

WP4 Sustainable entrepreneurship and innovation ecosystems

- **SEI ecosystems:** communities of interconnected and interdependent individuals, organizations, institutions, and processes oriented towards enabling value creation through supporting the development of new innovations and entrepreneurial start-ups with the aim of cultivating sustainable development
- **Deliverables led by:** CHALMERS, NTNU, TUB (with support from all partners)

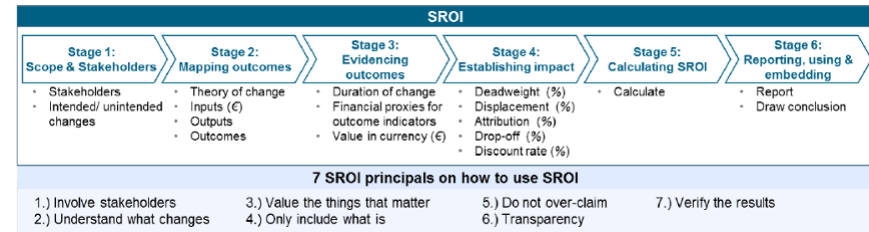
WP4 Sustainable entrepreneurship and innovation ecosystems

- **Task 4.1 Literature research, document analysis, partner screening and development of research instruments**
 - D4.2. First systematic mapping brought to first workshop [CHALMERS - M15]
 - D4.3. Research instruments [CHALMERS - M15]
- **Task 4.2. Developing a framework for, and piloting, sustainable impact/sustainable return on investment**
 - D4.1. Framework on sustainable impact/ sustainable return of investment [TUB - M12]


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D4.1. Framework on sustainable impact/ sustainable return of investment [TUB - M12]

- A framework for sustainable return on investments (SROI) developed based on scientific research
- A comprehensive view on social, environmental and economic outcomes
- Partner universities supported the testing / piloting of the framework on cases
- The work is being further developed for D4.7 (Joint platform on the measurement of sustainable return of investment)



I. Goals



- Measuring the sustainability-related impact of the incubation process
- Raising awareness of sustainability issues (entrepreneurs, coaches)
- Communication & Marketing
- Important for potential investors

Prof. Dr. Kratzer, Chair for Entrepreneurship and Innovation Management

Sustainability Measurement (Survey at the beginning, middle, and end of the funding period.)

This survey addresses the issues of environmental, social, and economic sustainability as well as the circular economy and fair labor conditions. Some questions address your intentions for the future. This questionnaire will be sent to you and your team members every three months during the grant period. The questionnaire will take about 10 to 15 minutes to complete.

Topic	Question	Scale
Classification in social, ecological or economic	Which of the above statements is more important for your idea/product/service:	1 - Point Likert Scale: 1. Solve a social problem. 2. Build a profitable business. 3. Build a profitable business. 4. Solve an ecological problem. 5. Solve an ecological problem.
		1. Solve a social problem. 2. Help others to support the community. 3. Build the company and keep the shareholders happy.
		1. Raise awareness of the issue in society. 2. Increase in sales of the product or service on the market.
		1. Scale the solution and increase the impact of the company.
		1. Increase the profitability/profitability of the company.
Using the scale below, please indicate whether you agree or disagree with each of the following statements.		
Sustainability in corporate management/business model	In our corporate management, ecological aspects such as climate neutrality are pursued (e.g. in the vision, mission).	5 Point Likert Scale
	Social aspects such as the evaluation of our suppliers with regard to social criteria are taken into account in our corporate governance (e.g. in the vision, mission).	5 Point Likert Scale
	The business model includes a clear ecological and socially sustainable value proposition (The business model contributes to the sustainable development of humanity, e.g. technologies for the treatment of drinking water, etc.).	5 Point Likert Scale

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D4.3. Research instruments [CHALMERS - M15]

2.1. Interview guide for interviewing staff of universities' SEI initiatives

Theme	Interview questions
Introduction <i>The purpose is to introduce the aim of the research to the interviewee and take their permission to record the interview for the purpose of transcription and storing data. Besides, understanding the interviewee's job description will help set the stage for the conversation.</i>	<ul style="list-style-type: none"> • [Introducing the interviewer and the project] • Do you agree to recording this conversation? • What is your title/role/responsibilities at the initiative and/or the university?
Initiative's overview <i>The purpose is to get an understanding of the background and aims of the initiative, and the different activities it undertakes to achieve its goals. This will give an overview on the "why" and "how". In addition, asking about the beneficiaries and target group will help identifying the extent of "openness" of the initiative (e.g., whether it is only for university's students and staff or to the general public; whether it is only for the city / region or the whole country / EU).</i>	<ul style="list-style-type: none"> • Can you give a brief overview about the initiative (e.g., history, goals, and objectives)? • What are the key activities that support sustainable entrepreneurship and innovation? (e.g., education, research, disclosures and technology transfer, incubators and accelerators, idea evaluation/development, startup and venture formation support, networking, funding). • Who are the key beneficiaries of the initiative?

Governance and management

The purpose is to clarify how the initiative is governed and managed (e.g., if it is an independent organization/program with connection to the university or a unit/department that is formally under the university's management; if it is a student-run initiative; if it involves different actors/organizations). Besides, asking about the sources of funding will help in understanding the connections to the broader ecosystem (e.g., locally, nationally, EU-level). The last question of this theme aims to seek reflections on the challenges in managing the initiative at the initiative's organizational level as well as staff's personal level.

Impact

The purpose of this theme is to understand how success is defined from an informal perspective (how the interviewee broadly perceives it) as well as from formal perspective (how the initiative formally evaluates success in achieving its goal via specific frameworks, tools, metrics, Key Performance Indicators, etc.). The last question digs specifically into the initiative's sustainability impact (e.g., any sustainability criteria/requirements for beneficiaries).

Conclusion

The purpose of the concluding questions is snowballing, i.e., getting additional contact persons for conducting more interviews and/or further research on sustainable entrepreneurship and innovation (e.g., on success cases of sustainable entrepreneurs who benefited from the initiatives).

- Is the initiative formally governed/managed by the university? Or completely independent? Clarify.
- How is the initiative financed/funded?
- Who are the different actors/stakeholders involved in managing the initiative?
- What are the key challenges in running the initiative?
- How do you define success in achieving your goals?
- Any metrics / KPIs / mechanisms / tools to formally assess success/impact?
- How do you reflect on the initiative's impact on environmental and social sustainability specifically (as opposed to entrepreneurship and innovation in general)?
- Can you share names/contacts of:
 - researchers doing research on the initiative and/or the topic of sustainable entrepreneurship and innovation?
 - interesting entrepreneurs/companies that benefited from the initiative?
 - other initiatives at your university that support sustainable entrepreneurship and innovation?

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D4.3. Research instruments [CHALMERS - M15]

2.2. Template for summarizing and organizing data on universities' SEI initiatives

Initiative & interviewee	Overview	Governance & management	Impact	Other contacts
Initiative's name: Website: Brief text: Initiative type (highlight all applicable): <ul style="list-style-type: none"> • educational course / program • research project / lab • disclosures & technology transfer • incubator / accelerator • idea evaluation / development • venture formation support • general advice / consultancy • funding / financing Interviewee: Title: Email:	Initiative's goals: <ul style="list-style-type: none"> • • • Key activities: <ul style="list-style-type: none"> • • • Key beneficiaries: <ul style="list-style-type: none"> • • • 	Governance: <ul style="list-style-type: none"> • • • Sources of fundings: <ul style="list-style-type: none"> • • • Actors involved in managing: <ul style="list-style-type: none"> • • • Key challenges: <ul style="list-style-type: none"> • • • 	Definition of success: <ul style="list-style-type: none"> • • • Metrics / mechanisms / tools to assess: <ul style="list-style-type: none"> • • • Sustainability impact: <ul style="list-style-type: none"> • • • 	Researchers conducting relevant research: Name: Title: Email: Entrepreneur / company that benefited: Company name: Contact person: Title: Email: Other SEI initiative(s) at the university: Initiative name: Contact person: Title: Email:

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D4.3. Research instruments [CHALMERS - M15]

2.3. Interview guide for interviewing entrepreneurs / companies' innovation managers (beneficiaries of SEI initiatives)

Theme	Interview questions
<p>Introduction</p> <p>Here you want to gather general info about your interviewees, and what Sustainable Entrepreneurship and Innovation (SEI) initiatives / ecosystems they sought / got support from.</p>	<ul style="list-style-type: none"> • [Introducing the interviewer and the project] • Do you agree to recording this conversation? • Can you give a brief background and history about your venture / your role? • What was your key motivation to start your venture / your role? • What SEI initiatives/ecosystem did you seek support from? What type of support did you get?
<p>Value-creating challenges: making positive long-term contribution to society</p> <p>Here your interviewee may tell you about their mission, vision, and the value of what they work on. They may mention issues with prototyping, product development, designing, digital technology enablers (e.g., IoT, AI, digital platforms), external legal/regulatory opportunities, and whether they follow different processes from the conventional way. The last question of this theme asks specifically on the support they sought/got from the SEI ecosystem/initiative to deal with value-creating challenges.</p>	<ul style="list-style-type: none"> • What is the value that you provide to society? • What challenges did this entail for you and your team? • How did you go about solving those challenges? • Did you get any support from the SEI ecosystem/initiative for dealing with these challenges? How?
<p>Funding challenges: bringing money into the sustainable venture</p> <p>Here your interviewee may tell you about their efforts to raise funds to power ahead with their ideas. They may mention different sources for funding such as impact investors, FFF (family/friends/fools), customer funding, public funding, grants, etc. They will possibly share ideas about their revenues/sales, and whether they are sufficient to run the business. The last question of this theme asks specifically on the support they sought/got from the SEI ecosystem/initiative to deal with funding challenges.</p>	<ul style="list-style-type: none"> • Can you tell us about your ways to sustain your project financially? • What challenges did this entail for you and your team? • How did you go about solving those challenges? • Did you get any support from the SEI ecosystem/initiative for dealing with these challenges? How?

Systemic challenges: enablers and barriers in the external environment

Here your interviewees may talk about lock-ins in place, path dependent thinking, incumbent players, stakeholders' conflicting interests, technologies, regulations, policy, institutional barriers, lobbyist forces, public attitude, change resistance, planetary boundaries, etc. The last question of this theme asks specifically on the support they sought/got from the SEI ecosystem/initiative to deal with systemic challenges.

- Can you tell us about the environment where you operate? How do the characteristics of the systems (economic, social, political, technological, etc.) impact your operations?
- What challenges did this entail for you and your team?
- How did you go about solving those challenges?
- Did you get any support from the SEI ecosystem/initiative for dealing with these challenges? How?

Human collaboration challenges: team and coordination issues

Here your interviewees will talk about teamwork issues, difficulties in building and maintaining their teams, conflicts in their organizations, ways to overcome conflicts and differences in values amongst team members. The last question of this theme asks specifically on the support they sought/got from the SEI ecosystem/initiative to deal with human collaboration challenges.

- How have you organized internally to push your project forward?
- What challenges did this entail for you and your team?
- How did you go about solving those challenges?
- Did you get any support from the SEI ecosystem/initiative for dealing with these challenges? How?

Final thoughts

Here you want your interviewees to emphasize a particular challenge or mention other challenges they have encountered and whether any support has been particularly useful for them. Finally, they hopefully tell you about possible future business/projects and whether they will follow the same logic of sustainability and continue seeking support from the SEI ecosystem/initiative.

- What has been the most challenging part of your experience?
- What has been the most useful support you got from the SEI ecosystem/initiative?
- What suggestions for improvement would you recommend to the SEI ecosystem/initiative to further develop their activities/services to support SEI?
- What are your future plans in the short-term and long-term?
- Will you seek further support from the SEI ecosystem/initiative for your future plans? Why / why not?

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D4.2. First systematic mapping brought to first workshop [CHALMERS - M15]

- Built on the preliminary sample of 40+ SEI initiatives (D2.3)
- Extended to 80+ initiatives that contribute to creating SEI ecosystems
- Data from secondary sources (websites, documents, etc.) and 30+ interviews using research instruments (D4.3)
- Presented and discussed in a workshop (TU Berlin, 19th Oct 2022)



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D4.2. First systematic mapping brought to first workshop [CHALMERS - M15]

	Educational programs and courses	Research centers, programs, and labs	Disclosures and technology transfer	Accelerators, incubators, and funders	Student-led initiatives
CHALMERS	Chalmers School of Entrepreneurship Tracks Practical Leadership and Entrepreneurship Course Creating New Business Course	HSB Living Lab Swedish Life Cycle Center Northern LEAD Logistics Centre	Chalmers Innovation Office Chalmers Industriteknik	Chalmers Ventures Stena Center Entrepreneurship Village Johanneberg Science Park Lindholmen Science Park Sahlgrenska Science Park	ICM Advice Elummi Chalmers Entrepreneurship Society
NTNU	NTNU School of Entrepreneurship MSc Innovation, Society, and Sustainable Development Experts in Teamwork	Centre for Environment-friendly Energy Research Centers for Research-based Innovation	NTNU Technology Transfer AS	Trondheim Tech Port NTNU Discovery 6AM	Spark* NTNU Start NTNU FRAM
POLIMI	Master in Sustainability Management and Corporate Social Responsibility Master in Environmental Sustainability and Circular Economy MSc Transformative Sustainability	"Cantieri" for the city of Milan	Technology Transfer Office Spin-Offs Tech4Planet	PoliHub Poli360 Switch2Product Self-financing	Entrepreneurship Club

RWTH	Sustainability in Degree Programs Impact Degree in GreenTech	Center for Circular Economy Undergraduate Research Opportunities Program	Expert Hubs	RWTH Innovation Deep Tech Momentum Sustainability and University Governance Sustainability Fund FairTrade University	Autak – Inclusion through Innovation
TUB	M.Sc. Innovation Management, Entrepreneurship, and Sustainability Master in Energy	Chemical Innovation Factory	Center for Intellectual Property	Centre for Entrepreneurship The coworking space EINS	TUB Mobility Club
UPV	Lifelong Learning Center	Project Management, Innovation and Sustainability Research Center	Office for the Promotion of Research, Innovation and Technology Transfer R&D and Innovation Management Office Orientation for Innovation R&D+i Solutions	IDEAS UPV StartUPV SPIN UPV The Polytechnic City of Innovation Centre for Development Cooperation	Generación Espontánea
WUT	Renewables in Business Program Executive MBA Startup Entrepreneurship Courses	Waste Management Innovations for Sustainable Energy Sustain 4.0 Advancing Methodology of Integrated Decision-Making Support for Sustainable Development	Center for Innovation Management and Technology Transfer Innovation Brokerage Department Research and Analysis Department	Innovation Incubator	Enactus PVV