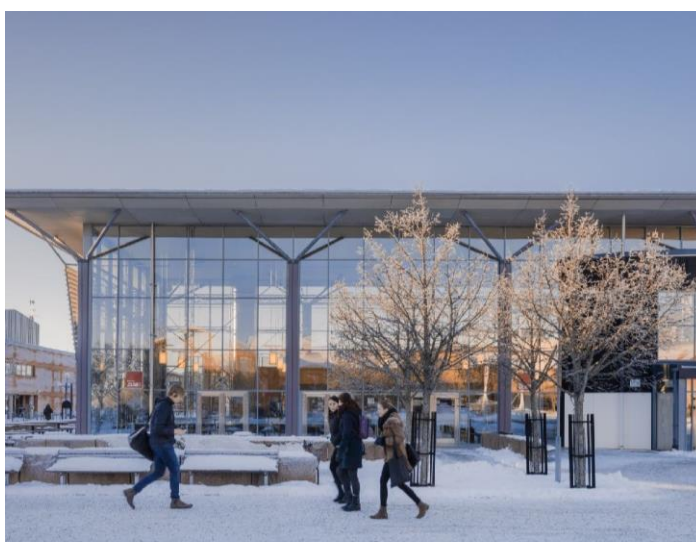
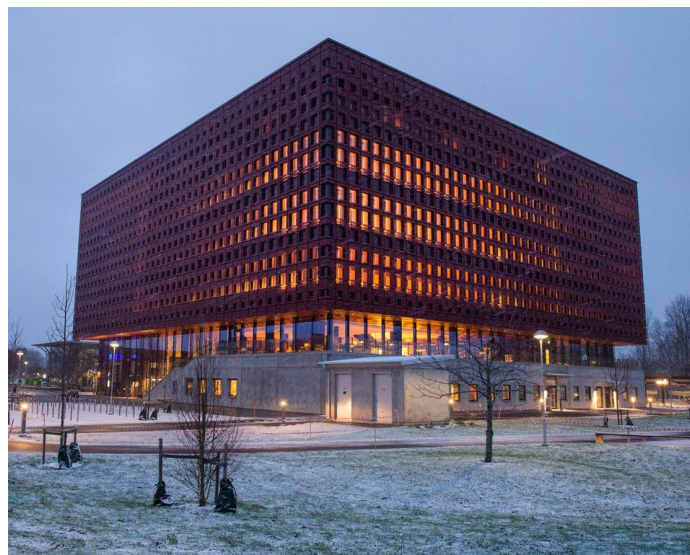


Society Quest

A base for societal
collaboration



A Challenge Driven Innovation Methodology and practical guideline for Local Partnership Arenas and Society Quests



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Create a base for societal collaboration with Society Quest

Societies current and future challenges need sustainable solutions. This growing demand has resulted in societal challenges becoming a driving force to find new solutions, which in turn lead to new business opportunities.

Society Quest is a meeting point for higher education institutions, industry and society where different challenges from the society are discussed first in seminar form and then through workshops. The purpose is to generate mutual research- and development projects as well as student engagement. After a Society Quest, an opportunity for a Deep Quest is available to deepen within the discussed area. The Deep Quest has proven to be a success factor to further realize research collaboration.

The methodology, developed by Linköping University, has successfully been applied within a number of subject areas:

- Environmental technology and management
- Sensors in the green industry
- Crises Management
- Inclusion of senior citizens
- Autonomous vehicles
- Construction logistics
- Sustainable cities

Provision

The following document is a draft, a part deliverable, and should not be regarded as a complete ECIU guideline for a Challenge Driven Innovation (CDI) and Society Quests (SQ). The document contains examples of the Society Quest methodology which has been developed, planned and coordinated by Linköping University; it presents planning and practical aspects as well as an Impact Case type description of the main event exemplified. The ECIU – CDI methodology and Society Quest Guideline will iteratively be developed during the pilot project.

Pilot references

- Local Society Quests at partner universities, 2019-2020
- European Society Quest in Linköping February 12-13th, 2020
- Toyota Innovation Day and presiding seminars on R&D collaboration (2020-2021)

ECIU Challenge Driven Innovation Methodology

Context

ECIU University believes in a European-wide ecosystem based upon open and inclusive collaboration connecting industry, societal stakeholders, researchers and learners to provide European answers to future societal challenges. The challenge driven innovation methodology outlined in this document integrates ECIU's learning objectives and SDG 11 into each part of the innovation process.

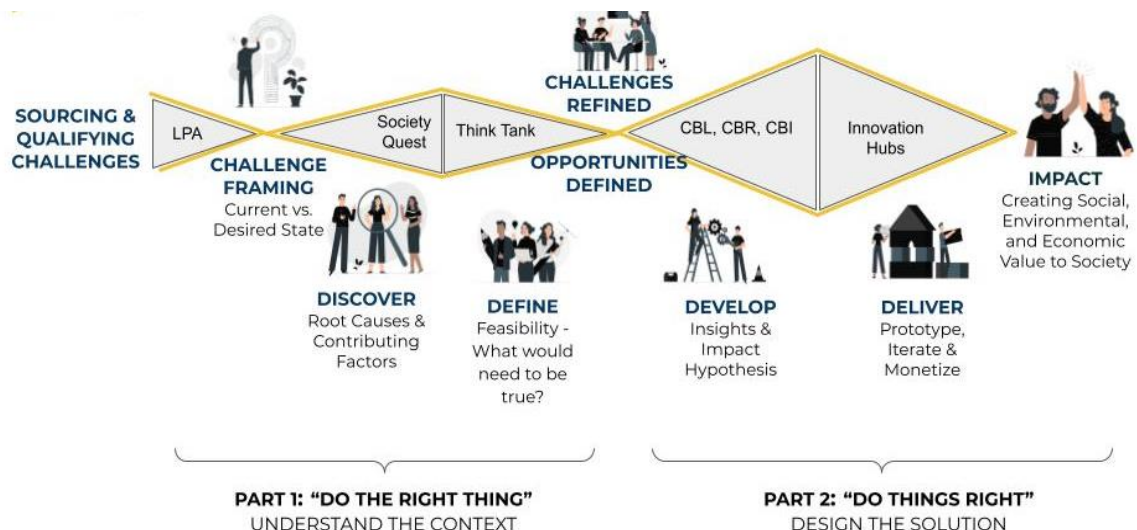
ECIU Learning Objectives: Enhance social and cultural intelligence, educate in critical thinking, train in 21st century skills, meet society's challenges.

SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable.

This methodology provides a framework to think about and structure an ECIU-wide innovation process. Acknowledging that at this point in time each university has different operational resources and constraints, it serves as a guideline through which we encourage universities to test, adapt, pilot and refine based on their needs and context - providing input that will shape the eventual ECIU process.

Challenge Driven Innovation Methodology Framework

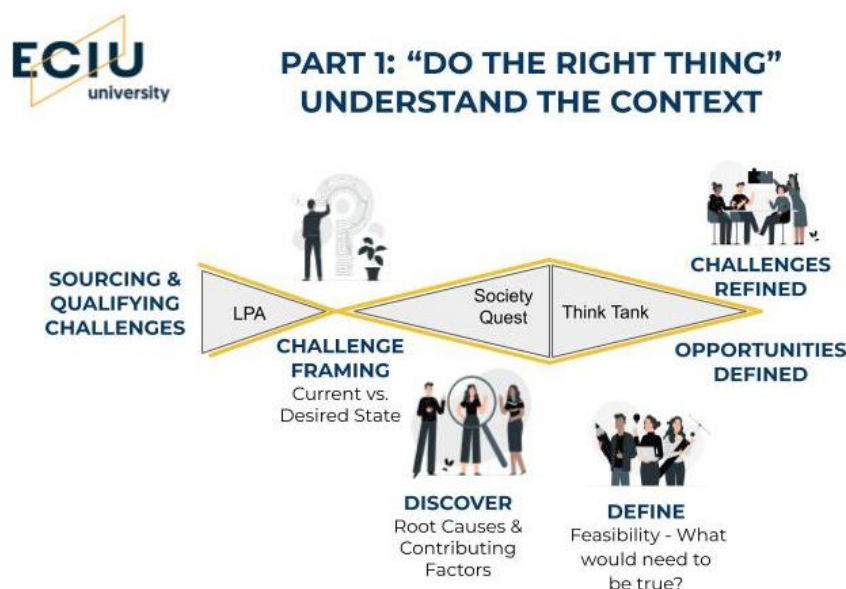
The methodology arranges activities into a design-thinking inspired double-diamond framework that flexes between divergent and convergent thinking throughout to facilitate the innovation process, and is split into two parts:



Part 1: Do The Right Thing - discover and define the challenge

Part 2: Do Things Right - develop and deliver the solution

This manual details the methodology for Part 1: Do The Right Thing. The second part will be completed when the ECIU Innovation hubs has been further developed, in the second half of the project.



To ensure we focus our efforts on challenges that will provide real impact and value to society, we bring all our stakeholders together in a series of facilitated sessions (Local Partnership Arenas, Society Quests and Think Tanks) to surface and shape the challenges that will be refined and eventually posted as defined Challenge-Based Learning, Research and Innovation opportunities for ECIU students and researchers in Part 2.

Sourcing & Shaping Challenges - Local Partnership Arenas

Through the twelve Local Partnership Arenas (LPAs), set up by the ECIU University initiative, we collectively surface and shape the societal challenges that are key to the stakeholders in the room. The quadruple-helix Local Partnership Arenas bring together private, public, as well as civic partners, and academia at the very start of the process. Ensuring the complexity of the challenges are reflected through multiple stakeholder perspectives, participants are split into multi-sector teams to discuss and collectively shape multiple challenges around the SDG11 theme. By collectively shaping the challenge, we build a resilient ecosystem of stakeholders aligned around each challenge - forming their own challenge cluster- contributing different perspectives and resources. With one representative from the cluster being nominated/ stepping into the role of "Challenge Champion" - coordinating external stakeholders, representing the cluster in future activities and acting as the main point of contact for the challenge coordinator.

Desired Outcome: Local stakeholders are aligned through the surfacing and shaping of challenges that reflect the complexity of the context and the relevance to their work.

ECIU Actors: Challenge Coordinator, Teamcher, Students, Innovation Hub Representative

External Actors: Industry, Public Sector, Civil Society Representatives, Community Members

Qualifying Challenges - The Challenge Board

After the LPA event, a challenge board is formed to initiate an objective and consistent process for evaluating challenges. Each challenge board member independently evaluates the challenges according to predefined criteria based on learning and impact objectives (listed below) using an online points-based scorecard.

CHALLENGE QUALIFICATION CRITERIA

- √ **Meets ECIU learning objectives** (Enhance social & cultural intelligence, educate in critical thinking, training in 21st century skills, meet society's challenges)
- √ **Meets CBL Criteria** (Significance, scale, innovation potential, content coverage, failure resilience, structure, complexity) + Impact Criteria *TBC (Inclusivity, impact potential, collaboration potential) : Published in the ECIU report on CHALLENGE-BASED LEARNING: Quality Criteria and Learning Outcomes (2019)
- √ **Addresses SDG 11 Smart Regions focus areas** (Energy and sustainability, circular economy, transport and mobility, resilient communities)

After each member has submitted their scores on the platform, the exploration board convenes for a half-day evaluation committee meeting to review and discuss the final selection.

Desired Outcome: A data captured, ranked and meta-tagged 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.

ECIU Actors: Challenge Coordinator, Teamcher, Student Representative, Innovation Hub Representative

External Actors: Challenge champions and selected LPA participants representing: Industry, Public Sector, Civil Society, and Community Members

Challenge Framing - Current & Desired State

The challenges put forward by the board are distilled into a challenge template, providing richer insight into the challenge in the form of data and stakeholder narratives.

- Rooted in **data** - we learn about the size of the challenge (how many people are affected?)
- Through a **personal narrative** we enhance empathy (how are they affected?)
- We explore the **potential for impact** on an individual and societal level. (What is the desired change to be seen in the numbers and narrative?)
- Finally, we explore what **resources** can be contributed from within the LPA ecosystem and what needs to be sourced or explored. (Research, space, equipment, funds etc.)

Below is an example of a challenge template which summaries the overall challenge in a “How might we...” style statement.

<div> <div>TEMPLATE</div> <div>CHALLENGE STATEMENT</div> </div> <div>How might <u>(challenge champion)</u> verb <u>(desired outcome)</u> by <u>(limiting factor)</u>?</div>	
<div> <div>BACKGROUND</div> <div> <div>ABOUT THE CHALLENGE</div> <p>Context on the circumstances that have led to the challenge.</p> </div> <div> <div>ABOUT THE CHALLENGE CHAMPION</div> <p>Outlining the relationship the champion has to the challenge, what they can influence and what resources they could leverage.</p> </div> <div> <div>TARGET GROUPS</div> <p>Describing the different target groups and how they are involved in and affected by the challenge.</p> </div> </div>	<div> <div>CURRENT STATE</div> <div> <div>Quantify the need</div> <p>Provide statistics and numbers to determine baselines, benchmarks and targets. Format: Data. Graphs. Visualisations.</p> </div> <div> <div>Qualitative insights</div> <p>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.</p> </div> </div> <div> <div>DESIRED STATE</div> <p>Potential for impact on individual and societal level. Format: Vision</p> </div> <div> <div>RESOURCES</div> <p>What resources can be contributed? What needs to be sourced or explored. (Research, space, equipment, funds etc.)</p> </div>

Desired Outcome: A continuously growing database of meta-tagged challenges with qualitative and quantitative data to contextualize, enhance and inform future CBL & CBR projects.

ECIU Actors: Challenge Coordinator

External Actors: Challenge Champion

Society Quests - Root Causes & Contributing Factors

The International Society Quest provides a **meeting point** for higher education institutions, industry and society across Europe to explore the potential of CBL & CBR projects that address real challenges within society. This full day of dynamic programming facilitates the building and strengthening of **new networks, exchange of knowledge** and **catalyzes project collaborations**.

Through panel discussions and workshop sessions, participants from across the ECIU network identify and explore the root causes of the challenges and potential contributing factors - highlighting commonalities between regions and identifying opportunities for collaboration and knowledge exchange.

SUGGESTED FLOW

1. Challenge Champions **summaries challenge & opportunity**, providing situational context and highlighting contributing factors
2. **Panel discussion** with all challenge champions to explore commonalities and overlaps
3. **Q&A** (captured in shared doc realtime and constantly updated throughout the day)
4. Multi-stakeholder **nano-challenge** for each challenge - exploring potential ways to address the challenge & identify stakeholders needed.
5. **Present multiple concepts** to be considered as Challenge-Based Learning opportunities to be taken to the Think Tank for further stakeholder mapping and resource mobilization.

Desired Outcome: Catalyze collaboration opportunities between ECIU stakeholders whilst generating a pool of potential high impact CBL & CBR projects to be reviewed, refined and built upon in the Think Tank

ECIU Actors: Coordinator, Students, Researchers, Innovation Hub Representative, Teamchairs,

External Actors: Challenge Champions, Industry, Public Sector, Civil Society Representatives, Community Members

Think Tank - Feasibility: What Would Need To Be True?

The think tank convenes subject matter experts across industry and sector to assess the feasibility and potential of the challenges to truly impact society in a financially viable and sustainable way. This session has a positive framing - not looking at obstacles, but rather enabling the experts to contribute to the challenge through an asset-based approach - providing tangible inputs / building blocks to enhance the learner experience.

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

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

Desired Outcome: “Glocal” Challenge-Based Learning Research and Innovation opportunities supported by a constellation of multi-sector collaborators and a pool of resources.

ECIU Actors: Challenge Coordinator, Innovation Hub Representative

External Actors: Subject Matter Experts within the ECIU network, Challenge Champion, and selected Challenge Cluster Representatives

CHALLENGES REFINED - OPPORTUNITIES DEFINED

The challenges and supporting material including data, resources and stakeholder commitments are divided into different challenge formats (nano/mini/standard) and uploaded onto the CHAD platform for student sign up.

Desired Outcome: Refined Glocal 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 cluster, challenge coordinator, teamcher and representatives from municipality, CSOs and industry)

ECIU Actors: Challenge Coordinator, Teamcher, Innovation Hub Representative

External Actors: Challenge champion

NEXT STEPS

The intention had been to further pilot components of this methodology during Q2 2021 - but due to tighter Covid-19 restrictions, the physical meetings have been postponed until vaccination rollouts have been completed and group meetings are considered safe - so likely to be Q4 2021.

The next phase of the project will be working with the innovation hubs to build out the next section of the methodology, Part 2: Do Things Right.

Society Quest planning and practicalities

Society Quest is an open societal collaboration forum where society and academy can meet with the focus to match challenges from society with knowledge and research from academia.

The Society Quest forum presents business opportunities and related questions that affect society challenges. These are then discussed in a workshop. The purpose is to give researchers an insight into related questions, initiate collaborative research and development projects but also an opportunity to establish new contacts and networks.

Key factors for a successful Society Quest

Identify an area of interest

A current societal challenge topic is suitable for a Society Quest. In order to confirm there is an interest to participate, the concept must first be established with researchers, businesses and organizations, preferably with local ties, which have shown active involvement and interest. After this, a topic can be decided upon.

Invite participants

In order to arrange a successful Society Quest, it is important to engage people knowledgeable in the topic of discussion.

To suit most participants, it is advisable to arrange a Society Quest on a Tuesday-Thursday between 09:00-16:00.

Previous Society Quests, arranged by LiU, have had between 15 and 100 participants, depending on the breadth and scope of the challenge.

Collect questions

The questions, which are discussed in workshops, are collected from the participants in conjunction with invitation and sign-up. The questions are then matched with researcher expertise.

To be able to match questions with researcher expertise, the questions need to be clarified and specified in detail. The questions should be open for discussion without the restriction of a confidentiality agreement.

Match questions with researcher expertise

After defining questions, they need to be matched with researcher expertise. It is preferable to allocate more than one researcher to each question. In some cases, researchers are able to handle questions outside of their specialized area. Senior

researchers often have broad competency and have often taught outside their main research focus.

Distribute the questions to relevant workshops and decide what researchers should be included in the workshop. The participants decide upon on-site registration which workshop to participate in.

Venue

The venue should be big enough to fit all participants in plenary, and should be equipped with both a sound system, projector and screen. Make sure there are additional smaller rooms for parallel workshops and focus groups. These rooms should be in different sizes as the number of people in a focus group varies. Also make sure there is a suitable area for mingling, lunch and coffee breaks.

Planning

Careful step by step planning is a key to success.

Week 1-6

- Preliminary discussions with researchers and organizations to confirm there is an interest for the suggested topic
- Determine topic, date and venue
- Settle on participants to invite

Week 7

- Send out invitations

Week 8-10

- Personalized contact with organizations
- Focus on collecting specific and precise questions

Week 11-12

- Process the questions
- Identify and contact relevant researchers

Week 13

- Determine workshop themes
- Facilitate moderators and, if need be, secretaries

Week 14

- Carry through the Society Quest

Week 15

- Define which discussions from the Society Quest should be evaluated further
- Offer selected participants to take part in a Deep Quest

Week 16

- Inform the participants of the projects
- Start work on identifying project owners

Week 17-24

- Assist in creating project groups

Week 25

- Evaluate the event
- Settle which projects have formed throughout the Society Quest process

The typical implementation of a Society Quest

Workshops

Every workshop must have a facilitator and a secretary. For smaller workshops one person can cover both tasks. The facilitator's responsibility is to lead the discussion while a secretary documents the details of what is said and by whom.

Follow up

1. The project group collects and summarizes the documentation. Potential projects and collaborations are identified.
2. The summary is distributed to all participants along with an encouragement to express interest in continuing the participation in specific projects, so called Deep Quests. The project group should also strive to identify project owners. This follow-up process is important and a number of weeks should be dedicated to the process.
3. Three months after the Society Quest event the project group meets and documents which projects have been initiated. The project group for the Society Quest must not become the long-term owner of the specific projects. During this meeting the project group also evaluates the Society Quest workshop.
4. It is beneficial to follow up over a number of years to study the effects the Society Quest have had.

Program layout suggestion:

Make sure the program starts and finishes well within office hours to facilitate participants' travelling without contributing to generating long days, which in turn risk becoming a limiting factor for participation.

Part 1: Presentations

09.00 Registrations and coffee

09.30 Welcome and introduction

09.45 Presentations about the research and development within the topic

12.00 Lunch and mingle

Part 2: Workshops

13.00 Workshop in parallel sessions based on specific questions

14.45 Summary

15.00 End

Some reflections from a Society Quest

“The contact with new businesses and the exposure of current research.” That is how professor in constructions logistics Martin Rudberg at Linköping University summarizes the usefulness of his and his research colleagues’ participation in Society Quest.

Society quest is a seminar method where society, industry and academia are able to meet and discuss and to make possible new development projects. The participants (businesses, researchers and public organizations) have a greater involvement in shaping the seminar as they, in the planning stages, contribute with questions related to the chosen topic.

The Society Quest on ‘construction logistics and virtual processes’ engaged 90 participants, highly appreciated by the moderator professor Martin Rudberg, at Linköping University.

“The layout of the Society Quest allows for greater engagement among the participants, which leads to more qualitative discussions and thus results in more solid for projects- and research ideas to be discussed in the next step. My research group developed many new contacts within the business sector, for example within IT. A concrete positive effect was that soon after the Society Quest, the companies HiQ and Atea were able to join in the previously commenced application “Online [smart] construction workplace” says Martin Rudberg.

The project, which was approved, balances approximately 4 million € over three years and holds 30 businesses partners, for example NCC, Skanska, Peab, Hexagon, and Telia. The project is part of the Swedish government’s five prioritized collaboration programmes, “Connected industry and new materials”.

“Society Quest was a good way to get exposure of our work, both locally and regionally. Both through the participants and through the publicity the seminar gained in industry newspapers”, adds Martin Rudberg.

The opportunity to try new thoughts and ideas within a research area and see the response from people in the industry is an important advantage of the Society Quest according to Martin Rudberg.

Martin finally concludes. *“Be prepared to spend a significant amount of time to plan and prepare. However, this makes it more likely that the event is successful and generates results that can be utilized after the Society Quest”*