g. Asset4, GRI, CDP) focus mostly on public companies or large organizations, and leave small and medium-size enterprises (SMEs) behind, even though they represent 99% of all European businesses, 67% for number of employees and 58% for value added; also, they hardly provide standardized measures for assessing sustainability practices in companies.

The Sustainability Measurement and Management Laboratory (SuMM Lab) aims to overcome such gaps in both theory and practice of sustainability measurement by acting as a permanent observatory assessing and reporting company's performance accordingly to environmental and social sustainability metrics. The project was launched in 2016 with an assessment of small, medium and large-size Italian companies of different industrial sectors, and offers new insights to businesses, academia, and education on how Italian companies are behaving and acting concerning sustainability.

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[2] Semenova, N., Hassel, L.G. (2015), "On the validity of environmental performance metrics", Journal of Business Ethics, Vol. 132, pp. 249–258.

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OBJECTIVES

The SuMM Lab has been developed as a permanent observatory aiming to explore the development and disclosure level of sustainability-related practices of small, medium and large organisations under the same framework. This is accomplished through a structured database gathering environmental and social sustainability-related practices (NOTA 3 vedi altro commento in fondo a pagina) data made publicly available online by companies.

The observatory has the following objectives:
1. To map the main thematic areas on sustainability measurement literature and international assessment frameworks.
2. To provide a standardised framework of sustainability key performance indicators.
3. To identify the main determinants of sustainability reporting by companies, by exploring associations between organisational characteristics and disclosure of information.
4. To disseminate the results achieved, making them available to businesses, practitioners and academia.

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[3] Mura, M., Longo, M., Micheli, P.; Bolzani, D. (2018), "The Evolution of Sustainability Measurement Research", International Journal of Management Reviews, Vol. 20, pp. 661–695.

METHODOLOGY

The first phase of the project was based on an extensive literature review on sustainability measurement, analysis 712 articles published from 1991 to 2017 to identify the main thematic areas and international frameworks and databases for sustainability measurements at company level (e.g., GRI, Asset4, CDP).

A dashboard with a preliminary list of indicators was designed and validated by practitioners from 20 Italian companies, organised into two focus groups. This allowed to identify a final list of 69 KPIs, belonging to 11 sustainability processes: environmental certifications, social certifications, energy management, water management, waste management, environmental impact, corporate social responsibility, supply chain, consumption, product innovation, business model.
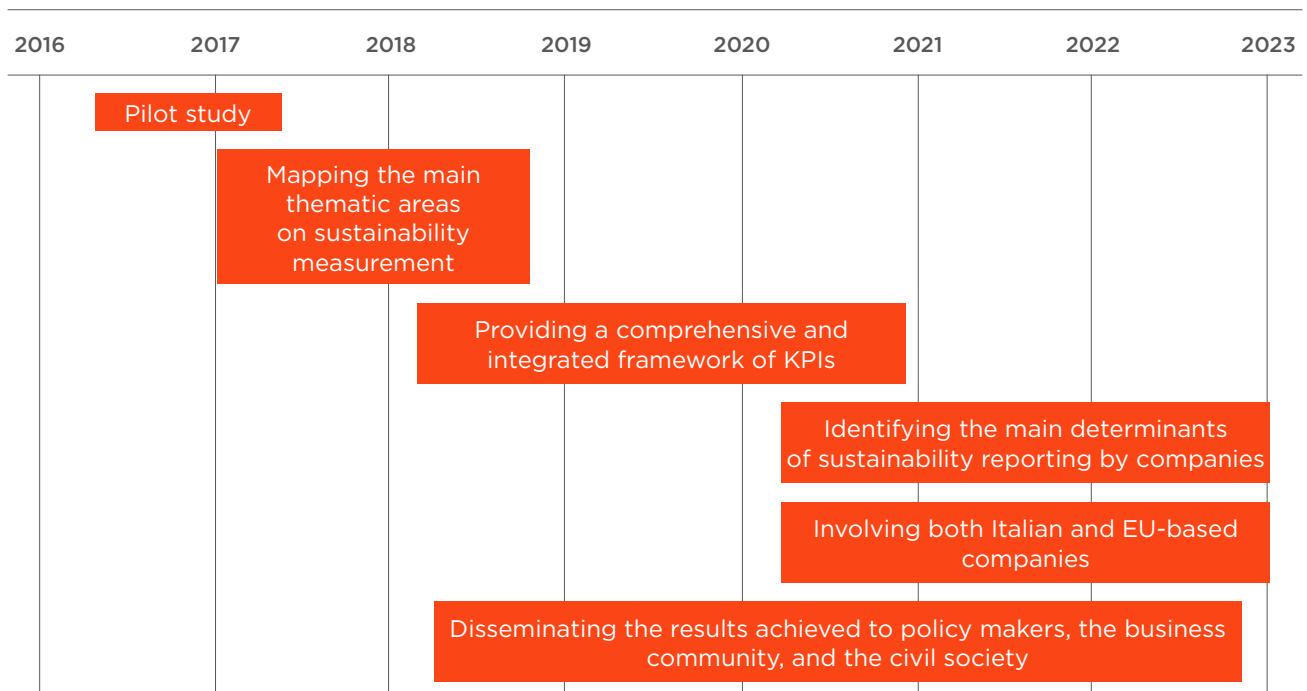
Then, a pilot study was conducted on 400 organisations randomly selected. As most organisations resulted micro firms and information shared by these companies were very limited or none, the selection method was modified to provide a more representative sample of Italian companies and stratified sampling by revenues was applied. Data characterising organisations were retrieved from the AIDA database.
Information on sustainability-related practices was collected through secondary sources – e.g. from organisation's websites and sustainability reports available online. Each of the 69 indicators was evaluated using dummy variables (i.e. 0/1 values), assessing whether or not an organisation discloses that particular sustainability-related practice. (Figure 1)

Figure 1. The process for SuMMLab construction

FRAMEWORK DEVELOPMENT

- Literature review (712 papers)
- Existing frameworks

PILOT STUDY

- Framework validation (focus groups)
- Pilot application (sample: 400 companies)

DATA COLLECT

- 11 sustainability processes
- 69 KPIs
- 80 students involved

The roadmap of the SuMM Lab includes several milestones already achieved and a set of activities for the next years for the extension of the project (Figure 2), which will include the integration of new methods for data collection and additional information provided by companies.

Figure 2. Roadmap of SuMM Lab's activities

2016	2017	2018	2019	2020	2021	2022	2023

Pilot study

Mapping the main thematic areas on sustainability measurement

Providing a comprehensive and integrated framework of KPIs

Identifying the main determinants of sustainability reporting by companies

Involving both Italian and EU-based companies

Disseminating the results achieved to policy makers, the business community, and the civil society

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OVERVIEW OF THE DATASET AND HIGHLIGHT OF KEY FINDINGS

This process led to the creation of a structured database including 3,928 companies. These companies operate in 32 different industrial sectors; are located in Italy (Figure 3); and the distribution by size is 50% of medium-sized enterprises, while the remainder is divided equally between small and large enterprises (Figure 4).

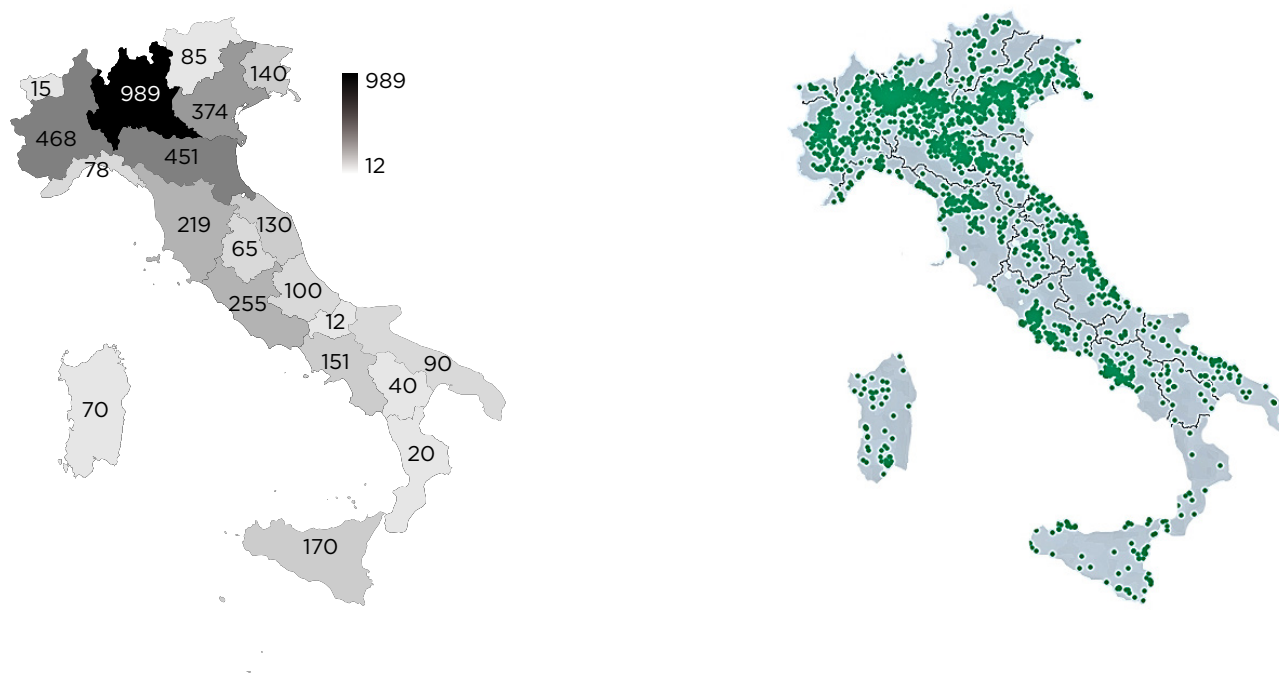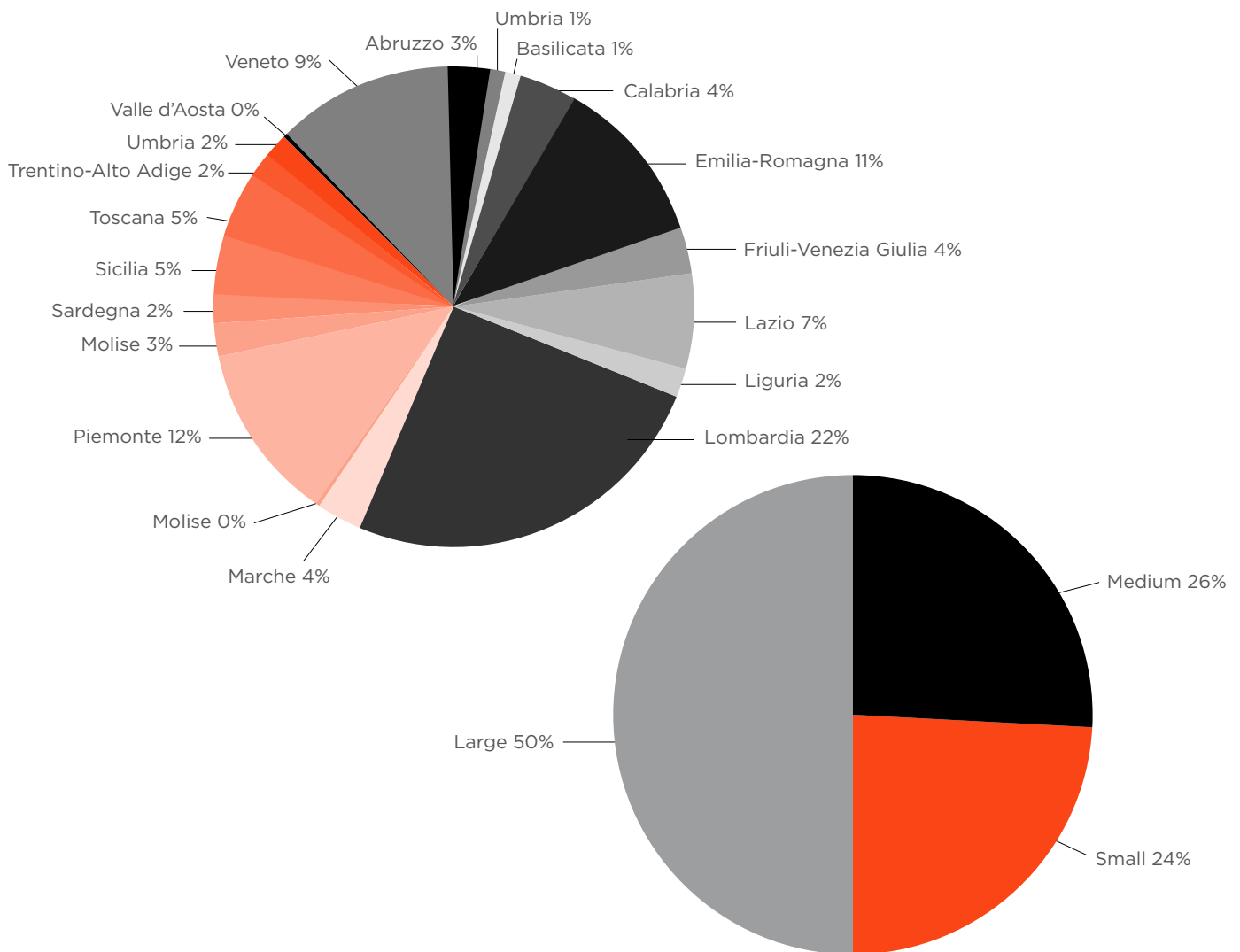**Figure 3. Location of 3,928 Italian companies mapped by the SuMM Lab and distribution among Italian regions**

Figure 4. Enterprises' distribution by region and size

Analyses suggest that the sustainability-related practices implemented by companies are still a few, as less than 15% of companies mapped appears to develop sustainability processes at all. Corporate Social Responsibility (CSR) and environmental certifications are among the most disclosed information.

Specifically, it emerged that the most developed sustainable process focuses on the employee under different perspectives, like training policies and risk analysis policies of industrial processes beyond the requirements from legislation.

This is followed by processes related to the attention to consumers expressed through the application of specific communication policies, like smart labels and sustainability reports, and the measurement of environmental impacts generated by the companies, in different environmental media.

The fourth most disclosed process refers directly to the supply chain testifying the intention of companies to extent their commitment towards sustainability to their ecosystem (Figure 4).

Figure 4. The most common sustainability processes at national level
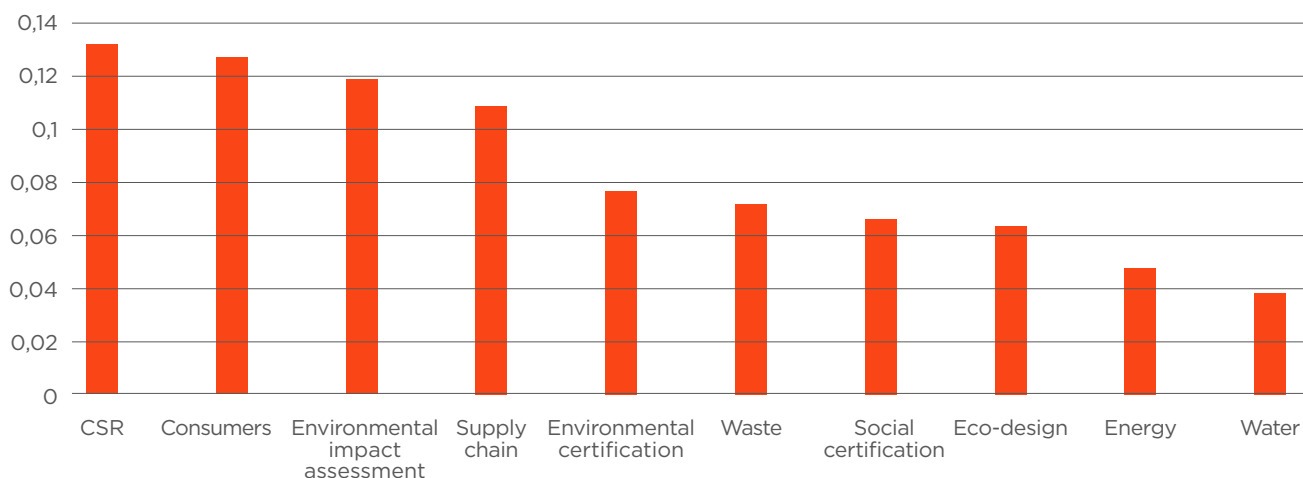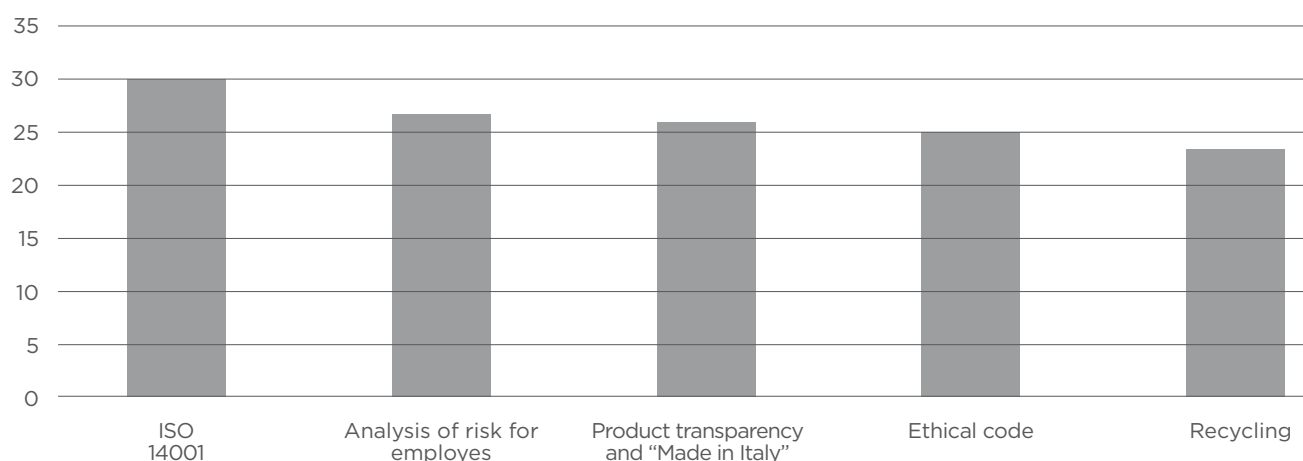

Figure 5. Top-five of the most disclosed practices at national level

Moving from sustainability processes to sustainability practices (Figure 5), twelve out of 69 KPIs exceed 15% of disclosure by companies. The most disclosed practice results ISO 14001, an internationally recognised and voluntary certification which verifies the concrete commitment of a company to minimize the environmental impact of its processes, products and services. The second most disclosed indicator is the management of risk for employees beyond the legal obligations. The third most disclosed practice concerns environmental communication, as companies provide information about the origin of the resources used and the origin of production processes (product transparency and "Made in Italy").

Distributions among Italian regions of the top-three most disclosed sustainability practices are shown in Figure 6.

Figure 6. Distributions of the top-three most implemented and disclosed sustainability practices among Italian regions.

ISO 14001

Analysis of risk for employees

Made in Italy
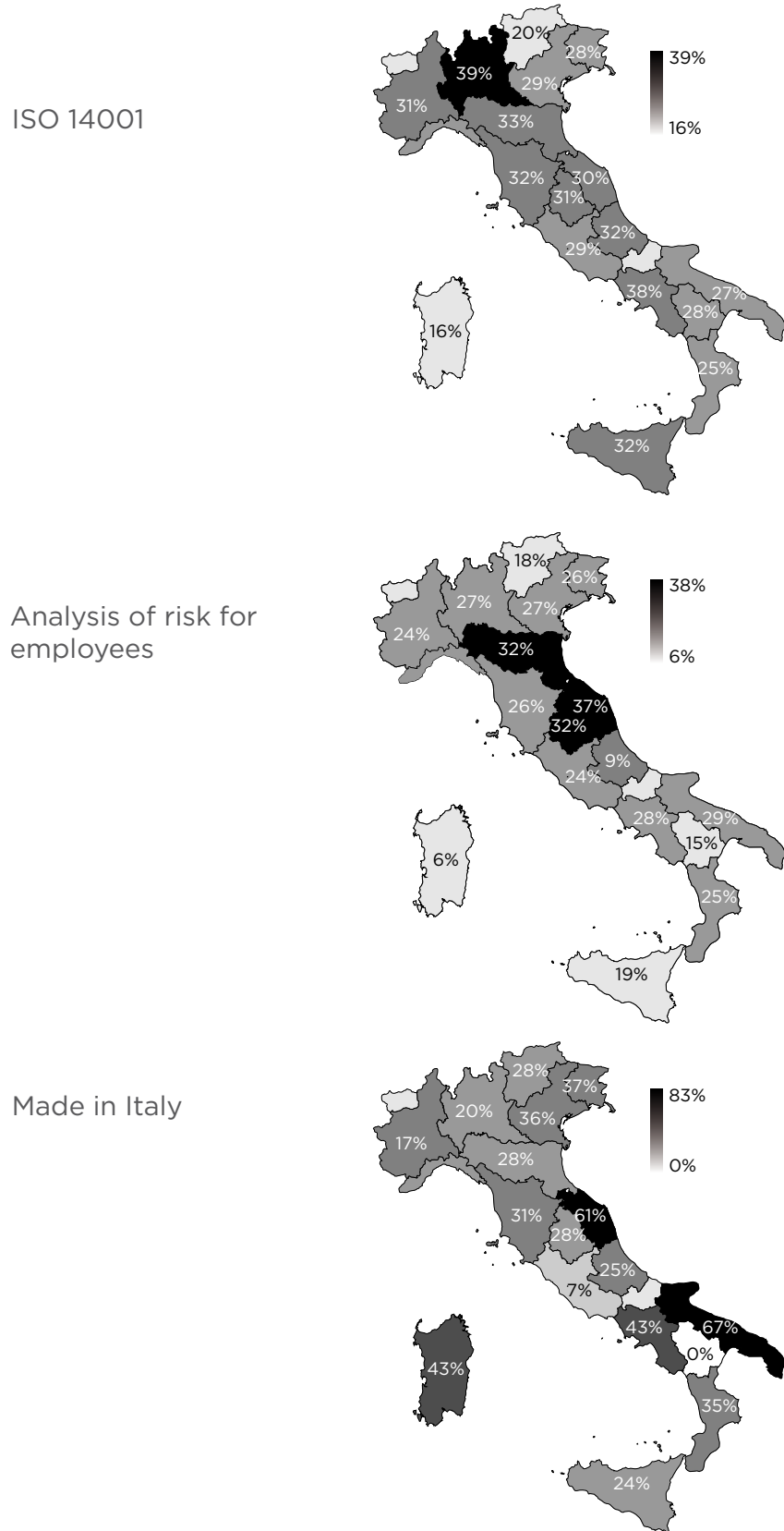
CONCLUSIONS

The SuMM Lab acts as a permanent observatory aiming to explore and compare the disclosure level of sustainability-related practices of small, medium and large organisations and different industrial sectors. This objective is accomplished by providing a structured database containing environmental and social sustainability-related data disclosed by companies coming from different industries.

Companies are currently striving for suitable tools and techniques to support their transition towards more sustainable models of production and consumption. Mapping sustainability practices developed by companies offers opportunities for businesses and policy makers to assess the state-of-the-art and explore the drivers of online sustainability disclosure. Moreover, considering the challenges posed by progressively stringent regulations and the increasing attention of costumers to sustainability issues, this observatory offers a benchmark for companies and industrial sectors, that could support competitive analysis and strategic planning,. Insights from the SuMM Lab may represent the baseline for setting roadmaps for organizations to cope with the implementation of SDGs into organizational processes and contribute to the construction of sustainable value networks.

APPENDIX

SUMM LAB
KEY PERFORMANCE INDICATORS FOR
SUSTAINABILITY ASSESSMENT

1. Does the company have one or more of the following environmental certifications?

• ISO 14001
• EMAS
• ISO 50001
• Ecolabels (E.G., FSC, Energy star, MSC, EU ecolabel)
• GOLDPOWER
• LEED

2. Does the company have one or more of the following social certifications?

• SA8000
• ISO26000
• OHSAS18001
• IFS
• ISO22005
• ISO22000
• ISO 45001

3. Does the company implement one or more of the following energy-related policies directly?

• Renewable energy: Wind turbines
• Renewable energy: Water mill and windmill
• Renewable energy: Co-generation plant
• Renewable energy: Solar panels
• Energy saving policies: Energy-saving light bulbs into buildings
• Energy saving policies: Outer coat for buildings
• Energy saving policies: Green roofs for buildings
• Actions for the next five years

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4. Does the company implement one or more of the following water recycling policies directly?

• Wastewater treatment and purification plant
• Rainwater treatment and purification plan
• Indication about the percentage of water use
• Actions for the next five years
• Quantitative information gathered and provided supporting the claim (such as graphics, trends, tables)

5. Does the company implement one or more of the following waste-related policies directly?

• Recycling policy beyond regulation
• Detailed description of the recycling procedures applied into company's documentation
• Energy recovery from waste (e.g. burning waste material) in place or by third party (e.g. waste management company)
• Use of recycled raw material as input for production
• Recycling of failed products directly within the company
• Packaging: biodegradable material is used
• Packaging: recovery and re-use is provided in place
• Actions for the next five years
• Quantitative information gathered and provided supporting the claim (such as graphics, trends, tables)

6. Does the company implement one or more of the following monitoring systems for environmental impacts?

• Monitoring of environmental impacts caused by Air emissions
• Monitoring of land emissions and spills
• Monitoring of emissions into water bodies
• Identification of specific objectives/targets to reduce emissions
• Report or communication of information initiatives to minimize/compensate environmental impacts
• Quantitative information gathered and provided supporting the claim (such as graphics, trends, tables)

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7. Does the company implement one or more of the following measures related to Corporate Social Responsibility?

- Sustainability report, environmental report, environmental statement, or environmental and social balance
- A statement or policy of equal opportunities
- Information about childcare, time flexibility, and healthcare
- Ethical code of conduct
- Development of training policies / training for employees (beyond mandatory regulation)
- Environmental Impact Assessment Study
- A risk analysis policy for employees' protection in the working environment
- External auditor of its CSR/Health & Safety/Sustainability Report
- Internal communication tools (such as Whistle blower, ombudsman, suggestion box, hotline, newsletter, intranet)
- Report of partnerships or initiatives with specialized Non-Governmental Organisations, industry organisations, governmental or supra-governmental organisations, which are focused on improving environmental issue
- Actions for the next five years

8. Does the company implement one or more of the following initiative towards the supply chain?

- Environmental and social criteria to select suppliers
- Policy to reduce environmental impacts of the supply chain
- Report of initiatives to reduce environmental impact of transportation used by employees
- Report of initiatives to reduce environmental impact of transportation of its products

9. Does the company implement one or more of the following initiative towards the consumer?

- Policies to encourage a circular economy (return to the company of old/used products)
- Description of the origin of the resources used and the origin of production (product transparency and "Made in Italy")
- Policies of social communication about the sustainability of the products to inform consumers
- Description of initiatives in place to reduce the energy footprint of products

10. Does the company implement one or more of the following methodologies to support sustainable innovation of product?

- Environmental product innovation policy/initiative on Eco-design: Eco-design
- Environmental product innovation policy/initiative on Eco-design: Life-cycle assesment applied to one or more product
- Environmental product innovation policy/initiative on Eco-design: Dematerialization of production
- Report of new production techniques to improve the global environmental impact (all emissions) during the production process
- Development of goods and services that improve the energy efficiency of buildings

11. Does the company develop one of the following business models or markets?

- Products or technologies for use in the clean, renewable energy (such as wind, solar, hydro and geo-thermal or biomass power)
- Products or technologies that are used for water treatment, purification or that improve water use efficiency
- Production or promotion of organic food or other products
- Construction of nuclear reactors, production of nuclear energy or active in the nuclear energy industry

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