

INCLUSION TOOLKIT

*Designing a user-centred living lab
from the ground up*

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This toolkit is aimed at street lab or living lab organizers in general (in particular, of course, the organizers of Copenhagen Street Lab), and aims to walk users a few steps down the path to becoming more user-centred and inclusive.

It is not a complete solution – more steps are required for a lab to become fully inclusive – but it is designed to be a practical and attainable start.

The toolkit begins by guiding users through basic user observation, identification, and categorization processes (observation, interviews, and personas). It then moves into problem definition and stakeholder prioritization, and finally defines a concrete suggestion for increased diverse stakeholder governance.

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Structure

This toolkit contains five areas of recommendation, designed to act as a guide through five steps towards a more user-centred, inclusive approach toward developing a living lab. Each tool contains a description of its intended purpose, a guide for usage, and the resources necessary to independently use it. Tools are named according to their function (Figure 5).

It's important to note that the tools presented here are by no means 'finished' – as they are put into use they should be developed, improved, and adjusted to better fit certain tasks. This process will hopefully occur in the real world, as they are shared, adapted, and applied to various projects.

FIGURE 1
The tools contained within this toolkit



1. GETTING TO KNOW THE USERS

In order to better choose projects, and develop a targeted inclusion strategy, we need to get to know the potential users within a local urban space. This includes identifying their needs, wants, habits and motivations, as well as their various demographics.

RECOMMENDATIONS

The best way to do this is to go out and talk to the people. Ideally, an individual could be assigned to this task over a period of several months, building a detailed body of knowledge about a broad range of users. One way to accomplish this could be to assign the task to a student worker or design research intern.

RESOURCES

Two resources have been developed: a brief citizen survey guide (R1), and a safari guide (R2).



RESOURCE 1

CITIZEN SURVEY

This survey is a first step in getting to know the users of an urban area. The aim of the survey is to gather a broad overview over who is using the space, and for what reasons.

TO USE: *this guide should be used to structure brief, casual, spontaneous interviews. To use, walk through an urban area and approach as many people as possible, filling in copies of the guide.*

Citizen details

AGE:

OCCUPATION:

INTERVIEWER:

DATE:

Questions

WHY ARE YOU IN THIS AREA TODAY?



COMMUTER



TOURIST



RESIDENT



WORK HERE



OTHER

HOW OFTEN ARE YOU HERE?

HOW COULD THIS PART OF THE CITY BE IMPROVED?

WHAT DO YOU LIKE ABOUT THIS PART OF THE CITY?

SAFARI GUIDE

Safaris (observational walk-throughs) in the urban area will also help to develop a clearer picture of user habits. This guide provides an overview of key things to look out for while observing in the area.

TO USE: *Simply walk around a specified area, moving through this guide and noting the answers to questions. This exercise can be completed very quickly, or extended for more detailed observation.*

Safari details

TIME OF DAY:

LENGTH OF SAFARI:

PARTICIPANT:

DATE:

Observation guide

WHAT KINDS OF PEOPLE ARE HERE TODAY?

WHAT ARE THEY DOING?

WHAT IS THE PHYSICAL CONDITION OF THE AREA?

OTHER NOTEWORTHY OBSERVATIONS

2. KEEPING USERS IN MIND

It's not enough just to know an urban area's users: we also need to continuously keep their interests in mind. This means defining user motivations as clearly as possible, as well as providing physical reminders within workspaces.

RECOMMENDATIONS

Personas are a perfect tool to fill this role. Putting a face on a collection of research dramatically improves ease of use, allowing the research to more easily enter casual conversation. Printing the personas and putting them up around the office space could help to provide a physical reminder to bear in mind user interests.

RESOURCES

Four example personas are included here, based on my research in Copenhagen Street Lab (R3.1, R3.2, R3.3, R3.4). A template is also included for creating more personas (R4).



RESOURCE 3.1 – PERSONA

ANNA, 24

BIO

Anna is a student, who works three days a week at a design agency in the city centre. On her way to work, Anna bikes through Rådhusplads twice a day – in the morning and in the evening.



INTERESTS

- **Healthy living.** Anna cares about eating well and tries to exercise several times a week.
- **Social connection.** Anna has a strong group of friends and enjoys going out with them on weekends.
- **Professional development.** Anna is focussed on developing her career as she studies.

Interest in Copenhagen’s development

FRUSTRATIONS

- Construction in bike lanes
- Bad weather during her commute
- Crowds and tourists blocking the bike lanes

Knowledge about smart cities & open data

RESOURCE 3.2 – PERSONA

DORTE, 72

BIO

Dorte has lived on Vester Voldgade for the past 30 years. She is retired, and lives alone with her small dog.



INTERESTS

- **Volunteering & community.** Dorte belongs to a women’s group and spends several hours a week volunteering at various charity events
- **Her dog.** Dorte feels a deep connection with her pet, and spends much of her day walking it through the neighborhood
- **Activism.** Dorte is interested in current affairs, and participates in town hall meetings for various projects and proposals

Interest in Copenhagen’s development

FRUSTRATIONS

- Speeding cyclists
- Not being able to voice her opinion
- Isn’t comfortable with technology

Knowledge about smart cities & open data

RESOURCE 3.3 – PERSONA

JOHAN, 30

BIO

Johan is from Germany, visiting Copenhagen for the first time with his wife and two young daughters. They’re staying for a week, and their hotel is in the city centre.



INTERESTS

- **History.** Johan loves learning about the past, and as such makes an effort to visit historical sites and museums
- **Family life.** Johan prioritizes his family over all else
- **Healthy living.** Johan cares about eating well and jogs weekly

Interest in Copenhagen’s development

FRUSTRATIONS

- Lack of 3G while travelling
- Inability to find good restaurants while abroad
- Crowds of other tourists at major sites
- Difficulty finding child-friendly attractions

Knowledge about smart cities & open data

RESOURCE 3.4 – PERSONA

MATHIAS, 45

BIO

Mattias owns a hot dog wagon which he parks daily on Rådhusplads. He works there from 7-3 daily during the week, and employs a student worker for the afternoon and weekend shifts.



INTERESTS

- **Social connection.** Mattias has a strong group of friends, who he sees weekly for card game evenings
- **Current events.** Mattias enjoys keeping up-to-date with both global and local news stories, and spends much time reading news websites
- **Family life.** Mattias has a girlfriend, and his parents, siblings, nieces and nephews play a large role in his life

Interest in Copenhagen’s development

FRUSTRATIONS

- Overly enthusiastic protesters
- Cyclists who ride through Rådhusplads
- Boredom on slow days

Knowledge about smart cities & open data

PERSONA TEMPLATE

This template should be used to create personas – imaginary people who exemplify a collection of researched traits.

TO USE: Fill in the blanks with information collected during observations, interviews, or other research techniques.

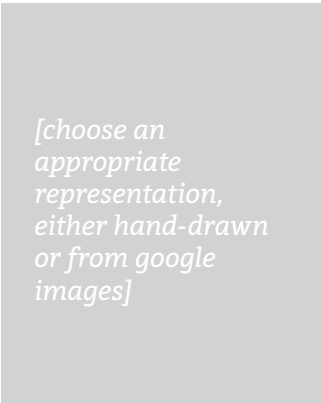
NAME AGE

[make these up, appropriate to the persona]

BIO

[Write a small sentence about this person's overall occupation, and why they interact with the urban area]

[choose an appropriate representation, either hand-drawn or from google images]



INTERESTS

[Choose four or five interests to highlight, which can be used to determine motivations and approximate choices]

-
-
-
-
-

FRUSTRATIONS

[Choose 3-5 things that frustrate this persona, which can be used to identify problem areas]

-
-
-
-
-

[key differentiating trait]

[key differentiating trait]

[Choose two key traits to help differentiate personas. Estimate the level for the two bar graphs based on research and mark bar]

3. DEFINING REAL-WORLD PROBLEMS

Clearly defining user issues is an extremely important step in ensuring that solutions developed and tested in a living lab are relevant and useful.

RECOMMENDATIONS

An ‘opportunity bank’ could be built up by consistently assessing user research for potential problems, defining them, and rephrasing them as design challenges. These opportunities could be useful in advising tech companies, setting living lab goals, and devising inclusion tactics.

Within design, problem statements can be built up using various frameworks. The ‘problem statement builder’ included here is based on IDEO’s ‘how might we’ method.

RESOURCES

A problem statement builder that phrases identified problems as ‘how might we’ questions is included here (R5).



RESOURCE 5

PROBLEM STATEMENT BUILDER

This guide bridges the gap between observed issues and user insights, and actionable problem statements.

TO USE: Follow the instructions described at each step.

STEP 1.

CHOOSE A PREVIOUSLY OBSERVED AND IDENTIFIED PROBLEM.

ex. Bike lanes can become congested during peak commuter hours

STEP 2.

BY ADDING THE PHRASE 'HOW MIGHT WE' AND UNPACKING THE PROBLEM CONTENTS, CREATE THREE DIFFERENT STATEMENTS

ex.

- 1. How might we reduce the number of cyclists during peak commuter hours?*
- 2. How might we increase the capacity of bike lanes so they can handle more traffic?*
- 3. How might we more evenly distribute bikers around the city during peak hours?*

STEP 3.

ASSESS EACH STATEMENT. CAN YOU QUICKLY THINK OF ANY SOLUTIONS? IF NOT, THE STATEMENT MAY BE TOO NARROW. IF YOU CAN THINK OF A HUGE RANGE OF SOLUTIONS, THE STATEMENT MAY BE TOO BROAD. ASSESS ALSO FOR STRATEGIC IMPACT.

ex. Using the previous three statements:

- 1. Not strategically ideal as it goes against Copenhagen's goals of a bike-friendly, green city.*
- 2. Probably too narrow a statement.*
- 3. Could result in some interesting solutions - perfect!*

STEP 4.

FINALISE PROBLEM STATEMENT. ENSURE THAT IT IS CLEAR AND CONTAINS ALL NECESSARY INFORMATION.

ex. How might we more evenly distribute bikers around the city during peak hours, to reduce bike lane congestion?

STEP 5.

SPREAD PROBLEM STATEMENT! PASS THE DESIGN CHALLENGE ON TO STUDENTS, STARTUPS, AND INDUSTRY.

4. ASSESSING STAKEHOLDER VALUE

Not every stakeholder can and should be included in a living lab. As resources are always limited, conscious decisions should be made with regard to which users are prioritized. In order to do this, the value that specific user groups bring to the solution development process must be defined.

RECOMMENDATIONS

In order to ensure that those who are involved in a living lab provide benefit to the project, value assessments and a stakeholder prioritization matrix should be completed for each new initiative. By clearly defining these areas, we ensure that the relevant stakeholders are involved, and we maximize the value these stakeholders can provide. These tools can also help communicate between governance partners with regard to the benefits to user inclusion.

RESOURCES

Two resources are included in this section, a value definition tool (R6), to assist in identifying specific stakeholder value, and a stakeholder prioritization matrix (R7).



RESOURCE 6

VALUE DEFINITION

This tool can be used to identify the specific value that stakeholders can provide to living lab projects, as well as providing advice on whether or not it is worth including them.

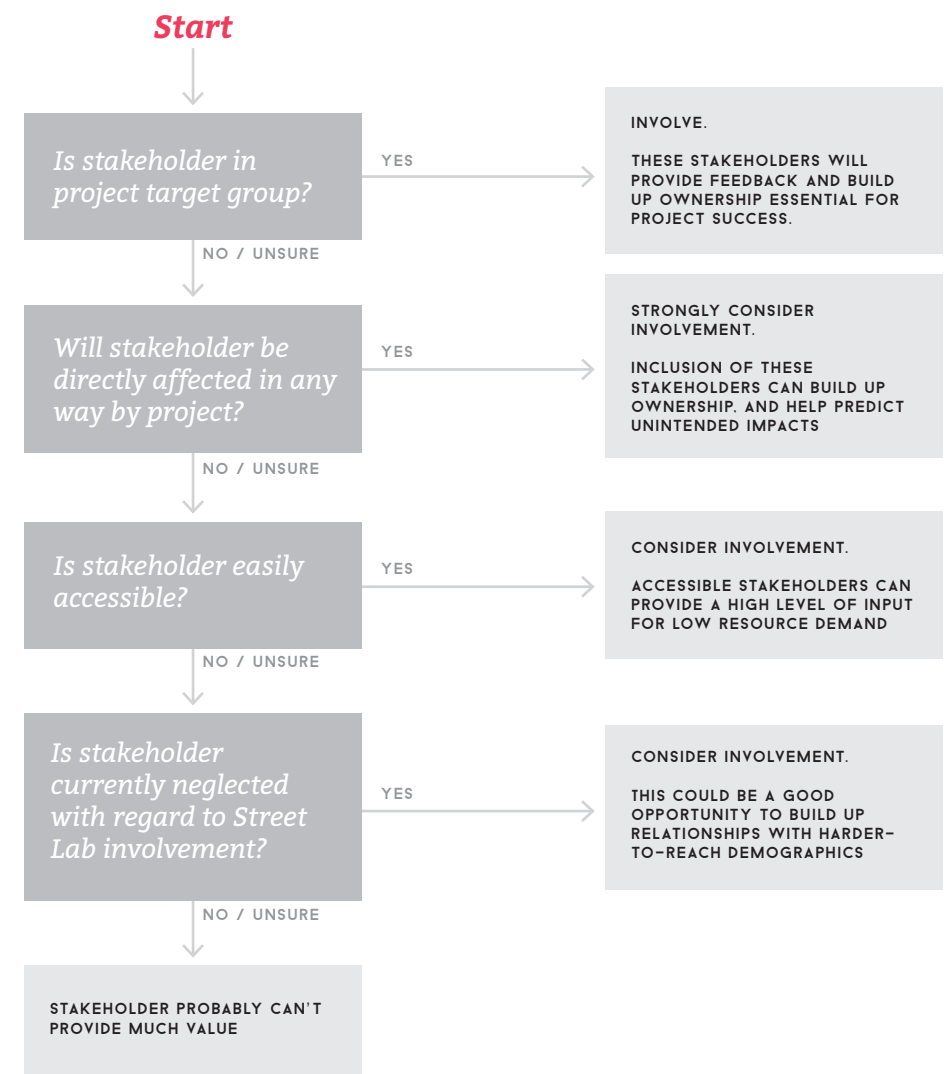
TO USE: *Should be completed at the during the planning stage of every new product/ service implemented in a living lab. Follow the two-step process described below.*

STEP 1.

IDENTIFY AND LIST ALL POTENTIAL STAKEHOLDERS – PEOPLE WHO INTERACT WITH THE LIVING LAB. OR WITH THE POTENTIAL TO IMPACT. OR BE IMPACTED BY. THE SPECIFIC INITIATIVE.

STEP 2.

TAKE EACH STAKEHOLDER THROUGH THE SIMPLE FLOW CHART BELOW TO DETERMINE A ROUGH OVERVIEW OF VALUE POTENTIAL.

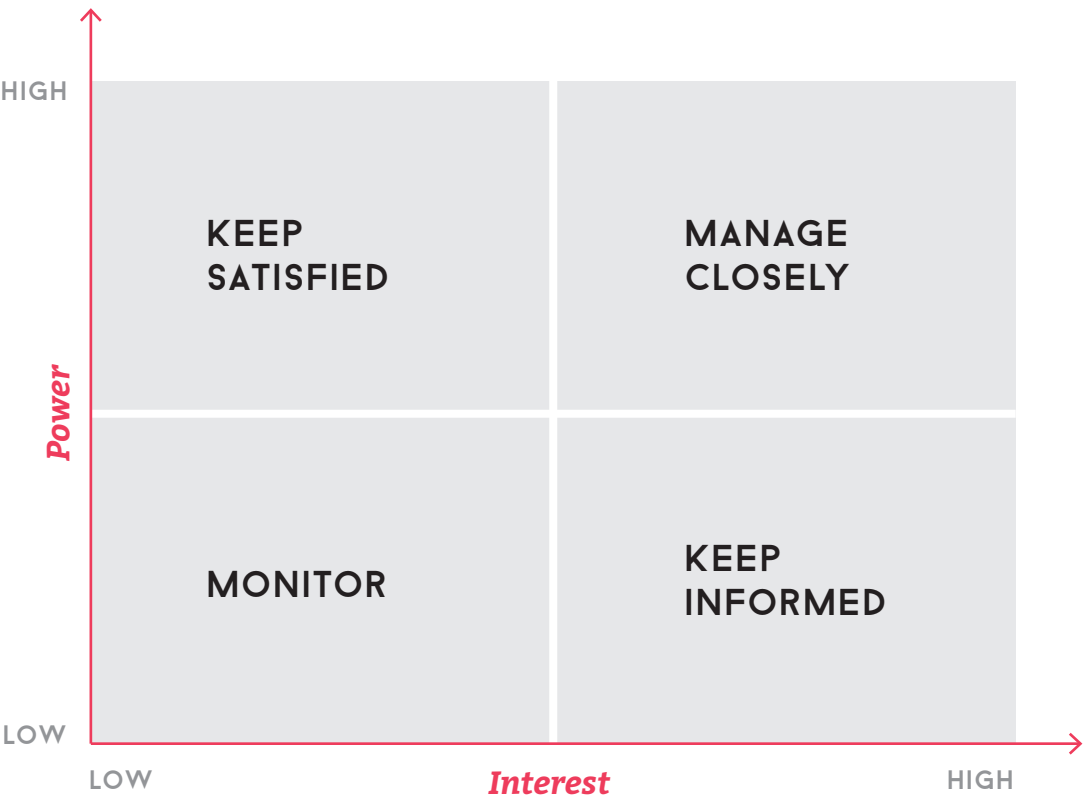


RESOURCE 7

STAKEHOLDER PRIORITIZATION MATRIX

This matrix should be used as a second step, after the value definition tool, to further define an involvement strategy for stakeholders deemed relevant.

TO USE: *Place the relevant stakeholders in the matrix, organized according to the amount of power they have over the project, and the amount of interest they have in the project. The statement in each quadrant then describes the overall involvement strategy required for the stakeholders placed these areas (based on Thompson, 2002).*



5. SHARING RESPONSIBILITY

Sharing the responsibility for diverse stakeholder inclusion will both help to alleviate some of the pressure on living lab organisers, and safeguard a place for diverse stakeholders in living lab governance.

RECOMMENDATIONS

One way to add polyphony to a living lab’s governance is to create a panel. This panel could help to guide the project, ensuring that the solutions developed genuinely do improve urban life for the variety of people who live and work there. Note that although the panel is referred to ‘citizen panel’, stakeholders with various divergent viewpoints should be involved – including those from the private sector (for example, small business owners).

RESOURCES

The first steps in drafting the structure and function of this citizen panel have been taken here, and presented in the form of blueprints (R8). Though the blueprints specify Copenhagen Street Lab as their particular focus, the contents can be extrapolated to other living labs around the world.



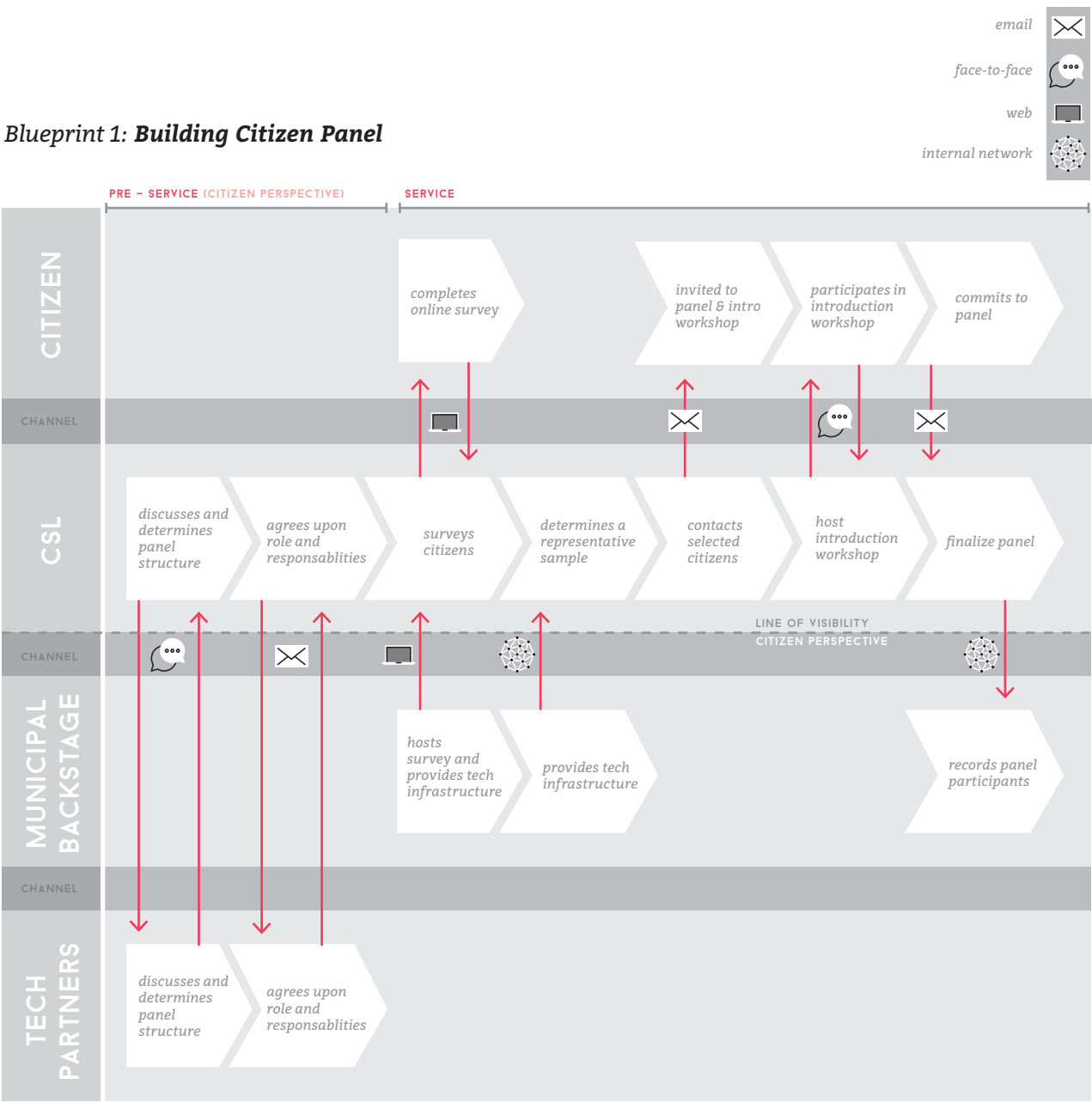
RESOURCE 8

CITIZEN PANEL BLUEPRINT

These two blueprints describe the recruitment and function of a Street Lab citizen’s panel. The first blueprint (this page) details the process of determining a representative group of citizens, briefing them, and confirming the panel. The second blueprint (over) details one iteration of how the panel might function.

TO USE: Read the blueprint from left to right. Each row describes the user journey for a particular stakeholder group, and the arrows detail interactions. The ‘channel’ rows indicate the type of interaction occurring. The ‘line of visibility’ denotes the boundary after which certain stakeholder groups are unaware of each other.

Blueprint 1: Building Citizen Panel



This blueprint shows the potential functionality of the Street Lab citizen panel. In the scenario detailed here, a new wave of smart city technologies is being selected and developed for implementation and testing in the lab.

Note that the stakeholders (listed on the left of the diagram) shown here are different from in the previous blueprint.

Note also that in this scenario, a positive outcome is assumed in all cases. For example, it is assumed that the project proposal is found to be good strategic fit, and it is assumed that the citizen panel also has a positive reaction to the proposal. Obviously, a project which is deemed incongruent with Street Lab's strategy, or unfeasible in some way, would not progress to citizen panel consultation.

Blueprint 2: Citizen Panel Operation

