

# E4S' Mission and Areas of Focus

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## I. MISSION, VISION & VALUES

### Our mission

The E4S Center's mission is to *spearhead the transition to a resilient and inclusive economy, within planetary boundaries, seizing the opportunities and addressing the challenges raised by scientific and technological change.*

#### **Toward a resilient economy**

E4S aims to strengthen economic institutions, rethink the framework conditions and accelerate the changes conducive to greater resilience when faced with rare or unforeseen external shocks.

#### **Toward an inclusive economy**

E4S aims to make sustainable economic and social development intelligible and acceptable by conceiving efficient support measures for those suffering from the disruptions it provokes as well as promoting redistributive mechanisms, collaborative behaviors and ethical principles that ensure equal opportunities for all components of society.

#### **Toward an economy within planetary boundaries**

E4S fosters the transition to a stakeholder economy geared toward a model of sustainable development.

#### **Seizing opportunities and addressing challenges raised by scientific and technological change**

E4S aims to ensure that scientific and technical innovation effectively translates into economic, environmental and social value creation.

### Our vision

To become a reference interdisciplinary center in Europe on the transition towards an economy that is resilient, inclusive and respectful of planetary boundaries.

### Working pillars

1. **Education:** We train the next generation of leaders to integrate environmental and societal concerns into their business models, mindful of the opportunities and challenges raised by scientific and technological change.
2. **Research:** We produce, collect and disseminate cutting-edge and interdisciplinary research with a view of helping enterprises and society develop practices, strategies and policies consistent with our mission. E4S's research is communicated via policy briefs, white-papers, media interventions and public stakeholder events.
3. **Innovation:** We strengthen the local start-up and innovation ecosystem by developing collaborative programs between start-ups, corporations and students.

## Our founding values

1. **Scientific excellence** in teaching and research.
2. **Focus on major societal challenges**, particularly with regard to the environment, building a more resilient society, the democratic acceptance of economic and scientific innovations, the social responsibility of companies and entrepreneurs and the requirements of ethical management.
3. **Transdisciplinary dialogue** between researchers and practitioners as a pre-condition to uncovering the solutions to these challenges.
4. **Proximity to the public debate** with a focus on societal impact.

## II. AREAS OF FOCUS

E4S is a **multi-platform interdisciplinary competence center** connecting researchers of the three partnering institutions and other world-class partners to produce knowledge and expertise that directly impacts the local and national economy.

The E4S's competence center is structured along **three main areas of focus**:

- (I) *Shaping institutions, policies and norms*: the scope -or unit of analysis- is the economy at large or the global environment in which industries and organizations operate,
- (II) *Transforming key industrial sectors*: the scope is the industry or economic domain in which organizations operate, and
- (III) *Reimagining managerial practices*: the scope is the organization itself and how it operates.

These areas of focus contain a set of interlocking platforms (or “topics”) that define a permanent mapping of E4S' domains of competence. Each platform is subject to a common scientific oversight while simultaneously hosting one or several distinct research projects. The projects are not meant to be permanent (dynamic flow). They can be the result of spontaneous interactions among researchers interested in an issue of societal significance or a problem relevant to an industry or sector. They can also be the outcome of a call or request for proposals. Platforms and projects have different sizes, ambitions and levels of activity.

The list of topics covered does not wish to be exhaustive (as would be, for instance, the UN SDGs), but is rather an attempt to concentrate on those levels where the most significant economic disruptions and changes will or should take place.

List of platforms by area of focus:

### I. Shaping institutions, policies and norms

- I. 1. Environmental policy and strategies

Most of the grand challenges of our times arise because the cost that certain economic activities impose on the planet, society and future generations is "ignored". Well-designed environmental

policy and strategies are key to disclose those costs and help society make economic decisions that are sustainable.

#### I. 2. Regulation, taxation and public-private partnerships

Preserving the environment, reducing inequality or building a resilient economy are challenges that cannot be addressed by individuals, organizations and firms without common objectives, rules and cooperation. Regulation, taxation and public-private partnerships provide a common framework and set rules necessary for all stakeholders to address the grand challenges.

#### I. 3. Macroeconomics and globalization

The performance and behavior of the economy as whole, within and beyond national borders, is affected by global developments such as climate change, COVID 19, global inequality and international regulation. Understanding and anticipating macroeconomic developments is fundamental for a smooth and rapid transition to a sustainable economy.

#### I. 4. Social norms and behaviors

Many human decisions are driven by social norms, emotions, heuristics and beliefs that go beyond the rational weighting of costs and benefits. Understanding social norms and behavior is crucial because changing many of them is needed to build a resilient and inclusive economy within planetary boundaries.

## **II. Transforming key industrial sectors**

#### II. 1. Mobility and infrastructure

Transport is responsible for 19% of current greenhouse gas emissions. Sustainable mobility and smart infrastructure will be essential for achieving net-zero. We seek to explore how to scale feasible innovation in electric and hydrogen mobility, as well as leverage the full potential of technologies for smart cities, buildings and homes.

#### II. 2. Energy

Each year, almost 50 billion tons of greenhouse gases are emitted, of which the energy sector accounts for over 70%. Transitioning the energy sector away from a fossil-fuel based industry towards zero-carbon is thus critical. We aim to drive the deployment of innovative renewable energy and energy efficiency, as well as the implementation of smart policy and regulation.

#### II. 3. Health and life sciences

The world is projected to have 9.8 billion people on this planet by 2050, with an average life expectancy clearly surpassing 80 years. AI-tailored precision medicine will become the new norm. Yet, a heating planet will challenge our health and health care system that already will be stress-

tested by our new lifestyles and diets. Finally, unprecedented epidemics will continue shaping our life and work; All questions and challenges we seek to better understand.

#### II. 4. Nutrition, agriculture and primary resources

Our current food and agriculture systems put huge pressure on natural ecosystems, on which they very much depend. Equally feeding a growing world population with healthy food while respecting the planetary boundaries is a major challenge. Our goal is to work with all stakeholders, from farm to fork, to find solutions to this challenge.

## II. Reimagining managerial practices

#### III. 1. Work and leadership

New developments in technology – AI, Internet-of-Things (IoT), robotics, virtual assistants, for example – are challenging the current world of work. Anticipating disruptions and shaping an inclusive workplace is important to ensure equal opportunities for all components of society.

#### III. 2. Digitalization, data and AI

In the digital era, an ever-increasing number of economic activities happen online, generating massive amounts of data. Preserving privacy and identifying the challenges but also leveraging the potential of "big data" and AI are crucial in our interconnected world.

#### III. 3. Materials, manufacturing and logistics

Global supply chains have grown in size and complexity over the past decades. Sustainable sourcing, traceability, clean manufacturing and transportation, and designing a resilient supply chain are some pressing challenges facing firms. How can they leverage new technologies to address those challenges?

#### III. 4. Finance and risk

Systemic events that have global reach and profound impact, such as climate change, need to be understood and their risks assessed so that society and organizations can design strategies to prevent or adapt to them. Financial mechanisms are powerful tools that can contribute to building a resilient and sustainable economy.

#### III. 5. Governance, strategy and reporting

The conditions under which the shareholder value-maximizing firm is legitimate are no longer satisfied. Firms must embrace responsibility towards all their stakeholders, including the environment, society at large and their workforce. Defining a sustainable strategy and a philosophy of corporate responsibility and measuring them are at the heart of today's management of organizations.