Urban Experiment





Learning Tool









The tool was developed by the EmbedterLabs team. The Urban Experiment Learning Tool ©2025 by EmbedterLabs is licensed under CC BY-NC-SA 4.0. It has been made available for public use as long as the creators are credited (through citation), it is used for non-commercial purposes only, and modified material is licensed under identical terms. To view a copy of this license, visit https://creativecommons.org/licenses/by-nc-sa/4.0/.

Please cite as: Dijk, M., Emanuel, M., Nixon, D., Hommels, A., Karvonen, A., Bach Glowinska, J., Normark, D. (2025). The Urban Experiment Learning Tool, EmbedterLabs, JPI Urban Europe









Authors:

Marc Dijk,
Martin Emanuel,
Denver Nixon,
Anique Hommels,
Andrew Karvonen,
Joanna Bach Glowinska

Graphic Design: **Joanna Bach Glowinska**Based on film character by Łukasz Góras

Better Embedded Labs for More Synergistic, Sustainable Urban Transformation Project Planning http://www.embedterlabs.com.pl



Embedded processes: Experimenting and learning

This tool presents seven steps to make the learning process around an urban experiment explicit. While experimentation and learning are embedded, the tool focuses on learning







Why?

Urban experiments are popular, yet creating a transformative impact beyond the experiment is challenging. In many cases, the learning process is neglected at the expense of "getting the project done". This tool helps to feed experimental lessons into policy development for urban transformation.

Who?

The facilitators of an urban experiment employ the tool. These engage all relevant stakeholders around the experiment in a learning community to jointly formulate questions and answers about a policy challenge. The active engagement of stakeholders, with their diverse perspectives, knowledge, and skills, implies learning from and with others, a form of social learning.

How?

The Learning Tool is applied with relevant stakeholders in (at least) two reflection sessions:

Pre-experiment Reflection Session:

Before the experiment
Jointly formulating key learning questions

Post-experiment Reflection Session

After the experiment
Jointly agreeing answers to the learning
questions + explore policy implications
and other impacts
Optional: half-way monitoring session



Step 1. Frame the challenge

This step is taken by the facilitators to frame the policy challenge and agree on a preliminary experimental design that can address the challenge. Deliberately framing the policy challenge and experimental design is important for recruiting participants and to identify the specific actions needed also to raise the interest of less intrinsically motivated target groups.

Framing the challenge is done in a two-step process, where:

(One) The facilitators identify a preliminary challenge or problem based on their experience and pre-understandings; and then

(Two) Confirm or adapt it based on informal discussions with relevant stakeholders. This serves to raise motivation and build mutual understandings in advance of the more formal learning process.



Step 2. Define Learning Community

In step 2 the facilitators defines and establishes the learning community. It is an important part of the process as it will influence what learning questions are raised and the dynamics of the learning process.

When defining the learning community, bear in mind: Who needs to learn? Who is affected (potential winners/losers)?

More to think about:

Urban experiments entail multi-stakeholder involvement and learning. The learning community ideally includes stakeholder participants and potentially affected stakeholders or users, as well as other policymakers who are not directly involved in the experiment, to facilitate the uptake of lessons learned and situate the learning into a broader policy landscape. However, the learning community may vary depending on the focus of learning.



Who to include in a learning community?

Who should be included in the learning community may vary depending on the need for learning, e.g. focus on internal municipal processes or relationships with external stakeholders and users.

Example: Learning from street experiments

If learning is geared towards community-building, better alignment with user needs (e.g. pedestrians), or roles and dynamics between the municipality and other stakeholders (e.g. cafés, property owners, schools), then affected stakeholders or users are better to be involved.

If learning is geared towards how the municipality can work more effectively with a policy measure (incl. how it "sits" in the wider policy landscape), then it might be more useful to have civil servants in different roles (e.g. operational/strategic, mobility/public space) and from different departments as well as collaborating partners who take part in implementing (yet are not "affected" by) the policy measure (e.g. consultants) involved in the learning community.



Step 3. Formulate learning Q

This step is part of the pre-experiment reflection session.

It seeks to formulate joint learning questions about the innovation under experiment with input from the learning community. Based on discussions, complete Column 1 ("Learning Question") in Learning Sheet #1

In the session participants will reactivate and express what they already know and formulate what they would like to know. Formulating learning questions is facilitated by having participants, in a workshop, reflect on the following:

What policy ambitions can be seen in the experiment?

What is at stake?

(Ensures learning questions are geared towards policy challenge)

What would you like to learn from the experiment?

Why is this knowledge needed and essential?

(Helps articulate rationales behind questions put forward)

More to think about:

Learning questions should be collaboratively developed and agreed upon to ensure participant commitment. If disagreements arise, each participant should have at least one personally relevant question.

These questions can vary in inquiry levels; they may be specific and operational or open-ended and reflective, with different levels complementing each other.

Facilitators should assess the need to adjust the experimental design in response to these questions. Be open to reformulating learning questions if they become difficult to address due to changes in design or available resources, whether during the experiment or in a later iteration.



Operational and Strategic learning questions

One way to distinguish between learning questions is whether they are operational or strategic

Operational learning questions:

Specific, concrete, immediate, well-bounded questions; "How can we decrease the clutter of shared bicycles in public spaces?"

Strategic learning questions:

Open, reflective questions, e.g. about wider, longerterm implications; "How can we scale up bike sharing initiatives across other neighbourhoods?"

Example of questions from an urban experiment on car commuting, from operational to strategic:

- "How can the employer decrease complaints about its reimbursement policy?"
- "How can the employer revise its reimbursement policy to encourage more sustainable commuting among its staff?"
- 3. "How can other employers in the city benefit from the experimenting employer's lessons on encouraging more sustainable commuting through adapted reimbursement policy?"
- 4. "How can the employer do more experiments in the future for organizational learning towards sustainability?"
- 5. "How can other employers in the city be encouraged to experiment for organizational learning towards sustainability?"



Step 4. Plan data collection

This step as well is part of the pre-experiment reflection session. Here, the learning community agrees on a plan for data collection that will help evaluate the experiment and reflect on lessons learned. Based on discussions, complete Column 2 in Learning Canvas #1.

For each learning question, the learning community reflects on the following aspects:

How can we answer this question from the experiment?

Does the experiment need to be adjusted to facilitate learning?

What "data" is required?

How is it collected/generated, and by whom?

More to think about:

Does the learning question require quantitative data or qualitative understanding, or both (mixed methods)? Specific questions might rely on continuous reflection and qualitative discussion rather than the collection of data and formal evaluation. Process learning can be facilitated by keeping a learning log.

Consider the timing of relevant evaluations or studies to address the learning question. Does it, for example, require the collection of before-and-after data?

Consider the possibility of making data collection a shared responsibility among the learning community, while respecting variations in stakeholders' capacity to participate.

Step 5. EXPERIMENT

and collect DATA





Step 6. Identify lessons learned

This step is part of the post-experiment reflection session. Based on the collected data, the facilitators draft preliminary answers to questions for circulation in the learning community before the session. Based on the discussions, please complete/revise the answers to the learning questions (Column 3 in Learning Canvas #1). This helps to document lessons explicitly

Note: this procedure might also be done half-way through the experiment to produce preliminary lessons learned.

After answering the learning questions, the learning community reflects on the whole set

What have we learned? How did we learn it? What do we still not know? How could we learn it? (This will be useful in the event of a second iteration of the experiment.)

Who should know this? (This helps in Step 7.)

More to think about:

Like questions, answers can both be qualitative (i.e. in narrative form) or quantitative.

The ambition is that the learning community jointly agrees on answers to the learning questions. In cases of disagreement among actors about answers or whether a question has been answered, document these. Such disagreements are essential for a fuller view and can lead to more targeted learning questions.







Step 7. Reflect on implications & share

Step 7 is also carried out as part of the post-experiment session. It seeks to reflect on policy (and other) implications of the lessons learned—and how to transfer lessons and implication beyond the learning community for greater impact. Based on discussions, complete Learning Canvas #2

Sharing of lessons learned is key. Involving Senior policymakers beyond the facilitators in the learning community (see Step 2) already helps to spread lessons quicker and increase the potential for policy innovation.

To further help spreading lessons learned, make the Learning Canvas easily accessible to all participants' organizations after the experiment.

Other ideas for transfer of lessons:

Pro-active sharing of lessons to non-involved Senior policymakers by experiment ambassadors

Stakeholders can organize seminars to share insights and lessons within their organizations; experiment managers may introduce knowledge transfer seminars in their organization's yearly cycle.

Some lessons may "transpire" into standard work practices by being incorporated into standard tools, instructions, and handbooks.



Learning Canvas #1 Question	How is 'data' gathered to answer it (and by whom)?	Answer / Lesson Learned







Now what?

One embedded experiment and learning process is completed. Do you know everything you need to know? Great! Make sure the lessons learned are shared beyond the learning community (Step 7).

If not, you are now in a good position to refine your learning questions and experiment design for a second iteration.



Learning Canvas #2 Reflection Questions	Answers	Who should know this?
How do the lessons learned help refining current policies?		
How do the lessons learned help/fit into longer-term policy plans/aims?		
Which structures of the present hinder the successful learning of		
this project/experiment?		
How can lessons learned inform new experiments, permanent interventions, work practices, institutional or Organizational change, etc.?		







Learning Questions to be formulated before the experiment with input from participants and potential affected stakeholders or users (incl. other Senior policymakers than those involved in the experiment). Check list for questions: can you group in categories? E.g. quality of public space, social inclusiveness, business models, policy.

The way and by whom data is gathered, helps to check whether the learning question can indeed be answered through the experiment.

Also to be sure that the required data is being collected. This may be qualitative (e.g. collected through interviews) or quantitative.

Answer/
lesson learned helps
to document lessons explicitly. To
be formulated after the
experiment, possibly also drafts
halfway. Jointly agreed by
participants and potential
affected stakeholders or users
(incl. other Senior policymakers
than those involved).
Lessons can be presented in both
qualitative (i.e., essay form) and
quantitative formats.



Support for lessons learned

Answers: This helps to document lessons explicitly.

Who should know that?:

This helps to transfer the lessons
to the relevant people.















