



D2.1 – Guidelines for living labs

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1. Executive summary

This document introduces a framework to create, establish, and maintain living labs in general. It shows how to plan a living lab, and how to implement it by referring to its organization, activity/event management, public relations, dissemination, and projects. Furthermore, the deliverable explains how to manage and evaluate the living lab simultaneously by using balanced scorecards. In the Annex, the StreetForum Living Labs are described without applying the presented framework and designing the balanced scorecards individually. The application is a longer process which will be placed in Tasks 2.2 through 2.5 in the course of the StreetForum project.

Implementing a balanced scorecard in living labs marks a strategic approach toward improving overall performance and enhancing stakeholder value. As an all-encompassing management tool that includes all relevant aspects of a living lab and its approaches and methodologies applied (for that, each living lab needs to define its goals carefully when determining the balanced scorecard), the balanced scorecard aligns strategic objectives with operational actions across the financial, stakeholder, internal process, and learning and growth perspectives. The specificity of indicators associated with each goal provides a clear roadmap for progress and facilitates evaluation. Furthermore, this multi-perspective approach ensures that the living lab's efforts are not solely focused on financial outcomes but also encompass stakeholder satisfaction, operational efficiency, and organizational learning, which are integral to a living lab's success. Living labs are innovation ecosystems characterized by participatory development including the researcher's work and ethical aspects. Adopting a balanced scorecard allows these entities to encapsulate their complex nature into a simplified but comprehensive framework. By integrating stakeholder perspectives, such as community members, research partners, and policymakers in the 'stakeholder' category, living labs can measure and enhance their impact on society. Meanwhile, focusing on the 'internal process' perspective ensures streamlined operations, efficiency, and high-quality outputs, underpinning the living lab's value proposition.

In conclusion, the balanced scorecard provides a multi-perspective framework for living labs to monitor and improve their performance across different dimensions. By setting clear goals and associated indicators, living labs can align their operations with strategic objectives, demonstrate their value to stakeholders, and foster a culture of continuous improvement and learning. The balanced scorecard, therefore, can serve not just as a measurement system but as a strategic management tool that can guide living labs toward successfully realizing their mission.

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4. Introduction

This deliverable supports the setup and functioning of living labs in the StreetForum project. It helps as a guideline in the project but also for other living labs with similar goals and scope. In this document, we present a framework for how to set up a living lab and what elements of a living lab can be. Based on the activities in T2.1 of WP2, guidelines for participation (e.g., gender balance) according to the ethical requirements, planning of actions, selection of tools, and the terms of collaboration between the living labs to support the evaluation process in WP3 (e.g., cross-lab study exchange) have been established. Each lab will facilitate the day-to-day collaboration and exchange between authorities, civil society, businesses, and researchers.

4.1. Task description and relation to other tasks

Task 2.1 is part of StreetForum Work Package 2 (WP2) and aims to develop a framework of living labs in general and particular for the project. The output of this task will serve as input and guidance for WP2 (setting up living labs in Tasks 2.2 through 2.5) and the evaluation process in WP3, especially Task 3.1 (Evaluation framework) and Task 3.3 (Applicability and transferability assessment).

4.2. Structure of the deliverable

Firstly, we introduce the framework for how to set up a living lab and what the elements of a living lab can be. This contains three parts: planning and establishment, implementation and management, and ongoing evaluation. Secondly, we describe in general what elements the management and ongoing evaluation of the framework can contain (in the form of a balanced scorecard for living labs) before we conclude the deliverable. In the Annex of the deliverable, we describe the StreetForum Living Labs without applying the presented framework and designing the balanced scorecards individually. This is a longer process which will be placed in Tasks 2.2 through 2.5 in the course of the StreetForum project.

5. Living Lab Framework

Communities are social entities comprised of people who share something in common. In urban areas, this common element may be geography, needs, goals, interests, ways of living together, or services the city provides. Technology and urban design can help to form communities and support their development and existence by providing services, e.g., for exchange and sharing. If designed and appropriately introduced, the design could contribute to their sustainability. In times of transformation, communities, and technologies evolve. So, new methods and approaches are needed to understand changing societal interactions and tailor technologies to support these dynamic processes.

For two decades, Living Labs became interesting arenas for research and development of innovation. They are instrumental tools of political economy and research management in Europe. They are used increasingly as innovative approaches to stimulate technological and social innovations in a policy-making manner. There are already several (research) projects applying Living Labs. How easy is establishing a Living Lab to create a local community and support its sustainable existence? What methods can be applied for a successful establishment of Living Labs? These questions are still to be answered, which motivates us to write this deliverable. We present a framework based on our previous work (Tellioğlu et al., 2019) and experiences at aspern.mobil LAB (<https://www.mobillab.wien>), for how to set up a living lab and what the elements of a living lab can be as well as how to contextualize the general living lab idea and process to the goals of the StreetForum project.

5.1. Related Research

Bergvall-Kåreborn et al. (2009, p. 1) define Living Labs as "... a gathering of public-private partnerships in which businesses, researchers, authorities, and citizens work together for the creation, validation, and test of new services, business ideas, markets, and technologies in real-life contexts.". Living Labs deliver insights into everyday context and user needs, stimulating and motivating research and development processes. There are particular forms of Living Labs: (Neighborhood) Mobility Labs, Learning Labs, and Real Labs. Mobility Labs focus on approaches to study and shape changes in the mobility behavior of citizens and in strategic planning of mobility in the areas of planning housing, landscape, and urban mobilities. Individuals' mobility behavior is mainly determined by their common choice of transportation modes and mobility patterns. The repetition and dependency on the same paths one has daily results from a certain mindset and the availability and accessibility of an infrastructure.

While Mobility Labs have a small portion of learning elements, Learning Labs focus on continuous learning processes and participants' progress. Real Labs, on the other hand, aim to involve relevant stakeholders and citizens in the generation and development of ideas. The process efficiency in Real Labs can be supported by sustainable transition management (Schneidewind, 2014) (Schneidewind & Scheck, 2013). Dutilleul et al. (2010) see Living Labs as "multi-business collaborations". Based on a literature review of the majority of Living Lab papers, Schuurman found that a critical reflection of existing Living Lab approaches is still missing (Schuurman, 2015, p. 191). There is still a lack of empirical, more quantitative, and comparative studies showing the added value of Living Labs for citizens (p. 199).

All types of Living Labs have a common goal: innovation. When studying innovation, information and communication technologies play an important role, especially in the post-development stage of innovation. The diffusion of innovation and the social shaping of innovations (use diffusion) are two areas to study (Mahajan et al., 2000) (Rogers, 2003, p. 27). "Technology shapes society" paradigm and the ignorance of the usage of innovation have led to the notion of domestication of innovations (Robertson, 1984) (Silverstone & Haddon, 1996), which is related to the "social shaping of technology" paradigm (Bijker & Law, 1992). This meant that society was a major influence on technology development. Appropriation, objectification, incorporation, and conversion are the four phases of the domestication process (p.29). Living Labs offer an opportunity to study the mutual shaping and reshaping of technology and society, which we built our approach on Frissen and van Lieshout (2006).

5.2. Planning & Establishment

The organizational structure of a living lab manifests at various levels: strategic, project, and operational. Each level has distinct roles and responsibilities that contribute to the overall functioning of the living lab.

At the strategic level, decisions are made about the lab's overarching objectives, scope, and policies. This typically involves the highest level of management and governance bodies in the lab, including a board of directors or a steering committee. These individuals or groups set the strategic direction of the lab and make high-level decisions about resource allocation, partnerships, and governance (Hossain & Leminen, 2014).

The project level of the living lab focuses on the planning, execution, and management of individual projects or initiatives. This could involve project managers, researchers, and other team members who coordinate activities, manage resources, and ensure the delivery of

project outcomes. They work closely with stakeholders to design and implement projects and monitor and evaluate their progress (Bergvall-Kåreborn et al., 2009).

At the operational level, the focus is on the day-to-day activities that support the functioning of the lab. This could involve roles related to administration, finance, human resources, IT support, and communication. These individuals ensure that the lab’s infrastructure and processes are functioning effectively and support the work at the strategic and project levels (Leminen et al., 2012).

These three levels of organizational structure play interconnected roles in operating a living lab, each contributing to the achievement of the lab’s mission and objectives.

There are several stages of establishing a living lab from scratch. For careful planning of the organizational and financial setting, we introduce elements to consider, as shown in Figure 1.

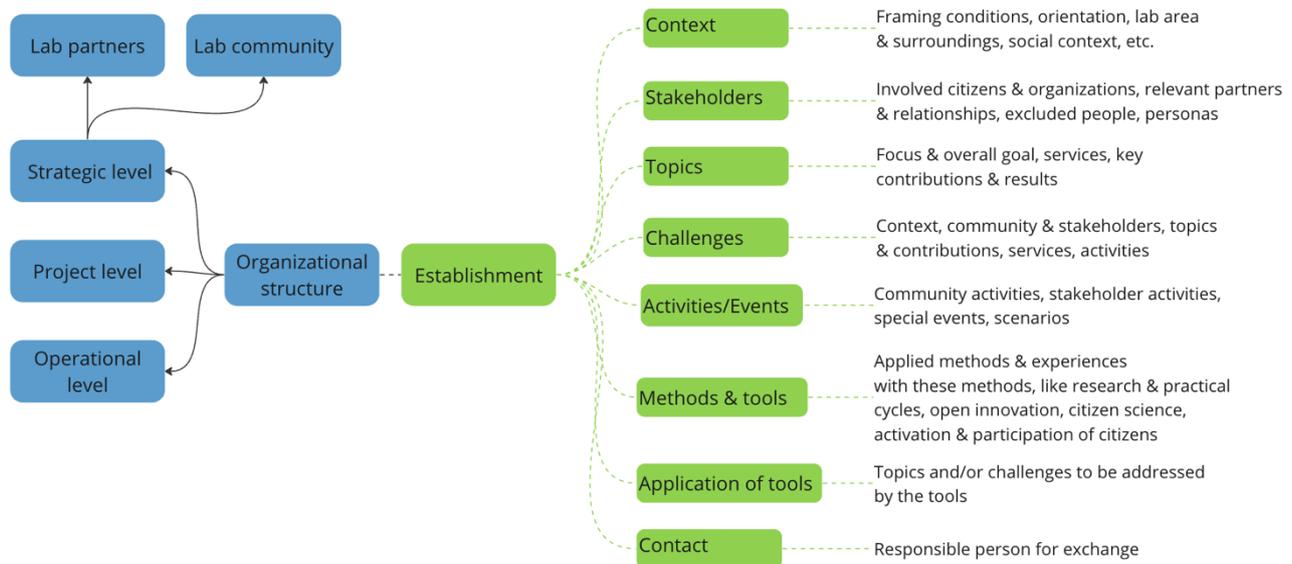


Figure 1: Living Lab Framework: planning and establishment support

Planning and establishing a living lab are a complex process that involves careful consideration of several factors, including context, stakeholders, topics, challenges, activities, methods and tools, and the application of these tools.

The context of a living lab encompasses its physical and socio-cultural environment, as well as the broader economic and political landscapes. For instance, a living lab in an urban environment will differ from one in a rural setting regarding accessibility, available infrastructure, local culture, and other contextual elements. The context influences the lab’s objectives, the stakeholders it engages with, the challenges it faces, and the methods it

employs. A deep understanding of this context helps to design a living lab that is relevant and effective.

Identifying and engaging stakeholders is a crucial part of establishing a living lab. Stakeholders could include, among others, community members, local government bodies, research institutions, businesses, and non-profit organizations. These stakeholders play different roles in the lab's activities, from providing inputs and feedback to participating in research, decision-making, and implementation processes. Effective stakeholder engagement fosters ownership and commitment and enhances the relevance and impact of the lab's work.

The selection of topics or focus areas for the living lab should align with the needs and interests of stakeholders, the lab's objectives, and the local context. These topics could span a broad range, including health, environment, technology, education, urban development, and social issues. Identifying pertinent topics involves conducting needs assessments, stakeholder consultations, and research.

Challenges are inherent in the establishment and operation of a living lab. They could relate to funding, stakeholder engagement, logistics, technology, regulation, or other issues. Anticipating these challenges and developing strategies to address them is an essential part of planning.

The activities of a living lab could include research, workshops, prototyping, testing, demonstrations, and community outreach, among others. These activities should be designed to address the identified topics, engage stakeholders, and achieve the lab's objectives.

The selection of methods and tools for the living lab depends on its objectives, activities, and the characteristics of stakeholders. Methods could include participatory action research, co-design, surveys, interviews, focus groups, web apps, and observation. Tools could include software for data collection and analysis, communication and collaboration tools, and physical equipment for prototyping and testing.

Applying these tools and methods involves training staff and stakeholders, designing and implementing activities, collecting and analyzing data, making decisions, and communicating findings. This application should be monitored and evaluated to ensure it is effective and to make necessary adjustments.

In conclusion, planning and establishing a living lab involves careful consideration of various factors and requires a strategic, participatory approach. This ensures the lab is relevant to its

context, engages stakeholders effectively, addresses pertinent topics, overcomes challenges, conducts meaningful activities, and applies appropriate methods and tools.

5.3. Implementation

While implementing a living lab, certain factors need to be in place:

A project management process is essential in operationalizing a living lab, much like any other organization (Figure 2). In the context of a living lab, project managers are explicitly assigned to ensure the day-to-day realization of the lab's activities. The project manager, who could be an individual or a team, depending on the size and complexity of the lab, takes the helm in guiding the project from inception to completion, overseeing the planning, execution, monitoring, and closure of projects. In the best case, the project manager is already involved in the planning of the project and does not only come in during the implementation phase of the project.

Coordination is one of the critical responsibilities of a project manager in a living lab. This involves liaising between various stakeholders, including researchers, participants, community members, and funding bodies, to ensure that the project objectives align with the needs and expectations of all involved parties. Project managers are also in charge of coordinating the use of resources, scheduling activities, and managing the team to ensure that projects are completed on time and within budget.

Financial management is another crucial aspect of project management. The project manager is responsible for budgeting, allocating resources, and overseeing expenditures to ensure the financial viability of the lab's projects. This involves meticulous planning and constant monitoring to ensure that the funds are being used efficiently and effectively.

Reporting is another area that falls under the remit of project management. The project manager is responsible for tracking progress, assessing performance, and providing regular updates to stakeholders. This includes preparing and presenting detailed project reports covering progress against timelines, financial status, risks and issues, and key accomplishments. These reports help maintain transparency and keep all stakeholders informed about the status of the projects.

In summary, the project management process in a living lab involves several complex tasks, all contributing to the successful day-to-day realization of the lab's activities. Effective project management, involving robust coordination, diligent financial management, and transparent reporting, is crucial to the success of a living lab. In the next sections, these points will be described in detail.

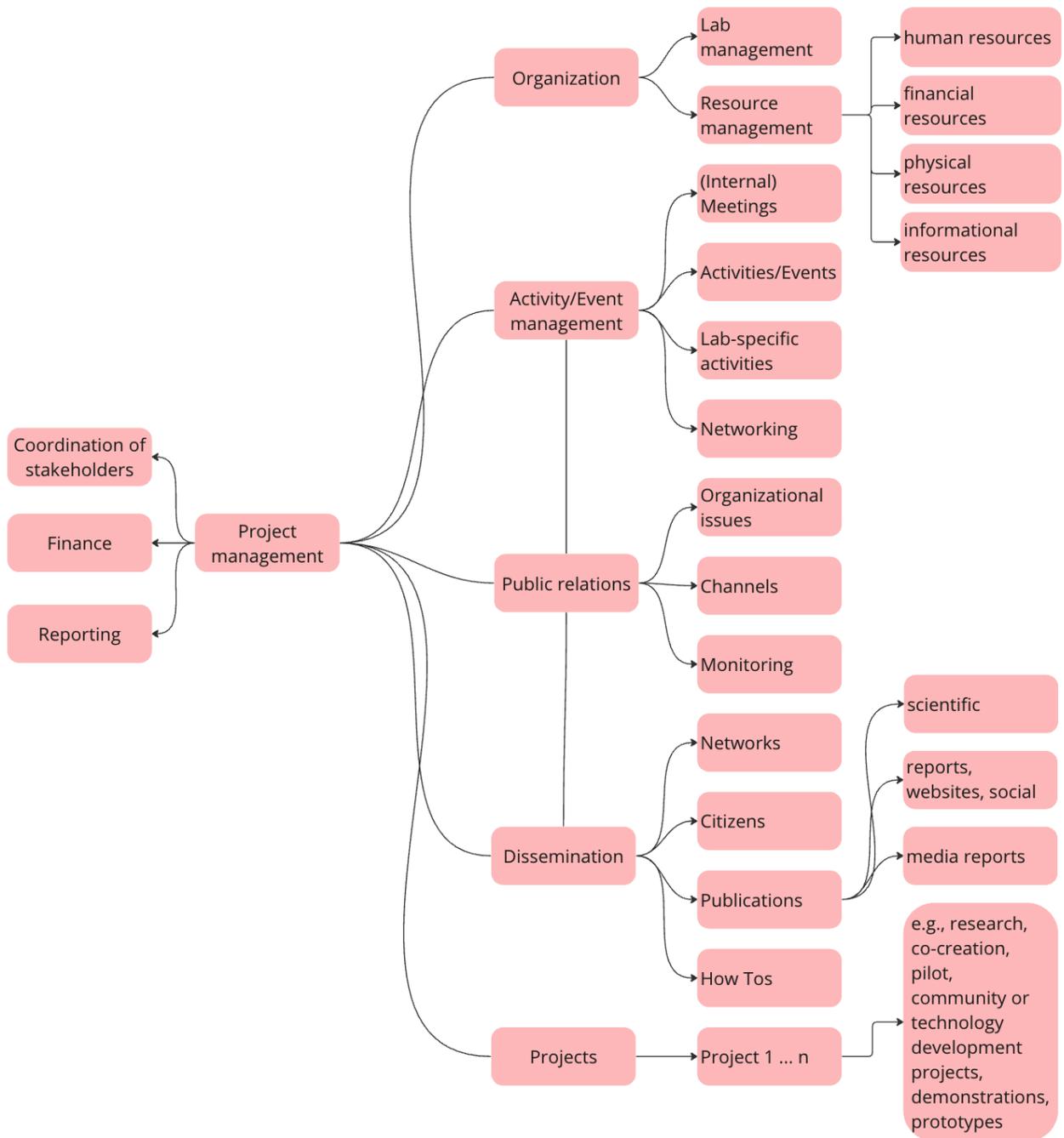


Figure 2: Living Lab Framework: Implementation support



5.3.1. Organization

The organization in the context of a living lab revolves around two key elements: lab management and resource management. These components are pivotal for the smooth functioning of the lab's activities, enabling it to fulfill its mission and objectives.

Lab management involves the strategic and operational direction of the lab's activities. This could include setting the lab's vision and mission, developing strategic plans, fostering a culture of innovation, ensuring adherence to ethical guidelines, and promoting stakeholder engagement. Lab management also involves coordinating various projects, monitoring their progress, and making necessary adjustments to ensure they align with the lab's strategic objectives. The lab management must foster creativity and collaboration, encouraging interdisciplinary interaction and enabling stakeholder co-creation.

Resource management, on the other hand, involves the planning, allocation, and utilization of resources to support the lab's activities. These resources could include human resources (staff, volunteers, participants), financial resources (funding, revenues), physical resources (equipment, facilities), and informational resources (data, research findings). Effective resource management ensures that these resources are used efficiently and sustainably and are aligned with the lab's strategic objectives.

Human resource management, a crucial part of resource management, involves recruiting, training, and retaining staff and volunteers with the skills and competencies required for the lab's activities. It also involves creating an environment that supports learning, growth, and job satisfaction.

Financial resource management involves securing funding, budgeting, financial tracking, and ensuring financial sustainability. This could involve seeking diverse funding sources, prudent financial planning, and rigorous financial reporting and control.

Physical resource management includes the utilization and maintenance of facilities and equipment. This could involve scheduling shared facilities, maintaining equipment, and ensuring compliance with health and safety standards.

Informational resource management involves collecting, storing, analyzing, and sharing data and research findings. This could involve setting up robust data management systems, ensuring data quality and security, and promoting open access to research findings while respecting privacy and intellectual property rights.

In conclusion, the organization in a living lab involves careful lab and resource management to create a compelling and sustainable innovation ecosystem that can fulfill its mission and objectives.

5.3.2. Activity/Event management

Activity and event management plays a pivotal role in the operations of a living lab, serving as a conduit for collaboration, information sharing, and innovation. This involves organizing and managing various activities and events, including internal meetings, external events, lab-specific activities, and networking opportunities.

Internal meetings form a critical backbone of a living lab's operations. These gatherings are platforms for exchanging ideas, fostering collaboration, and ensuring everyone is in sync with the lab's goals and strategies. Furthermore, they are pivotal in facilitating open and transparent communication among team members, crucial in creating an inclusive and collaborative environment. Meetings can encompass various activities, from regular team huddles and project update sessions to strategic planning workshops. Effective management of these meetings involves not only scheduling, setting agendas, and following up on action items but also incorporating effective communication strategies. Clear and concise communication helps in setting expectations, sharing ideas and feedback, and ensuring that everyone understands the objectives and outcomes of the meeting. In addition, conflict management is an integral aspect of meeting management. Differences of opinion can arise in any group setting, and these must be managed constructively. Facilitators should have conflict resolution skills to handle disagreements, ensure respectful dialogues, and reach consensus. This could involve mediating discussions, promoting active listening, and fostering an environment where differing views are considered and addressed. Post-meeting and documenting outcomes are vital for accountability and transparency. This includes capturing the decisions made, the reasons behind those decisions, and the assignments of tasks or action items. A clear record of these items effectively communicated to all participants ensures that everyone understands their roles and responsibilities in the progress of the lab's work.

Events are another critical element of a living lab's activities. These could include workshops, seminars, training programs, product demonstrations, or public outreach events. Event management involves planning, securing speakers or facilitators, promoting the event, managing registrations, coordinating logistics, and conducting follow-up activities. These events engage a wider audience, disseminate findings, gather feedback, and raise the lab's profile.

Lab-specific activities are the core activities that contribute to the lab's objectives. These could include research projects, product or service testing, user experience studies, or community projects. Managing these activities involves project planning and management, coordinating with stakeholders, managing resources, monitoring progress, and reporting outcomes.

Networking is also an integral part of a living lab's activities. This involves creating opportunities for stakeholders to connect and collaborate, such as networking events, online forums, or collaborative projects. Networking can help to foster partnerships, attract resources, and enhance the lab's influence and reach.

In summary, activity and event management in a living lab involves organizing and managing various activities and events that contribute to the lab's objectives, foster collaboration and learning, engage stakeholders, and enhance the lab's influence and reach. Effective management of these activities and events requires planning, coordination, communication, and follow-up and contributes significantly to the lab's success.

5.3.3. Public relations

Public relations in a living lab involve utilizing various communication channels. These activities, tightly interwoven with activity/event management and dissemination efforts, significantly contribute to the lab's public image, stakeholder engagement, and overall success.

Public relations are crucial in managing these issues as they often impact the lab's reputation. This may involve proactive communication strategies to keep stakeholders informed about changes or developments or crisis communication to manage potential negative impacts. These issues require tact, transparency, and responsiveness to maintain trust and positive stakeholder relationships.

Channels used for public relations activities in a living lab are varied and should be tailored to the target audiences. These could include traditional media outlets like newspapers and television for broader reach, digital platforms like websites, social media, email newsletters, and blogs for regular updates and engagement, and personal communication like meetings, presentations, and networking events for more direct engagement. Using multiple channels helps ensure that the lab's messages reach their intended audiences effectively.

Monitoring is a critical component of public relations in a living lab. This involves tracking the lab's media coverage, stakeholder perceptions, and public sentiment. Monitoring helps to gauge the effectiveness of public relations activities, identify emerging issues, and provide

insights for future strategy. Tools for monitoring can range from media monitoring software and social media analytics to surveys and feedback mechanisms.

Public relations, in conjunction with activity/event management and dissemination, play a significant role in shaping the public image and impact of a living lab. By effectively managing organizational issues, leveraging appropriate channels, and conducting ongoing monitoring, a living lab can build positive relationships with its stakeholders, enhance its reputation, and contribute to its overall success.

5.3.4. Dissemination

Dissemination in a living lab is pivotal in sharing the lab's achievements, findings, and innovations with a broader audience. This function, interlinked with public relations, encompasses a variety of elements such as networks, citizens, and publications.

Networks serve as vital conduits for disseminating information in a living lab. This involves sharing knowledge and insights within the lab's network of stakeholders, including partners, funding bodies, research institutions, businesses, and community organizations. This might involve presentations at meetings, sharing of reports, collaborative activities, and targeted communication. Networking events also offer platforms for disseminating information, engaging stakeholders, and fostering collaborations. This continuous exchange of information helps to strengthen the lab's relationships, enhance its influence, and facilitate collaborative innovation.

Engaging citizens in dissemination activities help to democratize innovation, align the lab's work with societal needs, and foster public support. This might involve public presentations, participatory events, public consultations, social media engagement, or community projects. These activities communicate the lab's work in accessible ways, gather public feedback, and involve citizens in co-creation processes. They also help to raise public awareness about the lab and its work, fostering public support and community engagement.

Publications, such as research papers, case studies, policy briefs, or blog posts, are another key means of dissemination. These provide detailed accounts of the lab's research findings, innovations, and impacts, contributing to scientific knowledge and public discourse. Publishing in reputable journals, industry publications, or popular media helps to reach a broad audience, enhance the lab's credibility, and influence policy and practice. It is crucial to ensure that these publications are accessible and understandable to diverse audiences, respecting principles of open access where possible.

How-to guides and documentation are vital for capturing the various elements and processes of living labs. These resources systemize the lab's practices, support its activities, and enhance its effectiveness and impact.

Creating how-to guides for the various project types undertaken in living labs can provide a step-by-step roadmap for project planning, execution, and evaluation. These guides can cover research design, co-creation processes, pilot testing methods, community engagement strategies, and technology development techniques. They can also guide project management, stakeholder engagement, ethical considerations, and impact assessment.

Documentation of the lab's structures and systems, such as its governance model, organizational structure, resource management practices, and public relations strategies, can support its operations and sustainability. This can involve creating manuals, procedures, policies, and templates that capture the lab's operational knowledge and best practices.

How-to guides for activity and event management can provide practical guidance on organizing and managing various activities and events. These can cover areas such as meeting facilitation, event planning, networking strategies, and public presentation techniques. They can also provide tips on using digital tools for remote collaboration, event promotion, and participant engagement.

Documentation of the lab's dissemination practices can provide guidance on communicating the lab's work and impact. This can include how-to guides on writing for different audiences, using various communication channels, engaging with media, and monitoring public sentiment. It can also provide guidance on open-access publishing, data sharing, and intellectual property rights.

In conclusion, dissemination in a living lab, closely tied to its public relations efforts, is crucial for sharing the lab's work, engaging stakeholders, and contributing to societal knowledge and innovation. By leveraging networks, engaging citizens, and producing accessible publications, a living lab can maximize the reach, impact, and societal value of its work. How-to guides and documentation are crucial for capturing the knowledge, practices, and insights of living labs. They support the lab's operations, enhance its effectiveness, and contribute to its sustainability. By systematizing and sharing its practices, a living lab can continually improve its practices, support its stakeholders, and enhance its contribution to innovation and societal impact.

5.3.5. Projects

Living labs, as a hub for innovation and collaboration, engage in various project types that are crucial for their mission and impact. These project types can vary depending on the focus and scope of the lab, but often include research projects, co-creation projects, pilot projects, demonstrations, community projects, and prototypes, technology development projects.

Research projects are a cornerstone of living labs, helping to generate new knowledge, technologies, or approaches that can address societal needs or business challenges. These projects often involve multidisciplinary teams, encompassing fields like technology, sociology, psychology, economics, and environmental science. They contribute to scientific knowledge, provide evidence for decision-making, and drive innovation.

Co-creation projects are a defining feature of living labs, involving stakeholders in developing new products, services, or solutions. These projects typically involve a collaborative process, engaging users, researchers, businesses, and policymakers in the ideation, design, testing, and refinement of the innovation. Co-creation projects help to ensure that innovations are user-centered, fit for purpose, and market-ready.

Pilot projects or demonstrations involve testing and evaluating innovations in a real-world setting. These projects provide a controlled environment to trial new technologies, systems, or approaches, gather feedback, and assess their performance, usability, and impact. They help to de-risk innovations, inform improvements, and build a case for their adoption.

Community projects involve working with local communities to address their needs, build their capacity, or involve them in research and innovation. These projects could focus on community health, environmental sustainability, social inclusion, or digital literacy. They help to foster community engagement, social impact, and mutual learning.

Technology development projects or prototypes involve creating new technologies, tools, or platforms. These projects often involve research, co-creation, and pilot testing and result in the development of new hardware, software, or digital platforms. They contribute to technological innovation, economic development, and digital transformation.

In summary, living labs engage in various project types, each playing a crucial role in achieving the lab's mission and impact. By combining research, co-creation, piloting, community engagement, and technology development, living labs can generate a stream of user-centered, impactful, and market-ready innovations.

All elements described so far might be used to define the StreetForum Living Labs. Additionally, some living lab specific other elements might be added to the framework presented in this section.

5.4. Management & Ongoing Evaluation using Balanced Scorecards

After establishing and running a living lab, the structures, activities, and all related factors must be evaluated regularly. Living labs are dynamic endeavors, and proper change management must be introduced and maintained throughout the project's lifetime. Balance Score Cards are valuable tools to help project (change) managers focus on the right goals at the right time (Figure 3).

Balanced scorecards have emerged as a revolutionary tool for performance measurement and strategic management since the seminal paper by Kaplan and Norton (1992) introduced the concept. This framework transcends the traditional focus on financial metrics by integrating non-financial indicators associated with learning and growth, internal business processes, and stakeholder satisfaction. Kaplan and Norton emphasized the importance of providing a balanced view of organizational performance, facilitating strategic alignment, and translating strategy into tangible objectives. In their view, the balanced scorecard serves as a communication tool, an operational guide, and a strategic feedback system.

In the StreetForum project, we are not business-oriented, we are designing and implementing Living Labs. This has an impact on the business-oriented balanced scorecards. Namely, there are no customers; there are stakeholders. For that reason, we will use the term stakeholder in the remainder of the document.

Moreover, the paper by Hoque and James (2000) sheds light on the integration of the balanced scorecard with modern management accounting systems. They have demonstrated that balanced scorecards provide a comprehensive structure, accommodating a range of performance measures, which makes it a versatile tool for various industries. The scorecard facilitates a systematic approach to set targets, assign responsibilities, track performance, and enable continuous learning and improvement. Notably, Hoque and James highlight the role of the balanced scorecard in encouraging a long-term perspective by incorporating non-financial measures that indicate future performance. This underscores the balanced scorecard's capacity to link today's actions with tomorrow's outcomes.

The Balanced Scorecard introduced by Kaplan and Norton (1992) consists of four perspectives that provide a comprehensive view of an organization's performance. These perspectives are:

1. **Financial Perspective:** This is the traditional focus of most companies and includes financial metrics such as revenues, earnings, return on capital, and cash flow. The financial perspective answers the question: "To succeed financially, how should we appear to our shareholders?"
2. **Stakeholder Perspective:** This involves measures of stakeholder satisfaction, stakeholder retention, market share, and other stakeholder-oriented metrics. The stakeholder perspective allows an organization to target the market segments in which they must excel to achieve their financial objectives. It answers the question: "To achieve our vision, how should we appear to our stakeholders?" We might call the stakeholder perspective "target groups' and stakeholders' perspective" because it seems more appropriate for living labs considering their stakeholders.
3. **Internal Process Perspective:** This perspective includes business processes such as product development, supply chain management, delivery, and after-sales service. These operational aspects are critical to stakeholder satisfaction and achieving the organization's financial objectives. It addresses the question: "To satisfy our shareholders and stakeholders, what business processes must we excel at?"
4. **Learning and Growth Perspective:** This perspective is about the company's people and infrastructure. It includes measures of employee satisfaction, employee retention, skill levels, and the availability of information systems to support key business processes. The learning and growth perspective establishes the infrastructure that the organization must build to create long-term growth and improvement. The question it answers is: "To achieve our vision, how will we sustain our ability to change and improve?"

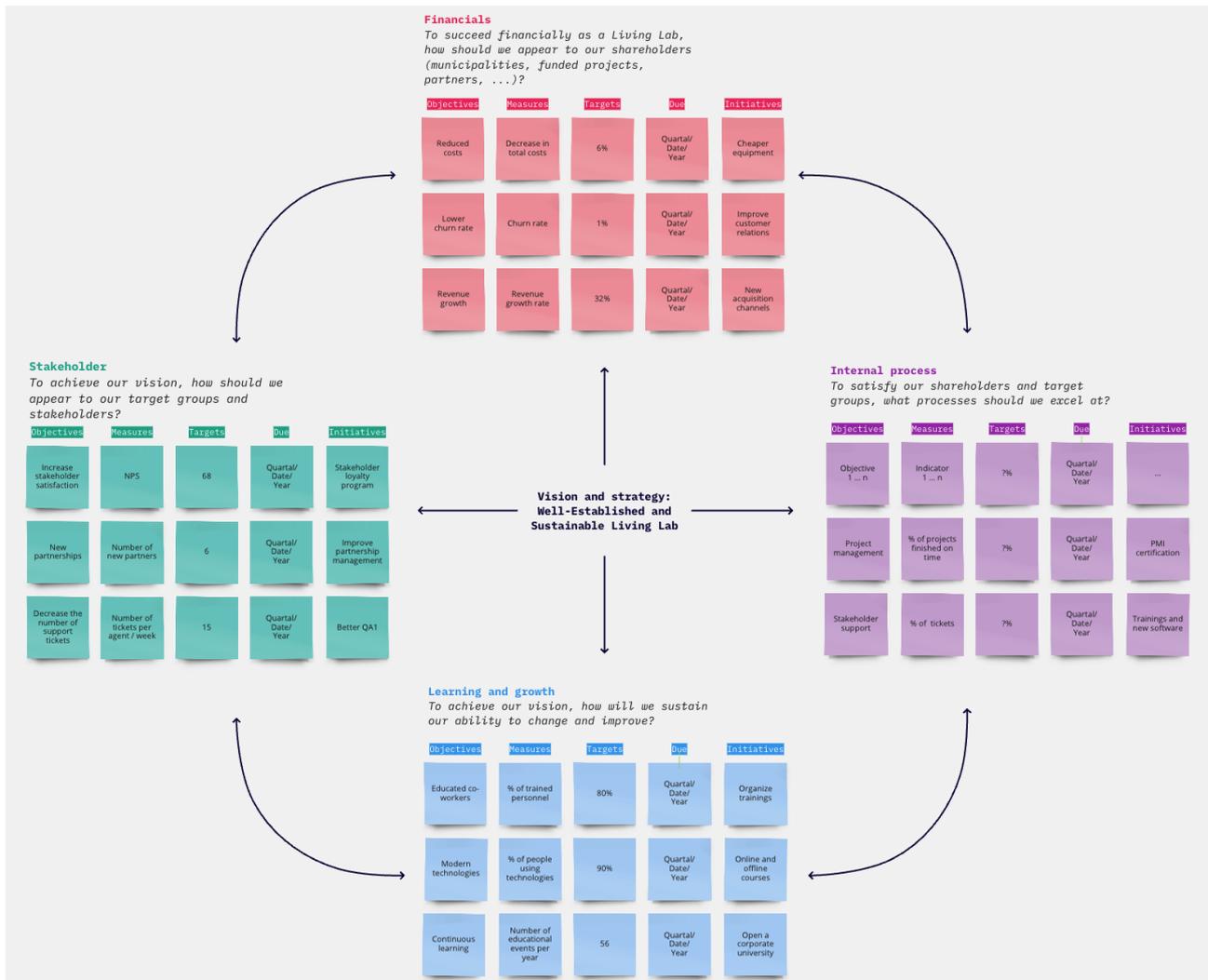


Figure 3: Living Lab Framework: Management and ongoing evaluation support using Balanced Scorecards.

Living labs represent an innovative approach to collaborative research and development, often involving various stakeholders such as researchers, citizens, city authorities, and businesses. The financial perspective in the balanced scorecard for a living lab could encompass goals related to securing sustainable funding, efficiently allocating resources, and demonstrating the financial value of the lab’s activities. Each should be associated with



measurable indicators to track progress. Some potential indicators for some potential goals are also outlined in the following examples¹:

- **Sustainable Funding:** Secure a steady stream for the living lab's activities. This might involve a mix of public funding, private partnerships, sponsorships, grants, and other forms of financial support. Indicators could include the amount of funding secured for the next fiscal year, the number of funding sources, or the percentage change in total funding from the previous year.
- **Cost Management:** Improve the cost-efficiency of the lab's activities. This might involve strategies to minimize overhead costs, better manage project budgets, and optimize resource allocation. Indicators could include the percentage reduction in overhead costs, the percentage of projects completed within budget, or the overall operational cost savings as a percentage of total costs.
- **Financial Returns:** Demonstrate a positive return on investment for the lab's projects and initiatives. This might be quantified regarding direct revenue from commercialization activities, cost savings achieved for partners, or economic value generated in the wider community. Indicators could include the return on investment (ROI) for individual projects or initiatives, the total revenue generated from commercialization activities, the cost savings achieved for partners, or the economic value generated in the wider community.
- **Financial Value of Research Outputs:** Develop mechanisms to quantify and demonstrate the financial value of the lab's research outputs. This might include the valuation of intellectual property, commercial benefits from applied research, and financial impacts of policy recommendations. Indicators could include the estimated monetary value of intellectual property generated, the revenue from the commercialization of research outputs, or the financial impact of implemented policy recommendations.

¹ The aforementioned concepts are merely examples. It is important to note that every living lab possesses its unique focus and objectives. Consequently, the measures for success—also known as indicators—vary greatly from one lab to another. These indicators hinge entirely on a lab's specific factors, including its primary focus, goals, structure, resources, and surrounding environment. Therefore, it is crucial to define these indicators in a way that is tailored specifically to each living lab. The metrics for one may not apply or be relevant to another, due to their unique operational contexts and objectives. Hence, bespoke indicators need to be established to accurately measure the performance and success of each individual living lab.

- **Diversified Revenue Streams:** Cultivate diversified sources of revenue to reduce financial risk. This might involve developing new services or products based on the lab's research, creating paid partnership models, or exploring other revenue-generating opportunities. Indicators could include the percentage of total revenue derived from new services or products, the number of paid partnerships, or the revenue diversification index (quantifying revenue spread across different sources to measure financial risk).

It is important to note that the specific goals would depend on the individual characteristics of the living lab, including its mission, structure, partnerships, and context. The indicators are examples and may need to be adapted or supplemented with other measures that are relevant to the specific circumstances and strategic objectives of the living lab.

In the context of a living lab, the stakeholder perspective might involve a broad range of stakeholders, including community members, research partners, project sponsors, and policymakers. The goals within this perspective are to focus on satisfying stakeholder needs, demonstrating the value of the lab's work, and building solid relationships with partners. Here are some potential goals, along with associated indicators:

- **Stakeholder Satisfaction:** Ensure high levels of satisfaction among stakeholders including vulnerable population groups, ensuring their unique needs and perspectives are taken into account. Indicators might include stakeholder satisfaction scores from surveys (tailored for vulnerable groups) or the percentage of stakeholders who report that the lab meets or exceeds their expectations, by addressing any disparities in service provision or accessibility.
- **Value Demonstration:** Demonstrate the value of the lab's work to stakeholders. Indicators could include the number of case studies published that highlight the lab's impact or the number of stakeholders who report understanding the lab's value proposition.
- **Relationship Building:** Build strong, mutually beneficial relationships with stakeholders. Indicators might include the number of collaborative projects undertaken with stakeholders or the stakeholder retention rate over time.
- **Community Engagement:** Actively engage the local community in the lab's activities. Indicators could include the number of community members participating in lab activities or the number of community outreach events held.

- **Policy Influence:** Influence policy-making by providing valuable research and insights. Indicators could include the number of times the lab's research is cited in policy documents or the number of policymakers who engage with the lab's work.

The specific goals and indicators would need to be tailored to the unique context of the living lab, taking into account its mission, stakeholder needs, and strategic objectives.

The internal process perspective of the balanced scorecard for a living lab focuses on the effectiveness and efficiency of the lab's operations and processes. Here are some potential quantitative goals and corresponding indicators. Besides these, there should be qualitative indicators if a living lab's methodologies are qualitative.

- **Project Efficiency:** Improve the efficiency of project planning and execution. Indicators could be the average duration of projects from inception to completion, the percentage of projects completed on time, or the utilization rate of resources.
- **Quality of Outputs:** Ensure the quality of the lab's research and other outputs. Indicators might include the number of research outputs meeting established quality criteria, the percentage of projects that meet predefined success criteria, or the number of positive reviews received from peer assessments.
- **Innovation:** Foster a culture of innovation and creativity within the lab. Indicators might be the number of new methodologies or technologies introduced, the number of patents or intellectual property rights secured, or an innovation index created from survey responses of lab members.
- **Collaboration and Communication:** Enhance collaboration and communication within the lab and with external stakeholders. Indicators could be the number of collaborative projects undertaken, employee satisfaction rate with internal communication, or stakeholder feedback scores on the lab's communication effectiveness.
- **Knowledge Management:** Improve knowledge sharing and management within the lab. Indicators could be the number of documents or data points added to the lab's knowledge management system, the usage rate of the knowledge management system, or feedback scores from lab members on the system's effectiveness.

As with the other perspectives, these goals and indicators should be tailored to the specific context of the living lab, considering its unique needs, priorities, and operational realities.

The learning and growth perspective of a living lab's balanced scorecard centers around developing the human, informational, and organizational capital to support the lab's operations and strategic objectives. Here are potential goals and corresponding indicators:

- **Staff Development:** Enhance the skills, competencies, and knowledge base of the lab's staff. Indicators might include the percentage of staff who meet defined competency levels or staff satisfaction rates with professional development opportunities.
- **Staff Retention:** Retain high-quality staff and maintain a low turnover rate. Indicators could be the employee turnover rate, length of employee tenure, or employee satisfaction scores from surveys.
- **Information Systems:** Develop and maintain robust information systems to support the lab's operations. Indicators might include system uptime, user satisfaction scores with the information systems, or the number of system enhancements or upgrades completed in a given period.
- **Organizational Culture:** Foster an organizational culture that supports collaboration, innovation, and learning. Indicators could be staff satisfaction rates with the organizational culture or responses to specific survey questions about collaboration, innovation, and learning within the organization.
- **Adaptability:** Enhance the lab's ability to adapt to changes in its external environment. Indicators might include the time taken to respond to significant external changes or the number of strategic adjustments made in response to external changes.

As with other perspectives of the balanced scorecard, these goals and indicators should be tailored to reflect the unique context and strategic objectives of the living lab.

Besides the perspectives described above, living labs like in the StreetForum project adapt the balanced scorecard approach by integrating other dimensions that reflect broader societal, ethical, and humanistic concerns. Here are some examples:

- **Social Responsibility and Ethical Conduct:** This dimension focuses on how the organization meets its social obligations and adheres to ethical principles.
- **Environmental Sustainability:** This aspect evaluates the organization's environmental impact.
- **Employee Well-being and Diversity:** Beyond mere productivity metrics, this perspective emphasizes employee health, satisfaction, and diversity.
- **Innovation and Learning for Societal Benefit:** Extending the traditional learning and growth perspective, this dimension could focus on how the organization's learning and innovation contribute to societal benefits.
- **Stakeholder Engagement:** Beyond customers and shareholders, this perspective considers a broader range of stakeholders, including local communities, suppliers, and even competitors.

- Cultural and Community Contribution: This aspect measures the organization's contribution to cultural and community vitality.

6. Conclusions

Implementing a balanced scorecard in living labs marks a strategic approach toward improving overall performance and enhancing stakeholder value. As an all-encompassing management tool that includes all relevant aspects of a living lab and its approaches and methodologies applied (for that, each living lab needs to define its goals carefully when determining the balanced scorecard), the balanced scorecard aligns strategic objectives with operational actions across the financial, stakeholder, internal process, and learning and growth perspectives. The specificity of indicators associated with each goal provides a clear roadmap for progress and facilitates evaluation. Furthermore, this multi-perspective approach ensures that the living lab's efforts are not solely focused on financial outcomes but also encompass stakeholder satisfaction, operational efficiency, and organizational learning, which are integral to a living lab's success.

Living labs, by their nature, are innovation ecosystems characterized by participatory research and development, including the researcher's work, experimentation, and ethical aspects. Adopting a balanced scorecard allows these entities to encapsulate their complex nature into a simplified but comprehensive framework. By integrating stakeholder perspectives, such as community members, research partners, and policymakers in the 'stakeholder' category, living labs can measure and enhance their impact on society. Meanwhile, focusing on the 'internal process' perspective ensures streamlined operations, efficiency, and high-quality outputs, underpinning the living lab's value proposition.

In conclusion, the balanced scorecard provides a multi-perspective framework for living labs to monitor and improve their performance across different dimensions. By setting clear goals and associated indicators, living labs can align their operations with strategic objectives, demonstrate their value to stakeholders, and foster a culture of continuous improvement and learning. The balanced scorecard, therefore, can serve not just as a measurement system but as a strategic management tool that can guide living labs toward successfully realizing their mission.

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8. Annex 1: StreetForum Living Labs

In the following, we show some information we captured from the labs. After receiving filled templates and fieldnotes from each lab, the following lab descriptions were used as a starting point to create the framework presented in this deliverable. The framework will be applied during the course of this project within the Tasks 2.2 through 2.5.

8.1. Living Lab Brussels (Status: 11.04.2023)

The living lab Cultureghem as such is being implemented together with the StreetForum project. The first meeting took place on March 7th, 2023. This can be considered the date of kick-off of the implementation of the lab. However, the elements being studied in the living lab relate to the transformation process that has been happening for some time. The Living lab will study how the tools developed in the StreetForum project impact consensus-making for transforming two different locations in the neighborhood of Cureghem (Figure 4 for the map where two lab spots are located; Figure 5 and Figure 6 for additional impressions to both locations).

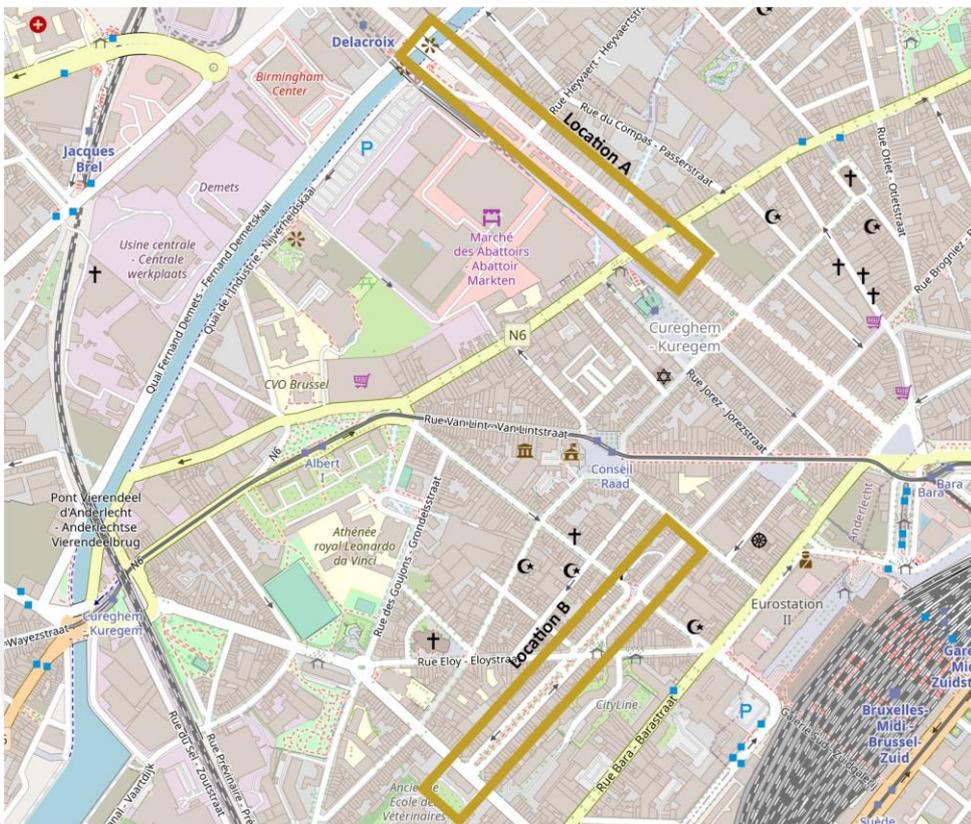


Figure 4: Locations of the Living Lab Brussels © Cultureghem

The Brussels Living Lab is located in the neighborhood of Cureghem in the municipality of Anderlecht, just outside the most central area of Brussels, the 'Pentagone'. It is located near the Brussels South Station, the largest railway station in Belgium. This is a dense area of Brussels, with a rich mix of activities taking place: residential, industrial, and tertiary uses. The transportation available in this area is rich, with several public transport stops (for the tram, train, bus, and metro), shared mobility services, roads, parking spaces, and increasing cycling infrastructure.



Figure 5: Impressions of the Location A (Ropsy Chaudron) of the Living Lab Brussels © Cultureghem

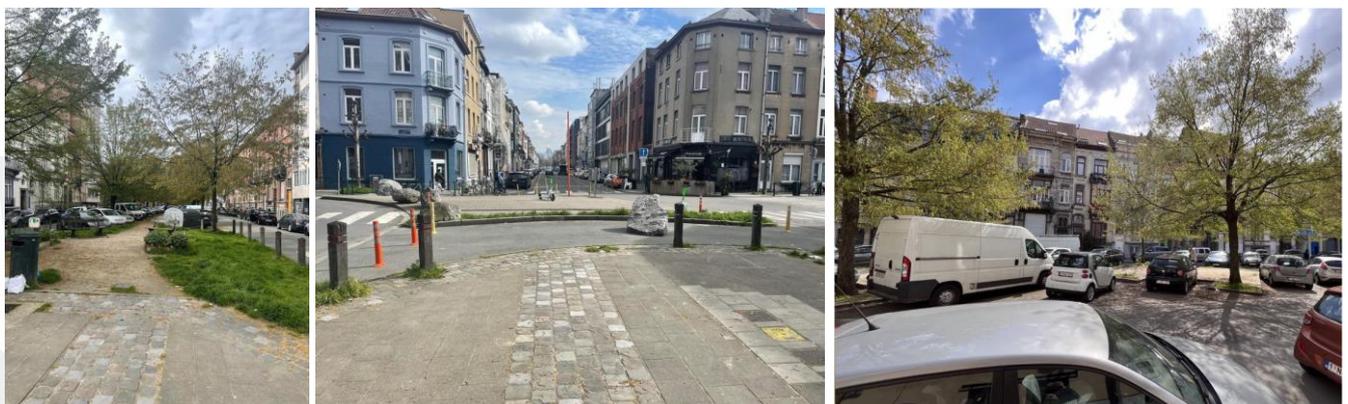




Figure 6: Impressions of the Location B (Boulevard de la révision) of the Living Lab Brussels © Cultureghem

From a socio-economic point-of-view, this can be considered a disadvantaged neighborhood. It is one of the most densely populated parts of Brussels, with more than 20,000 inhabitants per km, almost threefold the regional average. The median taxable income in Cureghem is around 15,500 €, more than 4,000 € below the regional average. The unemployment rate stands at a staggering 27%, and almost 20% of Cureghem's minors grow up in a family in which none of the parents has an income from labor. It hosts more people without Belgian nationality (European Union, Turkey, Northern Africa, Sub-Saharan) than the regional average.

On top of that, figures for the municipality of Anderlecht as a whole indicate that around 47% of the residents that has a Belgian ID-card, has non-Belgian origins. Given Cureghem's migration history and its role as an arrival point for migrants, it is very likely that the share of Belgians with non-Belgian roots is even higher. The share of people above 25 with a higher education degree, is also much lower than the regional average, 16% in Anderlecht compared to 28% for Brussels as a whole.

Parking pressure is among the highest in the Capital Region (due to the high population density). Its proximity to some of the major road axes in Brussels has repercussions for the neighborhood as well: data regarding the concentration of nitrogen dioxide – an emission gas that is traditionally linked to traffic – are among the highest in the region, being twice or thrice as high as the levels defined by the World Health Organization.

	Cureghem	Brussels Capital Region
Population density	20 679	7 501
Median taxable income	€ 15 518	€ 19 723
Unemployment rate	27 %	19 %
Share of minors living in a family without revenue from labor	21 %	16 %
+25-year-olds with a higher education degree (Anderlecht)	16.3 %	28.1 %
Occupation rate parking facilities (5-7u)	91 %	71 %

Table 1: Context of Cureghem in numbers. Source: Monitoring des Quartiers

As a part of the GoodMove mobility vision of the Brussels Capital Region, new circulation plans are being implemented in the capital. The goal is to develop 50 'maillles apaisées' in which transit traffic is reduced as much as possible and directed towards the significant traffic axes. This has to increase the liveability of residents and increase traffic safety for active modes. Cureghem was one of the first neighborhoods in the capital in which a circulation plan was implemented. It was designed by a technical committee consisting of municipal and regional mobility administrations and transport operators. Residents have been involved in the process as well: on-street meetings were organized at several locations; the testimonies of the local citizens allowed the administrative bodies to identify the significant mobility-related issues; and different scenarios of mobility plans were presented to citizens through online and on-street meetings. The municipal council approved the plans in February 2022, and a one-year test phase started in the Summer of 2022. The relevant topics of the living lab relate to some of the transformations proposed in the circulation plan and other similar transformations in the neighborhood.

8.2. Living Lab Vienna (Status: 06.05.2023)

The first location is the Rahlgasse, a residential street (Wohnstrasse / Woonerf) in the 6th district of Vienna. It is located between the well-known pedestrian street Mariahilferstraße and the car-dominated Gumpendorferstraße.

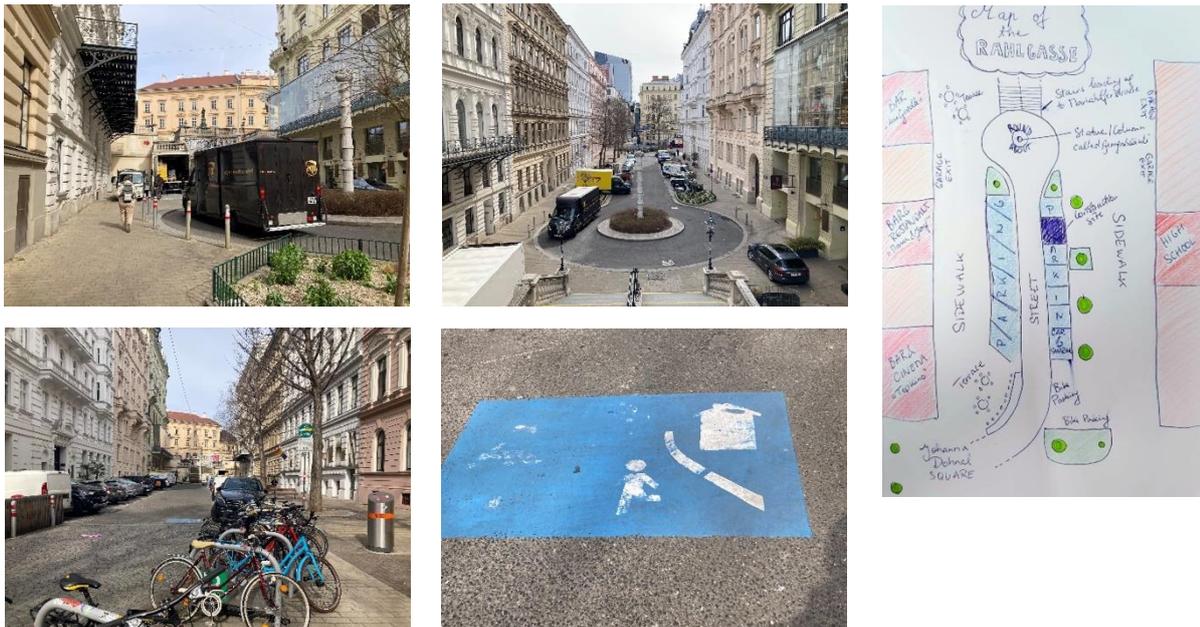


Figure 7: Rahlgasse 1060, Vienna, Photos & Sketch 2023 © space and place

The second one is the Lambertgasse, also a residential street in the 16th district of Vienna. It is located between the Ottakringerstraße, the busy main street of the district with a lot of different uses, and a smaller street, the Friedrich-Kaiser-Gasse, which has mainly housing functions.



In the Labs, we work on residential streets. We investigate, among other things, the extent to which art and culture, tactical urbanism and anthropological approaches can contribute to opening up streets for people and to co-creating and spreading the culture of “residential street life” initiated by space and place. And we explore how to negotiate different opinions in transforming car roads into roads for people. And how – in this context – find consensus or compromise.

Rahlgasse 1060:

The street is located next to a public staircase leading up to Mariahilferstraße, a well-known shopping street internationally recognized for its recent conversion into an encounter zone – “Begegnungszone.” On the other end of the street, there is the Gumpendorferstraße, a busy street dominated by car traffic. It is positioned along a NW-SE axis. There are 5 big trees and 3 smaller (recently added) ones. Additionally, there are 3 cafés/restaurants (2 of them have terraces located on the sidewalk) located on the western side of the street and a high school located on the other side. Furthermore, 3 garage exits in the street must be kept free the entire time.

The street is pretty busy: many pedestrians use it as a connecting route between the Mariahilferstraße and the Gumpendorferstraße and the “Naschmarkt”- a market area and meeting point. Additionally, even though it is a residential street with limited access for cars (see residential street law in Austria - road traffic regulations §76b), there is a lot of traffic coming in and out of the street: There is a roundabout at the end of the street where cars can turn around to drive back to the Gumpendorferstraße. Cars are often driving in the street to find a parking space. Still, there are also many delivery vans entering the street (especially in the mornings) to deliver goods to the different cafés/restaurants, as well as institutions and shops located in the street. Furthermore, garbage trucks access the street regularly.

A problem for our activities in parking spaces on residential streets is that mostly all parking spaces are occupied.

Lambertgasse 1160:

The street is positioned along an N-S axis. It is adjacent to the Ottakringerstraße, a busy street with a lot of traffic. On the corner of these two streets there is (or by the time of the finalization of the deliverable – was) an old-style Viennese Coffeehouse called “Ritter” and on the other corner, a new supermarket is opening or (and that’s not clear by now) only the warehouse of a supermarket. In the center of the street (on the western side), there is a “blank space” (where there is no building) which residents have turned into a community garden with the

help of a community association (GB*) after it was used as a small park and meeting point – also by drug users.

There are 7 trees in the street, 5 big ones, and 2 small ones. The street itself, especially in comparison to other (residential) streets, is not very busy. A few cars are passing by, sometimes looking for parking spaces, and relatively few pedestrians are using the street. The street is ideal in the sense that it presents a lot of opportunities for future development. On the adjacent Ottakringerstraße, there is a bookshop and a center for people with disabilities – both could be interested in collaborating in the framework of the StreetForum project.

A problem for our activities in parking spaces on residential streets is that mostly all parking spaces are occupied and that – by the time of the finalization of the deliverable, the last coffee house (a relevant stakeholder) in the street has closed its doors because of insolvency.

We chose our two labs based on the contrast they provide: The Rahlgasse, which is a busy, very central inner-city street is widely known due to its location and its connecting function between the Mariahilferstraße / Museumsquartier area and the Naschmarkt area. Also, the street is a side street of the Gumpendorferstraße, which is currently undergoing a process of change, from which the StreetForum project could profit or at least be influenced. The Lambertgasse, in comparison, is a much less known and relatively quiet street in an outer-city district, which is mostly known for its diverse and multicultural community.

Furthermore, there might be a big contrast between the socio-economic background of the residents of the first and the second street: In the first street, the people that live there might have a higher socio-economic status as rent is a lot more expensive in this central area. In the 16th district residents might have less economic resources as rents are also cheaper. Residents of Rahlgasse are assumedly upper-class, while residents of the Lambertgasse are supposedly mostly working-class/middle class. At the same time the street users in Rahlgasse might be of all classes, as it is a well-known, widely used connecting street with some popular bars such as the “Topkino-Bar” where many students and alternative people gather. Additionally, there is a public high school here with students of different backgrounds who use the street in their breaks (there are 3 benches in front of the school where the students gather).

Both district councils advised the team to work on the chosen streets. The Lambertgasse (16th district) was the choice of first sight from the team and the district council alike. Concerning the work in the 6th district, the team decided to follow the advice of the district council to study the Rahlgasse because synergies with other activities could be of use.

space and place in their sociocultural work always try to include all social groups present in the area, no matter if they're residents, home or shop-owners, or simply people passing by and making use of the street. In the Lambertgasse, because the district is diverse and multicultural, one of the challenges they might face is language barriers, as some residents might not speak German at all (or just a little). In the Rahlgasse, one of the challenges could be to include people in wheelchairs / elderly people, as on one side of the street, access is only possible by using stairs. As already noted, using all parking spaces on both streets by cars is a challenge for the planned activities.

The main groups the team will work with are residents, businesses, scholars, and the respective district representatives. Additionally, we will invite different cooperation partners – artists and stakeholders who might come from different neighborhoods to share some of their approaches, insights, and ideas. Our primary working language is German - in this respect, people with other language backgrounds have less access to our activities - but are not excluded per se.

In the StreetForum project, we make people aware of the potential of the residential streets (Wohnstraßen / Woonerven) as social spaces and negotiate the actual use of this public place. As people often do not know, a residential street can be used in many ways. The use of parking lots by cars only is not a natural thing but can be questioned. Due to the legal framework in a residential street, one can use free parking lots in many ways: play music (not too loud), do clothes-swapping activities, or relax in the sun on a deck chair. We will provide information to residents about the potential of these streets and also organize certain activities to show the possible uses of a residential street actively. We want to encourage residents and other stakeholders to interact on the street and use this social space. Furthermore, we will organize different participatory analog and digital gaming events, which are (further) developed by TU Wien and Space and Place.

During this process, we collect ideas, data and information about the street, its residents and its challenges. We initiate a debate about how to use the street in multiple ways and how to question the status quo: meaning how the space use can be diversified. We will gain experience in the different consensus-making processes necessary to find common ground in the context of ideas and plans for future street transformations. We will establish contacts with local stakeholders with whom we will also develop imaginaries and ideas for their possible future streets.

So, the main tool we will use is called “#wohnstrassenleben” (“#residentialstreetlife”). This tool is co-creative and participatory: we invite different partners and stakeholders to

contribute to street activities where we occupy free parking streets to create social spaces. We organize different activities such as clothes or plant swapping activities, fitness activities, live music or DJ music, art exhibitions, etc.

We will start with activities to get in touch with people and gain their trust, as well as activities to promote exchange between stakeholders and draw attention to the place “residential street” before – also in the framework of tools like rich.picture-talk, as well as analog and digital gaming, negotiate the possible transformation of residential streets for cars only into streets where people have priority.

Since our funds are very tight (see above), we can only do a few lab activities. We have to think about how we can motivate the population to realize their activities - even without our help.



8.3. Living Lab Istanbul (Status: 21.03.2023)

The selected location for the Istanbul Living Lab is “Yogurtçu Parkı Street.” Yoğurtçu Parkı Street is a parallel thoroughfare to Yoğurtçu Parkı, located in the Moda district of Kadıköy, Istanbul. Situated within the boundaries of the Osmanağa Neighborhood, it extends from the end of Moda Coastline and runs parallel to the Kurbağalıdere Stream.

Yogurtcu Parkı Street is situated in the bustling and centrally located Kadıköy district, approximately 500 meters in length. Additionally, it is conveniently situated near public transportation stops.



The selection of the Kadıköy district as a living lab stems from the pronounced emphasis on active participation in the area. The local community demonstrates a high level of sensitivity and awareness towards their environment. Furthermore, the street in question has been temporarily closed to vehicular traffic in past periods. The area experiences intense usage throughout the day, catering to a diverse range of users. The presence of a park area on one side of the road and its proximity to the stream indicates the potential for a more pedestrian-centric transformation compared to its current state. Consequently, the combination of the street's location and features, along with the presence of engaged citizens capable of facilitating participatory processes, led to the selection of Yoğurtcu Parkı Street for the StreetForum project.

As labs aim to transform the city into a more pedestrian-oriented environment, they also focus on the process carried out in collaboration with stakeholders. In this context, the objective is to address various aspects of Yoğurtcu Parkı Street, including the removal of curb parking areas, ensuring the safety of pedestrian crossings, making decisions concerning micro-

mobility, and proposing design enhancements that prioritize pedestrian-centric features along the street. Throughout these processes, active participation will be facilitated, and communication with the head of the Osmanağa Neighborhood will be established to reach out to the local community. The project's purpose and laboratory's mission will be explicitly stated, and joint efforts with stakeholders will involve organizing pop-up events with diverse participation tools, aiming to establish effective communication with both the residents and NGOs. This approach aims to achieve consensus on the pedestrian-oriented transformation of the area and simultaneously foster a pool of ideas by engaging citizens in discussions about their perspectives.

In terms of mobility, when considering Yogurtcu Park Street, there are vehicle parking areas on both facades of the street, which are bordered by the park. The remaining spaces are used for parking motorcycles and electric scooters. Despite the existence of residential zones and ground-floor areas designated for cafes, the area experiences a significant volume of traffic. Despite the placement of pedestrian crossings and traffic signs that highlight pedestrian priority, there is a prevalent occurrence of high-speed traffic flow. The parking areas located on both facades of the area are consistently filled throughout the day. This situation indicates a significant utilization of parking spaces by the owners and employees of surrounding businesses. The Yoğurtçu Park is utilized by individuals from various age groups throughout the day. Its proximity to public transportation stops and its central location also classify it as a waiting area. It can be observed that there are designated areas around and within the park where electric scooters are parked. When looking at the overall Kadıköy district, it can be characterized as a district with high usage of scooters.



The surrounding residential buildings mainly consist of 4-5 story structures, with ground floors utilized for commercial purposes. Particularly, the area is characterized by the dense presence of cafes/restaurants, as well as various production workshops such as ceramic studios along the main street and side streets. In addition to these, healthcare clinics also define another ground floor function along the avenue. In conclusion, it can be stated that there is a diverse range of ground floor usages in the area.

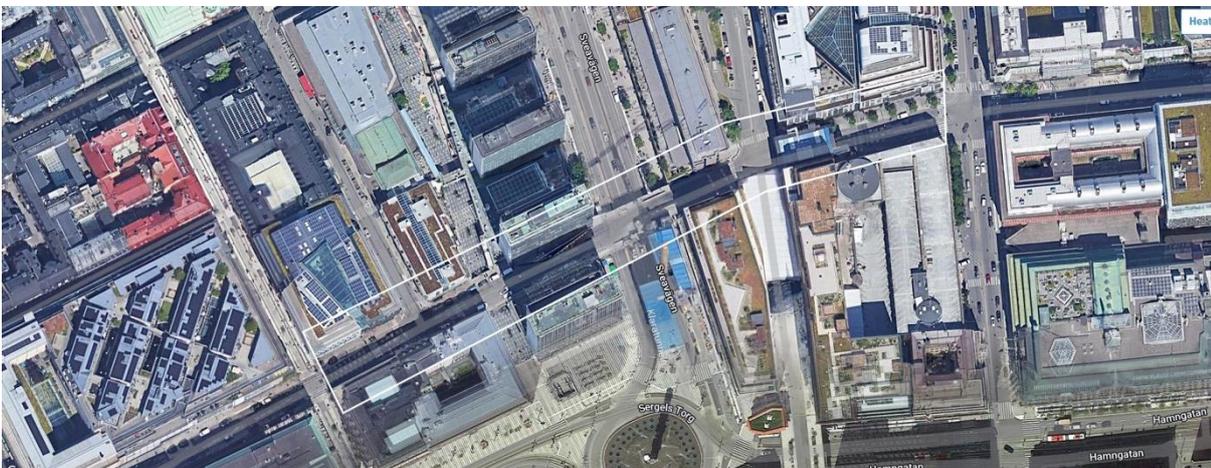


Due to factors such as proximity to the city center and the availability of multiple public transportation options, the rental prices for residential units in the area are significantly high. In terms of building inventory, the street comprises a mix of old and new structures, creating an anticipation of middle to upper-income individuals residing there. Additionally, given the mentioned central location, the concentration of public transportation stops, and diverse land usage, it can be inferred that a considerable number of people from outside the district also utilize the area throughout the day.

8.4. Living Lab Stockholm (Status: 13.03.2023)

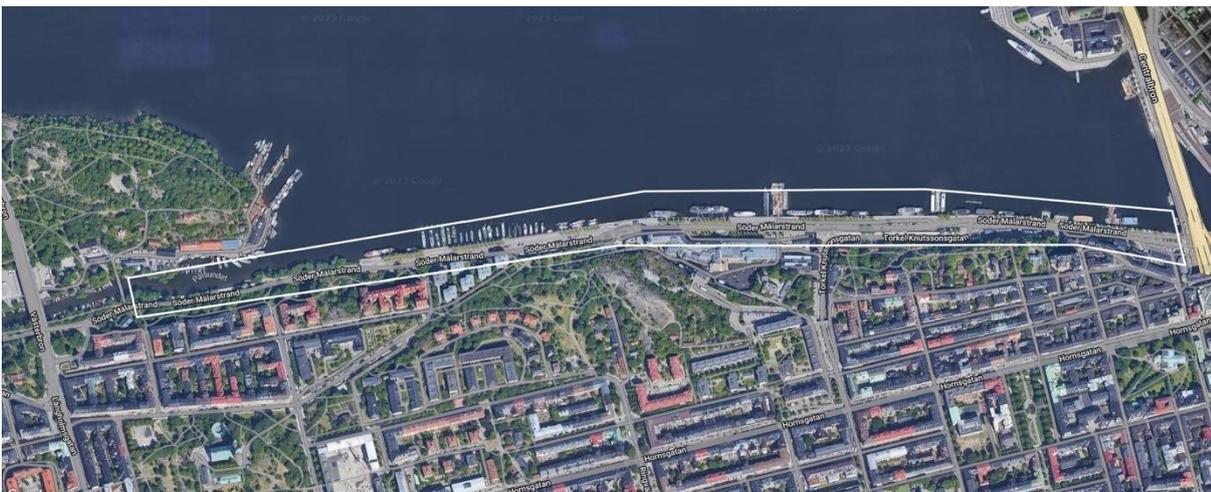
There are two central locations for the living lab in Stockholm: Mäster Samuelsgatan and Söder Mälarstrand.

Mäster Samuelsgatan is a busy street perpendicular to the main shopping street in the city center. The living lab consists of the 330-meter-long section between Drottninggatan and Regeringsgatan.



© SpS

Söder Mälarstrand is a 2 km long quay along Södermalm with an active port and residents in boats. The dock is partly disconnected from the rest of the neighborhood due to level differences in the landscape.



© SpS

The labs were founded in dialogue with the City of Stockholm. The first site to be decided was Söder Mälarstrand. In a newly released strategy document regarding the ports of Stockholm, Söder Mälarstrand is pointed out as one of the quays with the highest priority for change. Since a total transformation will take several years, it was considered a good place for a Living lab to begin with gathering different stakeholders' viewpoints and trying out quicker and lighter solutions.

Mäster Samuelsgatan was added later. The traffic on the street is about to change within another project called HITS (Sustainable and Integrated Urban Transport System) involving the municipality and property owners in the city center. The delivery traffic will change thanks to new logistic solutions and better cooperation between the businesses on the street, and both parties see the potential in creating a more active and livable street. Since dialogue with the property and business owners is an important part of the transformation, the City of Stockholm suggested it would be a second Living lab.

Both streets are currently in the planning process and start-up phase of the dialogue.



The City of Stockholm is responsible for the lab. They make the final decisions and finance and maintain the labs once they are built. Spacescape is in charge of the dialogue with the stakeholders and the visionary design process in close cooperation with the city.

The main stakeholders are, apart from the City of Stockholm, the Port of Stockholm and the property owners along each street. They are involved in the design process and facilitate the dialogue with their stakeholders and tenants. They both have a significant interest in the projects as their core businesses occur on the streets.

The lab is structured like a standard project for the municipality, with a project leader within the City and consultants (in this case, Spacescape) designing a transformation on their behalf. The difference is that Spacescape has an agenda independently due to the StreetForum project, and part of the financing derives from the research project. Spacescape has consequently freer rein concerning the dialogue, while the City of Stockholm has more power when redesigning the streets.

In the municipality, there is, for now, mainly the project leader who is working actively with the lab, apart from a communicator. Later, more persons and practices will be involved as the physical transformation materialize. At Spacescape, Alexander and Vera are in charge of these first phases, but the team will expand in time for the design matters.

The labs aim to study how physical transformations of places in the dense center of cities involving car restrictive measures can be carried through. Removal of accessibility and parking for cars often stirs up anger and negative attention within the population, and the Lab's focus is to investigate how to act preventive and reach a consensus before the implementation and actual transformation can be seen and experienced.

Another goal is to collect ideas and visions among the citizens about what to do with the two streets as input for further planning and decision-making.

The characteristics of the two streets are disparate. Mäster Samuelsgatan is located in the busiest part of the city but has, despite its very central position, mainly been a passage between the two more active, perpendicular streets, Regeringsgatan and Drottninggatan, during the recent decades. Closed and inactive facades partly consisting of a parking garage have made the street unattractive to pedestrians and instead full of delivery trucks and other motorized traffic. In recent years, it has been a construction site, but the reformation of the bordering buildings has significantly increased the conditions for human and social life on this and the adjacent streets. The street itself is though yet to be transformed.

Söder Mälarstrand is, on the contrary, a geographically separated space due to the fault slopes on one side and the water without bridges to the opposing Kungsholmen on the other. It is unique in the sense that it has boats alongside the quay used for living, parties, and maritime services. Its principal use today is as a recreational passage for walking and jogging, apart from parking. This summer, Söder Mälarstrand will be a part of Living Stockholm, the city's investment in temporary summer places, for the first time.

In the district around Mäster Samulesgatan, there are very few residents and instead mainly shops, restaurants, hotels, and offices. It's a prosperous part of the city close to the finance district but with a heterogeneous mix of people explained by the proximity to the big shopping street Drottninggatan and the Central Station. Before, the crossing street Malmskillnadsgatan was infamous for its prostitution and was avoided by many during the night, but this changed with the reconstruction of the buildings mentioned above.

Neither Söder Mälarstrand has any residents apart from in the boats. Contrary to Mäster Samuelsgatan, it lacks businesses and activities in general. Münchenbryggeriet, a former brewery in an old, huge, and beautiful brick building in the middle of the quay, is one of the few activity hubs with a few offices and occasional parties. The rest of Södermalm is a famous district, particularly among cultural workers, with high housing prices and thriving city life.

The target group is everyone with an interest in the transformation of the sites. Business owners and residents are two groups who traditionally are more critical to changes for cars in their proximity, and therefore extra relevant to analyze and address in the project. Generally, more men than women drive, which is likely to be reflected in the dialogue.

Groups we have experienced as hard to reach are kids, business owners, immigrants with less knowledge of Swedish, and residents in socioeconomically vulnerable areas. We are not planning to gather information about the stakeholders' or communities' economic backgrounds. Still, extra actions will be considered if the statistics show that certain ages or roles are underrepresented.

The first and main method is the web-based tool Placetoplan. It is an online platform used to gather opinions and ideas from citizens in one place and make them visible to anyone. This tool is used to spread the word about the living labs broadly and reach all categories of stakeholders.

A potential challenge is to identify and curb criticism regarding the transformation before it reaches a critical level where the whole project is at stake, for example, if it receives negative publicity in the media and reaches the political level.

Another challenge is to mobilize engagement and action in a positive direction. In Sweden, there is no tradition among citizens to engage in the community or take responsibility for activities happening in public. There is a need for precedent examples to refer to.

The experimental form of the transformation is also a new way of working, which has proven challenging to implement within the standardized processes in the municipality. Interim changes fall between the most temporary projects and the permanent rebuilds, and there are no guidelines to follow. This calls for bold management and a willingness to take risks within the city's leadership.

Söder Mälarstrand is a long quayside, and even small changes require a significant investment. Financing a transformation could also become a potential problem.

Spacescape has former experience working with the municipality of Stockholm. It has developed a close business relationship with the project leader, which makes cooperation and communication quick and easy. This, in combination with the municipality's role as a decision-maker, creates a risk of leaving the other stakeholders outside the process. Both Spacescape and the City must work actively with the involvement of all the identified parties to guarantee that everyone gets a say in every part of the process.

Generally, it is easier to gather ideas and views in a one-way communication than to maintain a relationship and inform the community what is happening and how their ideas are being considered. This is also an essential aspect of the dialogue which must be considered along the way.

Removing car parking is almost always a challenge, particularly in the central parts of the city. Older residential buildings which dominate the city centre of Stockholm lack parking facilities, and most residents park their private cars on the streets. Parking lots in garages are much more expensive and sometimes also scarce. Among business owners, there is a widespread and long-lasting idea of that restricted car access equals less revenue.