

## D6.4 – Final report on external advice & dissemination

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WP6 – External advice and Dissemination



Improving Anticipation and Social Inclusion in Living Labs for Smart City Governance



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## Document Description

<b>Project acronym</b>	SmarterLabs
<b>Project title</b>	Improving Anticipation and Social Inclusion in Living Labs for Smart City Governance
<b>Grant number</b>	854919
<b>Programme</b>	Urban Europe Joint Programming Initiative
<b>Overall project type</b>	Innovation/implementation, applied and strategic research
<b>Start date of project</b>	21/03/2016
<b>Duration</b>	36 months
<b>Objective</b>	The SmarterLabs project aims to develop a Smart City Living Lab approach to effectively deal with two major risks to successful, widespread implementation of smart transport technologies. These two risks concern (1) unforeseen barriers to large-scale change in socio-technical systems, and (2) exclusion of social groups not matching the required 'smart citizen' profile. This novel, 'smarter' approach will be developed, tested and refined by retrospective analysis of urban mobility governance and by action research in Living Lab experiments in the cities of Bellinzona, Brussels, Graz and Maastricht.
<b>Website</b>	<a href="http://www.smarterlabs.eu">http://www.smarterlabs.eu</a>

<b>Work Package</b>	WP6 – External advice and Dissemination
<b>Deliverable</b>	D6.4 – Final report on external advice & dissemination
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<b>Authors and involved institutions</b>	Report edited by: Mario Diethart (University of Graz)  Authors: Mario Diethart, Marc Dijk, Leyla Arsan, Cecilia Batalla and Tuija Hirvikoski

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## 1. Introduction

This report gives an overview on the dissemination activities throughout the SmarterLabs project's lifetime and includes contributions by the three external advisors who were involved in the project. SmarterLabs combined external expert advice and dissemination in one work package (WP6) to maximize the quality and impact of the project outcomes.

## 2. External advice

As described in the proposal, the SmarterLabs project formed an Advisory and Dissemination Board (A&DB), composed of three external experts, that focused on enhancing the quality and transferability of the SmarterLabs results. These experts were in constant exchange with the SmarterLabs team, in particular to give feedback on Deliverables, and they attended/co-organized project meetings. The three experts were:

- **Tuija Hirvikoski**, Laurea, Helsinki, Finland; President of the European Network of Living Labs (EnoLL)
- **Leyla Arsan**, CEO TAGES Industry & Information Technologies R&D Inc., Istanbul, Turkey
- **Cecilia Batalla**, Associate Professor in City and Regional Planning, University of Cantabria, Santander, Spain

Apart from their participation in project meetings, in which they gave feedback and advice on activities and results, the A&DB members hosted dissemination workshops in their own cities (Helsinki, Santander and Istanbul). These workshops reflected one core idea of the SmarterLabs project: Develop guidelines for “smarter” Living Labs based on experiences in four partner cities and make them more robust by testing them in three additional cities spread all over Europe. Consequently, the dissemination workshops served as both dissemination activities and evaluation to test and enhance the transferability of the SmarterLabs guidelines.

The following sections summarize the comments by the external advisors on the project in general and specifically its outcomes: The “practitioners brief” (guidelines on how to anticipate constraints on upscaling inclusive urban Living Lab experiments) and the “policy brief” (video). Both can be accessed at the SmarterLabs website: <https://smarterlabs.uni-graz.at/en/publications-results/smarterlabs-guidelines-video/> The guidelines are available in two versions: as a full document with descriptions of constraints, solutions and stories from the partner cities, and as a short version in a handy fan format (Figure 1). The latter is available in several languages in order to reach specific target groups in cities such as politicians, decision-makers etc. The video explains in two minutes what the “smarter” Living Lab approach is all about and introduces the SmarterLabs guidelines. Note: Detailed information about the SmarterLabs results are presented in D5.1 – “Report on synthesis and implementation guidelines” and D5.2 – “Policy and practitioner briefs”.



Figure 1: Left: SmarterLabs Guidelines ("Practitioners brief"); Right: SmarterLabs video ("Policy brief")

## 2.1. Comments by Tuija Hirvikoski<sup>1</sup>

### Introduction – The goal and role of SmarterLabs for Living lab community and cities

We live at the dawn of an era of mission oriented research, open science and open innovation. It is therefore important that funds, time and know-how are directed towards researching and developing the quality, impact, and challenges of cooperation between science, public actors, citizens, and businesses.

Living Labs approach is a forerunner in open science and open innovation, including citizen science. During the first decades, private, public and third sector players, as well as the academic, used the approach to develop, test and validate technology, products and services (i.e. business and technology innovations). Later, the focus of the Living Labs operations has changed towards social innovations and more macro level societal innovation such as Citizen Cities in Helsinki-Uusimaa region or United Nations global sustainable development goals (SDGs).

The Smarter Labs project shed light specifically on the co-creation and experimentation of societal and social innovations in Urban Living Labs. The project examined the challenges of cooperation between Living Labs actors in the Smart City context and introduced concrete measures to enable operators to anticipate factors that prevent scaling. The project examined the importance and role of social inclusion as a prerequisite for successful scaling. Social inclusion and scaling of results are important research topics as they both have an impact on the return of investment in Living Labs and/or open science and open innovation.

The Smarter Labs guidelines ("practitioners brief") discusses following constraints on upscaling or social inclusion and suggest/present ways to anticipate them:

1. *Citizens lack financial, intellectual and time resources to participate in the Living Lab*
2. *Relevant stakeholders remain outside the Living Lab*
3. *Groups and impacts outside the Living Lab context are overlooked*
4. *Existing power structures are reproduced inside the Living Lab*
5. *The Living Lab's potential for learning is underexploited*
6. *The Living Lab is disconnected from broader societal debate*
7. *The Living Lab consensus is not reflected in policy and society*
8. *Stakeholders and institutions are highly fragmented*
9. *The urban assemblage is sticky and locked-in*
10. *The Living Lab meets low institutional receptiveness*

<sup>1</sup> The original comments by the external advisors have been slightly adapted and shortened to fit in the format of this report.

The ways to anticipate social inclusion and scalability challenges were tested and refined by action research in Living Lab experiments in the cities of Bellinzona, Brussels, Graz and Maastricht.

### Transforming the Living labs phenomenon towards social innovation and more macro level and tackling the related social inclusion and scalability challenges

As many of the current short term Living Labs projects often focus on small-scale products and services or technology-user interactions, the Smarter Labs projects' contribution to long term Living Labs development in larger social-institutional context is most valuable. It helps to better understand how to solve the challenges and orchestrate the transformation from micro-level technology-user interaction to the macro level societally useful Urban Living Labs.

Although the results so far are very useful and encouraging yet more transdisciplinary research and practical experimentations are needed to develop an evidence-based and long-term sustainable model for cities and their stakeholders. With the help of the Finnish Ministry of Education, it is the aim of Laurea's Co-creation Orchestration project to develop a systemic governance model and related services to help to build and orchestrate innovation ecosystems across organizational boundaries. To be able to create a Europe wide scalable model, it will be most important to continue international collaboration to agree on details, such as how to collect, share and use cumulative data from social phenomena or how to allow the citizens or students to join science and innovation.

Smarter Labs well reflects the multi-strand, multi-layer and complex phenomenon that is involved when urban challenges are solved in authentic operational environments by means of co-creation and rapid experimentation. The Urban Living Labs action research is based on a multi-actor collaboration where the role of users or citizens is central. However, it remains unclear who is driving each the endeavor and how does the level of engagement vary in different innovation phases. As we know the devil is in details, therefore being more precise in details would increase shared understanding and learning. As an example (Figure 2), with the City of Espoo, Laurea has used simple graphs to illustrate this question.

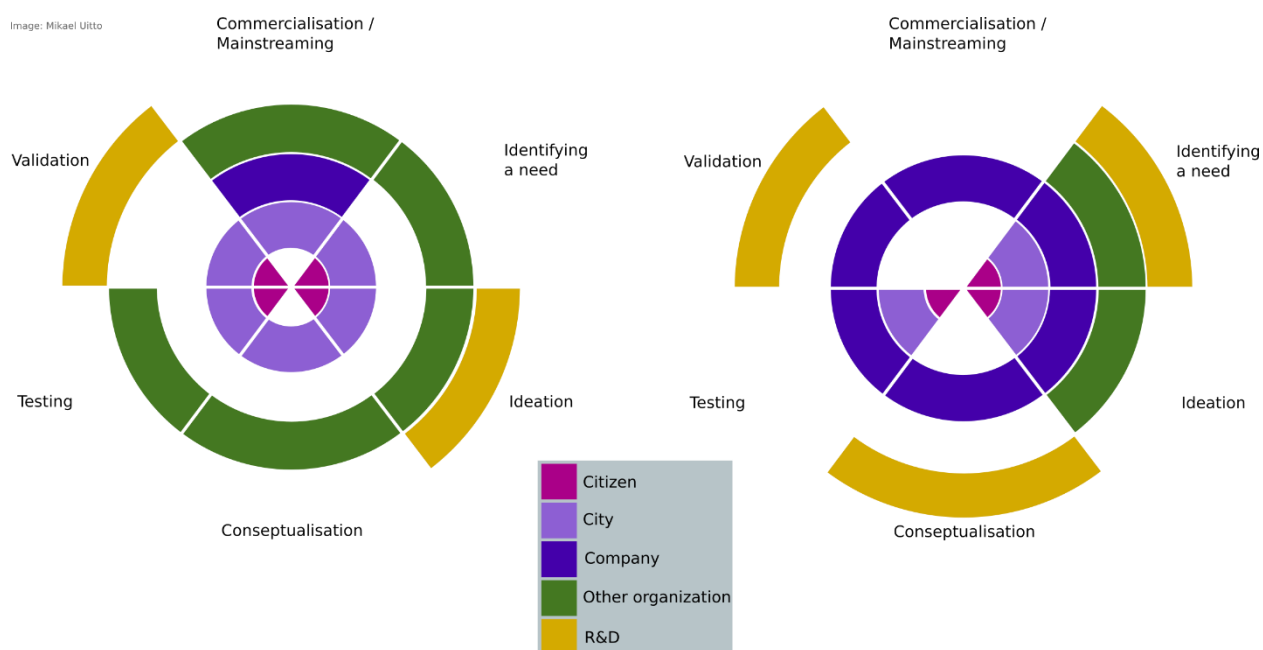


Figure 2: The left-hand figure illustrates the variation in the activity of the actors in a city-driven innovation project. The figure on the right was a company-driven project

### Ways to anticipate upscaling challenges particularly related to the Living Labs context

The SmarterLabs outcomes present many useful and recommendable solutions to anticipate and prevent the challenges of social inclusion and scalability. As said earlier, Smarter Labs' most valuable contributions rely on its suggested solutions to anticipate upscaling challenges particularly related to the Living Labs context. Many of the more mature and long-term Living “labbers” develop and skillfully use the design and facilitation methods and tools as well as the related business models. That is, they they know how to design the individual innovation subsystems and related processes, whereas the more connections to other social-institutional levels and innovation subsystems remain weak. Many Urban Living Labs would benefit from the integration of Social Sciences to their analysis and design processes.

In the current world transforming with accelerating speed, accumulating and wicked societal problems cannot be solved in silos and with partial optimization. Therefore, it is extremely important to have a holistic view of connections between the different innovation subsystems and various city governance levels.

Urban and regional (RIS3) innovation policies, funding agencies and all the involved stakeholders should include and implement the recommendations suggested by SmarterLabs on how to tackle the challenges related to *highly fragmented, locked-in urban assemblages* with low receptiveness to external advice. And as mentioned earlier, to make most out of the European projects, deeper collaboration among the cities across borders is needed.

As an example, the Finnish six-city strategy has proven how important it is that the cities distinguish when to use and when not to use a co-creation and experimentation approach (i.e. Urban Living Labs, it is noteworthy that in many languages the name Living Lab makes communication more difficult therefore it is replaced with other expressions) or when their role is to enable and when to drive the Urban Living Labs. Cities can drive Urban Living Labs in different ways. They can do it either by opening up their challenges and processes for multi-actor co-creation, experimentation, and validation or by organizing rapid experiments and pre-commercial procurements or by providing automated mechanisms to scale up the solutions from one city to another. Sometimes, the role of a city is however to do nothing but to allow the self-organizing citizen activism to make the city a better place to live, work and do business. That, however, demands trust and trust capital can be created mainly by working together and for that, we need joint physical and virtual arenas such as Urban Living Labs.

Ideally, some of the upscaling challenges either disappear or at least diminish if the activity is driven by the city or region and the starting point is to fix the jointly identified and recognized problems preventing the city from flourishing. This might be the case concerning challenges related to *The Living Lab disconnected from broader societal debate* and *meeting low institutional receptiveness* or the *Living Lab's potential for learning is underexploited*.

Moreover, based on the experiences from Finland, effective usage of such principles as the 3Os (<https://ec.europa.eu/digital-single-market/en/news/open-innovation-open-science-open-world-vision-europe>) or such mechanisms as mediator teams are recommendable. As they create better occasions for the multiple actors to interact and to become familiar with the Urban Living Lab process or to discuss the issues and solutions emerging within the specific Living Lab situation. Mediator teams, or the Circle of Mediators (Figure 3) as we call them, also empower the local players by teaming them up with other municipalities or national and international NGOs such as ENoLL (Scale jumping. Creating and experimenting a mechanism to make these connections visible and facilitating the connections is what the CoHeWe project is doing).

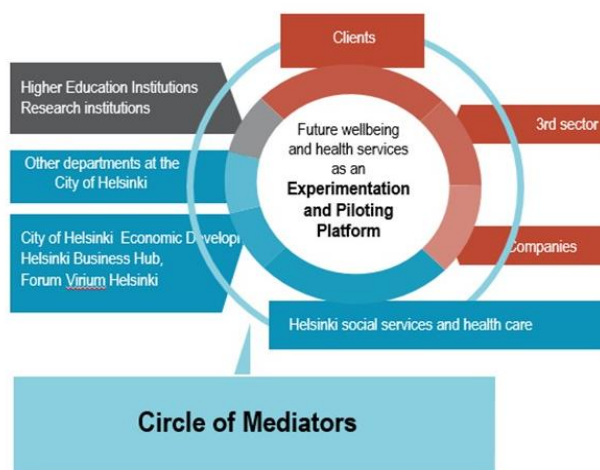


Figure 3: Circle of Mediators as it was created (by Forum Virium Helsinki and Laurea) and used in Kalasatama for Future wellbeing and health services by the City of Helsinki

### Ways to anticipate potential exclusion constraints from and in Living Labs

Also, the suggested ways to anticipate potential exclusion constraints from and in Living Labs deserve every cities' full attention. However, from the point of view of the more mature Living Labs, using service design and facilitation methods, this problem is better under control compared to how they do anticipate upscaling challenges related to the wider societal context. Therefore, it is recommended to go for the more mature design oriented Living Labs to find more methods and tools to handle the social exclusion challenges.

In addition to the presented ways to anticipate social inclusion challenges, there are two more fundamental procedural ways to be discussed. In order to constantly keep the interaction and power relations between the different actors in line with the project goals, the Ethical Code of Conduct should always be defined. Moreover, the previously introduced Circle of Mediators should be appointed to facilitate, interpret, curate, intensify, and monitor the activities of the multifunctional community.

If common Living Labs rules and the Ethical Code of Conduct are drawn up in cooperation between different groups of actors already at the start of each project, also co-operation between the project actors will be well promoted throughout the project's life cycle. Considering, Living Labs truly aim at collaborative solutions and joint value creation, not just testing existing products and services, it is important to invest in common understanding and common language in Living Labs. As shared meanings lay the grounds for a shared vision, shared learning, and shared value creation, the time and resources invested in them are multiplied in the long term. Here humanities and social sciences are valuable allies.

Social inclusion and user engagement can be viewed from many different perspectives. The SmarterLabs' recommendations take good account of the different groups of stakeholders, as well as the background variables within user groups such as age, place of residence, education, motivation, ability to participate, etc. Often, projects focus more on co-creation and testing innovation than the diffusion and exploitation of them. It appears that, also in the SmarterLabs' design recommendations, different user groups' varying readiness and willingness to take real advantage of the project result would deserve more attention. This could happen with the help of Rogers' diffusion theory of innovation.

As emphasized in the SmarterLabs guidelines, it is important to identify and recognize what kind of innovators and users are involved in Living Labs activities. For that, Rogers's diffusion curve and its user segments could and should be better utilized in the design of stakeholder involvement. For example, lead-users are valuable when a company or municipality wants to develop radical new technology or innovation. While the mainstream, laggards, and non-users are irreplaceable when looking for social innovation and scalability of for example a transport or climate solution that applies to all citizens and organizations living and working in the city.



Thus to give some examples, while social inclusion, volunteering, and democracy are utmost important in themselves, researchers and Living Labs must ensure that not only the explicit needs but also the hidden needs and goals of each relevant segment are properly taken into account in the analysis and the whole process.

Firstly, the versatile utilization of different user panels and the so-called personas created based on cumulative data from the user panels can and should be fully exploited. The reason is obvious. If only people who are interested in and have time to develop a phenomenon, one can be sure that the results will be biased. Secondly, co-creation workshops are popular but not a sufficient method. We should use the huge variety of design methods and tools. E.g. with the help of Design4All methods which can give voice to those (e.g. elderly people) who do not necessary have the skills, capacity or needed means to take a stand on the developing phenomenon. With the use of observation and creative design methods and tools, a better understanding of the different users' goals and hidden needs can be made. That understanding serves as a firm ground for joint solution creation and testing. All the stakeholders are to be involved but the intensity of different actors varies in different phases of innovation.

### **To sum up**

Based on almost three decades long experience from the Living labs and multiple actor co-creation, I warmly recommend the SmarterLabs results to be exploited by cities, funding agencies, Living Lab practitioners and researchers. Particularly in order to improve the ROI in Living labs and to increase the societal impact of participatory research, development, and innovation in Europe in the spirit of Open Science, Open Innovation and Citizen Science.

The better cities, companies, and academia can cover the versatile goals and hidden needs of the different societal beneficiary groups, irrespectively to their capacity to express themselves, the more likely it is to be able to design scalable solutions.

To revel and make better use of the results from previous Living Labs, Design, Co-creation and Experimentation projects, Europe would need a compilation project in which both social, business and technology innovations would be researched at the same time. Apart from business models also other types of social, cultural and ecological value creation models should be developed to build up sustainable urban and regional Living Labs. In addition, there is an urgent need for education for those who do not yet know how the non-linear and ecosystem-based innovation takes place and how to facilitate, mediate, orchestrate, broker, interpret and activate the innovation and business subsystems in a systemic way.

## **2.2. Comments by Leyla Arsan**

The “guidelines on how to anticipate constraints on upscaling inclusive urban Living Lab experiments” were piloted successfully in the four European cities of Bellinzona, Maastricht, Graz and Brussels. The examples and results were categorized into one common agreed and comprehensive guide (“practitioners brief”). The interesting point is that the dissemination workshops showed the evidence that all different cities including the dissemination cities Helsinki, Santander and Istanbul share common constraints. The guide will definitely be very useful for ongoing Living Labs, for the fresh ones like in Istanbul and for decision makers in cities. The experiences, examples, outcomes and stories described in the guide will have an important impact on Living Lab managers and make them consider different aspects too.

The video for decision makers (“policy brief”) will have an effect on understanding better why Living Labs are needed and how they should act and be supported. In this respect, I found this project efficient and successful having a compact outcome at the end after working with diversified subjects and issues. I believe that this guide will be very helpful, and would like to make some additional suggestions below.

The main idea for the SmarterLabs project derived from the strong necessity of being a “smart citizen” with both the cognitive and material resources to consume and co-produce the smart services of the smart city where citizens lacking these resources will normally not be included as users and co-creators in Living Labs. Nevertheless nowadays, the “smart citizen” concept is being transformed into a “resilient citizen” concept as cities are facing harder conditions and a need of resilience becomes a priority for urban life. Being smart will not be adequate anymore where cities are confronted with serious problems on environment, disaster, security and terrorism. So, social cohesion, creativity, adaptation become more important or as Richard Florida says in his book “Cities and The Creative Class” the 3 T’s and their relationships are crucial: talent, technology and tolerance. Cities are diversified by means of size, geography, crowd, diversity and by their souls. Technology is also changing rapidly and Artificial Intelligence has become a primary technology especially on creating future urban lives, in factories, schools, hospitals and houses. The “data driven innovation” and “smart citizen” concepts are leading city innovative applications but the resilience concept is now one of the impulsive forces for the emerging implementations of smart applications in cities. Thus, Living Labs in these cities may now face different constraints on upscaling and social inclusion. Since the guide ought to be used by these diversified cities with new challenges in each of them, it becomes much more important that they are easily accessible.

In this respect, the guide should be replicable, adaptable and applicable in different cases which should be updated with current developments too. For this reason, new tools should be used and shared in platforms like ENoLL. There might be crowdsourcing tools for Living Lab communities to share and update information. A communication and replication plan would be useful for the time after the project end.

I would also suggest a self-check tool based on the guidelines for any Living Lab to evaluate their status quo and progress. All could be included in one platform and promoted by ENoLL. This could be the task for a new project.

### 2.3. Comments by Cecilia Batalla

The SmarterLabs project successfully developed a practical tool to foster effective anticipation of two major risks to effective smart innovations through Living Labs (LL): exclusion of non-smart citizens and unforeseen constraints to upscaling results.

The results are presented in two ways:

- Guidelines/“practitioners brief”, practitioners focused document, which presents 10 constraints in LL and 10 ways to address them. The presentation for these results as a handy “folder” with cartoons is very useful.
- Video/“policy brief”, designed for policy makers.

These outcomes are based on practical applications tested previously in the cities of Bellinzona, Brussels, Graz and Maastricht. The affinity of the results with the real practice and its applicability to other contexts was verified in the three dissemination workshops such as in Santander.

Different stakeholders participated in the workshop with projects of different scales and themes: Bilbao Ria 2000: Urban Regeneration Plan; City Council: Santander Smart City; Eco-campus UC: eMOB, Life Program project; Plan Estratégico de Santander; Oso Pardo Foundation.

Despite this diversity, the meeting showed great affinity with the results obtained. The discussion and reflection on the applicability of the guidelines to the different local case studies, helped to produce highly applicable and universal results. The guidelines are a complete and very specific guide. The glossary makes the document even more useful, especially, the specific description of terms such as: Group dynamics analysis, Group facilitation techniques, Map of actors, Citizens jury, Mental map, Social safari, Stakeholder analysis, or Multi criteria decision-making techniques.

## 3. Dissemination

This section reports on dissemination activities by all partners throughout the SmarterLabs project. Please note that the main Deliverables (“practitioners brief” and “policy brief”) were only finalized recently. Thus, promotion of these outcomes will continue after the ending of the SmarterLabs project. For initial dissemination activities (e.g. creation of website, logo etc.), see D6.3 – “Interim report external advice & dissemination”.

As previously explained, an essential element in the dissemination strategy were three dissemination workshops which were co-organized by the external advisors. They gathered local representatives of their city governments, civil servants and Living Lab practitioners to facilitate an exchange between them and the SmarterLabs team. The workshops hugely enhanced the quality of the final products and can be considered a successful methodological approach for a project like SmarterLabs. They are summarized in the following.

### 3.1. Dissemination workshops<sup>2</sup>

#### 3.1.1. Helsinki

From October 25<sup>th</sup>-27<sup>th</sup> 2017 the first dissemination workshop took place in Helsinki with local support by the project's external advisor Tuija Hirvikoski. Essential background for the three-day meeting was the "Retrospective analysis on urban mobility governance" (D3.1). In this document the most typical constraints for Living Labs in terms of upscaling and social inclusion were identified on the basis of past mobility projects in the four partner cities of Bellinzona, Brussels, Graz and Maastricht. Having these constraints and possible solutions in mind, the SmarterLabs project members met with practitioners in Helsinki to exchange about their experiences. Therefore, on the first day the group visited Helsinki's district of Kalasatama where the Smart Kalasatama Living Lab is based. During a field trip the participants gained insights into several pilots that are tested there. Afterwards all together reflected upon the before mentioned constraints and presented examples of how each city tried to address them.

On the second and third day Tuija Hirvikoski joined the group and gave valuable feedback on the outcomes so far. She provided input on where to set the focus for future research and make the project's results most beneficial to Living Labs practitioners, governments and citizens in general.

#### 3.1.2. Istanbul

From May 30<sup>th</sup> to June 1<sup>st</sup> 2018 the second dissemination workshop took place in Istanbul. The second dissemination workshop took place in Istanbul. Its purpose was to enrich the learnings from the four partner cities (Bellinzona, Brussels, Graz and Maastricht) with experiences from the Turkish metropole of Istanbul. The meeting was supported by the project's external advisor Leyla Arsan who invited Living Lab practitioners and representatives of the municipality to meet the researchers of the SmarterLabs project.

So far the SmarterLabs project had identified more than ten typical constraints for Living Labs in terms of upscaling and social inclusion. These constraints could be observed in past mobility projects in the

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<sup>2</sup> Texts partly taken from the news articles on the SmarterLabs website

four partner cities of Bellinzona, Brussels, Graz and Maastricht as well as in the ongoing Living Lab experiments.

The urban laboratory Studio-X Istanbul offered the location to facilitate intensive discussions. Also present in this dissemination workshop was Cecilia Batalla, another external advisor in the SmarterLabs project. Together with Leyla Arsan she reflected on the learnings so far and gave recommendations for further research activities respectively on how to translate them into final products (practitioners brief, policy brief etc.).

### 3.1.3. Santander

From November 7<sup>th</sup> to 9<sup>th</sup> 2018 the third dissemination workshop took place in Santander. After Helsinki and Istanbul the third dissemination workshop focused on an exchange with Spanish partners from the cities of Santander and Bilbao. The meeting was supported by the project's external advisor Cecilia Batalla who gathered local practitioners to meet the researchers of the SmarterLabs project. Together they reflected on constraints they experienced in Living Labs in terms of upscaling and social inclusion. The presented examples included initiatives such as the "Bilbao Ria 2000" project or "Smart City Santander".

The participants concluded that the ten constraints (and their corresponding anticipation strategies) which were identified by the SmarterLabs researchers were highly relevant and applicable. The stories from the practitioners shared some of the issues that were also present in the four SmarterLabs cities of Bellinzona, Brussels, Graz and Maastricht while others offered some new insights. After the discussions, the SmarterLabs team had the chance to visit the Smart City Demonstration Center and see several pieces of modern technology in Santander.

## 3.2. Publications and other dissemination activities

The following lists give an overview on selected dissemination activities sorted in different categories. In addition, several other formal and informal promotion activities were carried out that are not separately stated here (website articles, Facebook news etc.).

- **Scientific papers & conference proceedings**

- Dijk, Marc; Hommels, Anique; Heur, van, Bas; de Kraker, Joop; Kemp, René (2017) 'Roll it out!' or shape institutional change? Conceptualizing upscaling in an urban context, Paper presented at the International Sustainability Transitions (IST) conference 2017, Gothenburg
- Cellina, F., Simão, J., Mangili, F., Vermes, N., Granato, P. Outcomes of a smart city Living Lab prompting low-carbon mobility patterns by a mobile app. In: Proceedings of the 18th Swiss Transport Research Conference STRC 2018, Ascona, May 16-18, 2018.
- Cellina, F., Castri, R., Veiga Simão, J., Lessons from a mobility smart city Living Lab triggering new governance practices at the urban level. In Proceedings of "Breaking the Rules! Energy Transitions as Social Innovations International Conference", Berlin, June 2018.
- Dijk, M., de Kraker, J., Hommels, A. (2018). *Anticipating Constraints on Upscaling from Urban Innovation Experiments*. Sustainability 2018, 10(8), 2796, <https://doi.org/10.3390/su10082796>
- Cellina, F., Castri, R., Diethart, M., Höflechner, T., Da Schio, N., Dijk, M., Constraints on upscaling and social inclusion in smart city Living Lab experiments and ways to anticipate them: lessons from four "smarter" labs. In Open Living Lab Days 2018 Research and Innovation Conference

Proceedings 2018, European Network of Living Labs, ISBN (e-book): 9789082102789, DOI: 10.5281/zenodo.1434741.

- Vermes, N., Mangili, F., Cellina, F., Veiga Simão, J. Accurate transport mode detection in Smartphone-based mobility tracking for sustainable mobility, In Proceedings of the FTAL 2018 Conference on Industrial Applied Data Science, Lugano, Switzerland, 18-19 October 2018.
- Da Schio, N., de Geus, B., & Bouland, C. (2017). A brief guide to the air of Brussels. BSI BCO – Brussels Centre Observatory. <http://bco.bsi-brussels.be/a-brief-guide-to-the-air-of-brussels>
- da Schio, Nicola, Kobe Boussauw, and Joren Sansen, 2018, Accessibility versus Air Pollution: A Geography of Externalities in the Brussels Agglomeration. *Cities* 84: 178–189. <http://www.sciencedirect.com/science/article/pii/S0264275118302440>, accessed August 24, 2018.
- Da Schio, Nicola, 2018, Governing the Air: Knowledge, Infrastructures, Contestation. *In On Reproduction1 : Re-Imagining the Political Ecology of Urbanism* Pp. 57–61. Ghent, Belgium: University of Ghent. <https://www.ugent.be/ea/architectuur/en/uu-9th-edition-of-the-phd-seminar-in-urbanism-urbanization>.
- DA SCHIO Nicola & VAN HEUR Bas (forthcoming), Atmospheric resistance: dissident knowledges & practices around air pollution
- da Schio Nicola (forthcoming) Air in common: collective action for pollution measurement & control
- da Schio Nicola with Arnaud Dubois, Cécile Herr, Katia Xenophontos (@Lanomadesed), Lorenzo Glorie, Matthieu Coulonval, L’air d’un Bruxellois: self-portraits of personal exposure to air pollution, in ‘Resistance is in the Air’ Brussels 25-27 April 2019

#### • Other publications

- Dijk, Marc (2017) *Towards a typology of urban transition and non-transition pathways*. Paper prepared for JPI Urban Europe 'Urban Transitions Pathways Symposium' 27 October 2016, Brussels (available online)
- Cellina, F. (2017). *Bellidea. A living lab to co-design a smartphone app promoting sustainable individual mobility patterns*. *Presentazione di Bellidea alla Conferenza moblab 2017*. Bellinzona. Svizzera. – [Download](#)
- Cellina, F., Simão, J., Mangili, F., Vermes, N., Granato, P. (2018). *Outcomes of a smart city living lab prompting low-carbon mobility patterns by a mobile app*. In: Proceedings of the 18th Swiss Transport Research Conference STRC 2018, Ascona, May 16-18, 2018 – [Download](#)
- Cellina, F., Castri, R., Simão, J. (2018). *Lessons from a mobility smart city living lab triggering new governance practices at the urban level*. In: Proceedings of “Breaking the rules! Energy transitions and Social Innovations”, Berlin, June 14-15 2018. Abstract
- Cellina, F., Simão, J., Granato, P. (2018). *Co-designing a persuasive app promoting a less car-dependant community: introducing the Bellidea living lab*. In Book of abstracts Behave 2018 – The 5th European Conference on Behaviour and Energy Efficiency, Zurich, September 2018. Abstract
- Diethart, M. Höflechner, T. (2018). *Urban Labs als Trend für eine nachhaltige Stadtentwicklung*. In: GEOGRAZ – Grazer Mitteilungen der Geographie und Raumforschung. 63. 2018. 11-14.
- da Schio, Nicola, 2018, L’air d’un Bruxellois: Self-Portraits of Personal Exposure to Air Pollution. *Toxic News*. <https://toxicnews.org/2018/09/03/lair-dun-bruxellois-self-portraits-of-personal-exposure-to-air-pollution/>, accessed September 4, 2018.
- Blogpost by LaNomade Sedentaire <http://www.lanomadesedentaire.be/lair-dun-bruxellois-qualite-de-lair-bruxelles-bruxselair/>

- TAO AFI brochure  
[https://docs.wixstatic.com/ugd/ea3a84\\_53142a33c1ab452382e5524dc6059bb7.pdf](https://docs.wixstatic.com/ugd/ea3a84_53142a33c1ab452382e5524dc6059bb7.pdf)
  - BRAL & Cosmopolis 2019 Citizen Science - Collective Knowledge Empowers
  - BRAL.brussels, Citizen lobby een jaaractie voor propere lucht en de strijd gaat door,  
<https://bral.brussels/nl/artikel/citizen-lobby-een-jaar-actie-voor-propere-lucht-en-de-strijd-gaat-door>
  - BRAL.brussels, Mapping air quality brussels while cycling work  
<https://bral.brussels/nl/artikel/mapping-air-quality-brussels-while-cycling-work>
  - BRAL.brussels, Verslag meer dan gebakken lucht speeddate  
<https://bral.brussels/nl/artikel/verslag-meer-dan-gebakken-lucht-speeddate>
  - BRAL.brussels, how do we learn about air pollution <https://bral.brussels/nl/artikel/how-do-we-learn-about-air-pollution>
- **Key notes/pitches/Events**
    - Nicola da Schio, Round Table on Smart Citizen Air Quality meters, Brussels, 18 October 2016
    - Marc Dijk, (Invited) Pitch on ‘Upscaling’ for Smart-city expo Barcelona, 16 November 2016
    - Nicola da Schio, Bas van Heur, Improving Anticipation and Social Inclusion in Living Lab for Smart City Governance, in Experimenting with Urban Living Labs beyond Smart City-Regions, in Brussels, February 2017
    - Mario Diethart, Pitch on SmarterLabs project at “Mapping Univer©ities” Conference, Innsbruck, 23 February 2017
    - SmarterLabs Kick-off “How do we learn about Air Quality?”, Elzenhof, Brussels, 13 March 2017: seminar open to interested citizens during which the SmarterLabs project was presented, including presentations of citizen groups involved in the project.
    - Mario Diethart, Pitch on SmarterLabs project at “10 Jahre RCE Graz-Styria” Conference, Graz, 5 May 2017
    - Marc Dijk, (Invited) Pitch on ‘Upscaling’ for JPI Urban Europe conference Brussels, 30 May 2017
    - BRAL, Sixth Ministerial Conference on Environment and Health in Ostrava, Engagement on Air Quality crowdsensing and its empowerment potential for citizen communities, June 2017
    - Francesca Cellina, Bellidea incentives to reduce use of the private car. Moblab 2017 – International conference on sustainable mobility, industry and innovation, Bellinzona, 15 November 2017 (<http://www.moblab-conference.ch>)
    - BRAL, Towards Clean Air with Open Data. Public event on air quality stressing the role of open data in informing, raising awareness and mobilising citizens, Brussels, 3 March 2018
    - Friedrich Zimmermann, presentation at American Association of Geographers (AAG) Annual Conference, New Orleans, 11 April 2018
    - OpenLivingLab Days 2018, organized by European Network of Living Labs (EnoLL), 22 August 2018, Geneva
    - Marc Dijk, Annual International Conference 2018 of the Royal Geographical Society of the UK, Cardiff, 31 August 2018.
    - Mario Diethart, Petra Wlasak, SmarterLabs presentation in lecture for students at University of Graz, Graz, 19 November 2018
    - Marc Dijk, Verdus yearly conference, 29 November 2018, Amersfoort, Netherlands (<http://www.verdus.nl/congres>)
    - Mario Diethart, Petra Wlasak, SmarterLabs presentation in lecture for students at University of Graz, Graz, 21 January 2019

- Cellina, F., Castri, R., Veiga Simão, J. (2019) Co-designing a persuasive app promoting a less car-dependant community - Introducing the Bellidea Living Lab. Oral presentation at the Swiss Political Science Association (SPSA) Annual Conference 2019 & Dreilaendertagung, February, 14-16 2019, Zurich, Switzerland.
- Marc Dijk, Invited speaker in online Urban Lunch Talks #4 - Sustainable Land-use and Urban Infrastructures, a webinar series organized by JPI Urban Europe (<https://jpi-urbaneurope.eu/urban-lunch-talks-a-webinar-series>), February 2019
- Marc Dijk, Transportation Studies Unit, Oxford University (lunch seminar series), 4 March 2019
- VeloMai: air quality 04-06-18, <https://webcast.ec.europa.eu/velomai-air-quality-04-06-18>
- Irrespirabile, l'air de Bruxelles... et celui de Woluwe ?, mercredi 13 juin 2018
- WHO conference (13–15.06.2017). BRAL has been invited by Health & Environment Alliance to WHO Europe Sixth Ministerial Conference on Environment and Health in Ostrava, speaking engagement on Air Quality crowdsensing and it's empowerment potential for citizen communities
- Towards Clean Air with Open data (03-03-2018). for open data day, Open Knowledge Belgium organized a public event on air quality stressing the role of open data in informing, raising awareness and mobilising citizens. BRAL presented SmarterLabs as one of the approaches.

- **Posters**

- Mario Diethart. SmarterLabs – Improving Anticipation and Social Inclusion in Living Labs for Smart City Governance. Mapping Univer@ities Conference, Innsbruck, 23 February 2017
- Francesca Cellina, Roman Rudel, Nikolett Kovacs, Roberta Castri, Pasquale Granato SUPSI. A living lab to co-design a smartphone app promoting sustainable individual mobility patterns. 2017 SCCER Mobility Annual Conference, Zurich, 15 September 2017 ([http://sccer-mobility.ch/p\\_supporting\\_measures/Annual-Conferences/AC2017](http://sccer-mobility.ch/p_supporting_measures/Annual-Conferences/AC2017))
- Friedrich Zimmermann. SmarterLabs – Improving Anticipation and Social Inclusion in Living Labs for Smart City Governance. American Association of Geographers (AAG) Annual Conference, New Orleans, 11 April 2018
- Cellina, F., Veiga Simão, J., Mangili, F., Vermes, N., Granato, P. Outcomes of a smart city Living Lab prompting low-carbon mobility patterns by a mobile app. Poster presented at the SCCER Mobility 2018 conference, Zurich, Switzerland, September, 11 2018.
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- **Press**

- Articolo sulla newsletter di December 2016 delle Aziende Municipalizzate Bellinzona (AMB), 1 December 2016 – [Download](#)
- Articolo su La Regione, 12 December 2016 – [Download](#)
- Articolo sul Giornale del Popolo, 25 gennaio 2017 – Leggi l'articolo
- Articolo sul Ticinonews, 25 January 2017 – Leggi l'articolo
- Articolo su 20 minuti, 26 January 2017 – [Download](#)
- Articolo su La Regione, 26 January 2017 – [Download](#)
- Press release, January 2017 – [Download](#)
- Flyer, January 2017 – [Download](#)
- Intervista con Francesca Cellina su Rete Uno alle Cronache della Svizzera italiana, 29 January 2017 – Ascolta l'intervento
- Intervista con Francesca Cellina nella trasmissione Modem di Rete Uno, 2 February 2017 – Ascolta l'intervento



- Articolo su La Turrita, 17 February 2017 – Leggi l’articolo
- Presso conference, April 2018 – Intervento Municipale Simone Gianini, Intervento Direttore SUPSI Franco Gervasoni
- Flyer, April 2018 – [Download](#)
- Poster, April 2018 – [Download](#)
- Press release, April 2018 – Comunicato stampa
- Tramissione La consulenza su Rete Uno, con Simone Gianini, Claudio Sabbadini e Francesca Cellina, 9 May 2018 – Ascolta l’intervento
- 01-AirCasters: Patricia <https://vimeo.com/322035876>
- 02-AirCasters: Rajaa <https://vimeo.com/322035590>
- 03-AirCasters: Katia <https://vimeo.com/322034031>
- 04-AirCasters: Olivier K <https://vimeo.com/321473747>
- 05-AirCasters: Olivier D <https://vimeo.com/322278311>
- 06-Summary <https://vimeo.com/323207342>
- <https://www.bruzz.be/milieu/eerste-staten-generaal-over-brusselse-luchtkwaliteit-van-start-2019-04-25>
- <https://www.levif.be/actualite/belgique/la-qualite-de-l-air-dans-la-capitale-au-coeur-d-un-colloque-de-trois-jours/article-news-1127769.html>
- [https://www.lavenir.net/cnt/dmf20190426\\_01327279/la-qualite-de-l-air-est-une-urgence-politique-un-colloque-ce-week-end](https://www.lavenir.net/cnt/dmf20190426_01327279/la-qualite-de-l-air-est-une-urgence-politique-un-colloque-ce-week-end)
- <https://www.sudinfo.be/id115175/article/2019-04-25/la-qualite-de-lair-dans-la-capitale-au-coeur-dun-colloque-de-trois-jours>
- [https://www.rtb.be/info/regions/detail\\_la-qualite-de-l-air-a-bruxelles-un-probleme-de-sante-publique-largement-sous-estime?id=10205400](https://www.rtb.be/info/regions/detail_la-qualite-de-l-air-a-bruxelles-un-probleme-de-sante-publique-largement-sous-estime?id=10205400)
- <https://www.lacapitale.be/377374/article/2019-04-19/saint-gilles-trois-jours-de-debat-sur-la-qualite-de-lair>
- Alter échos n. 438, 30 January 2017, Qualité de l’air: et moi, je suis pollué?
- DH.be 17 June 2017 – Une parade de poussettes pour dénoncer la qualité de l’air à Bruxelles
- Wie fijn stof meet, heeft invloed, DS 28 February 2018
- Alterechos.be 29 May 2018 – Mini Brussel’Air: nouvelles sentinelles pour mesurer l’air à Bruxelles
- 16 September 2018 - Journey sans voitures - Katia speaks of Aircasting on RTBF
- 6/4 news Broadcasted in En en Fr, focus op Brussels luchtproblematiek met interview Joeri van Greenpeace <http://www.euronews.com/2018/04/06/welcome-to-brussels-one-of-europe-s-most-polluted-cities>
- 6/4 news: focus sur aircasting brussels et le questionnement des citoyens ☒
- <https://bx1.be/bruxelles-ville/marolles-citoyens-mesurent-qualite-de-lair-quils-respirent/>
- Une rue avec école sans voiture à Saint-Josse: "C'était devenu vraiment dangereux" BRUZZ
- Article dans la capitale <http://www.lacapitale.be/246748/article/2018-06-22/forest-action-devant-les-ecoles-pour-la-qualite-de-lair>



## 4. Final Remarks

We believe that for the SmarterLabs project to be considered successful widespread and target-oriented dissemination activities were important. Besides promotion about the project itself, special attention was dedicated to its outcomes. It was our ambition to produce outcomes that are accessible and can be applied by various stakeholders in real life, respectively in Living Labs, also after the project's ending. The "guidelines on how to anticipate constraints on upscaling inclusive urban Living Lab experiments" (in a full and a short version) and the SmarterLabs video fulfill these criteria. Both were designed with special attention to format and graphical design. The guidelines use a simple language and are presented in a clear layout that is enriched with cartoons. To ensure easy access and satisfy different needs all outcomes are available as downloads as well as directly online.

We are convinced that the SmarterLabs project delivered tools that help to facilitate "smarter" Living Labs. At the same time – as also mentioned by the external advisors – there is a need for continuous research on the topic which might be covered by future projects.