



## **A5.2, O4: Innovation exploration activities**



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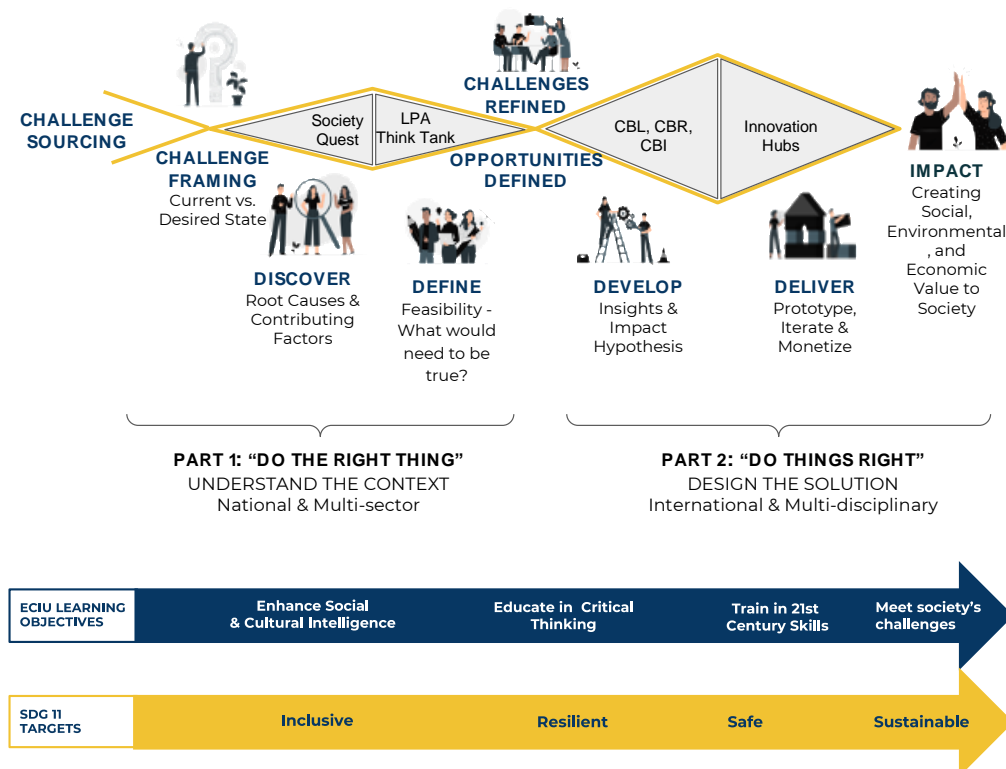
# Innovation exploration

To engage key actors and stakeholders, to be involved in the creation of challenges through the local Partnership Arenas and in the Innovation Hubs, the alliance uses the methodology of Society Quests (as described in A5.2, O2). Society Quest is a methodology developed by Linköping University to capture challenges, problems, and ideas for further development. It is a meeting place for researchers, business and society where various challenges are discussed. The purpose is to initiate joint research and development projects thus exploring the possibilities of innovation.

The following short report presents an extended step by step overview of the local partnership arenas, supported by Innovation Hubs facilitators, the presentation include a series of innovation exploration activities, addressing the following questions:

- What information, tools and processes will help actors innovate for long-term liveability, sustainability and resilience?
- How can the innovation system be configured to accelerate transformation of urban areas toward a more liveable, sustainable and resilient future?
- How can unintended consequences, innovation mainstreaming and complex issues of social inequity, power and political economy be addressed through the innovation and transformation process?

On a generic level these inquiries could easily be transformed into other specific areas. Systems thinking helps to see how problems of one sector can be due to long-range, indirect causes or even solutions implemented in other sectors.



**Figure 1** The ECIU Innovation exploration process and SDG targets

# 1. CHALLENGE (CROWD)SOURCING



LAYING THE FOUNDATION FOR **CHALLENGE DRIVEN, MISSION FUELED AND CROWDSOURCED** LEARNING. MAKING **HUMAN SETTLEMENTS SAFE, INCLUSIVE, RESILIENT AND SUSTAINABLE** THROUGH EACH STEP OF THE PROCESS.

It starts with how we **Source & Qualify** challenges:

- **INCLUSIVE:** Open call with clear criteria. An open process for students, communities and partners that increases reach, raises awareness, and encourages **Critical** and **Creative thinking**.
- **SAFE:** Ensuring enabling and Safe spaces for exploratory discussion and transparent decision making. Empathizing to increase **Social** and **Cultural intelligence**.
- **RESILIENT & SUSTAINABLE:** Qualifying Criteria that ensures a holistic, eco-systemic approach, focused on building Capacity to Innovate and Adapt, rather than static solutions. Developing **21st Century skills**, meeting the **Practical needs** of the current and emerging society.

## CHALLENGE SOURCING FLOW

Leveraging the accessibility of the virtual environment, launch an online call for challenge concept notes open to a broad sector of society

1. Interested parties (industry, NGOs, communities) submit a one-page concept note (based on current challenge summary)
2. Similar themed challenges are grouped together and potentially merged
3. Challenge exploration board rank challenges according to learning and impact potential
4. Challenges with the highest scores are asked to provide more detail to frame the challenge.

<b>Objective</b>	<b>An open, inclusive and transparent process to surface local challenges.</b>
<b>Actors</b>	All: Civil society, public sector, industry, community, students
<b>Input</b>	A simple online concept note template to facilitate a public call for challenges
<b>Activities</b>	6 weeks: promote the call through external networks and university channels
<b>Desired Output</b>	A broad range of challenges identified and surfaced by different sectors of society
<b>Desired Outcome</b>	<ul style="list-style-type: none"><li>- Raise awareness of local university's involvement in ECIU and the challenge-based learning approach</li><li>- Enhance university reputation and deepen engagement with external stakeholders as the broader public becomes aware of the university's ambition to solve problems raised by the local community</li><li>- Provide a platform for multiple voices within society to surface challenges that may have previously not been heard</li></ul>

**THE CHALLENGE**

Describe the challenge and provide context on the circumstances that have led to the challenge.

**MOTIVATION**

Why is this challenge important to you? What is your relationship to the challenge? How does it affect you or your work?

**TARGET GROUPS**

List the groups affected by the challenge and describe how they are affected.

**CURRENT STATE**

Quantify the need - provide statistics - how big is the problem? How many people are affected?

**DESIRED STATE**

Potential for impact - what would change if we solved this challenge?

**RESOURCES**

What resources can be contributed? What needs to be sourced or explored? (Research, space, equipment, funds etc.)

**ANYTHING ELSE WE SHOULD KNOW?**

## 2. QUALIFYING CHALLENGES

### CHALLENGE EXPLORATION BOARD



<b>Objective</b>	<b>An objective and consistent process for evaluation of challenges.</b>
<b>Actors</b>	Coordinator, Teamcher, Innovation Hub rep, Student, Community rep.
<b>Input</b>	Clear challenge qualification criteria based on learning and impact objectives
<b>Activities</b>	Online scoring of submitted concept notes - with 0.5 day evaluation committee meeting
<b>Desired Output</b>	<p>A refined batch of qualified challenges that meet the predetermined CBL &amp; CBR criteria to be framed as challenges for the Society Quest</p> <ul style="list-style-type: none"> <li>✓ Meet ECIU learning objectives (Enhance social &amp; cultural intelligence, educate in critical thinking, train in 21st century skills, meet society's challenges)</li> <li>✓ Meet CBL Criteria (Significance, scale, innovation potential, content coverage, failure resilience, structure, complexity) + Impact Criteria *TBC (Inclusivity, impact potential, collaboration potential)</li> <li>✓ Address SDG 11 Smart Regions focus areas (Energy and sustainability, circular economy, transport and mobility, resilient communities)</li> </ul>
<b>Desired Outcome</b>	A data captured overview of community-based challenges that enables quick identification of trends, recurring themes and opportunities for collaborations - providing insights and context for current and future challenges

#### TEMPLATE

### CHALLENGE QUALIFICATION CRITERIA

Criteria	1 - Bad	2 - Poor	3 - Fair	4 - Good	5 - Excellent	Score /50
Significance						
Scale						
Innovation Potential						
Content Coverage						
Failure Resilience						
Structure						
Complexity						
Inclusivity						
Impact Potential						
Collaboration Potential						

\* See also deliverable 5.3, O1, for a more comprehensive definition of criteria's.

### 3. CHALLENGE FRAMING

CURRENT VS. DESIRED STATE



<b>Objective</b>	<b>A consistent framework for stating and displaying challenges</b>
<b>Actors</b>	Challenge Champion, Coordinator
<b>Input</b>	Challenge framing template
<b>Activities</b>	Challenge champion to provide more material as per template and work with coordinator to frame challenge
<b>Desired Output</b>	A comprehensive one-page challenge document with supporting qualitative and quantitative data uploaded onto CHAD for a vote by students and researchers for what challenges should proceed to Society Quest
<b>Desired Outcome</b>	A continuously growing database of meta-tagged qualitative and quantitative data to contextualise, enhance and inform future CBL & CBR projects

Components to **Frame** a challenge:

- **CHALLENGE STATEMENT:**  
Asked as a question with the standard format ***how might*** challenge champion enable/influence desired outcome **by** limiting factor.
- **CURRENT STATE:**  
**Quantify the need.** Rooted in **data** (how many people are affected?) *Format: Data. Graphs. Visualisations.*  
**Enhance empathy** through a **personal narrative** (how are they affected?) *Format: Video. Personal Narrative. Testimonial.*
- **DESIRED STATE:** Potential for **impact** on individual and societal level. What change you want to see in the numbers and narrative.
- **RESOURCES:** What resources the challenge champion can contribute and what they feel needs to be sourced or explored. (Research, space, equipment, funds etc.)

#### CHALLENGE FRAMING FLOW

1. Challenges with supporting data and personal narratives are presented by challenge champion via live stream and uploaded on CHAD platform
2. Online voting - students, researchers and LPA stakeholders sign up & submit questions for challenges they want to explore further in the society quest
3. Challenges that reach the predetermined threshold of sign-ups move into the society quest.

## CHALLENGE STATEMENT

*How might* (challenge champion) **verb** (desired outcome) **by** (limiting factor)?

### BACKGROUND

#### ABOUT THE CHALLENGE

Context on the circumstances that have led to the challenge.

#### ABOUT THE CHALLENGE CHAMPION

Outlining the relationship the champion has to the challenge, what they can influence and what resources they could leverage.

#### TARGET GROUPS

Describing the different target groups and how they are involved in and affected by the challenge.

TEMPLATE

### CURRENT STATE

**Quantify the need** Provide statistics and numbers to determine baselines, benchmarks and targets.

*Format: Data. Graphs. Visualisations.*

**Qualitative insights** Quotes from stakeholders / target groups who are/will be impacted illustrating how are they affected and what will/should change.

*Format: Video. Personal Narrative. Testimonial.*

### DESIRED STATE

Potential for **impact** on individual and societal level.

*Format: Vision*

### RESOURCES

What resources can be contributed? What needs to be sourced or explored. (Research, space, equipment, funds etc.)

## CHALLENGE STATEMENT

*How might* the Region Östergötland **facilitate** regional growth and prosperity **by** radically reducing net emissions from the transport sector?

**ABOUT THE CHALLENGE** Östergötland is a growing region. A flexible labour market and available transports support regional growth. However, as the transport sector represents one third of the total carbon emissions in Östergötland this is also a great challenge. The overall regional goal is 70% reduced carbon emissions from road transports with year 2030 compared to 2010.

**ABOUT THE CHALLENGE CHAMPION** Region Östergötland is the county council and the public organisation responsible for supporting regional growth, as well as transport infrastructure planning and public transports. This means that the region is involved in shaping the drivers for transport service demand as well as in creating the solutions for tomorrow's transport system.

#### TARGET GROUPS

Regional business, municipalities, citizens

### CURRENT STATE:

**Quantify the need** Graphs of carbon emission contribution per vehicle. No of people are affected.

*Format: Data. Graphs. Visualisations.*

**Qualitative insights** Snippets of interviews with community members talking about traffic volumes and transport workers who may lose jobs to automotion

*Format: Video. Personal Narrative. Testimonial.*

### DESIRED STATE:

Potential for **impact** on individual and societal level.

*Format: 2030 Vision video for the region and supporting communications material..*

### RESOURCES:

Research, space, equipment, funds etc.

EXAMPLE

## 4. DISCOVER - SOCIETY QUESTS

### ROOT CAUSES & CONTRIBUTING FACTORS



Society Challenge Quick Facts (full description in A5.2, O2: Society Quest Guideline):

- A **meeting point** for higher education institutions, industry and society to explore the potential of CBL & CBR projects that address real challenges within society.
- A full day of dynamic programming, which facilitates the building of **new networks, exchange of knowledge** and **catalyzes project collaborations**.
- Planning tips:
  - Best attendance is for a mid-week session (Tues, Wed or Thurs)
  - All activities between 09.00 - 16.00 with optional dinner to strengthen network building
  - Arrange participants into multi-stakeholder groups (with one of each represented in each group)
  - 20 - 100 participants (when working on the nano-challenge a minimum of 4 people per challenge)

### SOCIETY QUEST FLOW

1. Challenge Champ **summarizes challenge & opportunity**, providing situational context and highlighting contributing factors
2. **Panel discussion** with all challenge champs to explore commonalities and overlaps
3. **Q&A** with all Challenge Champs & Community Member (captured in shared doc real-time and constantly updated throughout the day)
4. Multi-stakeholder **nano-challenge** for each challenge - Explore ways you may want to address the challenge & identify stakeholders needed.
5. **Present concepts** recommended to move into CBL (Challenge-based Learning), CBR (Challenge-based Research) or CBI (Challenge-based Innovation)
6. Participants **sign up** for the challenges they want to be part of

<b>Objective</b>	<b>Generate excitement, explore and expand challenge potential, catalyze collaboration opportunities between stakeholders.</b>
<b>Actors</b>	<b>ECIU:</b> Challenge champion, challenge coordinator, innovation hub rep, teamchairs, students. <b>External:</b> Representatives from community, civil society, public sector, industry
<b>Input</b>	X number of Framed Challenges (with supporting data) which achieved the predetermined threshold of votes
<b>Activities</b>	1 Day: Pitch, Panel, Q&A, Creathon, Presentation, Wrap Up
<b>Desired Output</b>	Generate a pool of potential high impact CBL & CBR projects to be reviewed and refined by Learning Partnership Arena
<b>Desired Outcome</b>	X number of deeply defined potential challenge projects that are: <ul style="list-style-type: none"> <li>- Rooted in data</li> <li>- Humanized through personal narrative</li> <li>- Contextualised through root causes &amp; contributing factors</li> <li>- Reinforced/supported by identified stakeholders and resources</li> </ul>

## SOCIETY QUESTS - MULTIPLE TEAMS, MULTIPLE CHALLENGES

### SESSION FLOW

Welcome & "who's in the room" energizer exercise	
Challenge Pitches	Challenge champion & community member summarises challenge & opportunity providing situational context (what contributing factors we should be aware of) and insights (what has been tried before, noting what worked and what didn't and why)
Panel Discussion	Moderated discussion with all challenge champs on stage discussing commonalities, potential for overlap and collaboration - identify if there are shared visions or root causes.
Q&A	Audience questions with Challenge Champs & Community Members (captured in shared doc realtime and constantly updated throughout the day)
Lunch with themed tables	
Nano Challenge: From insight → idea	Nano challenge structure - As a multi-stakeholder team explore different angles of how you may want to address the challenge. Identify what you could contribute and what other stakeholders would need to be involved.
Presentation	Present 1-2 concepts you think should be explored further through CBL, CBR & CBI
Wrap Up	After hearing all the concepts, all stakeholders sign up to work on the challenges they want to take forward. Challenge coordinator notes the project teams for future follow up.
Optional networking dinner	

## 5. DEFINE – Local Partnership Arenas

WHAT WOULD NEED TO BE TRUE?



Learning Partnership Arenas Quick Facts:

- A **think tank** for subject matter experts across industry and sector to assess the feasibility and potential of the challenges to truly impact society in financially viable and sustainable way.
- Planning Tips:
  - **Impact is amplified by diversity!** Ensure there is multi-sector representation in the room - across academia, society and industry.
  - Allocate an hour to each challenge
  - Buddy up 2 participants and adopt a “thinking hats” facilitation style based on the feasibility lenses (outlined to the right) so that each challenge is viewed from a different perspective.
  - The output of the discussions should be formally captured for each challenge as it will feed into the upcoming “opportunities defined” section

### LPA THINK TANK FLOW

A full day of discussing and exploring the challenge concepts through the feasibility lenses of:

- **Structural barriers** - Legislations and regulation
- **Social barriers** - Potential market adoption and behavior change obstacles
- **Stakeholder mapping** - Who would need to be involved
- **Asset mapping** - Existing research or business activities to build upon or leverage
- **Resource mobilization** - what can be contributed

<b>Objective</b>	Ensure stakeholder alignment and define scope of collaboration with asset-based approach with contribution of knowledge and resources
<b>Actors</b>	<b>ECIU:</b> Challenge champion, challenge coordinator, innovation hub rep, teamchers. <b>External:</b> Representatives from community, civil society, public sector, industry
<b>Input</b>	X number of deeply defined potential challenge projects from Society Quests
<b>Activities</b>	1 Day: Think Tank discuss, develop and review feasibility of challenges and map the resources and stakeholders needed.
<b>Desired Output</b>	X number of challenges with committed multi-stakeholder project team. Stakeholder and resource maps with clearly defined roles and contribution of different actors
<b>Desired Outcome</b>	Multi-sectoral collaborations that contribute to the solving of locally based challenges with European potential.

## 6. CHALLENGES REFINED

### OPPORTUNITIES DEFINED

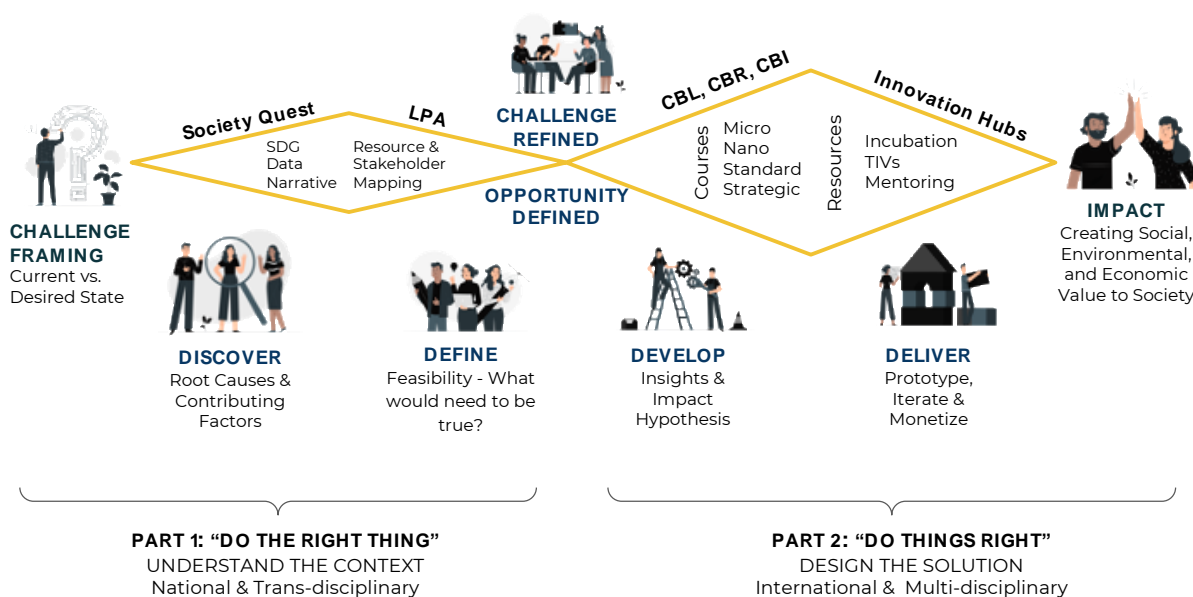


<b>Actors</b>	Challenge coordinators across universities
<b>Input</b>	X number of deeply defined potential challenge projects from Locally-based Society Quests
<b>Activities</b>	1 Day: Presentation of challenges per university and clustering similar themes
<b>Desired Output</b>	ECIU Glocal Challenges - Local challenges grouped under ECIU Grand Challenge Themes to be uploaded to CHAD
<b>Desired Outcome</b>	X number of refined Glocal CBL, CBR & CBI projects that are: <ul style="list-style-type: none"> <li>- Scoped by challenge format (nano, mini, standard)</li> <li>- Supported by a constellation of multi-sector collaborators</li> <li>- Driven by a project team (challenge champion, challenge coordinator, teamcher and representatives from municipality, CSOs and industry)</li> </ul>

## 7. SUMMARY

### INPUTS FOR IMPACT

The following illustration and table summarize the innovation exploration activities developed by ECIU University. In deliverable A5.4, O1: A future model for transnational challenge-based innovation support is proposed, based on Impact Management and Innovation Hub support.



CHALLENGE SOURCING	QUALIFYING CHALLENGES	CHALLENGE FRAMING	DISCOVER SOCIETY QUESTS	DEFINE LOCAL PARTNERSHIP ARENAS	CHALLENGES REFINED OPPORTUNITIES DEFINED
<b>Objective</b>	An open, inclusive and transparent process to surface local challenges	An objective and consistent process for evaluation of challenges	Generate excitement, explore and expand challenge potential, catalyze collaboration opportunities between stakeholders	Ensure stakeholder alignment and define scope of collaboration with asset-based approach contributing knowledge and resources	Global scoping of challenges for CBL & CBR
<b>Actors</b>	ECIU: Coordinator, marketing dept, students External: Civil society, public sector, industry, community	ECIU: Coordinator, teacher, innovation hub rep, student rep External: Independent community rep not affiliated to challenge submitters	ECIU: Coordinator, innovation hub rep, teachers, students External: Challenge champions, representatives from community, civil society, public sector, industry	ECIU: Coordinator, innovation hub rep, teachers External: Challenge champion, representatives from community, civil society, public sector, industry	ECIU: Challenge coordinators across universities
<b>Input</b>	A simple online concept note template to facilitate a public call for challenges	Clear challenge qualification criteria based on learning and impact objectives	X number of Framed Challenges (with supporting data) which achieved the predetermined threshold of votes	X number of deeply defined potential challenge projects from Society Quests	X number of deeply defined CBL & CBR projects with stakeholder and resource maps from LPAs
<b>Activities</b>	6 weeks: Online open call promoted through external networks and university channels	Online scoring of submitted concept notes - with 0.5 day evaluation committee meeting	1 Day: Nano Challenge with Pitch, Panel, Q&A, Presentation & Wrap Up	1 Day: Think Tank to discuss, develop and review feasibility of challenges and map the resources and stakeholders needed	1 Day: Presentation of challenges per university and clustering similar themes
<b>Desired Output</b>	A broad range of challenges identified and surfaced by different sectors of society	Qualified challenges with identified challenge champion that meet the predetermined CBL & CBR criteria to be framed to meet ECIU learning objectives & address SDG 11: Smart Regions focus areas	Generate a pool of potential high impact CBL & CBR projects to be reviewed, refined and built upon by Local Partnership Arena	X number of challenges with committed multi-stakeholder project team. Stakeholder and resource maps with clearly defined roles and contribution of different actors	X number ECIU Global Challenges - ECIU Grand Challenge Themes to be uploaded to CHAD with local challenges clustered under relevant themes
<b>Desired Outcome</b>	- Raise awareness of local university's involvement in ECIU and CBL approach - Enhance university reputation and deepen engagement with external stakeholders as the broader public become aware of the university's ambition to solve problems raised by the local community - Provide a platform for multiple voices within society to surface challenges that may have previously not been heard	A data captured overview of community-based challenges that enables quick identification of trends, recurring themes and opportunities for collaborations - providing insights and context for current and future challenges	Deeply defined potential challenge projects that are: - Rooted in data - Humanized through personal narrative - Contextualised through root causes & contributing factors - Reinforced/supported by identified stakeholders and resources	Multi-sectoral collaborations that contribute to the solving of locally based challenges with European potential	Refined Global CBL & CBR projects that are: - Scoped by challenge format (nano, mini, standard) - Supported by a constellation of multi-sector collaborators (municipal, CSO, industry, academia) - Driven by a project team (challenge champion, challenge coordinator, teamleader and representatives from municipality, CSOs and industry)

## Acknowledgements



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