

# LDT4SSC Project Methodology

Step 1: EXPLORE (Ideation)

## Workshop: Mapping your Use Case: Visualising Processes, Pinpointing Challenges, and Co-Designing Data-Driven Solutions

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## Document History

| Date     | Version | Edited by                                 | Description                                        |
|----------|---------|-------------------------------------------|----------------------------------------------------|
| May 2026 | v1      | Marine Le Gall, Laura Riou, Sophie Houzet | First version adapted from the CAPACities program. |

## Workshop overview

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title                  | Mapping Your Use Case: Visualising Processes, Pinpointing Challenges, and Co-Designing Data-Driven Solutions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Methodological step    | Step 1: EXPLORE (Ideation)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Duration               | 3 hours                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Number of Facilitators | 1 for each group of 4 to 5 people                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Equipment Needed       | <ul style="list-style-type: none"> <li>One big sheet of paper (1m/2m) or a large (digital) whiteboard</li> <li>Pens and markers (black, blue, green, red).</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Expected Outputs       | <ul style="list-style-type: none"> <li><b>Photo/scan of the produced diagram</b> (raw output from the session).</li> <li>The <b>video recordings</b> of the summary presentations.</li> <li>A <b>summary report</b> including: <ul style="list-style-type: none"> <li>Description of the <b>current use case</b>.</li> <li>List of <b>identified challenges and gaps</b>.</li> <li>List of <b>proposed data-driven solutions</b>.</li> <li>Next phases.</li> </ul> </li> <li>A <b>clean, digital version of the use case diagram</b> (finalized by the facilitator post-workshop for clarity and sharing).</li> </ul> |

## Copyright Message

This document is intended for the LDT4SSC consortium, pilot teams and the public use, providing guidance to support the consistent implementation of LDT4SSC pilot activities.



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# 1. Context and objectives

The **Mapping Your Use Case** 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 Hub<sup>1</sup>.

The workshop is designed to achieve the following objectives:

- **Visualise the end-to-end process** of your specific use case.
- **Identify key challenges, bottlenecks, and opportunities** and address them for improvement.
- **Co-design data-driven solutions** that align with stakeholder needs and project goals.

## 2. Workshop

### 2.1. 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.           |
| 1 hour 30 mins | 1.1. Mapping the current Use Case                     | Participants map the current use case, using colour coding to show data and data flows.                   |
|                | 1.2. Identifying the challenges                       | Participants identify and highlight challenges in the existing use case.                                  |
| 1 hour         | 2. Identifying opportunities and developing solutions | Participants identify opportunities and propose improvements to the use case.                             |
| 15 mins        | 3. Summarising Group Insights                         | Each group presents the mapped use case, identified challenges and opportunities, and proposed solutions. |

### 2.2. 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.

<sup>1</sup> [https://knowledgehub.ldt4ssc.eu/resources\\_content/methodology/](https://knowledgehub.ldt4ssc.eu/resources_content/methodology/)

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: Mapping the current Use Case and Identifying the challenges (recommended allocated time: 1 hour 30 mins)

The exercise begins with a **visual mapping process (i.e., drawing)**, wherein participants use a structured colour-coding system to illustrate the current state of the use case. To do so, the facilitator can divide participants into **sub-groups** if there are too many people to work on one sheet of paper. If multiple use cases are under consideration in the LDT, each sub-group can be assigned a specific **use case**.

- **Colour 1** is employed to depict the **core elements of the use case**, including stakeholders (e.g., personnel, end-users), databases, and applications involved.
- **Colour 2** represents **data flows**, using dots or directional arrows to visualise how data is collected, processed, and shared across the system.

As they construct this visual representation, participants are encouraged to critically reflect on key questions:

- **What types of data** are being collected, and for what purpose?
- **How is this data utilised and shared** (technically, organisationally and/or legally) among stakeholders?
- **Who are the key stakeholders** involved, and what roles do they fulfil within the use case?

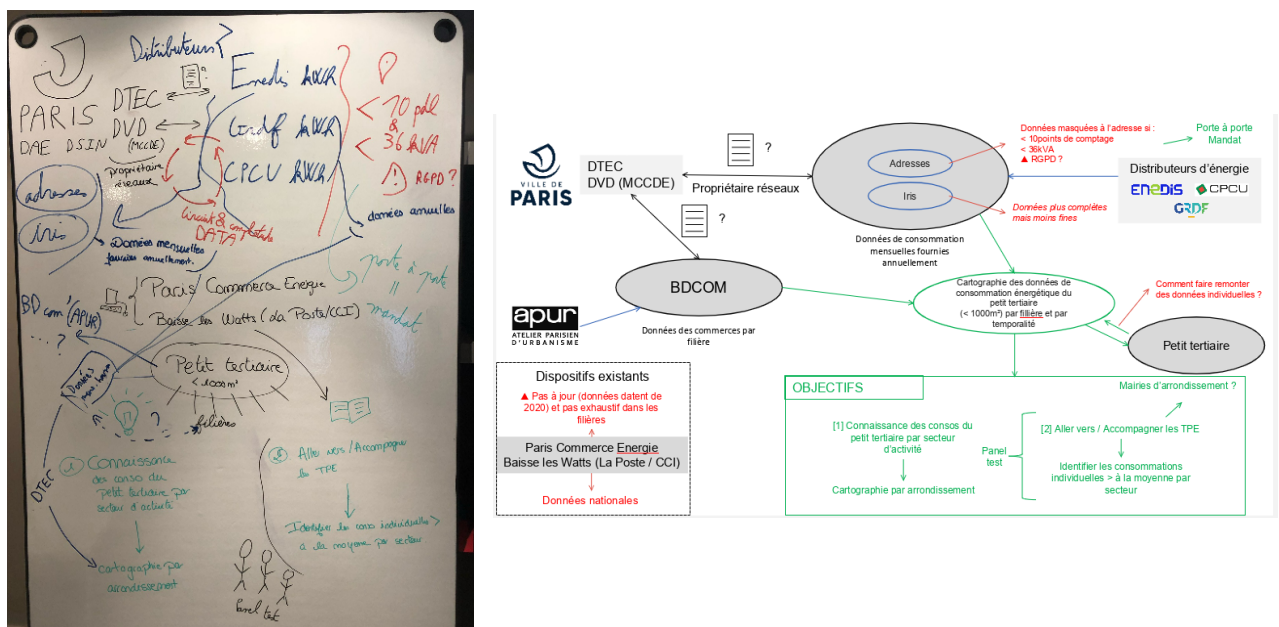


Figure 1: An example of the result of a use case visual mapping exercise. The initial drawing during the workshop is displayed on the left and the clean digital version of it made afterward is on the right.

To identify challenges and opportunities, participants use:

- **Colour 3**, marked with triangles, to **highlight issues, challenges or bottlenecks** within the use case. This includes examining:
  - **Communication or response time delays** that hinder efficiency;
  - **Difficulties in data collection and sharing**, such as inconsistencies or gaps in data availability;
  - **Regulatory or technical barriers** that may impede progress, such as compliance issues or interoperability constraints.

Given that participants may vary in their familiarity with the use case, the workshop supports **collaborative inquiry and knowledge-sharing**, ensuring that all members develop a **shared understanding** of the challenges and dynamics at play. The facilitator plays a crucial role in guiding the **Project Team** through this mapping exercise, with particular attention to **access rights, data collection practices, data-sharing mechanisms, and contractual considerations**, thereby ensuring a comprehensive and actionable analysis.

### *Phase 2: Identifying opportunities and developing Solutions (recommended allocated time: 1 hour)*

In this phase, participants **collaboratively propose and visualise ideal solutions** to address the challenges identified in the use case. Using **Colour 4**, they highlight **potential improvements and opportunities**, including:

- **New data requirements** that could enhance decision-making or operational efficiency;
- **Strategic partnerships or tools** that might streamline processes, improve interoperability, or foster innovation;
- **Regulatory or technical adjustments** that would remove existing barriers or optimise data governance.

This exercise encourages participants to **think creatively and pragmatically**, ensuring that proposed solutions are both **feasible and aligned with the project's strategic objectives**. The visual representation serves as a **shared reference** for prioritising actions and guiding subsequent implementation efforts.

### *Phase 3: Summarising Group Insights (recommended allocated time: 15 mins)*

Each group presents its use case, the challenges identified, and the proposed solutions. Presentations are video-**recorded** to keep a record to refer back to when needed during the project implementation. Key points are summarised, ideally in a common area such as a whiteboard or a large sheet of paper for a final collective overview.

## 2.3. Recommendations for Workshop facilitation

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

### *Apply the 5W-2H Framework*

Guide participants through a structured exploration using the **5W-2H framework: What, Who, Where, When, Why, How, How much**. This framework encourages thorough consideration of all relevant dimensions.



Figure 2: The 5W-2H Framework,  
from <https://www.msicertified.com/blog/5w2h-training/>

### *Post Instructions Visibly*

Display the **colour codes** and **key questions** prominently on the wall or a shared screen to serve as a constant reference for participants throughout the session. This visual aid helps maintain focus and clarity.

### *Promote Visual Clarity*

Use **colour-coding and visual aids** (e.g., arrows, dotted lines, symbols) to clearly represent **data flows, challenges, and proposed solutions**. Visual tools enhance comprehension and enable participants to quickly grasp complex relationships within the use case.

### *Ground Discussions in Concrete Examples*

Present the **chosen use case** with **real-world examples** to help participants **visualise the scenario** and engage more effectively. Concrete illustrations make abstract concepts tangible and facilitate more meaningful contributions.

### *Encourage Empathy and User-Centric Thinking*

Remind participants to **adopt the perspective of end-users**, who may include **multiple personas** with varying needs and expectations. This approach ensures that solutions are **user-focused** and address real-world pain points.

### *Leverage Collective Knowledge*

Invite participants to **share their experiences, insights, and best practices**, fostering a collaborative environment where diverse expertise enriches the discussion and leads to more robust outcomes.

### *Stimulate discussion*

The following questions are designed to **stimulate discussion** and can be adapted to the specific context of the workshop. There is no fixed order —facilitators should **tailor them to the needs of the group**.

| <i>Colour 2: Data Management</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <i>Colour 3: Problem Identification</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <i>Colour 4: Future Improvements</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• What <b>types of data</b> are required to manage this use case? (e.g., sensor data, software outputs, text alerts)</li> <li>• Who <b>produces this data</b>, and from where does it originate?</li> <li>• How does the data <b>circulate</b>? With whom is it shared, and in what format?</li> <li>• Is the data <b>aggregated</b>? If so, at what stage and by whom?</li> <li>• <b>Map the data flows</b> using visual aids (e.g., dotted lines with arrows) to illustrate directionality and the systems or partners involved in the process.</li> </ul> | <ul style="list-style-type: none"> <li>• What <b>challenges</b> currently exist in managing this use case? <ul style="list-style-type: none"> <li>◦ Are there issues with <b>communication or response times</b>?</li> <li>◦ Who is responsible for <b>data collection</b>, and are there gaps or inefficiencies in this process?</li> <li>◦ How are <b>communication tools linked</b> across different data sources? Are there breakdowns in this chain?</li> </ul> </li> <li>• Do you have <b>formal agreements</b> in place for data sharing? If not, what barriers exist?</li> <li>• Are there <b>regulatory constraints</b> that create unresolved issues?</li> <li>• How does your <b>IT department</b> support or hinder problem-solving?</li> <li>• Are there <b>interoperability issues</b> with software providers or other technical partners?</li> <li>• What <b>feedback or complaints</b> have been received from residents or end-users?</li> </ul> | <ul style="list-style-type: none"> <li>• In an <b>ideal scenario</b>, how could the current system be improved? <ul style="list-style-type: none"> <li>◦ What would <b>best satisfy citizens or end-users</b>? Are there specific features or functionalities they have requested?</li> <li>◦ Which <b>partners</b> should be involved to enhance the process?</li> <li>◦ What <b>additional data</b> would be most valuable? How could it be integrated?</li> <li>◦ What <b>data linkages</b> would enable smoother operations?</li> </ul> </li> <li>• What <b>new information or dashboards</b> would support decision-making, particularly for elected representatives or managers?</li> <li>• What <b>regulatory changes, political support, or dedicated resources</b> (e.g., a demonstrator project, a specialised team) would facilitate progress?</li> <li>• Is there a need for <b>feedback or expertise</b> from other sectors or subject-matter specialists? If so, which areas would be most beneficial?</li> </ul> |

### 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 workshops for the EXPLORE step are:

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