



Sant'Anna
Scuola Universitaria Superiore Pisa

INSTITUTE
OF MANAGEMENT



Sant'Anna
School of Advanced Studies – Pisa

The UN Global Compact

COMMUNICATION ON ENGAGEMENT (COE)

*Scuola Superiore di Studi Universitari
e di Perfezionamento Sant'Anna*

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1. Statement of Continued Support

Pisa, June 2022

Sant'Anna School of Advanced Studies and its Institute of Management reaffirm our support to the United Nations Global Compact and its Ten Principles in the areas of Human Rights, Labour, Environment and Anti-Corruption.

This is our Communication on Engagement with the United Nations Global Compact. In this document, we describe the actions that our organization has taken to support the UN Global Compact and its Principles. We also commit to share this information with our stakeholders and we welcome feedback on its contents.

Our aim is to help students become interpreters of the current global challenges and future leaders through the pursuit of excellence in education and innovative research, always taking into account the social, economic and environmental pillars of sustainability. Our adhesion to the UN Global Compact since 2010 represents a coherent choice for advancing and promoting a sustainable, innovative, and better society for our future generations.

Sincerely,

Prof. Andrea Mario Cuore Piccaluga

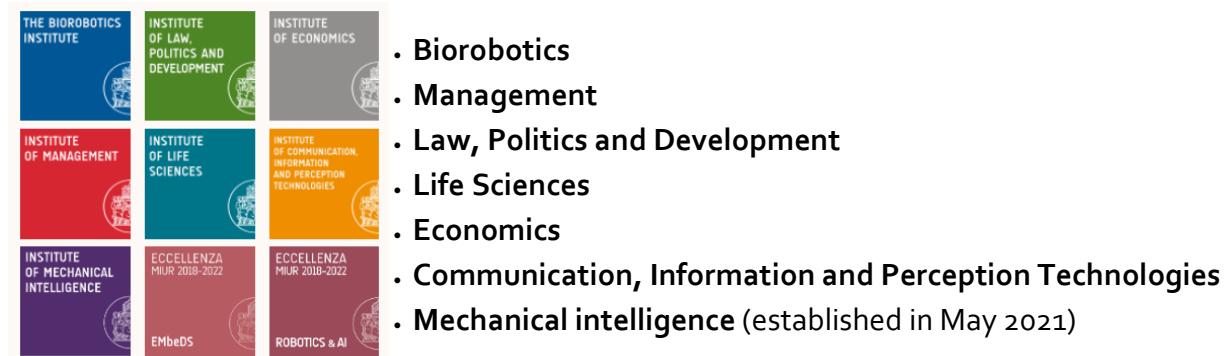
Director, Institute of Management



2. Description of Actions

2.1 Introduction

Sant'Anna School of Advanced Studies (*Scuola Superiore di Studi Universitari e di Perfezionamento Sant'Anna*, hereinafter SSSA) is a public university institute, with special autonomy, located in Pisa, Italy and operating in the field of applied sciences. It comprises seven Institutes:



In addition to these institutes, in 2018 SSSA established two “Departments of Excellence”: **Economics and Management in the era of Data Science (EMbeDS)** that uses the opportunities offered by Data Science in the disciplines of Economics and Management in collaboration with the Dirpolis Institute; and the **Robotics and Artificial Intelligence (Robotics & AI)** born from the collaboration of SSSA’s engineering institutes with the aim of creating a new generation of robots capable of autonomously and effectively impacting society.

SSSA offers graduate programs (both Masters and PhD) that combine rigorous traditional courses with research, service learning, internships and entrepreneurship in both national and international contexts, whereas undergraduate programmes are run in conjunction with the University of Pisa. In addition to these Institutes, the Department of Excellence for Economics and Management in the era of Data Science (EMbeDS), and the “Robotics & AI” Program focused on Artificial Intelligence (AI) and Material Science were awarded as “Excellence departments” by the MIUR (Italian Ministry of Education, University and Research) for the years 2018-2022.

Since its foundation in 1987, SSSA has experimented innovative programmes in research and training activities, with an interdisciplinary approach and in a context of continuous cultural and intellectual exchange between faculty and students. Professors, researchers and students form part of a scientific community that generates innovative ideas, developed in collaboration with foreign universities, institutions, companies and research centers. In the past years, SSSA has further grown its role as a point of reference in Italy and abroad, thanks to its continuous focus on excellence, its international nature and its high-level scientific community.

The high level of our research is recognized by the results of the Quality Assessment Research (VQR) conducted by ANVUR. Moreover, in 2022 SSSA was confirmed as the **1st University in**

Italy, and 7th in Europe and 14th in the world among young Universities (founded less than 50 years ago) by the Times Higher Education Young University Rankings 2022.



Within SSSA, the **Institute of Management** has the broad mission of contributing to the advancement of knowledge in the field of managerial studies, educating managers for private and public organizations and generating a positive impact on the business environment and on society as a whole. It is active in three main research areas:

- **Innovation (MAIN)**
- **Sustainability (SuM)**
- **Healthcare (MeS)**

The **Sustainability Management Research Laboratory (SuM Lab)**

combines knowledge of business management and policy making with the principles of sustainability, through scientific research and empirical investigation in the areas of *Environmental Management and Industrial Symbiosis; Energy and Resource Efficiency; Circular Economy and Natural Capital; Sustainable Products, Life-Cycle Thinking and Green Marketing; CSR and Accountability; Climate Change and Disaster management.*



It works and collaborates with different actors in Italy and at the European level: businesses, policy makers, public and private institutions, local communities, offering its high-level expertise on technical analysis, socio-economic analysis, policy and regulation, management and training, with the aim of advancing the principles of sustainability and responsible management.

The SuM Lab has a high level of skills on technical analysis, socio-economic analysis, policy and regulation, management and training for the promotion of sustainability in both private and public organizations. Sum Lab develops and implements innovative tools, guidelines and methodologies to contribute to the **Green Deal**, the European Commission's strategy to implement the United Nations' 2030 Agenda and achieve the Sustainable Development Goals. Sum Lab has been managing European projects on **sustainability & energy management** since 2006. We are experts on environmental and socio-economic impact assessment (mainly linked to our European projects), stakeholder engagement involving consumers, institutions and working together with companies, consumer behavior analysis, implementation of circular economy solutions in many productive sectors, assessment of industrial symbiosis solutions and management of eco industrial parks. We apply the LCA, LCC S-LCA and PEF methodologies to compare the performances of new and traditional products, services, materials and technologies. We support companies, trade associations and institutions in surveys, case studies and many other research activities.

- This report encompasses some of the University's activities, and focuses more specifically on the work carried out by [the SuM \(Sustainability Management\) Laboratory](#) of the Institute of Management.

2.2 Incorporation of the UN Global Compact Principles into Internal Operations

The values of global social responsibility as portrayed in the UN Global Compact principles of anti-corruption, environmental sustainability, labour rights and human rights are incorporated into our academic activities and curricula.

We embrace the “business and human rights” approach in our educational framework and we promote the respect of human rights as a key driver for global social responsibility. We integrate sustainability into our governance structure and internal operations and our reporting activities are conducted in reference to institutional values and principles, to ethical guidelines and codes of conduct.

Our [Code of Ethics](#) upholds the following key principles:

- a) dignity and promotion of the individual, both as a person and as a member of the University’s social community;
- b) solidarity, fostered especially through the promotion of a collegial environment, in that this enhances teaching and research activities;
- c) equality before the law, by acknowledging and respecting differences in provenance, language, religion, political view, personal, social and economic conditions, sex, gender and sexual orientation, and by rejecting and condemning all forms of discrimination;
- d) academic freedom and freedom of scientific research;
- e) promoting merit as a means for ensuring substantive equality, also by upholding the principle of transparency in evaluation and in the definition of evaluation criteria;
- f) respect for and protection of the environment and of health and safety in the workplace and in living spaces;
- g) good administration according to norms of efficiency, effectiveness and economy.
- h) Special emphasis is given to the norms on “abuse of power”, “sexual abuse and harassment” and other offensive and discriminatory behaviour, “nepotism and favouritism” and “conflict of interest”, providing concrete measures to defeat them.

Emphasis is also given to the pursuit of transparency, impartiality and integrity, and to the central role and freedom of students as well as academic freedom and freedom of research.

In accordance with the European Charter for Researchers, issued by the European Commission Recommendation 2005/251/EC, the Code states that SSSA considers all research personnel as professionals, regardless of their classification on the different juridical status existing at the legislative level. Moreover, it binds itself to settle working conditions that guarantee gender equality and the creation of a research environment that can provide adequate tools and opportunities to men and women.

The 2020-2022 Prevention Plan of Corruption and Transparency (PTPCT): SSSA adopts the [Three-Year Plan for Transparency and Anti-corruption](#), in compliance with the Italian Law n.

190/2012 on the prevention and punishment of corruption and illegality in the Public Administration and subsequent amendments, and with the National Anti-Corruption Plan (PNA) approved by the National Anti-Corruption Authority (ANAC).

With regard to gender equality and diversity in staff recruitment and promotion, in 2020 the **Guarantee Committee for Equal Opportunities, Employee Wellbeing and Non-Discrimination at Work (Comitato Unico di Garanzia – CUG)** confirmed its commitment to the promotion of a work environment characterized by the respect for the principles of equal opportunity, well-being and non-discrimination in terms of gender, age, disability, ethnicity, language, political views, sexual orientation.

SSSA also signed the **“Manifesto of Inclusive University”**, promoted by the United Nations Refugee Agency (UNHCR). According to UNHCR estimates, only 3% of refugees globally have access to higher education compared to an average of 37% globally. The Manifesto encourages access of refugees to university education and promotes their social integration e active participation in academic life.

We understand that our own organisational practices should serve as an example of the values and attitudes we convey to our students. In this regard, a concrete example of how the School has incorporated environmental sustainability principles into its organisational practices is represented by the **“Green campus project” (Progetto “Scuola Verde”)**. The project was launched in 2019 by our Rector through the establishment of the Working Group for the promotion of environmental sustainability within our Campus. Inspired by the CRUI Manifesto entitled “Sustainability in Universities”, the WG is committed to establish an integrated and permanent university sustainability structure (Green Office) and to include two Sustainable Development Goals in its Strategic Plan:



Operative actions identified as part of SDG 12 “Ensure sustainable production and consumption models”:

- Sustainable Public Purchasing: e.g. use only recycled paper; offer locally sourced sustainable food at the University’s canteen; define a sustainable procurement manual, supported by training initiatives.
- Minimize the use of resources to prevent the production of waste, especially plastics and food: reduce energy consumption, paper consumption and the use of disposable plastic products. For example, water fountains are available in most office buildings and dorms, encouraging the use of refillable water bottles. These bottles were distributed during large events organised by SSSA. Another planned action is to reduce food waste by donating surpluses from the School’s canteen to charities.

- Waste recycling: recycling bins were introduced in all dorms of the Campus. The next step is to create easily accessible 'islands' for separate waste collection in all locations.
- Promote a sustainable and active lifestyle: e.g. purchase of institutional CicloPi cards for urban bike travel; promote bike-sharing and car-sharing; promote a healthy and sustainable diet by improving the information available.
- Transparency and public commitment to support the environment (Sustainable reporting).¹



Operative actions identified as part of SDG 13 “Fight against climate change”:

- Invest in the energy efficiency of buildings under construction or renovation: e.g. reinsert the initially planned photovoltaic panels into the San Giuliano project.
- Increase the energy efficiency of existing buildings: e.g. identify and evaluate eco-efficient actions for improving the energy efficiency of buildings; define and implement awareness raising and “energy education” actions also through the creation of eco-competition systems between the various offices.
- Reduce the organization's environmental footprint (OEF): e.g. apply sustainability criteria within tenders for the assignment of purchases of products and services; prefer the use of energy from sustainable sources; encourage afforestation projects.
- Increase the sustainability awareness of the community: offering educational initiatives both within the School’s community and to the local population on the current state of the environment and on sustainable lifestyles.

In parallel, our strategy for improving the environmental sustainability of our campus includes:

- Education: The promotion of environmental awareness and education of students and staff, through specific and multidisciplinary initiatives on sustainable lifestyles and practices, especially in the "orientation" phase.
- Communication: A specific and easily recognisable logo was created to identify all initiatives and best practices linked to sustainability. For example, in 2020 the University’s Store launched some “green” products (e.g.USB pen and mobile phone charger in bamboo wood, rechargeable with sunlight, t-shirts and backpacks in recycled cotton, notebooks made with recycled plastics and paper, etc.). These products are marked by the “Green School” logo, created by a student of the Master’s programme GECA of the Institute of Management. Moreover, we plan to develop a specific section of our Website dedicated to sustainability, in which professors and researchers are encouraged to report their initiatives and the good practices adopted (“sustainability pills”), and which can provide service communications for experiencing the School in a "sustainable" way (eg: localization of water fountains).

¹ Since 2020, SSSA has been drafting a **Sustainability Report** (“**Bilancio di Sostenibilità**”) that aims at communicating the School's sustainability objectives, the actions implemented and the results achieved, also in relation to the SDGs. [The 2018-2020 Report can be downloaded here](#). The new report will be released later this year and published on the University’s website.

2.3 Educational Programmes on Topics Related to Sustainability and to the Global Compact Ten Principles

In these past years we have consolidated and improved our **educational programmes for students at the under-graduate and post-graduate levels**. We provide here below a brief description of some of the programmes offered by our University that address topics related to sustainability and to the Global Compact Ten principles.

Under-graduate classes² on topics such as Energy Resource Management; Circular Economy: implications and opportunities for business and policy making; Business contribution to Agenda 2030; Business strategies and sustainability.

The **Master of Science in Innovation Management (MAIN)**, jointly offered by the Institute of Management of SSSA and the Department of Economics and Management of the University of Trento, is a two-year full-time program ("Laurea Magistrale") that equips national and international students with advanced knowledge and practical experience on innovation management. It provides sound knowledge of the innovation processes across industries, based on solid foundations in economics and management, a quantitative approach and the exposure to a mix of cultures. The programme includes a Sustainability Management course that aims to provide students with knowledge of corporate sustainability, its background, its objectives and operating modalities. It refers to the current trends in the way organizations respond to the increasing environmental, social and technological challenges, in the perspective of the UN Agenda 2030. A specific focus is dedicated to the analysis of the connections between corporate strategy and corporate sustainability and to the impact of corporate sustainability on business functional organizational structures and on business performances. The course deals with key concepts such as how organizations impact on the environment and socio-technical systems, the relationship between social and environmental performance and competitiveness, the approaches and methods (e.g. organizational, managerial and operational tools) that can be adopted to effectively manage these issues.



The **Master's Programme in "Environmental Management and Control: circular economy and efficient management of resources" (GECA)**, offered by the SuM Lab of the Institute of Management, is designed to provide outstanding training to those who want to work in sectors in which the circular approach to economics and the efficient management of resources in an integrated cycle perspective are key aspects. The Master is based on a multidisciplinary approach aimed at creating systemic skills in the management of environmental issues, with particular reference to waste, water,



² One of SSSA key values is the pursuit of merit as a means for ensuring substantive equality and transparency. Undergraduate degrees are awarded in partnership with the University of Pisa. Students at the University of Pisa sit rigorous entrance exams for studying at SSSA, and they are required to achieve top marks and demonstrate proficiency in two foreign languages. In return, they benefit from free scholarships.

energy, ecosystem services. It trains professionals that can support companies and organizations in the creation of a circular economy, also taking into consideration the 2030 Agenda for Sustainable Development. The program is divided into two different phases:

- 1) Classroom lectures; field-visits to companies operating in relevant areas; Laboratories (action learning activities through case studies in collaboration with companies);
- 2) Internship with final project work.

Master in Human Rights and Conflict Management

DESCRIPTION

The Master in Human Rights and Conflict Management is designed to provide students from different cultures and backgrounds with a deep understanding of the linkage between human rights and conflict management theory and practice. The curriculum, strongly field oriented, prepares participants to work with NGOs, governments, aid agencies, the UN system and regional organisations, as well as to operate in the context of complex emergencies.

STRUCTURE

The Master is a one-year post-graduate programme. It starts on January 14, 2020 and runs until Spring 2021. The Programme encompasses about 400 hours of classroom lectures and 400 hours of internship, in addition to individual studying and to the preparation of a written thesis. Classroom lectures are usually from Monday to Friday and run from January 2020 to the end of July 2020. The internship lasts three or more months, starting from August/September 2020.

humanrights@santannapisa.it

The **Master in Human Rights & Conflict Management** offered by the Institute of Law, Politics and Development is designed to provide students from different cultures and backgrounds with a deep understanding of the linkages between human rights and conflict management theory and practice. The curriculum, strongly field oriented, prepares participants to work with NGOs, governments, aid agencies, the UN system and regional organisations, also operating in the context of complex emergencies and joint operations. The postgraduate programme is under the patronage of the United Nations Regional Information Centre (UNRIC) and is organised in collaboration with the International Research Laboratory on Conflict, Development and Global Politics and with the International Training Programme for Conflict Management – ITPCM – of SSSA.

The international **Ph.D. in Management – Innovation, Sustainability and Healthcare** is a three-year training programme that deals with the main topics in management with a strong interdisciplinary approach. Its areas of study characterise the current research activities of the Institute of Management, in particular:

- the **management of innovation** includes topics such as Open Innovation, technology transfer, cost accounting, finance for innovation, purpose driven organisations, tourism management, neuro-marketing, technological innovation in healthcare;
- the **management of sustainability** combines the knowledge of business management and policy making with the principles of sustainability, through scientific research and empirical investigation;
- the **management of healthcare** covers a wide range of topics ranging from health policies, performance measurement, innovative models of healthcare delivery and organisation, to the study of decision-making processes that guide the choices of health professionals and users.

The international **Ph.D. in Human Rights and Global Politics: Legal, Philosophical and Economic Challenges** offered by the Institute of Law, Politics and Development, is a three-year programme that provides an educational path that enables participants not only to carry out

sound academic research, but also to undertake professional careers within a wide range of international, national and regional entities, in both the private and the public sectors. The Programme addresses the issue of Human Rights (Legal Dimensions of Sustainability and Human Rights Protection) and Global Politics, and is characterized by a strongly interdisciplinary approach, which implies the intersection among the research areas of: Agricultural, food and agri-environmental Law; Public International Law; Political Economy; Political Philosophy.



The new [Ph.D. Course in Health Science, Technology and Management](#), introduced in 2020, involves the 6 Institutes of Scuola



Superiore Sant'Anna (Life Sciences, Biorobotics, TeCIP, Management, Dirpolis, Economics). It adopts of a multi- and interdisciplinary approach and focuses on the topics of health and equity of the health systems (HS): characterized by complexity, interdisciplinarity and dynamism, they require innovation and management skills to be sustainable and ensure adequate levels of care for their clients. This course aims to train researchers and professionals with an interdisciplinary background in order to face the most current challenges:

- the development of tailored strategies for health management in internal areas, ensuring both the proximity of patient services and the excellence of the healthcare offer;
- the improvement of relations between different HS both at national interregional level and between States;
- reducing the gap between the advancement of knowledge and technological advancements and their implementation within the processes of diagnosis and treatment
- the resilience of the HS in emergency health situations, such as the Covid-19 pandemic;
- the defense of the most fragile categories among the population by age, sex, comorbid condition, wealth, fragility, health coverage;
- the analysis of the values of family, work, social, intergenerational relationships in the evolution of the categories of pathology;
- improving relations between different HS both at national interregional, and international level between States;
- the assessment of the impact of ethical-legal aspects of health processes, in particular in matters relating to the citizens' privacy and health.

In 2020 SSSA approved the future launch of a new **PhD programme in Sustainable Development and Climate Change**, starting from the XXXVII cycle. The aim of this programme is to create a new generation of researchers and experts who contribute to designing a fairer and more sustainable society. It will address technological, economic, social and environmental problems through a multidisciplinary approach, with particular focus on immigration, health, justice, pollution, access to water and food.

In 2020 SSSA launched the [Seasonal Schools](#), short training programmes “of excellence”, which are strongly interdisciplinary, and focused on the School’s frontier research topics. They are open to University students enrolled in Bachelor Degree, Masters’ Degree and PhD courses, who have

the same advancement characteristics as the School's students. The Seasonal Schools are also opportunities for meetings and exchanges with other high-performing students from all over Italy as well as from abroad, to be experienced "inside" our facilities and laboratories.



For the academic year 2021-2022 we highlight the following courses that address issues related to the Global Compact principles:

- **CESM - Circular Economy and Sustainability Management: managing the transition towards a circular economy** (II edition). The course, offered by the SuM Lab, is aimed at students from different backgrounds interested in the field of efficient resource management and circular economy. It explores organizational aspects and innovation facets related to all phases of the product life cycle; moreover, it provides a practical overview of how processes, decisions and business models should change in light of the new circular economy paradigm.
 - **Food, Sustainability and Rights** (II edition)
 - **Climate change and International Law: interdisciplinary perspectives** (II edition)
 - **ECLIRE - The ethics of climate change: reshaping responsibilities for present and future generations** (II edition)
 - **AGRIDEV – Climate resilient, biodiversity-based agriculture for sustainable development** (I edition)
 - **TRUST – Transparency, integrity and anti-corruption in a public-private system** (I edition)
 - **TWIST – Welfare transformation, social innovation, rights and third sector** (I edition)
- The 2021-2022 full programme is available [here](#).

In addition to our educational offer for national and international students, the University offers **training courses for public and private entities**. In this regard, the Sum Lab has developed many executive courses throughout the past years. For example, in 2021 and 2022 the following training courses for business have been carried out with the leadership of SuM Lab professors and researchers:

- **"Circular Economy School ENEL"** (second edition - 2021). Executive course programme financed by ENEL SpA, with the aim of designing and delivering training to ENEL executives on Circular Economy.
- **"Circular Economy Academy Online"** (2022), with the aim of designing and delivering training on Circular Economy.
- Other training seminars on circular economy at Italian chambers of commerce.

2.4 Research and Thought Leadership to Advance Sustainability Best Practices, the Global Compact Principles and the SDGs

Publications

In terms of research achievements, we present the below list of the **main publications of the SuM Lab** related to this reporting period **2020-2022**:

2020

- Annesi, N; Gragnani, P; Battaglia, M; Frey, M. (2020), Le cooperative e l'innovazione sostenibile: le nuove sfide dell'Agenda 2030. *Corporate Governance and Research & Development Studies*, Issue 2 (77-110)
- Annunziata, E. (2020), Strategie di business per la geotermia di superficie: evidenze empiriche in Italia e in Europa. Contributo su volume "Opportunità di business per lo sviluppo dell'energia sostenibile: il caso della geotermia di superficie in Italia", Vol 1 pp. 58-83, Edizioni ETS Pisa (ISBN: 9788846758774)
- Annunziata, E; Casamento, G. (2020), Innovazione dei modelli di business per lo sviluppo della geotermia di superficie in Italia. Contributo su volume "Opportunità di business per lo sviluppo dell'energia sostenibile: il caso della geotermia di superficie in Italia", Vol. 1 pp. 84-102, Edizioni ETS Pisa (ISBN: 9788846758774)
- Annunziata, E; Rizzi, F; Frey, M. (2020), The supporting role of business models in the promotion of sustainable innovations in the energy sector: an explorative study in the Italian SMEs. *SINERGIE*, Vol. 28 (3), pp. 131-146 (DOI: 10.7433/s113.2020.08).
- Annunziata, E; Rizzi, F; Frey, M. (2020), The interplay of business models with sustainable innovations: evidence from Italian SMEs in the energy sector. Contributo Atti Congresso "Grand challenges: companies and universities working for a better society", Fondazione CUEIM, Verona, pp. 25-39.
- Bartolozzi, I; Daddi, T; Punta, C; Fiorati, A; Iraldo, F. (2020), Life cycle assessment of emerging environmental technologies in the early stage of development: A case study on nanostructured materials, *JOURNAL OF INDUSTRIAL ECOLOGY*, 24 (1), pp. 101-115 (DOI: 10.1111/jiec.12959)
- Battaglia, M.; Annesi, N.; Calabrese, M.; Frey, M. (2020), Do agenda 2030 and Sustainable Development Goals act at local and operational levels? Evidence from a case study in a large energy company in Italy. *Business Strategy and Development* (DOI: 10.1002/bsd2.125).
- Battaglia, M; Passetti, E; Bianchi, L; Frey, M. (2020), Innovation in managing sustainability: a tentative integration of accounting for employee health and safety. *SINERGIE*, 38(1), pp.73-101.
- Borghini, A.; Gusmerotti, N.M.; Frey, M. (2020), Innovazione, territorio e sostenibilità come driver di competitività: il caso Arbi Dario. Contributo su Volume "Il futuro ha una storia antica", Pacini Editore, Pisa, pp. 29-38 (ISBN: 978-88-6995-823-6)
- Contini, M; Annunziata, E; Rizzi, F; Frey, M. (2020), Exploring the influence of Corporate Social Responsibility (CSR) domains on consumers' loyalty: An experiment in BRICS countries. *Journal of Cleaner Production*, Vol. 247 (DOI: 10.1016/j.jclepro.2019.119158).
- Corsini, F; Frey, M. (2020). LA RESPONSABILITÀ ESTESA DEL PRODUTTORE DI APPARECCHIATURE ELETTRICHE ED ELETTRONICHE: Profili strategici, organizzativi e di specializzazione sostenibile. FrancoAngeli, Milano (ISBN: 9788835109174).
- Corsini, F.; Gusmerotti, N. M.; Frey, M. (2020), Consumer's circular behaviors in relation to the purchase, extension of life, and end of life management of electrical and electronic products: A review. *SUSTAINABILITY*, 12(24), 1-15 (DOI: 10.3390/su122410443).

- Daddi, T; Bleischwitz, R; Todaro, N.M; Gusmerotti, N.M; De Giacomo, M.R. (2020), The influence of institutional pressures on climate mitigation and adaptation strategies. *JOURNAL OF CLEANER PRODUCTION*, Vol 224, pp.1-12 (DOI: 10.1016/j.jclepro.2019.118879)
- Frey, M. (2020) Il ruolo delle imprese di pubblica utilità durante la pandemia. *Tra il dire e il fare*, Anno IV, Issue 20 (171-176).
- Frey, M. (2020) L'evoluzione della responsabilità delle imprese. *Impresa progetto*. Issue 3.
- Frey, M. (2020), Politiche internazionali. Contributo su Volume "GreenItaly 2020. Un'economia a misura d'uomo per affrontare il futuro", Vol. 1 (pp. 19-51), Quaderni di Symbola, Roma (ISBN: 9788899265861).
- Frey, M. (2020) Genesi ed evoluzione dell'economia circolare. Contributo su Volume "L'ambiente per lo sviluppo. Profili giuridici ed economici", Vol.1 (pp. 21-23), Giappichelli Torino (ISBN: 9788892133693).
- Frey, M; Loré, S. (2020). Smart working nell'era della digitalizzazione post-Covid: da soluzione di emergenza a strategia per la sostenibilità. *Quaderni di Economia e del lavoro*. Issue 111, pp. 153-202.
- Gusmerotti, N. M.; Frey, M; Iraldo, F. (2020), "Management dell'economia circolare: principi, drivers, modelli di business e misurazione", Ed. Franco Angeli, Milano.
- Khan, O; Daddi, T; Iraldo, F (2020) The role of dynamic capabilities in circular economy implementation and performance of companies. *CORPORATE SOCIAL RESPONSIBILITY & ENVIRONMENTAL MANAGEMENT* (DOI: 10.1002/csr.2020).
- Khan, O; Daddi, T; Iraldo, I. (2020) Microfoundations of Dynamic Capabilities: Insights from Circular Economy Business Cases. *BUSINESS STRATEGY AND THE ENVIRONMENT*, pp. 1-13 (DOI: 10.1002/bse.2447)
- Khan, O; Daddi, T; Slabbinck, H; Kleinhans, K; Vazquez-Brust, D; De Meester, S (2020), Assessing the determinants of intentions and behaviors of organizations towards a circular economy for plastics, *RESOURCES CONSERVATION AND RECYCLING*, Vol 163 (DOI: 10.1016/j.resconrec.2020.105069)
- Marrucci, L; Marchi, M; Daddi, T (2020) Improving the carbon footprint of food and packaging waste management in a supermarket of the Italian retail sector, *WASTE MANAGEMENT*, Vol 105 pp. 594-603 (DOI: 10.1016/j.wasman.2020.03.002)
- Rizzi, F.; Annunziata, E.; Contini, M.; Frey, M. (2020) On the effect of exposure to information and self-benefit appeals on consumer's intention to perform pro-environmental behaviours: A focus on energy conservation behaviours. *Journal of Cleaner Production*, Vol. 270 (DOI: 10.1016/j.jclepro.2020.122039).
- Rizzi, F; Pellegrini, C; Annunziata, E; Frey, M (2020) Exploring the antecedents of responsible leadership behaviour at individual and organisational levels. Contributo Atti Congresso "Grand challenges: companies and universities working for a better society" 1(1), 573-579, Fondazione CUEIM, Verona (ISBN: 9788894393767).
- Testa, F.; Iovino, R.; Iraldo, F. (2020) The circular economy and consumer behaviour: The mediating role of information seeking in buying circular packaging. *BUSINESS STRATEGY AND THE ENVIRONMENT*, 29 (8), 3435-3448 (DOI: <http://hdl.handle.net/11382/544562>).
- Todaro, N.M.; Daddi, T; Testa, F; Iraldo, F (2020) Organization and management theories in environmental management systems research: A systematic literature review. *BUSINESS STRATEGY AND DEVELOPMENT*, 3 (1), 39-54 (DOI: 10.1002/bsd2.77).
- Vizzoto, F.; Tessitore, S.; Iraldo, F.; Testa, F. (2020). Passively concerned: Horeca managers' recognition of the importance of food waste hardly leads to the adoption of more strategies to reduce it, *WASTE MANAGEMENT*, 107, pp. 266-275 (DOI: 10.1016/j.wasman.2020.04.010).

2021

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International Research Projects

Our University coordinates and participates in national and international research projects that focus on sustainability and advance the Global Compact Ten Principles.




Below we provide a **list of international research projects funded by the EU and developed by the SuM Lab** of the Institute of Management that have been **active during this reporting period**. These projects are carried out in partnership with public and private institutions and the SuM Lab is either Coordinator or Partner.

INTERNATIONAL RESEARCH PROJECTS – SUM LAB		
<p>HORIZON EU ALCHIMIA - DATA AND DECENTRALISED ARTIFICIAL INTELLIGENCE FOR A COMPETITIVE AND GREEN EUROPEAN METALLURGY INDUSTRY</p> 	<p>The project aims at building a platform based on Federated Learning and Continual Learning to help big European metallurgy industries unlock the full potential of Artificial Intelligence to support the needed transformations to create high-quality, competitive, efficient and green production processes. ALCHIMIA will find an optimal mix to reduce energy consumption, emissions and waste generation of the steelmaking process, while also guaranteeing to obtain high-quality products.</p> <p>Project period: 01/09/2022 - 31/08/2025 Total budget: € 3 554 971; Budget Sant'Anna: € 205 000 (Partner)</p>	

<p>ERASMUS+ SPORT GAMES - GREEN APPROACHES IN MANAGEMENT FOR ENHANCING SPORT</p>  <p>Erasmus+</p>	<p>The main objectives of GAMES are to increase the awareness and to foster the adoption of climate change practices by sports' key actors in order to improve sustainability during sports events. Grounding on the shortcomings that characterise the current governance of sport events, in order to prevent and reduce environmental impacts during these events and to fight climate change, the project focuses its activities on the whole sport event's life cycle, in particular with regard to Athletics, Floorball and Biathlon.</p> <p>GAMES will analyse the current climate change governance and management models adopted by partner sport organizations. It will support sports organisations in developing a Roadmap for the decarbonisation of their activities, through the definition of a strategic set of objectives, programs and a coherent operational framework of actions aimed at mitigating, neutralising or offsetting greenhouse gas emission. Moreover, a carbon footprint analysis will be carried out in order to support sport organisations in identifying the most suitable solutions to reduce their climate impacts. The goal of reducing GHG emissions will also be pursued through strategies and interventions at the organizational level, as well as through national and international public policies. To pursue this goal, sport organizations in particular define effective mitigation and reduction strategies in line with their role as players in the society. An important step for improving environmental governance in any organization is the spread of an environmental culture; for this reason, GAMES will develop face-to-face and on-line training modules aimed at improving environmental knowledge and awareness among sport organizations' employees and supporters. Lastly, GAMES will enhance the popularity of sports organizations by helping them to develop environmental awareness actions towards supporters and by improving their environmental communication activities.</p> <p>Project period: 01.06.2022 – 31.12.2024 Total budget: € 400 000; Budget Sant'Anna: € 145 000 (Coordinator)</p>
<p>ERASMUS+ SPORT ACCESS - ACHIEVING CIRCULARITY IN CITIES THROUGH ENVIRONMENTAL SUSTAINABILITY OF SPORTS</p>  <p>Erasmus+</p>	<p>The project aims to narrow the gap between the current environmental performances of sports clubs and associations, their strategies and practices and the strategies and targets of the cities and regions in which they are located and where their activities take place.</p> <p>While many cities and regions in Europe are following the European-wide pattern of adopting required strategies that would enhance and deploy various European policies and frameworks locally regarding waste, water, energy, mobility and other environmental issues or the Circular Economy Action Plan and Green Deal in general, their successful implementation and uptake among sport organisations are rather limited and require additional efforts to achieve required contribution. The underlying factors for this are diverse and range from the shortage of qualified staff, lack of cooperation between sports clubs and associations and relevant academic bodies, low inclusion of existing staff in training and capacity building activities to general difficulties in cooperating with local and regional authorities.</p> <p>This project intends to address these key challenges and transform them into enabling actions that promote the application of circular economy solutions to sport. It wants to promote innovative and replicable circular economy solutions among sport organisations, as well as their cooperation and synergy with local and regional authorities, contributing to the development of circular cities.</p> <p>These actions would lead to seizing transversal improvement opportunities by embedding circular economy and sustainability principles in city planning, infrastructure and asset management procedures as well as in sports organisations management and governance. The key goal is to activate a collaboration between urban stakeholders and sport organisations for getting closer to circular cities.</p> <p>Project period: 01.06.2022 – 31.05.2025 Total budget: € 400 000; Budget Sant'Anna: € 77 100 (Partner)</p>

<p>HORIZON AFRICAMAVAL - BUILDING EU-AFRICA PARTNERSHIPS ON SUSTAINABLE RAW MATERIALS VALUE CHAIN</p>  <p>Horizon 2020 Programme</p>	<p>Secure the access to raw materials represents a critical issue for European ambition to deliver the Green Deal and perform the energy and digital twin transition. As future demand of primary critical raw materials will continue to be largely met by importations, EU needs to diversify its supply chain and engage strategic partnerships with resources-rich third countries covering extraction, processing and refining such as African countries. In this framework, AfricaMaVal project aims to develop EU-Africa partnership ensuring a responsible sourcing of mineral resources for the European industry while granting a sustainable local co-development in the best Environmental, Social and Governance (ESG) conditions and leading to a long-terms business environment for European and African companies. The consortium, created with partners coming both from Africa and Europe, is based on experienced organizations and networks deeply anchored and involved in the raw material domain with a specific expertise and knowledge of the African culture, organisations, difficulties and resources. The mineral, financial, environmental, social, institutional and economical aspects will be studied along with all the value chains, including the ASSM activities, to the project completion to reach its operational targets:</p> <ul style="list-style-type: none"> - Building an EU and Africa business networking on the whole CRM value chains. - Developing a strategy on the integration of identified and emerging EU and African raw materials value chains for the energy and digital transition. - Assessing responsible investment opportunities. <p>The AfricaMaVal project will conduct ten case studies in African countries and an evaluation of 100 investment opportunities, a wide dissemination within Europe and Africa to promote responsible sourcing and will implement a sustainable organisation after the completion of the project.</p> <p>Project period: 01.05.2022 – 30.11.2025 Total budget: € 7 851 460; Budget Sant'Anna: € 161 935 (Partner)</p>
<p>HORIZON 2020 TRICK - PRODUCT DATA TRACEABILITY FROM CRADLE TO CRADLE BY BLOCKCHAINS INTEROPERABILITY AND SUSTAINABILITY SERVICE MARKETPLACE</p> 	<p>The TRICK project aims to develop blockchain solutions to ensure traceability and information sharing and thus support the adoption of sustainable and circular approaches in the textile and food supply chain. The project will also create a dedicated market platform to allow third parties to market certified solutions and implement the principles of transparency and traceability. The demonstration project will take place in 2 highly complex and polluting areas: the textile-clothing sector as the main pilot and the food chain for replication activities. As part of the TRICK Project, the contribution of the Sant'Anna School will focus on two main areas:</p> <ol style="list-style-type: none"> 1) The analysis of consumer behavior in relation to the purchase and recycling of second-hand clothing in the textile-clothing sector (TC) which will study the consumer response to sustainability, traceability and the adoption of a circular approach to TC products. 2) The measurement of the impact of TRICK on the overall circularity level of the supply chains in question with reference to three different levels of analysis: the entire supply chain, individual players within the supply chain and individual phases of the supply chain. <p>Website: https://www.trick-project.eu/ Project period: 01.05.2021 – 01.11.2024 Total budget: € 7 997 850; Budget Sant'Anna: € 66 696 (Partner)</p>
<p>ERASMUS+ SPORT GOALS: GOVERNANCE-ORIENTED ACTIONS LEVERING ON ENVIRONMENT FOR SUSTAINABILITY</p>	<p>GOALS is a project funded by EU Commission through the ERASMUS+ Sport Programme, that aims at improving the environmental governance in football organizations. The project is aimed primarily at women and youth football teams with the aim of improving the environmental impact of clubs and football matches. GOALS aims to increase their environmental awareness and promote the adoption of more environmentally friendly behaviors. The project also intends to strengthen cooperation</p>


	<p>between institutions and sport organizations boosting the adoption and the implementation of environmental governance actions.</p> <p>To these ends, GOALS will develop organizational tools for the three National Football Associations involved - Romanian, Portuguese and Kosovar - to improve their environmental governance. The project also focuses on operational governance through the involvement of at least 9 grassroots football clubs, 3 for each of the countries involved. In addition to the calculation of the environmental footprint of the clubs participating in the project, GOALS will provide an intuitive online tool to support football organizations in the calculation of their Environmental Footprint applying the European methodology on footprint (Recommendation 2013/179 / EU).</p> <p>The project is coordinated by SSSA. The Consortium includes, in addition to the three participating Federations, Real Betis Balompié - the professional team of the Spanish Lega - and the international association ESSMA (European Stadium & Safety Management Association). This network comprises over 350 members that will contribute through communication, networking and replication activities, dissemination of project outputs and stakeholders' engagement from the European world of football. Moreover, GOALS is supported by UEFA and by the Football Association of Ireland.</p> <p>Project website: https://erasmusgoals.eu/ Project period: 01.01.2021 – 30.06.2023 Total budget: € 398.983; Budget Sant'Anna: € 157.377 (Coordinator)</p>
<p>HORIZON 2020 LEAP-RE: LONG-TERM JOINT EUROPEAN UNION - AFRICAN UNION RESEARCH AND INNOVATION PARTNERSHIP ON RENEWABLE ENERGY</p> 	<p>The LEAP-RE project aligns with and responds to the AU-EU high-level policies and specific objectives of the CCSE Roadmap. It seeks to create a long-term partnership of African and European stakeholders in a quadruple helix approach: government (programme owners and funding agencies), research and academia, private sector, and civil society. Impact will be sought by creating a framework, methodology, and cooperation model. The aim is to reduce fragmentation by aligning existing bilateral and multilateral frameworks. LEAPRE establishes and jointly implements research, innovation, and capacity-building activities that respond to the Multi-Annual Roadmaps (MARs) developed in PRE-LEAP-RE.</p> <p>The programme opted for a large-scale, inclusive consortium of 96 partners from 34 countries and 2 international organisations, to ensure a broad thematic, geographical and stakeholder coverage, and to demonstrate the feasibility of the collaboration and build trust in view of a long-term partnership addressing the post-2025 period. LEAP-RE draws on the experience and partnership developed in PRE-LEAP-RE, which conceptualised and developed a framework for long-term, bi-regional cooperation in research, innovation, and capacity building in renewable energies. This partnership is further strengthened by previous collaboration between partners in other projects supporting the EU-Africa HLPD on STI, such as LEAP-Agri, ERAfrica, LEAP₄FNSSA, RINEA, and CAAST-Net Plus. Furthermore, the proposal includes a number of R&I partners, 8 individual projects (formalised as Work Packages), which were chosen among expressions of interest received in late 2019.</p> <p>Project website: http://www.leap-re.eu/ Project period: 01.10.2020 – 30.09.2025 Budget Sant'Anna: € 113.048 (Partner)</p>
<p>HORIZON 2020 CORALIS: CREATION OF NEW VALUE CHAIN RELATIONS THROUGH NOVEL APPROACHES FACILITATING LONG-TERM INDUSTRIAL SYMBIOSIS</p>	<p>The project envisages the development of actions to favor the decarbonisation of energy-resource intensive industrial sectors through industrial symbiosis approaches that integrate technological solutions with new business and managerial strategies. The application will take place through the involvement of three industrial areas in Italy, Spain and Sweden. The implemented approaches will be shared during the project with other European industrial areas (Spain, Austria, Poland and Turkey). In addition, the economic, environmental and managerial effectiveness of the implemented solutions will be assessed and a strategy will be structured for the replicability of industrial symbiosis initiatives in other contexts.</p>

	<p>Project website: https://www.coralis-h2020.eu/ Project period: 01.10.2020 – 01.10.2024 Total budget: € 17 987 600; Budget Sant’Anna: € 290 750 (Partner)</p>
<p>COSME TOURISME: IMPROVING SUSTAINABILITY OF TOURISM SMES THROUGH KNOWLEDGE TRANSFER, INTERNATIONAL COOPERATION AND MULTISTAKEHOLDER ENGAGEMENT</p> 	<p>The project, co-funded by the COSME Programme, aims to promote the adaptation of European tourism SMEs towards more sustainable, low-carbon and resource-efficient business models by scaling-up their activities and build capacity through knowledge transfer, exchanges and collaboration with other SMEs, business accelerators, incubators, development agencies and other tourism industry stakeholders.</p> <p>In particular transversal issues addressed by the project will include:</p> <ul style="list-style-type: none"> - promoting circular business models and plastics reduction in SMEs - facilitating access to EC initiatives promoting sustainable tourism (European Tourism Indicator System (ETIS), European Destinations of Excellence (EDEN), European Capital of Smart Tourism, EU ecolabel and EMAS) - addressing the growing consumer demand for an eco-friendly tourism experience (Diversification of tourism routes, Stakeholders engagement methodologies, Marketing, etc.) <p>The project will address companies covering different sectors of the tourism industry, including coastal tourism, but also natural and cultural tourism and tourism linked to sport events.</p> <p>Specific project objectives are:</p> <ul style="list-style-type: none"> • Design and implement trans-national and cross-sectoral support scheme including capacity building knowledge transfer and scaling-up activities to enable sustainable growth of SMEs in the tourism sector • Support uptake of innovative solutions for sustainable tourism • Support participation of SMEs in certification schemes <p>Website: https://tourisme-project.eu/ Project period: 16.09.2020 – 16.03.2023 Total budget: € 991 535; Budget Sant’Anna: € 88 475 (Partner)</p>
<p>ERASMUS+ GREENER: BOOSTING INDUSTRY ENGAGEMENT IN GREEN PROCUREMENT</p> 	<p>Green Public Procurement is becoming increasingly important at the European level as a tool to support the Circular Economy and the European Green Deal.</p> <p>The ERASMUS+ GREENER project is part of a series of more than ten-year activities of the Sustainability Management Laboratory on the theme of Green Public Procurement. The objectives of the project are as follows:</p> <ol style="list-style-type: none"> 1. Improve the skills/knowledge of administrative profiles dealing with purchases, within SMEs, on GPP criteria, including eco-labels, eco-design of products, extended producer responsibility, etc; 2. Improve the adaptability of traditional profiles, such as administrative profiles working in the tender offices of SMEs, to the future demand for skills (requalification training course); 3. Increase the employment opportunities of students of professional training institutes; 4. Improve the training of stakeholders in the contexts involved and create awareness on the influence of green public procurement on the adoption of sustainable consumption and production models by companies; 5. Promote the attractiveness of vocational education and training institutions by relaunching the close collaboration between VET, public administrations, government agencies and bodies supporting the development of SMEs and SMEs, transparency tools for validating skills and the capacity of trainers to apply an international approach to education. <p>Website: https://greener-project.eu/ Project period: 01.12.2020 – 01.12.2022 Total budget: € 174 724; Budget Sant’Anna: € 32 939 (Partner)</p>

<p>LIFE CO₂ PES&PEF: PROMOTION AND ENHANCEMENT OF FOREST SYSTEM THROUGH DIFFERENT ECOSYSTEM SERVICES AIMED TO INCREASE CARBON STOCK</p> 	<p>The first objective of the project is to conduct an analysis of the ecosystem services of three forest areas, representative of the Alpine and Apennine areas, and the operational implementation of some of them, in order to: 1) evaluate the contribution of the sustainable management of the forests, conservation and growth of carbon fixation and storage capacity and other ecosystem services; 2) Define the certification registers of ecosystem services as a result of the analysis of the scientific literature on the topic and existing experiences; 3) Provide an economic assessment of ecosystem services resulting from sustainable forest management, that can be used to create an "ecosystem credit" system; 4) Create a model for the development of a register and an ecosystem credit market, with the possibility of including them in "green bonds", in line with the latest EC plans on socially responsible investments. Ecosystem services will be those resulting from sustainable forest management practices. In action C1, a specific cognitive analysis of cultural ecosystem services will be conducted. The second objective of the project is to analyze the life cycle of the wood products of these three forest areas according to the PEF methodology and the EU Rec 2013/179, and to minimize the impacts of the industry. The specific objectives of this section of the project are: 1) To carry out a screening of the wood industry, build a PEFCR (Product Environmental Footprint Category Rules) and conduct support studies; 2) Organize an operational plan for companies involved in PEFCR studies, whose impact could be reduced by 2%; 3) Create a Toolkit for companies in the forestry and wood sector in order to make the PEF analysis replicable in other territories and guide them for obtaining certifications for Green Public Procurement activities. The third objective of the project is to provide support elements for policy makers, which can be replicated not only in other regions, but also nationally and internationally. The specific objectives are: 1) Provide information to implement Adjustment Plans; 2) Provide recommendations on good practices that increase forest ecosystem services, which can be included in the Rural Development Plan (RDP) of Regions; 3) To encourage the use of wood according to the "cascade" method.</p> <p>Project website: https://lifeco2pefandpes.eu/en/ Project period: 03.06.2020 – 31.12.2023 Total budget: € 1.014.215,00; Budget Sant'Anna: € 266.909,00 (Coordinator)</p>
<p>ERASMUS+ SPORT GREENCOACH: INCORPORATING SUSTAINABILITY IN THE GOVERNANCE OF SPORTS</p> 	<p>The sports industry has a large responsibility towards global environmental pollution. Existing initiatives promoted by international sports organisations have focused mainly on large events. There are not yet reference models focusing on how to incorporate sustainability as a cross-cutting priority in sports organisations as a governance element, beyond specific actions carried out during sport events. In this framework, GREENCOACH aims to improve the environmental impact in grassroots football organizations by incorporating: 1) monitoring and benchmarking of the environmental footprint of football events and organisations, and 2) sustainability as a cross-cutting element in football organisations daily management. In addition, it also aims at enhancing environmental awareness of supporters, spectators and staff and at promoting healthy lifestyles at individual and community levels, especially among young athletes.</p> <p>As partner of the project, the SuM research group of the Institute of Management will bring in scientific expertise to carry out the assessment of the environmental footprint of grassroots football organisations, and to design and check the benchmarking tools and the education modules. In particular, 2 kinds of footprint will be calculated:</p> <ol style="list-style-type: none"> 1.Environmental footprint of an amateur football match (then used to calculate aggregated footprint of bigger events such as the total footprint of an amateur championship/tournament or the assessment of the total footprint of all amateur matches of a country) 2.Organisational Environmental Footprint (OEF) of an amateur football organization (by categorizing the organisations according to their complexity – i.e. the number of

	<p>structures and facilities that belong to the sport organisations that could influence their environmental footprint).</p> <p>Project period: 01.01.2020 – 31.12.2023</p> <p>Total budget: € 408.072,00; Budget Sant’Anna: € 65.000,00 (Partner)</p>
<p>INCIRCLE: SUPPORT INSULAR AND LOW DENSITY AREAS IN THE TRANSITION TOWARDS A MORE CIRCULAR TOURISM ECONOMY</p> 	<p>INCIRCLE Interreg MED aims to apply the principles of the circular economy to the tourism sector in insular and scarcely inhabited MED areas. To this end, the project aims to capitalize on the existing knowledge and tools currently available to test a new methodology on four main areas of application: mobility, energy efficiency, water resource management and waste management. The project plans to achieve stable and lasting results and at the same time easily adaptable to provide policy makers with concrete tools and opportunities for experimentation both to improve assessment and planning skills of sustainability in territories where resources are already scarce, and to discover new funding opportunities and concrete possibilities of replication, for a sustainable and circular growth within the MED area. Capitalization activities will be replicated in further territories at the regional, national and European levels.</p> <p>Specifically, the contribution of the SUM research group of the Institute of Management consists in the design and development of a circularity measurement model in tourism based on <i>Circular economy KPI</i>, addressing both tourism needs and individual tourism industries. The application of this model in the project partner territories will be the basis for the development of strategies to increase the circularity of these territories and their competitiveness, in addition to supporting the development of the model itself. Starting from the measurement model that SUM researchers will develop, which will have a general and transversal value, it will then be possible to develop specific <i>tools for self-assessment</i> of circularity and sustainability, that will be made available to managers of public and private organizations in an international context. The aim is to provide them not only with a snapshot of current performances, but, above all, elements of strategic support, which are fundamental for directing this strategic sector towards sustainable development and circular economy logics. The goal is to provide a snapshot of current performance, but above all, strategic support elements, which are fundamental to direct this sector towards sustainable development and circular economy. Researchers who deal with the development of the project will contribute to providing support, both in the context of INCIRCLE and in the horizontal project Sustainable Tourism Community, to the tourist territories and businesses, in order to face the current pandemic crisis, with the aim of facilitating the emergence of new, innovative, creative and increasingly circular development strategies.</p> <p>Project period: 01.11.2019 – 30.06.2022</p> <p>Total budget: € 3.378.770,00; Budget Sant’Anna: € 260.000,00 (Partner)</p> <p>Project website: https://incircle.interreg-med.eu/</p>
<p>LIFE MAGIS: MADE GREEN IN ITALY SCHEME</p> 	<p>The LIFE MAGIS project targets consumers and producers to support the launch and spread of the PEF method and of the PEF-based Made Green in Italy scheme. The project will stimulate PEF-related innovation, improve communication about green products, and incentivise consumers to purchase greener products. To do this, LIFE MAGIS will develop new Italian product category rules for the carrying out of PEF studies on specific products (PEFCRs). The PEFCRs will cover certain food products (snacks, ice cream, fruit, cheese and coffee), leather products, window fittings and cosmetics. The project will also:</p> <ul style="list-style-type: none"> - help define PEFCRs at EU level through its work on new product groups at national level; - demonstrate the effectiveness of the PEF method in promoting sustainable models of production and consumption; - encourage better-informed and conscious consumer choices and ensure the transparency and comparability of environmental information; - create tools and approaches to make PEF easily replicable and transferable to other Member States.

	<p>Project period: 02.09.2019 - 30.12.2022 Total budget: € 2.624.168,00; Budget Sant'Anna: € 256.466,00 (Partner) Project website: https://lifemagis.eu/</p>
<p>LIFE TACKLE: TEAMING-UP FOR A CONSCIOUS KICK FOR THE LEGACY OF ENVIRONMENT</p> 	<p>The main objective of TACKLE is to improve the environmental management of football events and the environmental awareness of supporters. The project's activities focus on the whole sport event life cycle: conception, organisation, staging, closure. Grounding on the shortcomings that characterize the current governance of sport events the project aims to:</p> <ul style="list-style-type: none"> - Collect, evaluate and test best practices on environmental management during football events by creating guidelines to be used as a basis for awareness raising actions; - Develop adequate competences and organizational structures within national football associations (NFAs) to promote the dissemination of best practices in the related football leagues and stadiums; - Identify the critical information flows that are necessary for NFAs to ensure an adequate implementation of the EU waste policies in stadiums; - Increase the competences and awareness of NFAs in developing a set of strategies and tools (e.g. guidelines, procedures, contract formats, etc.) to both prevent and manage waste according to circular economy criteria; - Engage all the relevant contractors in enduring efforts to prevent and reduce waste during football matches (e.g. food and beverages providers, stadium cleaning operators, tickets sellers etc.); - Promote the continuous improvement of the environmental management of football events even after the end of the project through the setting of targets and the peer-influence of the National Football Associations committed to environmental sustainability; - Develop and implement communication campaigns aimed at raising awareness over waste issues among football clubs, football fan clubs, supporters, stadium and sport facilities staff; - Exploit the influence of Football National Associations, Football Leagues and Football clubs and famous football players over fans and supporters to engage them in the adoption environmentally-friendly behaviours; - Replicate project activities and results in non-participating NFAs through the establishment of a specific Replicability Management Board (RMB) coordinated by UEFA; - Keep strong contacts with EURO 2020 organizers to share with them TACKLE results on environmental management issues to be valorised during the European Championship; - Ensure a wide dissemination of the project results by adopting advanced communications techniques and enhancing the support of the Life Programme during football events. <p>Project period: 01.09.2018 – 31.03.2022 Total budget: € 1.947.070,00; Budget Sant'Anna: € 475.811,00 (Coordinator) Project website: https://lifetackle.eu/</p>
<p>LIFE EFFIGE: ENVIRONMENTAL FOOTPRINT FOR IMPROVING AND GROWING ECO-EFFICIENCY</p> 	<p>EFFIGE aims to improve the environmental performances of products operating in the sectors involved in the project by means of the implementation of EU Product Environmental Footprint (PEF) method described in the EU Rec. 179/2013. By using PEF as tools for supporting decision process within companies and remove information asymmetries on the final good market, EFFIGE will support the pilot companies and especially SMEs to improve their environmental "hot spots" and introduce to markets products and services more sustainable. Moreover, EFFIGE project aims to:</p> <ul style="list-style-type: none"> -demonstrate the effectiveness of EU PEF method for supporting the environmental performance improvements of products

	<ul style="list-style-type: none"> -contribute to the development and dissemination of EU Environmental Footprint, which has become a top priority in the policy agenda of the European Commission in terms of green market and circular economy. It aims to spread the PEF in Italy and in the EU by focusing on sector not involved in EU Pilot Studies. At least 21 PEF will be conducted according to EU Rec. 179/2013, in 4 relevant supply chains (furniture, foundry, agrifood, catering services). -develop “preparatory working documents for the future PEF Category Rules” in supply chain not currently involved in EU PEF Pilot Studies, in order to enhance comparability between organisations operating in the same sector and, therefore, to enable consumers and businesses to take better informed decisions. -remove typical drawbacks affecting the implementation of PEF within SMEs by means of the creation of a PEF Supporting Toolkit, tested in the pilot experiences and, finally, disseminated in other sectoral and geographical contexts. -contribute, as requested by the Commission (Rec. 2013/179/EU), to develop Public Databases on environmental impact ready to use by SMEs to perform PEF -develop clear guidelines and approaches to improve the effective communication of environmental performance of product by testing EU communication vehicles and draft and disseminate a “NO Greenwashing” Guideline through an homonymous Working Group -stimulate the integration of PEF method within other existing EU environmental policies thanks to several Policy suggestions and Guidelines developed by the PEF integration Working Group -create tools and approach that are easily replicable and transferable as demonstrated by testing in flied in other EU contexts and supply chains not covered by EU PEF Pilot Studies. <p>Project period: 01.09.2017 – 30.06.2021 Total budget: € 1.642.867,00; Budget Sant’Anna: € 251.276,00 (Coordinator) Project website: www.lifeeffige.eu</p>
<p>HORIZON 2020 S-PARCS: ENVISIONING AND TESTING NEW MODELS OF SUSTAINABLE ENERGY COOPERATION AND SERVICES IN INDUSTRIAL PARKS</p> 	<p>The project presents a sound concept for reducing energy costs and energy consumption in industrial parks, while, at the same time, increasing renewable on-site energy production. The pre-assessment of the seven “Lighthouse Parks” from Spain, Portugal, Italy, and Austria, which participate in the study, has shown a high potential for joint energy actions, many of which are transferrable to the community of S-PARCS Followers in the UK, Sweden, Turkey, Russia, Italy, Portugal, Austria and Norway. 5 research organisations, 1 engineering company and 1 industrial association will make their knowledge on suitable technologies, novel business models and cooperative action among companies available to the parks to help them develop an “energy cooperation plan” and the necessary skills to achieve a long-lasting sustainability impact. At the end of the project, all Lighthouse parks will be equipped with a free ICT tool supporting the decision-making processes on joint investments, at least 1 full feasibility study for the most promising cooperative project, as well as a strategy for longer-term actions. 65 of the 278 located in the “Lighthouse Parks” are expected to benefit directly from reduced energy costs derived from energy efficiency measures, such as the use of waste heat, joint energy purchases and a wide range of viable small-scale renewable projects. Improvements in the parks in terms of energy efficiency are likely to be superior to 10%. The project’s impact, however, extends to the entire Follower Community, thanks to the identification of at least 20 viable cooperative energy solutions, which are to be widely disseminated. The identification of relevant financial, legal and organizational barriers to joint energy action in the parks – and ways of overcoming them - will make a valuable contribution to policy-making on regional, national and European level.</p> <p>Project period: 01.03.2018 - 28.02.2021 Total budget: € 1.997.325,00; Budget Sant’Anna: € 252.250,00 (Partner) Project website: https://www.sparcs-h2o20.eu/</p>

<p>INTERREG ENHANCE: EMAS AS A NEST TO HELP AND NURTURE THE CIRCULAR ECONOMY</p> 	<p>Organizations, large and Small and Medium sized enterprises (SMEs), are increasingly aware of the benefits of closing loops by improving resource efficiency: saving material costs, creating competitive advantages and new markets are among the main reasons for organisations to take action. At this respect, the Eco Management and Audit Scheme (EMAS) is considered as a driver of the Circular Economy by encouraging organisations to develop techniques which make better use of resources in the production phase and retain physical goods longer and more efficiently in productive use, thus increasing their competitiveness. Starting from these considerations, ENHANCE project overall objective is to improve the implementation of regional policy instruments oriented to increasing the efficiency of resources by the exchange of experiences and practices on supporting EMAS registration.</p> <p>Main barriers perceived by EMAS adopters are: lack of EMAS recognition from the market and Public Authorities (PA), technical support from PA and external incentives; high cost, etc. In this regard, the role of PA supporting EMAS as a competent body becomes essential in order to remove these barriers and to encourage organizations to adopt EMAS through various means, such as reducing the technical barriers for EMAS adoption, enhancing benefits derived from EMAS, public subsidies and rewarding EMAS implementers with reduced enforcement (e.g. regulatory relief).</p> <p>The activities of the project - financed by the Interreg Europe program - will be directed towards the production of:</p> <ol style="list-style-type: none"> 1) regional studies aimed at supporting and incentivising EMAS registration 2) a methodology to assess the feasibility of good practices on supporting EMAS registration 3) the creation of an EMAS Joint Database 4) the organisation of a series of thematic workshops to exchange experiences 5) regional studies on the exchange processes 6) Support for the adoption of EMAS action plans by public administrations, with effects also on EMAS-registered organizations and companies. <p>Project period: 01.01.2017 - 31.12.2020 Total budget: € 1.024.071,00; Budget Sant'Anna: € 169.872,50 (Partner) Project website: http://www.interregeurope.eu/enhance/</p>
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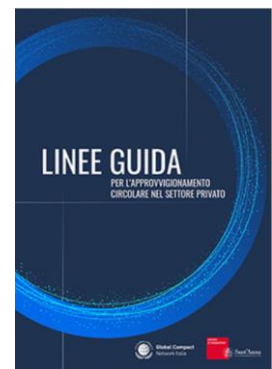
The SuM Lab also develops many other research projects at the local, regional and national levels, in partnership with public and private entities. The companies that collaborate with the SuM operate in different sectors - e.g. oil&gas, energy, minerals, food&beverage, consumer goods, paper industry, fashion, telecommunications, electricity, transportation, water services, waste, environmental multi-utilities. These projects aim at promoting sustainability in private and public organizations by applying expertise in Life-Cycle Management and Product Environmental Footprint, Environmental Certification Schemes, Environmental Innovation and Green Technologies, Sustainable marketing, Environmental reporting, Stakeholder engagement, Green Public Procurement, Corporate Social Responsibility, Health & Safety Management, etc.

2.5 Collaboration with the Global Compact Network

SSSA participates to the Global Compact Network Italy Foundation through its Spin-off company, [Ergo S.r.l.](#) Ergo was founded in 2006 by Full Professors of the SuM research group of the Institute of Management, and since then it has been offering consultancy support services in the field of health and safety in the workplace, environmental management, social responsibility, energy, territorial planning and governance. It has directly supported the Foundation providing pro bono scientific support to some of its Working Groups activities.

Full Professor Marco Frey, Director of the SuM Lab of the Institute of Management, is the President of the Global Compact Network Italy Foundation.

In addition, we highlight the work of the SuM Lab of the Institute of Management with the Global Compact Network Italy on the "**Guidelines for circular procurement in the private sector.**" The SuM Lab developed these guidelines in 2020 as part of the Research Laboratory of the Master's Degree Programme in "Management and Control of the Environment: Circular Economy and Efficient Management of Resources" (GECA) at Sant'Anna School of Advanced Studies. These Guidelines provide companies with criteria for making more conscious procurement choices, from the selection of raw materials and products to the selection of suppliers with the goal of minimizing or completely avoiding the negative environmental impacts and the creation of waste during a product's life cycle. In addition, a qualitative measurement tool was developed to give companies an idea of the level of circularity of their supply chain.



For more information:

<https://www.globalcompactnetwork.org/it/news-e-eventi/notizie/2027-linee-guida-per-l-approvvigionamento-circolare-dal-global-compact-network-italia-un-nuovo-tool-per-le-imprese-impegnate-nella-just-transition.html>

2.6 Beyond Research and Education: The Third Mission at Sant'Anna School

Sant'Anna School of Advanced Studies is committed to enhancing its ability to produce value for the community, acting as a driving force for social, economic, environmental, cultural and technological development, through and beyond research and training. This means including activities such as public engagement initiatives, partnerships, placement, support to institutions, communication and dissemination, etc., that produce value for the community in synergy with research and education.

For this reason, in October 2020 SSSA established the **Third Mission Area** through the Provision of the Director General no. 299/2020. This Third Mission Area includes all the activities that go

beyond research and training. The spirit of each of these activities is to enhance the bi-lateral contributions from the School to the stakeholders (institutions, businesses, third sector, students, researchers, citizens) and vice versa.

The creation of an Area that would collect all the Third Mission activities under a single label originated from the need to organise and summarize the numerous Third Mission activities that the School has always carried out (considered by ANVUR as an "institutional responsibility").

During 2021, the work of the Area focused on strengthening the ability to produce value for the community and enhancing the School's vocation to act as a driving force for socio-economic, cultural and technological development.

The United Nations 2030 Agenda is our strategic framework of reference, with its 17 objectives, 169 targets and 240 indicators. In 2021 SSSA signed 43 framework agreements and conventions involving 10 SDGs. The image shows the data related to the agreements signed by the School during 2021 with reference to the SDGs.

		2021
	SDG 01 Povertà Zero	3
	SDG 02 Fame Zero	-
	SDG 03 Salute e benessere	5
	SDG 04 Istruzione di qualità	19
	SDG 05 Uguaglianza di genere	2
	SDG 06 Acqua pulita e igiene	-
	SDG 07 Energia pulita e accessibile	1
	SDG 08 Lavoro dignitoso e crescita economica	2
	SDG 09 Imprese, innovazione e infrastrutture	15
	SDG 10 Ridurre le disuguaglianze	6
	SDG 11 Città e comunità sostenibili	11
	SDG 12 Consumo e produzione responsabile	6
	SDG 13 Agire per il clima	1
	SDG 14 La vita sott'acqua	-
	SDG 15 La vita sulla terra	1
	SDG 16 Pace, giustizia e istituzioni forti	7
	SDG 17 Partnership per gli obiettivi	16

3. Outcomes and Numbers

There are detailed outputs and data related to each of SuM Lab's projects and activities; listed below are some of the general outcomes in terms of partnerships and research projects:

3.1 Partnerships Formalized with the Aim of Advancing the UN Global Compact Principles

SSSA and more specifically, the SuM Lab of the Institute of Management **works and collaborates with different actors** with the aim of advancing the principles of sustainability: businesses, policy makers, public and private institutions, citizens, local communities.

As mentioned above, the SuM Lab's network includes, among others, the Ministry of the Environment, several regional and local authorities, the General Confederation of Italian Industry, the Union of Chambers of Commerce, Industry, Agriculture and Artisanry, trade associations, national organizations such as plastics and paper packaging consortiums, top Italian companies from different sectors (such as **Oil&Gas, Energy, Minerals, Food&Beverage, Consumer goods, Paper industry, Fashion, Telecommunications, Electricity, Transportation, Water services, Waste, environmental multi-utilities**) as well as many **SMEs**.

The SuM also collaborates with other Institutes such as Biorobotics for the deployment of ad hoc technological solutions for sustainability, and it is member of the International networks **EERA** and **PREPARE**.

As part of SSSA, we belong to the academic system of the University of Pisa together with Scuola Normale Superiore and IUSS Pavia, and we collaborate with other Italian academic institutions such as LUISS in Rome and Bocconi University in Milan.

The above listed partnerships produce an array of projects and research activities that have a positive impact for the advancement of sustainability within our local, national and global environment.

3.2 Expertise Provided to Advance the Aims of the Global Compact in Italy

To its network, the SuM Lab offers its high-level expertise on technical analysis, socio-economic analysis, policy and regulation, management and training for the promotion of sustainability. In particular, our areas of expertise includes: Corporate Environmental Management, Life-Cycle Management (LCA, LCCS-LCA) and the Product Environmental Footprint (PEF and OEF), Economics and Management of Voluntary Certification Schemes, Environmental Innovation and Competitiveness, Sustainable marketing, Environmental reporting, Stakeholder engagement, Environmental Innovation and green technologies assessment, Green Public Procurement, CSR, Health & Safety Management, Environmental economics, Public policies for Sustainable Local Development.

The School currently has **639** active projects, of which **140** are the projects currently active within the Institute of Management. Among these **140**, the SuM Lab currently has **67** active projects related to the above-mentioned areas of expertise³:

- **14** ongoing EU projects
- **10** ongoing institutional projects
- **43** ongoing research contracts commissioned by industry and business

³ Data retrieved in May 2022

4. Contact Information

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Social media:



The Sustainability Management Laboratory has also launched its own [YouTube channel](#) dedicated to the publication of videos that illustrate the research activities coordinated by Profs. Marco Frey, Fabio Iraldo, Francesco Testa and Tiberio Daddi at the Institute of Management of SSSA.