

LDT4SSC Project Methodology

Step 1: EXPLORE (Ideation)

Workshop: Questioning The Purpose of your LDT Project: Iterative Mapping of the Multi-Dimensional Benefits

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Authors: Cerema



Document History

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May 2026	v1	Marine Le Gall, Laura Riou, Sophie Houzet	First version adapted from the CAPACities program.

Workshop Overview

Title	Questioning The Purpose of your LDT Project: Iterative Mapping of the Multi-Dimensional Benefits
Methodological step	Step 1: EXPLORE (Ideation)
Duration	2 hours and 40 mins, 3 times
Number of Facilitators	1 for each group of 4 to 5 people
Equipment Needed	• One big sheet of paper (1m/2m) or a large (digital) whiteboard • Pens and markers (blue, green, red).
Expected Outputs	• The filled-in Benefits Restitution Table. • A list of identified potential operational, strategic, social, and environmental benefits for the community • A summary note produced after the workshop, outlining key findings and next steps.

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1. Context and objectives

The **Questioning The Purpose of your LDT Project** workshop is part of the **EXPLORE step (ideation)** which marks the launch of an LDT initiative. During this step, stakeholders should reach a common understanding of their use case outlining *expected processes, data flows, and challenges*.

More information on the objectives, prerequisites and stakeholders to involve in the EXPLORE step can be found on the LDT4SSC Knowledge Hub¹.

While the workshop is part of the first step of the LDT4SSC Methodology, it is recommended that it is carried out several times throughout the project lifecycle. The goal of repeating this exercise is to refine the results over time alongside the project moves forward.

The workshop is designed to achieve the following objectives:

- Clarify the **strategic intent** and **public value** of the LDT project.
- Identify and map **multidimensional benefits** (economic, social, environmental).

2. Workshop

2.1. An iterative workshop

It is recommended to **conduct this workshop three times** at different stages of the project lifecycle.

The **first session takes place once interest in the project has been confirmed** by at least several members of the city or community. Its primary objectives are to define, as precisely as possible, the initial use cases enabled by the Local Digital Twin (LDT), to identify potential operational, strategic, social, and environmental benefits for the community, and to propose relevant indicators for measuring these impacts. **This can be done before applying** to help build a strong and justified project proposal and the projects Key Performance Indicators (KPIs).

The second session is organised immediately prior to the implementation phase. This session focuses on developing preliminary insights into the potential economic, social, and environmental benefits for each stakeholder involved in the project.

The final session is conducted at the conclusion of the implementation phase. Its objectives are to identify and consolidate the economic benefits for each stakeholder, define the associated social and environmental benefits, and assess, weigh, and prioritise these benefits in order to support future evaluation and decision-making processes.

¹ https://knowledgehub.ldt4ssc.eu/resources_content/methodology/

2.2. Workshop phases overview

Time spent	Phase	Description
15 mins	0. Framing and Icebreaker	Participants revisit the selected use case and project objectives to keep discussions grounded.
15 mins	1. Clearly defining the use cases purpose	Each sub-group works on clarifying the project's purpose and clearly defining the use case.
45 mins	2. Identify the projects strategic benefits	Participants collaboratively identify strategic benefits and populate the benefits table.
20 mins	3. Refine the benefits	Participants project themselves five years into the future to reflect on the future benefits.
20 mins	4. Choosing indicators to measure the benefits	Participants refine project KPIs by proposing at least one relevant indicator for each benefit
30 mins	5. Presenting and Consolidating	Each sub-group presents their findings to the others.
15 mins	6. Synthesising and Defining Next Steps	Participants summarise the key findings and draft follow-up actions.

2.3. Workshop step by step guide

Phase 0: Framing and Icebreaker (recommended allocated time: 15 mins)

The facilitator orients the participants **towards the selected use case** and the overarching project objectives. They list all **relevant project factors** such as: goals, stakeholders, budget. This initial phase ensures that the subsequent discussions remain grounded in a **clear and concrete context**. It also serves to **align all stakeholders** on the purpose, scope, and expected outcomes of the workshop, fostering a shared understanding before diving into deeper phases.

The facilitator also **organises an icebreaker** designed to foster mental and creative engagement by encouraging participants to adopt a playful, and open mindset. This initial interactive, game-like activity, stimulates imaginative thinking, reduces initial social tension, and prepares participants to engage fully in subsequent workshop phases.

Phase 1: Clearly defining the use cases purpose (recommended allocated time: 15 mins)

Following the framing, participants are **divided into the aforementioned sub-groups**. These groups are tasked with **clarifying the project's purpose**.

The **first task** for each sub-group is to **define the use case as precisely as possible**. The results of the *1.1 Mapping Your Use Case* workshop can be used. This definition will become increasingly precise over the course of the three successive workshops in the EXPLORE step. Participants are encouraged to reflect on the **local challenges** the project aims to

address, questioning how and whether the implementation of a LDT is the most appropriate or sole solution.

Phase 2: Identify the projects strategic benefits (recommended allocated time: 45 mins)

The **second task** is to identify the **potential benefits** of the project, requiring a **thorough examination of the purpose – the "why" – behind each benefit**: the beneficiary, the scope and themes of these benefits, and the underlying motivations for pursuing them.

To do so, the **5 Whys** tool is used. It is a simple root cause analysis technique used to identify the underlying cause of a problem. The approach consists of repeatedly asking "Why?" in response to each answer until the fundamental issue is identified. This method is particularly useful to help participants move beyond surface-level symptoms and identify structural or organisational issues that require long-term solutions.

Example : Benefit identified - Real-time monitoring of energy consumption.

- **Why is this beneficial?** → Because it allows faster detection of abnormal consumption patterns.
- **Why is faster detection important?** → Because it enables quicker corrective actions.
- **Why are quicker corrective actions beneficial?** → Because they reduce unnecessary energy consumption.
- **Why is reducing energy consumption important?** → Because it lowers operational costs and environmental impact.
- **Why is that valuable?** → Because it improves both the financial sustainability and environmental performance of the community.

In this example, the method helps move from a technical functionality to the broader strategic, economic, and environmental benefits associated with the project.

Together, the participants collaboratively complete a **Benefits Restitution table**, consolidating the insights and ensuring a shared understanding of the project's strategic and operational value.

It is also important to recognise that **a benefit may fall into multiple categories or involve several stakeholders**. In cases where **regulatory constraints** (such as risk prevention plans or environmental regulations) are imposed on the community, these should be noted as **contextual elements** rather than benefits.

<i>Profit perimeter</i>	<i>Category of benefits (example)</i>	<i>Description</i>
<i>For whom</i>	Benefits for the community	
	Benefits for community services	
	Benefits for residents	

	Benefits for businesses	
	Benefits for tourists	
	Benefits of General Interest	
Geographic scope	Benefits within reach of the chosen perimeter	
	Benefits within reach community	
	Benefits on a broader scale (to be defined)	
Theme of benefits	Economic • Damages avoided • Employment • Economic development • Attractiveness	
	Environmental • Pollution • CO₂ emissions • Air quality • Biodiversity • ...	
	Social • Equity • Vulnerable populations • All populations • ...	
	Societal/public • Quality of life • Urban planning	

Table 1. The Benefits Restitution Table

NB: For each iterative session, when relevant, participants should **review the table completed in the previous phase**, ensuring that the scope of impacts is not artificially limited. Benefits identified should be **directly recorded in the table**, with approximately ten printed copies available per table to facilitate documentation. **It is acceptable for the same indicator to apply to multiple benefits.**

Phase 3: Refine the benefits (recommended allocated time: 20 mins)

To deepen this analysis, the **third task** for participants is to **project themselves five years into the future**, envisioning the **ideal LDT and end-user journey** for the use cases under consideration, while also assessing the **strategic, political, or operational benefits** for the community, its services, and other stakeholders. This task can help complete the table.

Phase 4: Choosing indicators to measure the benefits (recommended allocated time: 20 mins)

The **fourth task** requires participants to **propose at least one relevant indicator for each benefit** to measure the identified impacts and/or benefits. These indicators can later serve as KPIs for the project.

Phase 5: Presenting and Consolidating (recommended allocated time: 30 mins)

Following the groups' work, the participants are then gathered back all together. **Each group presents its findings** to the others.

The benefits identified are then aligned with key **local policy priorities**, such as **environmental goals** (e.g., biodiversity, pollution reduction), social objectives (e.g., quality of life, inclusion, protection of vulnerable groups), **economic priorities** (e.g., attractiveness, employment, sectoral development), and **participatory dimensions** (e.g., balancing stakeholder interests with community goals).

Phase 6: Synthesising and Defining Next Phases (recommended allocated time: 15 mins)

The facilitator **synthesises the workshop's key findings**, addressing any outstanding questions from participants to ensure clarity and alignment on next phases / steps. Finally, the session concludes by **defining responsibilities, timelines, and follow-up actions**, ensuring accountability and momentum as the project progresses.

2.4. Recommendations for Workshop facilitation

To ensure the workshop's effectiveness, facilitators are advised to adopt the following approaches:

Facilitate the identification of strategic benefits

The facilitator can use the following questions and use the 5-Why tool to help participants identify benefits. This helps the process of **transitioning from operational to strategic benefits** that can be challenging. To ensure a thorough exploration of strategic objectives, facilitators should encourage participants to **repeatedly ask, "And why do you want to do that?" after each benefit** is identified.

Question to ask to identify potential benefits	
Local-issue questions	- What are the local issues you want to help solve? - Will the implementation of a LDT solve it? NB: Do not assume from the start that it is the right –or only– solution.
Ask "Why": List the potential	Who exactly benefits from this?

benefits of a solution	• What is the scope of this benefit? • What themes does this benefit relate to?
Ask “Why” again: Are you sure of these potential benefits? Is it what the local authority ultimately looks for?	• Projecting yourself five years into the future, what is the ideal user journey for the use case(s) you wish to address with the LDT platform? • What would be the strategic or political (or conversely) operational benefits for the community? Or the services? • What would be the benefits for other stakeholders?
Go deeper: Which strategic domain of the local policy does this objective refer to?	• Does it deal with the environment and/or climate change, i.e. biodiversity, pollution, reducing the impacts of human activity...? • Does it deal with social issues, i.e. the quality of life for one local authority’s residents (compared to the needs of tourists), inclusion, protection of the most vulnerable (foreigners who do not understand the language, children...), social equity...? • Does it deal with the economy of the local authority, i.e economic attractiveness, employment, development of new sectors...? • Does it deal with participatory-related questions and/or democracy, i.e. taking into account the objectives of different types of stakeholders in a balanced manner, those compatible with the interests of the community...?

Table 1. Questions to ask to identify the potential benefits.

Pre-Define local policy priorities for Focus

Before the workshop, **collaborate with external stakeholders** to **pre-identify the local policy priorities** that guide phase 2 of the workshop. This preparation ensures that the discussion remains **focused and aligned** with overarching goals, avoiding dispersion and maintaining momentum. By starting with a **clear set of priorities**, participants can concentrate on **refining and operationalising** these objectives, rather than debating their relevance.

Organise the participants in Sub Groups

Organise participants into **small tables of four to five people**, ensuring representation from **diverse departments** to foster cross-functional insights. Assign **one use case per table**, to maintain focus and depth in discussions. Each table should have a **dedicated facilitator** to

guide the process, and a **designated note-taker** to document insights alongside the visual outputs. Where possible, **record the session** to capture nuanced discussions and ensure nothing is overlooked, providing a valuable reference for future iterations.

Structure Benefits for Clarity and Depth

Ensure that **benefits are documented directly in the Benefits Restitution table**, providing **printed copies for each table** to streamline the process.

Embrace Redundancy for Comprehensive Analysis

Accept that **an objective may span multiple categories** or involve **several actors**. Recognise also that **the same indicator may apply to multiple benefits**, and embrace this overlap as a natural part of the analysis. When documenting, **avoid restricting the scope**—let the discussion flow organically to capture both **operational and strategic benefits**. Redundancies within the tables are not only acceptable but can also **highlight critical intersections** between objectives, actors, or impacts. This approach ensures that **no dimension is overlooked** and that the analysis remains **thorough and multidimensional**.

Distinguish Benefits from Regulatory Constraints

In projects where **regulatory constraints** (such as risk prevention plans or environmental regulations) are imposed on the local authority, clearly **separate these from benefits** in the analysis. **Document regulatory constraints as contextual elements rather than benefits**, ensuring that the focus remains on **value creation** and **strategic alignment** rather than compliance obligations. This distinction helps maintain clarity in prioritisation and decision-making.

Prioritise Benefits for Strategic Alignment

Recognise that the **benefits of a platform can be numerous and diverse**, making prioritisation essential. This process allows you to **select options based on their ability to meet the most critical objectives**, ensuring that resources and efforts are **aligned with strategic goals**. Since each community / local authority has its **unique strategy and priorities**, it is their responsibility to **rank objectives**—both their own and those of other stakeholders—through a **deliberative and iterative process**.

Leverage Stakeholder Iterations for Refinement

Understand that the **table will evolve** through ongoing **iterations with stakeholders**, including input from **other stakeholders**. This collaborative refinement ensures that the prioritisation remains **dynamic and responsive** to new insights, changing conditions, or emerging stakeholder needs. Embrace this evolution as a **strength**, allowing the project to adapt and improve continuously.

Use Visual Tools for Engaging Discussions

Enhance the discussion by **using stickers, colours, and visual markers** to highlight priorities, categorise ideas, and track progress. These tools make the process **more interactive and engaging**, helping participants to **quickly identify patterns, overlaps, and gaps** in the analysis. Visual aids also foster **creativity and collaboration**, making complex discussions more accessible and productive.

3. Next Steps

Once the use case is defined, it is time to explore it in greater depth. To achieve this, one may use workshops from this EXPLORE (ideation) step or move on to workshops from the next step.

The following workshop for the EXPLORE step is:

- *1.3 Implementing Sustainable Digital Design: Assessing and Integrating Social, Environmental, and Economic Impacts in Digital Projects*

Next Methodology steps:

- *Ongoing: Complete the EXPLORE workshops*
- Complete the VALIDATE workshops
- Complete the DEFINE workshops
- Complete the IMPLEMENT workshops

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