



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 837498.



SONNET - SOCIAL INNOVATION IN ENERGY TRANSITIONS

Co-creating a rich understanding of the diversity, processes, contributions, success and future potentials of social innovation in the energy sector

D4.1: Report on transdisciplinary research protocol for six co-creating SIE city labs

Project Coordinator: Fraunhofer ISI

Work Package: 4

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Version: 1.0

March 2020



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GA#: 837498

Funding type: RIA

Deliverable number (relative in WP)	D12 (D4.1)
Deliverable name:	Report on transdisciplinary research protocol for six co-creating SIE city labs
WP / WP number:	4
Delivery due date:	31/03/2020
Actual date of submission:	31/03/2020
Dissemination level:	Public
Lead beneficiary:	Akademia Leona Koźmińskiego (ALK)
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11	City of Grenoble	GREN	FR	
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Executive Summary

The transdisciplinary research protocol for SONNET's city labs aims to propose **a shared understanding of the role and methodology of SONNET's city labs** and to provide SONNET cities and researchers with guidelines for how to conduct a city lab that at the same time answers local needs and meets overall SONNET objectives. The Protocol offers a philosophy of conduct that we believe would allow to exploit to the fullest the contribution of city labs to SONNET's research objectives and ambitions.

The Protocol addresses the **specific dual role of the city labs** in WP4 and in SONNET. On the one hand, they are perceived as an experimental space for social innovations in energy to unfold. On the other hand, city labs themselves are seen as SIE, novel in diverse ways through doing, thinking about and organizing towards energy transitions.

The protocol addresses two major groups. The first group consists of practitioners, in our case city representatives, who are leaders of the SONNET city labs, and responsible for their realization. The second group consists of researchers, in our case the academic partners of SONNET's city labs, whose focus is on analysing how SIE are unfolding in and through the SONNET city labs. The success of the city labs – conducted in WP4 of SONNET – depends on the cooperation of practitioners and academics.

This protocol is organized as follows. **Section 2 City labs in SONNET** defines city labs as a transdisciplinary research method. It focuses on main definitions, presents city labs in the context of SONNET, and illustrates the connection of the six city labs with the overall SONNET objectives and research questions. It defines different roles that academic and non-academic partners play in the collaborative research process. Furthermore, it outlines the variety of city labs planned in each of the six SONNET cities, as well as linkages to the research activities conducted in the other WPs within SONNET. **Section 3 SONNET city labs – stages of the process** depicts four stages of the city lab process and reflects on objectives and methods recommended to be used in each of the stages. Since the SONNET cities are diverse and use city labs to address different energy related issues, most of these elements are treated as a portfolio of recommendations, while only some of them are mandatory to ensure coherence and comparability. **Section 4 City labs as a process of learning** presents city labs as an opportunity for learning. The process of learning takes place on the individual level of labs' participants and on the organizational level, as processes and positions are created to implement collaborative processes of SIE development. We present reflections on the possibilities to extend learning beyond the city labs. **Section 5 City labs – common challenges and ways of addressing them** discusses some of the most common challenges of the city labs, as well as suggestions on how to tackle them. Finally, **Section 6 Organization and management of the process** is devoted to organizational aspects of WP4, such as distribution of responsibilities and milestones of the organizational process (deliverables, events, etc).

There are six appendixes to the protocol, consisting of documents templates and checklists to be used by city partners and academic partners along the SONNET city lab process.



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1. INTRODUCTION

This transdisciplinary research protocol for SIE city labs aims to propose **a shared understanding of city labs' role and methodology for SONNET** and to provide SONNET cities and researchers with guidelines for how to conduct a city lab that at the same time answers local needs and meets overall SONNET objectives. Given an open, processual and experimental nature of city labs methodology, as well as diversity of SONNET partner cities, their contexts and challenges they face, this Protocol offers a philosophy of conduct, that we believe would allow to exploit to the fullest city labs contributions to SONNET research objectives and ambitions, rather than concrete instructions on city labs realization.

City labs play a specific, dual role in WP4 and in SONNET. On the one hand, they are perceived as an experimental space for social innovations in energy to unfold. On the other hand, city labs themselves are seen as SIE, novel in diverse ways through doing, thinking about and organizing towards energy transitions. While creating methodological challenges, this duality also offers valuable opportunities for research exploration and practical learning. It is important that all the partners involved in WP4 share this understanding of SONNET city labs. There are two major groups of this Protocol's addressees. First, there are practitioners, city representatives who are leaders of the SONNET city labs, responsible for their realization. The second group consists of researchers, city labs academic partners, whose focus is on analysis of SIE unfolding in and through the SONNET city labs. The success of WP4 with its city labs depends on the cooperation of practitioners and academics.

This Protocol is organized as follows. **Section 2 City labs in SONNET** defines city labs as a transdisciplinary research method. It focuses on main definitions, presents city labs in the context of SONNET, and illustrates city labs' connection to overall SONNET objectives and research questions. It defines different roles that academic and non-academic partners play in the collaborative research processes. Furthermore, it outlines the variety of city labs planned in each of six SONNET cities and, as well as linkages to the research activities conducted in other WPs. **Section 3 SONNET city labs – stages of the process** depicts four stages of the city lab process and reflects on objectives and methods recommended to be used in each of the stages. Since SONNET cities are diverse and use city labs to address different energy related issues, most of these elements are treated as a portfolio of recommendations, while only some of them are mandatory to ensure coherence and comparability of processes. **Section 4 City labs as a process of learning** presents city labs as an opportunity for learning. The process of learning takes place on the individual level of labs' participants and on the organizational level, as processes and positions are created to implement collaborative processes of SIE development. We present reflections on the possibilities to extend learning beyond city labs. **Section 5 City labs – common challenges and ways of addressing them** discusses some of the most common challenges of the city labs, as well as suggestions on how to tackle them. Finally, **Section 6 Organization and management of the process** is devoted to organizational aspects of WP4, such as distribution of responsibilities and milestones of the organizational process (deliverables, events, etc).



Three appendices consist of: the template for a final city specific report (**Appendix 1**), “checklist” of questions to help monitoring the city lab process and preparation of the reports (**Appendix 2**), a scheme for updates on the cities’ processes developments to be submitted for regular City Council Calls (**Appendix 3**), a list of documents to be submitted to WP-lead in English across the city lab process (**Appendix 4**), templates for SONNET city labs events, participant list and informed consent form (**Appendix 5**), and EC summary requirements (**Appendix 6**).



2. CITY LABS IN SONNET

2.1. Overview of transdisciplinary labs

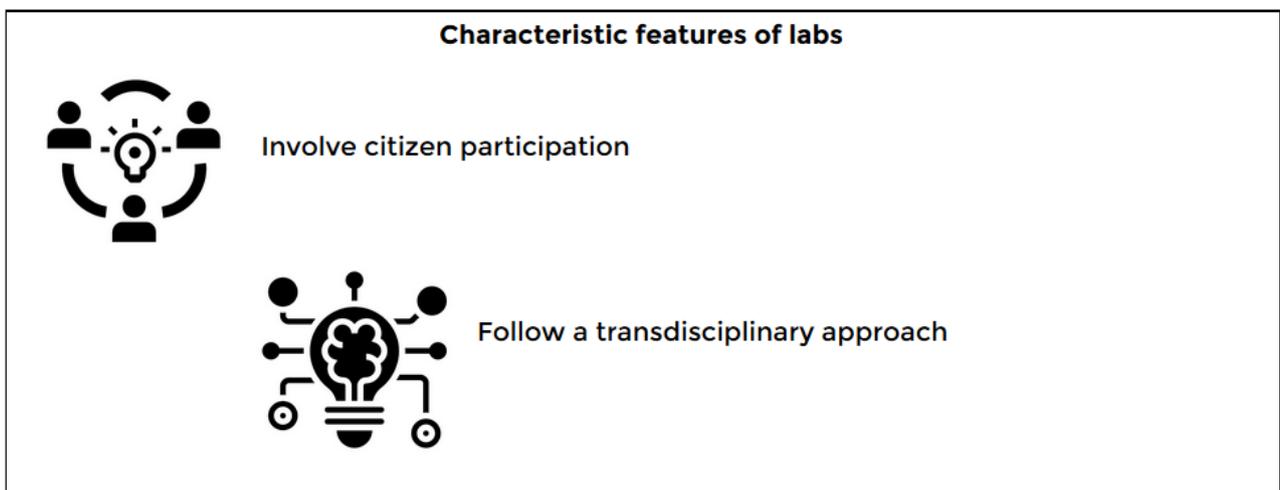
The SONNET SIE city lab approach draws on a dynamic family of research settings, which includes living laboratories (Voytenko et al., 2016), real world laboratories (e.g. Renn, 2018), urban (sustainability) transition labs (Nevens et al., 2013; Forrest and Wiek, 2015) as well as social innovation labs (Seyfang and Longhurst, 2013). These approaches share a focus on using **experiments in real-world settings to understand and shape societal transformation to contribute to solving sustainability challenges**. Often such labs operate in a geographical context (e.g. city) where they integrate concurrent research and innovation processes within a public-private-people partnership. Box 1 presents diverse lab approaches (and their definitions) which are particularly relevant for SONNET.

- **City Labs** are participatory platforms in which local governments and other stakeholders jointly are involved and learn about new ways of dealing with urban challenges. Often, they have been initiated and are at least partly funded by departments of local governments.
- **Living Labs** represent an approach to user-centred innovation by engaging users actively as contributors to the creative and evaluative processes in innovation and development.
- **Social Innovation Labs** (or Social Living Labs) function as vehicle for systemic change by experimenting with social innovations. They shift away from technology and efficiency centred approaches towards more people-oriented strategies for dealing with urban challenges in the field of social and planning issues.
- **Gov Labs** aim to strengthen the ability of institutions and people to work more transparently and collaboratively to make better decisions and solve public problems. The goal is to deepen our understanding of ways to govern more effectively and legitimately, using new advances in technology and science.
- **Innovation Labs** are cross-disciplinary platforms designed to support a range of stakeholders, to foster innovation and entrepreneurship. They usually focus on networking, consulting and qualification services.
- **Policy Labs** are non-partisan platforms focusing on multi-perspective dialogues, which actively engage in projects for shaping societal developments. They often experiment with new policy techniques and design services, using data analytics and new digital tools.
- **Reality Labs** (or real-world laboratories) are testbeds where solutions and concrete implementations are tested under real conditions. This makes places for transdisciplinary research in order to experiment with potential solutions to sustainability challenges.
- **Design Labs** is a generic name, covering various forms, like Gov Labs, Innovation Labs, Policy Labs, and DESIS Labs (Design for Social Innovation and Sustainability). They challenge established practices, organizational entities and procedures of innovation. They commonly apply design-oriented approaches, focus on urban sustainability, and engage in governance-related experimentation.

Box 1: The family of labs

Source: adapted from: Scholl et al., 2017

It is not a definitive list, rather it is to illustrate that labs have several characteristic features (adapted from: Scholl et al., 2017). They usually involve **citizen participation**, not only as observed subjects but also as a source of creation. They often build on the tradition of action research in the social sciences, applying **participatory methods and/or following transdisciplinary approaches** (e.g. Zscheischler et al., 2018). According to Lang et al. (2012), ‘*transdisciplinarity is a reflexive, integrative, method-driven scientific principle aiming at the solution or transition of societal problems (...) by differentiating and integrating knowledge from various scientific and societal bodies of knowledge*’ (Lang et al., 2012, p. 27). In short, transdisciplinary work is understood as collaborative work between science and practice.

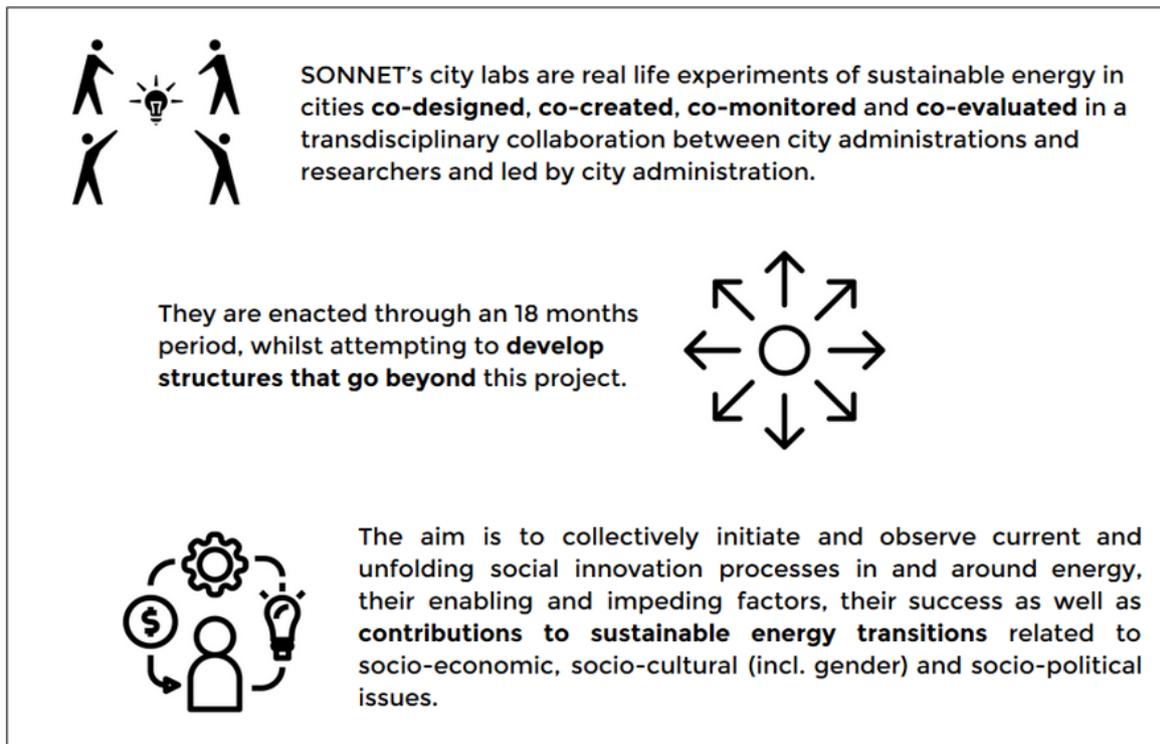


Box 2: Characteristic features of labs

SONNET’s understanding of city labs presents a mixture of features mentioned above. SONNET’s city labs are initiated and led by local governments, which fits the definition of city lab above. The SONNET project focuses on social aspects of energy transitions (like Social Innovation Labs). It emphasizes the development of novel governance arrangements and multi perspective dialogue (like Policy and Gov Labs).

2.2. SONNET city labs

Drawing on characteristics of lab-like approaches, each SONNET city hosts one transdisciplinary city lab. These labs are mutually beneficial in terms of producing knowledge, practices and experience that are both scientifically and socially relevant for social Innovation in the energy sector (SIE) and sustainable energy. Each city lab addresses a specific city aim towards sustainable energy, which fits the research interest in SIE of SONNET. Together, the SONNET city labs aim to be novel in diverse ways through doing, thinking about and organising energy differently and developing governance structures, service models, financial structures, business models and technical applications.



Box 3: SONNET's city lab definition

The process of co-creation involves transdisciplinary learning and knowledge production, as well as critical reflection on the means and ends of SIE governance. In this sense, SONNET's city labs build **capacity for transformative change** within the six SONNET cities involved.

Each SONNET city lab follows four distinct phases to provide methodological coherence (Nevens et al., 2013):

1. setting the stage and challenge structuring (incl. team formation, actor and system analysis),
2. agenda and goal setting, envisioning and determining possible major pathways,
3. experimenting (incl. network building), and
4. evaluation.

The SONNET city labs and their real-life experiments are evaluated on an ongoing basis using mixed methods, engaging process participants (e.g. by interviewing SIE actors) and academia-driven ones (e.g. participant observation conducted by the academic partners). The evaluation investigates questions such as what the expected goals are and if they have been achieved, who is able to participate (or not, incl. gender aspects), or how many resources are required to implement the experiment. Overall, the SONNET city lab approach thereby aims to obtain in-depth insights into the complex dynamics of SIE processes, with the intention of influencing and reflecting upon changes to social relations, institutions and practices as they unfold and how these can be supported by policy initiatives at multiple levels (SONNET GA, p. 16-17).

2.3. Labs and other SONNET research activities

SONNET empirically investigates social Innovation in the energy sector (SIE) by combining qualitative (WP2, WP3, WP4, WP6) and quantitative data (WP5, WP6) to enhance the robustness and validity of results. The empirical work serves different research objectives and therefore applies different methods and focuses on different geographical scales. In-depth qualitative work provides a rich understanding regarding enabling and impeding conditions as well as success and contributions of SIE (WP 2, 3, 4, 6). WP2 provides analysis of governance patterns, policy networks, power dynamics and policy mixes for SIE. WP3 relies on case studies of diverse SIE ‘ecosystems’ (fields). WP6 develops and applies evaluation tools to understand different perceptions of success of SIE-initiatives. Quantitative approaches offer the possibility to get a representative overview of individual citizens’ perceptions of SIE, as well as to explain what factors shape the attitudes towards SIE (WP 5).

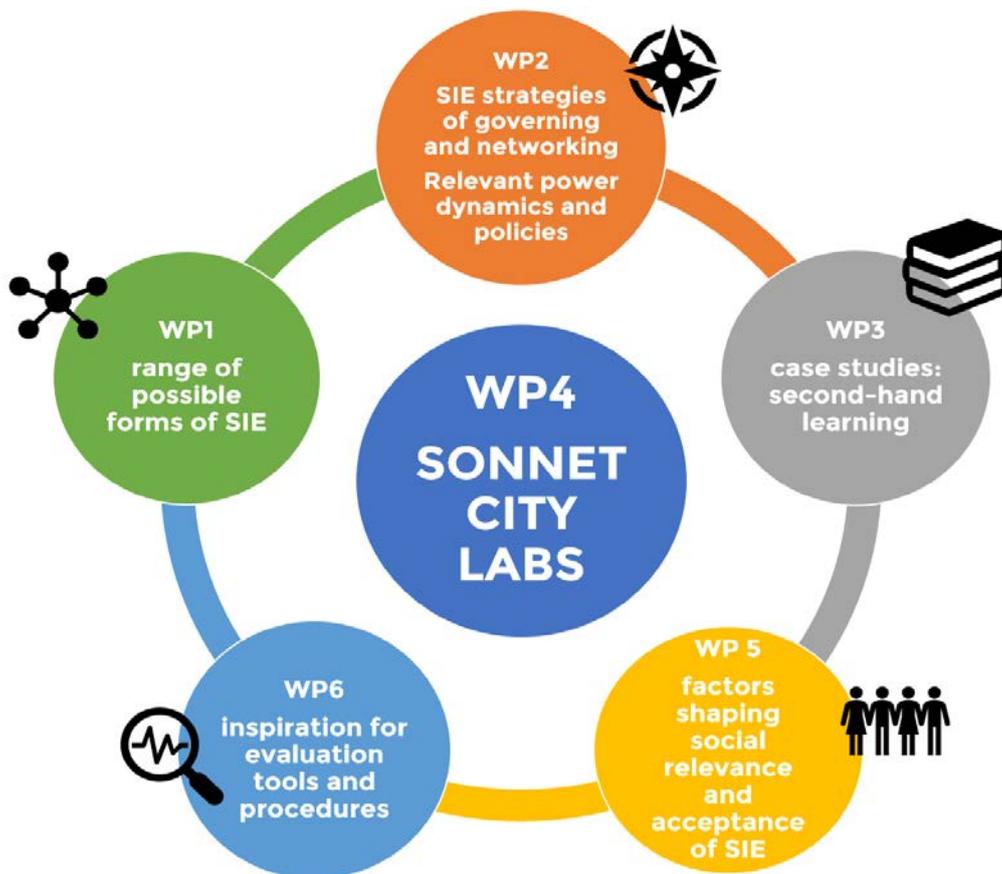


Figure 1: SONNET city labs and other SONNET WPs

An important assumption of SONNET is that work packages supplement and inform each other. WP4’s city labs are co-created innovative endeavours, which develop a range of SIE types, such as creating novel business and services models, investment activities and governance



arrangements whilst tackling issues such as energy poverty and energy efficiency. Labs deliver insights into the processes of 'unfolding' SIE, including enabling and impeding conditions. This transdisciplinary work shall be informed by all other WPs. For example, WP1 delivers an overview of the SIE landscape and informs city labs about the range of possible forms of SIE. WP2 delivers insights about possible strategies of governing and networking for SIE, and about significance of power dynamics and policies relevant for SIE processes. WP3 provides contextual descriptions of cases embedded in the realities of each country/ region/ city and therefore offers a possibility for second-hand learning (learning from experiences of others) when designing and conducting different stages of the city labs. From the perspective of SONNET city labs, WP 5 delivers strategic information about factors shaping social relevance and acceptance of SIE, while WP6 may inspire reflection on evaluation tools and procedures.

Ideally, the relationship between different work packages should have a form of a feedback loop, because city labs as such offer an opportunity to test in practice ideas and hypotheses developed within each of remaining WPs. Effective use of these connections poses a substantial coordination challenge. SONNET has secured several management tools to enhance dialogue between WPs (see deliverable D8.2: Project Management Guide). To harness the above-mentioned links, WP4 is led by an academic partner (Kozminski University) with a good overview of related project activities across WPs, thereby facilitating coordination. Each city lab is led by SONNET cities with the support of academic partners. Since academic partners are present in other WPs as well (to a larger extent than city partners), they have a special role in the coordination process (also see section 2.5 Transdisciplinarity: roles of academics vs roles of practitioners).

2.4. Labs and overall SONNET objectives

SONNET works with citizens and other SIE stakeholders in each urban area through transdisciplinary city labs. These city labs are co-created between city administrations and academics, and address societal issues related to energy transitions in each of the six SONNET cities. For SONNET, it is vital to understand stakeholder needs and motivations, as well as how these needs can be met by SIE. **It is imperative that stakeholders are involved as active, competent partners and domain experts.** Their involvement and influence in SONNET's city labs is essential (SONNET GA, p. 17-18).

SONNET co-creates SIE activities and, in the process, encourages sharing knowledge and learning between city partners, stakeholders and academic partners. Hence, with its city labs SONNET itself aims at providing an innovative example of institutional work needed to enhance SIE-initiatives and to reveal their potential for energy transitions. **The implication is that the city lab approach moves from a strict research and innovation action to piloting and, potentially, demonstration as well** (SONNET GA, p. 12).

Ideally, labs become a niche, a place for experiments offering the freedom to try out new things, without putting at risk the daily operations of the municipal organization, in case of failure (Scholl et al., 2017). Experimenting involves failing, while failing is an opportunity for learning as well. This



is why space for failure should be negotiated in each of the lab processes. Within SONNET, a space for failure is understood as providing context and time for the iterative process of exercising and correcting various activities, including experimenting and testing social arrangements, leading directly towards and/or facilitating sustainable energy transitions.

WP4 and its transdisciplinary city labs aim to contribute to answering the overall SONNET research questions. The **main research question** for WP4 is the following:

How, to what extent and under which enabling conditions may city labs result in new breakthroughs or successfully help to overcome sustainable energy transition barriers, such as limited citizen engagement or slow adoption of new technologies?

To support the inquiry, two types of supportive research questions can be identified.

The first type of supportive research questions addresses the city lab process itself:

- *Which enabling and impeding conditions is the city lab faced with, that aid (or not) its survival and development over time?*
- *How do these conditions depend on the local, regional and national energy systems and dominant institutions that the city lab is embedded in?*

(e.g. existing technologies, regulations and other policies, infrastructures, financial/organizational models, routines, practices, dominant public discourses and social norms on how to consume and produce energy)

The second type of supportive research questions addresses the results of city labs:

- *In what way does the city lab contribute to making energy more secure, affordable and sustainable?*
- *Does it lead to greater competitiveness and if so, how?*

SONNET city labs, as spaces for development of social innovations in energy, as well as examples of SIE themselves, may contribute to exploration to the following cross cutting issues:



Table 1: Contributions of city labs

	CONTRIBUTION THROUGH PROCESS AND RESULTS OF THE CITY LABS	CONTRIBUTION THROUGH RESULTS OF THE CITY LABS
Socio-economic contributions: What kinds of alternative/novel economic practices and other means do SIE-initiatives create to address, e.g. issues of energy affordability and justice? (e.g. novel business and service models, novel ownership models, novel investment strategies)	○	☑
Socio-cultural contributions: In what way and by what means do SIE-initiatives aim to create, e.g. greater acceptance of sustainable energy transitions and enhance gender equality? (e.g. novel narratives of how to produce energy, novel routines of how to consume energy, novel ways of thinking about gender relations)	☑	☑
Socio-political contributions: What kind of alternative/novel governance arrangements and other means do SIE-initiatives create to address, e.g. issues of citizen participation, inclusion and power? (e.g. novel or enhanced collaborative governance arrangements, SIE actor networks for collective advocacy activities, decision-making processes and structures within SIE-initiatives that can be made use of more widely)	☑	☑

The processes and results of SONNET’s city labs can be analysed regarding all three types of cross-cutting contributions. However, while novel decision-making processes, as well as e.g. novel narratives and novel ways of thinking about gender relations, are to be exercised during lab processes and may influence participants’ attitudes and behaviours along the way, the socio-economic contributions, such as novel business models and novel investment strategies, being direct results of the lab, would more likely become contributive further in the process and after the lab ends. However, it is worth acknowledging that all three types of contributions are intertwined and mutually referential, so the typology presented in Table 1 provides a conceptual outline rather than an empirical depiction of the areas of impact.

2.5. Transdisciplinarity: roles of academics vs roles of practitioners

The crucial feature of the SONNET city labs, conditioning their role within the whole SONNET project, is their **dual nature**. On the one hand, SONNET city labs are considered the space for D4.1 | Transdisciplinary Research Protocol



development of social innovations in energy through transdisciplinary and co-creative processes of experimentation. On the other hand, SONNET city labs are considered SIE themselves, being “novel in diverse ways through doing, thinking about and organising energy differently and developing governance structures, service models, financial structures, business models and technical applications.” (SONNET GA, p. 18). This duality poses a major challenge for the methodology guiding the realization and evaluation of the city labs, because the dual nature of the SONNET city labs is to be mirrored by a dual character of the research. That should be acknowledged from the beginning of the city lab process, ensuring that relevant data necessary for both types of analysis is collected. Hence, the duality of SONNET city labs should be discussed between academic partners and city partners, and a shared understanding should be established. This initial effort is worthy, because the dual nature of the SONNET city labs provides a key contribution to the project’s transdisciplinary research ambitions.

This duality is addressed in the **task leadership responsibilities** assigned in WP4. Each SONNET city lab is led by the hosting city representatives in cooperation with the country specific academic partner. Although the SONNET cities are the primary leaders of the city labs, the academic partners act as co-leader and shall be actively involved at all stages of the process (see section 6.1 Distribution of responsibilities; with the exception of SONNET’s associated partner Basel). The role of the academic partners is to support the realization of its respective local city lab, to monitor (and possibly conduct) its ongoing and outcomes evaluation, as well as to contribute to the overall conceptualization and analysis of the city labs as SIE. An active role of the academic partners is also necessary for exercising transdisciplinary learning, which is an important objective of the city lab methodology itself, and of the SONNET project in general.

It is imperative that the **roles and task division between a city and its academic partner are explicitly discussed and decided** together by both partners at the very beginning of the process. A shared understanding of the dual nature of each SONNET city lab is necessary. This should display in the specific activities design and in ongoing evaluation throughout the process. It should also be acknowledged and justified in the final city-specific reports (see Appendix 1).

It is recommended that the partners remain in **contact on a regular basis** along all stages of the city lab process (see section 3 SONNET city labs – stages of the process). As a co-creative process, the city lab creates a space for the exchange of knowledge and experiences, also in more informal ways. Although a division of tasks shall be decided, it would be valuable to practice mutual consultancy and communication also between formally scheduled reflexive sessions (see section 3.4 Evaluation). Acknowledging that different partners may adapt the distribution of their responsibilities according to their preferences and idiosyncrasies of their city lab, the WP4-lead suggests the broad description of roles of city partners and academic partners as following:

City partners:

- conducting and coordinating their SONNET city lab during all stages of the process, and leading their city lab team (see section 3 SONNET city labs – stages of the process)
- communication with the WP4-lead (see section 6.2)
- organizing opening and closing events (see section 6.3)
- implementing ethical guidelines, including data gathering and storage (see the ethics deliverables (particularly D9.1: H-Requirement No.1) and Appendix 5)
- preparing brief updates for City Council (CiC) calls (see section 3.4 Evaluation) and participating in these CiC-calls
- leading the ongoing evaluation process, particularly: organizing reflexive sessions and participants feedback sessions, as well as collecting data and preparing materials required for evaluation (see section 3.4, e.g. minutes from feedback sessions, feedback forms, materials for reflexive sessions, etc.)
- writing the final deliverable: city-specific final report (deliverable D4.2-D4.7; as outlined in Appendix 1)
- review the first draft of the conceptualization of city labs as SIE (deliverable D4.8, based on all six SONNET city labs)

Academic partners:

- consulting their local city partner in planning and conducting their SONNET city lab at all stages of the process, and participating in the city lab team
- participating in calls of the City Council (CiC-calls)
- monitoring and consulting the ongoing evaluation process (particularly: participating in reflexive sessions, see section 3.4 Evaluation, and developing recommendations for further stages)
- conducting outcomes evaluation based on the results of the ongoing evaluation (see section 3.4.2)
- preparing an evaluation report on their city lab (an internal SONNET working document)
- providing support and feedback on the city-specific final report prepared by their local city partner
- review the first draft of the conceptualization of city labs as SIE (deliverable D4.8, based on all six SONNET city labs)

Box 4: Description of roles of city partners and academic partners

2.6. SONNET cities: different foci and goals of the labs

Six transdisciplinary SONNET city labs will be developed simultaneously in different locations: Mannheim in Germany, Antwerp in Belgium, Grenoble in France, Bristol in the UK, Warsaw in Poland, and Basel in Switzerland. All these labs will have their own goals and trajectories of development. They will be all embedded in respective city strategies and policies, but to varying degrees – e.g. some of them will be developed as parts of already existing city projects, while others will address relatively new challenges. However, despite their differences, it is particularly important to regularly exchange experiences between all SONNET city labs along their



development. To this end, it is needed to seek arenas of mutual concern and potential dimensions of fruitful cooperation between SONNET city labs. One possible way of grouping city labs is pairing them in accordance with their main foci of operations:

- Socio-political approach (Mannheim and Warsaw) with focus on alternative governance arrangements, issues of citizen participation, inclusion and power;
- Socio-economic approach (Antwerp and Bristol) with focus on alternative economic practices, issues of energy affordability and justice;
- Socio-cultural approach (Grenoble and Basel) with focus on social acceptance of sustainable energy transitions, gender relations, novel narratives and routines of how to produce and consume energy.

Below is a brief description of all six SONNET city labs regarding their goals and crucial research opportunities (sources: <https://sonnet-energy.eu/citylabs>; SONNET GA, p. 15-16).

Mannheim city lab research led by the City of Mannheim and co-led by Fraunhofer ISI

The main agency responsible for the city lab: Climate Protection Unit, City of Mannheim

Goal: Developing new governance structures and practices that enable social innovation in the energy sector in the Neckarstadt-West neighbourhood. Creating integrated and participatory planning approaches for the most important energy-consuming sectors (particularly electricity, heat, transport and energy efficiency).

Research opportunities: Studying more difficult preconditions, i.e. being connected to an industry intensive region for sustainable energy transition. Analysing SIE within a city that is committed to sustainable energy and is active in developing citizen engagement and social innovation activities.

Warsaw city lab research led by the City of Warsaw and co-led by Kozminski University

The main agency responsible for the city lab: Air Protection and Climate Policy Department, City of Warsaw

Goal: Testing new co-creation governance schemes to make energy use better understood and more efficient among users. Focusing on vulnerable households and public buildings through the lens of energy consumption patterns.

Research opportunities: Developing an understanding of the role of the city administration in the relation to engaging with diverse SIE actors, because of strong support from the city administration. With its targets of carbon reduction, the city has a potential to become a model for other cities functioning in carbon intensive national contexts.

Antwerp city lab research led by the City of Antwerp and co-led by DRIFT

The main agency responsible for the city lab: Energy and Environment Department, City of Antwerp

Goal: Harnessing social innovation to ensure an inclusive energy transition where no one is left behind. The city lab is a part of the broader participatory project Stadslab2050.

Research opportunities: Studying more difficult preconditions, i.e. being connected to an industry-intensive harbour for sustainable energy transition. Analysing SIE within a city that has innovative social innovation laboratories.



Bristol city lab research led by the City of Bristol and co-led by SPRU

The main agency responsible for the city lab: Bristol City Council

Goal: Exploring the feasibility of crowdfunding as a means of raising capital to install energy efficiency measures within community buildings.

Research opportunities: Studying strong links between city administration and diverse SIE initiatives and bottom-up, smart city developments relevant to SIE processes, success and contributions.

Grenoble city lab research led by the City of Grenoble and co-led by GEM

The main agency responsible for the city lab: Sustainable City Department, City of Grenoble

Goal: Developing novel service models to empower energy users to change their daily energy practices. Creating an environment in which behavioural shifts towards “energy sobriety” are both attractive and attainable.

Research opportunities: studying existing social innovation laboratories linked to the city administration and diverse SIE-initiatives that conduct energy projects to examine how the labs and the diversity of SIE create enabling conditions for SIE so that they are able to contribute to sustainable energy transitions.

Basel city lab research led by ZHAW in collaboration with the City of Basel

The main agency responsible for the city lab: ZHAW School of Management and Law, Center for Energy and the Environment

Goals: Testing a personal energy tracker app Enerjoy to track an individual’s CO₂-footprint. Building a community of highly motivated and environmentally conscious users.

Research opportunities: Testing, evaluating and establishing SIE with multiple actors who are already engaged in existing real-life sustainability laboratories with emphasis on energy research.



3. SONNET CITY LABS – STAGES OF THE PROCESS

SONNET city labs are collaborative processes based on co-creation and learning. In this protocol, we focus on the processual character of SONNET’s city labs methodology. Due to the variety of contexts and objectives of SONNET city labs taking place in six different European cities, we intentionally keep the description of a process relatively open, allowing each city lab to develop its own specific ways and methods. However, a certain shared frame, designed to allow more complex and comparative analysis, is to be maintained by all SONNET city labs.

Table 2: SONNET city labs leads and co-leads

City lab	Partner	Lead (Name)	Co-Lead (Name)	Co-Lead (Academic Partner)
Mannheim city lab	MANN	Agnes Schönfelder	Karoline Rogge Heike Brugger	ISI
Antwerp city lab	ANTW	Jana Deforche	Julia Wittmayer	DRIFT
Bristol city lab	BRIS	Richard Lowe	Sabine Hielscher	UoS
Grenoble city lab	GREN	Fabien Dupré	Carine Sebi	GEM
Warsaw city lab	WARS	Dominik Kołodziejczyk	Agata Dembek	ALK
Basel city lab	ZHAW	Manuel Grieder	Devon Wemyss	ZHAW

SONNET city labs, in line with the scheme described below, are to take place between March 2020 and July 2021 (our planning prior to the COVID-19 pandemic). They are to be opened and closed by a dedicated public event. Except for those, the particular city lab activities are to be decided by the hosting cities, in cooperation with their academic partner. Adjusting to those conditions, in this protocol we emphasize principles guiding each of the process stages, rather than concrete practical solutions to be exercised. Understanding of the given stage’s role shall be elaborated and shared between the SONNET cities and their academic partners.

Some inspiration

- [Transition management in the urban context](#) - the guidance manual developed by the MUSIC project and published by DRIFT

Below, we provide a detailed description of the four consecutive stages of the SONNET city lab process:

1. setting the stage,
2. agenda and goal setting,
3. experimenting (incl. network building),
4. evaluation.

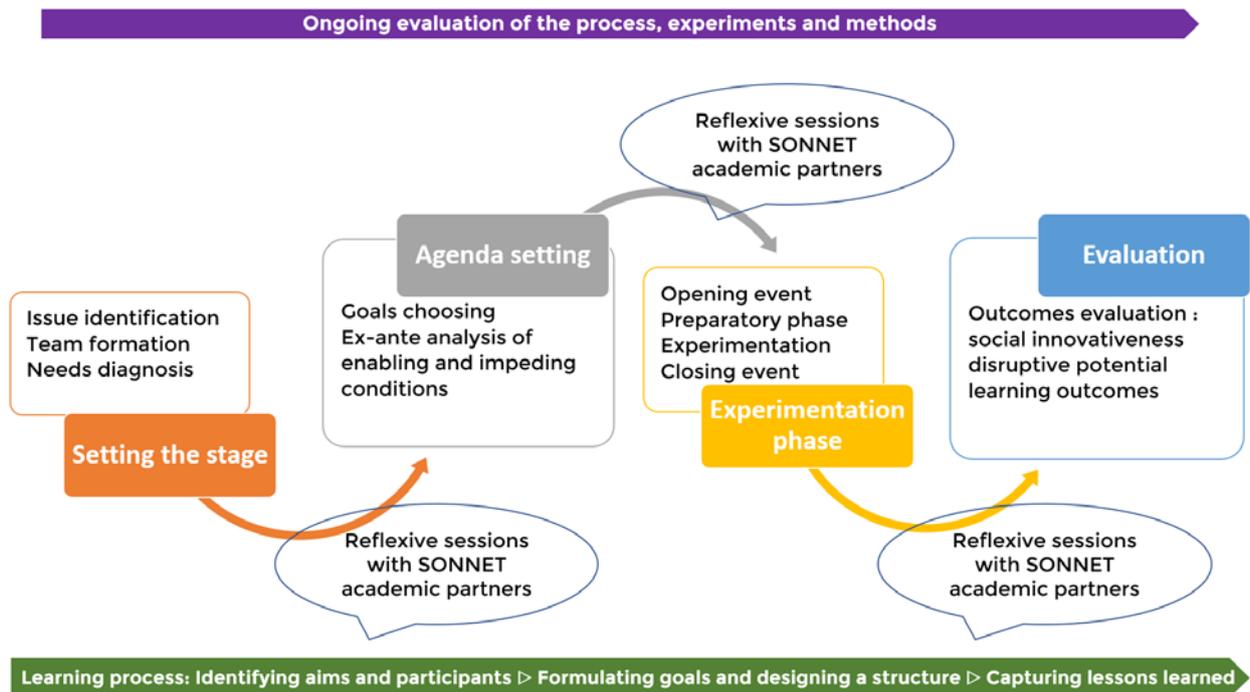


Figure 2: Stages of the SONNET city labs process

3.1. Setting the stage

Setting the stage for the whole SONNET city lab process is particularly important, since it establishes the rules and patterns for all the following stages. Enough time should be dedicated for this stage. It is a time for different partners and participants to get to know each other, to define and exercise inclusive communication and participatory decision making, and to develop a shared understanding of the features and methodology of each city lab.

3.1.1. Identification of an issue

In the SONNET project, the issue to be dealt with is proposed by the city hosting a city lab. The issue is related to social innovation in energy but can vary in terms of nature and addressees. For example, some cities may focus on vulnerable groups, such as those struggling with energy poverty, while others may address the technological and behavioural aspects of energy efficiency.



At the preliminary stage of the project, the issue shall be defined broadly, in order to create space for further specification involving different stakeholders and/or relevant parties, and to allow their voices to be heard. It is important to avoid imposing *'preconceived ideas of what the core of the problem is'* (Scholl et al., 2017, p. 38), that may, on the one hand, limit creativity of the participants, and exclude or neglect potentially relevant areas of interest, and on the other hand, constrain opportunities for transdisciplinary learning that a city lab methodology offers.

The rationale behind the choice of the issue to be addressed with the SONNET city lab shall be developed in cooperation with academic partners. It is recommended that the choice would result from the analysis of the city's previous efforts concerning the issue and their outcomes. Embedding the issue to be addressed in the city's current strategies and policies regarding energy shall:

1. build on learning outcomes from previous experiences and avoid repeating mistakes;
2. contribute to identification, on a practical level, of enabling and impeding conditions for SIE development in urban contexts;
3. ensure that a team of actors engaged in SONNET city lab may remain a valuable network of local experts, interest groups and citizens after the city lab ends;
4. increase the potential for scaling up and replication of the solutions tested during a city lab;
5. ensure the relevance of a SONNET city lab as an example of SIE within the conceptual framework of the overall SONNET project (for all three levels of manifestation: doing, thinking and organizing).

Your toolkit for this stage:

- [Fast idea generator](#) - to generate new ideas by thinking differently
- [Thinking hats](#) - to generate new ideas by framing a constructive discussion with your team
- [Brainstorm web](#) - to facilitate group brainstorming
- [Disney's idea generation technique](#) - to solve problems through the use of role play
- [Assumption busting](#) - to view the problem by challenging its assumptions
- [Problem definition](#) - to clarify your priorities by focusing on key critical issues

3.1.2. Team formation: how is the city lab team composed?

The SONNET city lab team composition shall result from the choice of an issue to be addressed. A SONNET city lab team is defined as a group of actors organizing a lab that should be involved in all the four stages of the process [recommended]. The team should consist of representatives of all relevant departments in the city administration (in terms of responsibilities and expertise), as well as, potentially, the experts in a field and representatives of key interest groups. It is the city's responsibility to ensure that all important partners are represented in a city lab team.



Diversity and transdisciplinarity are the principles that should display from the early stages of a team formation. *'In order to integrate the language, values, knowledge and interests of different actors from different domains, urban labs need to do active boundary work. Different values and interests need to be rendered transparent and intelligible, and their integration should be facilitated.'* (Scholl et al. 2017, p. 90) The leader of the team, i.e. typically a city representative (with the exception of Basel), should be aware of and attentive to differences within the team, and make sure that all perspectives and interests are given voice during the city lab implementation. Hence, enough time should be booked for the team formation phase, in order to set the desired collaborative patterns of practices for further stages. However, the very process of investigating the issue and defining the goals can be seen as an important team building work.

Practically, it is probable that at least some of the SONNET city lab team members worked with each other before and maintain professional contacts. That is an advantage to be leveraged; it can allow to carry on more direct, potentially less formal communication, and facilitate information exchange. However, it is important to ensure that all the members of a city lab team have equal access to information, participate in decision-making processes, and that no one is excluded due to their yet to be established relationships with team leadership (namely: a city).

At least one representative of the SONNET academic partner is a member of the city lab team as well, in order to follow the decision-making process, and to support and/or continuously evaluate the respective city lab (aligned with the evaluation criteria outlined in section 3.4). This dual role of academic partners has to be explicitly discussed within a city lab team. It should be acknowledged that while contributing to creating a space for social innovation developments, academic partners also bear responsibility for reconstructing and analysing city labs as SIE themselves. Therefore, it is important that they are involved in SONNET city lab's activities across the whole city lab process.

Your toolkit for this stage:

- People and connections map - to map actors that could potentially become your partner, user or supporter
- Stakeholders map - to visualize all stakeholders involved in the social innovation process
- Team roles through reflection - to reflect on the team roles
- Stakeholder visualisation - to know your stakeholder, what are their needs, motivation and drivers for participating in the lab

3.1.3. Needs diagnosis tailored to the issue identified

SONNET city labs are problem-solving oriented endeavours aiming at enhancing social innovation. Being open and flexible in terms of setting the objectives to be achieved (between SONNET cities and their agendas), the city labs are to address a concrete issue and collaboratively develop and exercise solutions to the challenge identified. In this, we follow Scholl et al. (2017)



who stated that '*Social Innovation Labs (or Social Living Labs) function as vehicles for systemic change by experimenting with social innovations. They shift away from technology and efficiency centred approaches towards more **people-oriented strategies for dealing with urban challenges** in the field of social and planning issues.*' (Scholl et al., 2017, p. 13, emphasis added)

Needs diagnosis shall serve as a basis for further goals and agenda setting. It aims at identifying the crucial challenges and areas for potential impact. It may refer to previous attempts to address the issue chosen for a SONNET city lab (e.g. previous lab-like projects), as well as develop designated, tailored analysis of a current state of affairs. The diagnosis will also allow to check whether the pool of stakeholders identified is complete, the city lab team's composition balanced (i.e. if all the relevant voices are represented), and what may be the potential enabling and impeding conditions for socially-innovative intervention (such as e.g. institutional, technical, social, economic conditions). The diagnosis may employ methods such as SWOT analysis (strengths, weaknesses, opportunities, and threats related to project planning) and GAP analysis¹ (Giannouli et al. 2018) to identify potential obstacles, and/or design-thinking workshops to reconstruct imagined scenarios for change.

Envisioning potential scenarios may serve as a framing development for further city lab activities. They may be used as reference points while conducting ex-ante analysis of enabling and impeding conditions (see section [3.2.2](#)). They may also be useful for developing agenda and planning consecutive activities and experiments within a lab, e.g. providing certain structures for SONNET city lab team's decisions.

Your toolkit for this stage:

- [Innovation flowchart](#) - to look ahead to understand what you need to do to bring your idea to life
- [Idea canvas tool card](#) - to design the strategy needed to execute an idea
- [SWOT analysis](#) - to develop a clear plan by evaluating how you are doing and what your options are
- [Team canvas](#) - to align teams and achieve cohesion among team values, goals and performances

¹ Gaps relate here to the underdeveloped institutional infrastructure linking labs with its organizational and institutional environment. The gap analysis allows partners: (1) to identify gaps in their current institutional capacities and ways of working (tools, techniques, and practices), and (2) to identify inspirational examples of useful technical, spatial and institutional practices and tools they might use to fill these gaps or add to their current practices and tools. (Strumińska-Kutra et al. 2019)



The support of SONNET academic partners shall consist of consultancy of the methods and research tools, potentially also of conducting the diagnosis. It may also provide an opportunity to assess and adjust the ongoing evaluation criteria, by “testing” them at diagnosis-oriented activities.

Setting the stage: wrap-up

Identification of an issue

- city and academic partners jointly define the issue to be addressed with the city lab
- the issue should be defined rather broadly, to be specified in later stages
- the issue should be embedded in the analysis of the city's previous efforts and their outcomes
- the identified issue should bear the potential for scaling up

Team formation

- the city lab team should be formed based on the issue chosen on the previous step
- the team should consist of diverse partners from different domains: representatives of relevant departments in the city administration, experts in a field and representatives of key interest groups
- make sure that all perspectives and interests are taken into consideration
- ensure that no one is excluded in the process – all members of the team have equal access to information and participate in decision-making
- academic partners serve the dual role of both contributing to decision-making process, as well as supporting and/ or continuously evaluating the city lab as a SIE

Needs diagnosis

- aimed at identifying the crucial challenges and areas for potential impact
- it may refer to previous attempts to address the issue chosen
- conducted to verify whether the team's composition is complete and balanced
- allows to check what may be the potential enabling and impeding conditions for the intervention
- academic partners could conduct the diagnosis, consult the methods and research tools, and/ or test and adjust the ongoing evaluation criteria

Wrap-up 1: Setting the stage

3.2. Agenda setting

The agenda setting stage of the SONNET city lab process focuses on the goal(s) setting and ex-ante analysis. There are two objectives of this stage. First, it sets the frame and provides the basis for a learning process, that is one of major objectives of city labs methodology. Ex-ante analysis shall allow the development of conceptual tools to be used further at experimenting phase (i.e. to be best prepared for different scenarios to occur). Second, this phase shall enhance



collaborative potential of the lab, aligning agendas and fostering plurality, so that participants would identify with the goal(s) set and with their roles. During this stage of the process the following actions are to be undertaken.

3.2.1. Goal(s) selection process based on issue identification

Activities undertaken at the previous stage of the process (setting the stage) were designed to provide foundations and necessary information for choosing the goal(s) of a SONNET city lab. Needs analysis conducted for the identified issue shall indicate a relatively limited number of problems/ challenges urgent and precise enough to be considered. It is recommended to pay attention to institutional conditions (referring to the city's broader policy towards energy transition) that would determine (i.e. limit or enhance) the choice. For example, some problems identified may be already addressed by other endeavours within a city, while others may require additional investments and/ or legal regulations to be efficiently worked upon. Therefore, considering the choice of the SONNET city lab goal(s), their 'doability' and fit to the city's broader policy shall be 'filter criteria'. Additionally, in certain cases, the spatial frame for a city lab shall be considered (i.e. what the spatial scope of planned activities would be). The need for such circumscribing would depend on the issue chosen, goal(s) and planned interventions.

It is important to make the selection process participatory. The sense of 'ownership' of the process, built through participatory decision making, was proven to increase participants' commitment at the further stages of the process, and in consequence – chances for success. Furthermore, choosing goal(s) through analysing different options, together in the SONNET city lab team, will enhance learning by negotiating the shared understanding of a situation and desired remedies. Finally, participatory choice also means agreeing on the options that end up not being chosen. Those 'dropped' options may remain a reference frame for further works, and can potentially be addressed in the future, beyond SONNET city lab. They may be seen as (a draft) shared agenda for different stakeholders in a city, so might strengthen the network of actors emerging in a city lab and increase chances to carry on collaboration after the lab ends.

Your toolkit for this stage:

- [Idea selection](#) - to map out the numerous ideas you have according to their originality and feasibility
- [Idea rating sheet](#) - to achieve democratic voting from the contest participants
- [Skill share](#) - to determine skills that the team members have or may need to achieve your goal
- [Problem definition](#) - to re-frame the problem in a more specific and direct manner



3.2.2. Ex-ante analysis of enabling and impeding conditions

An analysis of enabling and impeding conditions for SIE development is at the core of one of key SONNET research questions. It is also particularly relevant for city labs, since their experimental nature allows participants and researchers to actually experience those conditions under inquiry. Processual character of a city lab approach gives a space for reconstructing the lab activities in reference to cross-cutting issues conceptualized in SONNET (socio-economic, socio-cultural incl. gender, and socio-political). In order to exploit the potential of city lab methodology regarding those issues, it is important to make an effort at the early stages of the process to prepare a 'conditions map' tailored for a particular SONNET city lab.

Building on previously conducted needs diagnosis, a SONNET city lab team together with their academic partner should consider developing an ex-ante 'map' of factors that are expected to condition realization of the city lab goal(s). Those factors may vary, for example:

- institutional factors, such as mechanisms of decision making and communication within a city.
- existing regulations and organizational models.
- diversity of actors (regarding their occupations, experience, gender, age, ethnicity, opinions, interests etc.) necessary to be involved in order to conduct the process, their willingness and capacities to commit, and their energy-related practices.
- accessibility of resources needed (material, technological, financial, knowledge, skills, infrastructural, etc.).
- social and cultural factors, such as e.g. energy-related consumers' habits and routines, level of social acceptance for sustainability transitions, experiences with participatory urban projects among interest groups, etc.

Given the diversity of SONNET's city labs' goals and differences among partnering cities, as well as the flexible and experimental character of the city lab methodology, the above mentioned (types of) conditions and methods of their ex-ante analysis may vary. Design thinking methods, elements of systems analysis, and developing foreseen scenarios identifying key milestones and bottlenecks for the process may be taken into consideration. However, it is important for a city lab team and academic partner to decide together on the methods and approach most fit to their city lab goals. **The purpose of an ex-ante conditions analysis is functional** – it should contribute to preparation of the experimentation phase, making a team attentive to possible obstacles and helping to identify sources of support to be leveraged.

Finally, the literature review on city labs indicates that a lab-like approach may be used for either experimentation or optimization of existing systems. SONNET city labs are designed as experimental endeavours, however, there is a space for optimization-oriented activities if they serve enhancing social innovation development. Ex-ante conditions analysis shall help identifying areas for optimization.

Your toolkit for this stage:

- System map - to take on a systemic view of the solution and see connections between the different actors
- Theory of change - to clarify your priorities by defining goals and the path to reach them
- Causes diagram - to clarify your priorities by breaking down a complex issue
- Evidence planning - to look ahead by defining the outcomes from your work

Agenda setting: wrap-up

Goals selection

- allows for setting the frame and provides the basis for a learning process
- when choosing the city lab goals, consider their “doability” and fit to the city’s broader policy
- consider the spatial scope of planned activities
- make the decision-making participatory: the sense of “ownership” of the process increase participants’ commitment
- negotiating the shared understanding of a situation and desired remedies enhances learning in the city lab team
- “dropped” options may remain a reference frame for further works beyond SONNET city lab, increasing chances to carry on collaboration after the lab ends

Ex-ante analysis

- reconstructing the lab activities in reference to SONNET cross-cutting issues: socio-economic, socio-cultural and socio-political
- developing a map of factors that might condition the realization of the city lab goals
- aims at making the team attentive to possible obstacles and helps to identify sources of support to be leveraged
- allows the development of tools best prepared for different scenarios to occur
- the team decides on the methods and approach most fit to their city lab goals

Wrap-up 2: Agenda setting



3.3. Experimenting

When a preliminary agenda is set, with goals chosen and ex-ante analysis performed, a SONNET city lab team is ready to embark on the actual experimentation phase. It is worth recalling the dual nature of experiments conducted within SONNET city labs. The setting up of a city lab and deciding upon its structure is one kind of an experiment (with activities such as opening and closing events, communication, targeting a broader audience, anchoring developed solutions in a city structure etc.). On the other hand, we have the actual experiments and specific interventions that the city labs conduct. These two kinds of experiments are mutually dependent, and the learning process evolves within their constant interactions.

This section describes preparatory, testing and experimenting activities performed during the city lab. It is needed to bear in mind that the adaptable nature of a city lab allows for adjustments of the process according to any new opportunities or challenges that might emerge along its development. These adaptations might concern the team configuration, methods used, issues chosen, goals set, etc. Whenever needed, it is advisable to return to any previous stage (regarding setting the stage or agenda of the SONNET city lab) and adjust it accordingly. The experimentation phase should evolve alongside an ongoing evaluation of the process (see section 3.4.1 [Ongoing evaluation](#)) in order to ensure that the best possible outcomes are achieved and to exploit the learning potential of a city lab to its fullest.

1) [Organizing an opening event](#)

Each city lab is expected to organize an opening event that aims at inaugurating the SONNET city lab process and informing broad audiences about its goals and potential impacts (for more details see section 6.3 [Opening and closing events](#)).

2) [Preparatory phase](#)

Before initiating the actual city lab experiments it is needed to decide upon some important issues regarding the specific activities to be conducted, methods, as well as metrics to be used for measuring success. It is also advisable to agree upon some organizational matters such as initial timeline of activities, some basic procedures for effective communication and collaborative decision-making, as well as division of responsibilities among all partners. At this stage the following actions are likely to be undertaken:

- Deciding upon the specific experiments and activities to be undertaken in the course of the SONNET city lab development in relevance to the goal(s) set;
- Choosing methods for experimenting;
- Developing indicators to measure success of particular activities and experiments;
- Developing a timeline of planned activities;



- Deciding upon roles and dividing responsibilities between city lab partners (e.g. who is responsible for particular tasks, conducting an ongoing evaluation, taking notes and minutes from meetings, etc.);
- Deciding upon the frequency of meetings, who is expected to participate in which meetings, what are the expectations regarding specific contributions;
- Discussing optional means of communication (e.g. shared online folder for uploading relevant documentation, minutes and notes from meetings, etc.);
- Developing (recommended: writing down in a designated document) procedures for participatory decision-making, rising concerns, as well as proposing changes and corrections throughout all the stages of a SONNET city lab process.

Your toolkit for this stage

- Idea card - to get a feel of what you're doing right and what you could improve
- Critical tasks list - to sustain and implement by executing your plan without being overwhelmed
- Service blueprint - to plan or improve a service by showing what is happening along the service line and who is doing what through what means
- Five tactics - to avoid missing project deadlines
- Re-motivate demotivated project team - to get to know some tactics to boost project team morale

3) Experimentation phase

When the preparatory phase is completed, the SONNET city lab team is ready to initiate the actual experimentation phase. Whenever possible, it is advisable to create some prototypes and test them before developing the proper experiments in order to optimise an idea and eventually achieve better results. Prototypes could take various forms, covering the whole spectrum from very simple visualisations of ideas (sketches and diagrams) to more complex methods like designing personas representing the users' motivations and needs, developing a customer journey map presenting all steps that users will take while interacting with given products or services, or storytelling as a way of imagining possible scenarios. However, developing prototypes is not treated as a prerequisite in the SONNET city lab process. The experimentation phase should be conducted in an iterative manner, with an ongoing evaluation at the heart of this process, according to the scheme below.

(optional: preparing prototypes, testing them and drawing conclusions) → developing experiments → conducting an ongoing evaluation → adjusting goals/ methods/ team composition/ resources → (partly) repeating experiments → ...

Box 5: The iterative nature of the experimentation phase

Your toolkit for this stage

- Personas - to know the people you're working with by visualising their key characteristics
- Customer journey - to keep the beneficiaries at the centre of design decisions, highlighting pain points and opportunities
- Experience prototype - to think better by making certain features of the service or product tangible
- Target group - to know the people you're working with by better defining who you are trying to reach
- Prototype testing plan - to test and improve by collecting useful feedback on your work at different phases

4) Organizing a closing event

In order to officially close the SONNET city lab process, there should be a dedicated event organized. It shall serve as a space for presenting the main outcomes and lessons learned, allowing for discussion between all engaged parties regarding future cooperation, as well as possible ways of scaling up the initiative and further dissemination of the results achieved (for more details see section 6.3 Opening and closing events).

Throughout the whole experimentation stage, it is important to consider these driving principles of the city labs:

- **Participatory nature of the process:** all actions, experiments and interventions need to be thoroughly discussed with all partners who have equal opportunities to raise their concerns and influence the decision-making process regarding choosing and designing specific solutions (for more details see section 3.4.1 Ongoing evaluation);
- **Experimental nature of the process:** there needs to be a safe space developed where all partners feel welcome, can be truly creative, and are allowed to make mistakes in order to learn from them at any stage of the city lab development;
- **Iterative nature of the process:** established goal(s) of the SONNET city lab, chosen methods, planned experiments, as well as the city lab team configuration can change in the course of the city lab development according to emerging opportunities and/or new challenges.



Experimentation phase: wrap-up

Organizing an opening event

- aimed at inaugurating the SONNET city lab process
- a space for informing broad audiences about the city lab's goals and potential impacts

Preparatory phase

- deciding upon the following: the specific experiments and activities to be undertaken, methods, indicators of success, timeline, roles and responsibilities, details regarding the team meetings, means of communication, as well as procedures for participatory decision-making

Experimentation

- it's advised to create some prototypes and test them before developing the proper experiments in order to optimise the idea
- experiments should be conducted in an iterative manner, with an ongoing evaluation at the heart of this process
- whenever needed, the goals/methods/team composition/resources should be adjusted accordingly

Organizing a closing event

- a dedicated event to officially close the SONNET city lab process
- a space for presenting the outcomes and lessons learned, discussing future cooperation and possible ways of scaling up

- mind the participatory, experimental and iterative nature of the city lab

Wrap-up 3: Experimentation

3.4. Evaluation

Due to the open and flexible nature of the SONNET city lab process, as well as due to its transdisciplinary character, it is necessary to ensure an ongoing process of evaluation, followed by the evaluation of outcomes.

3.4.1. Ongoing evaluation

Given the learning objectives of the city lab methodology (see section 4 [Wrap-up 4: Evaluation City labs as a process of learning](#)), and a dual role played by the city labs in SONNET (space for social innovation development, and example of SIE), an ongoing reflection on the process, the actions undertaken and their expected results is key. These requirements create a major space for cooperation between SONNET cities and their academic partners.



Considering the diversity of the SONNET city partners in terms of the experience with the city lab methodology and social innovation, specificity of their energy policies, problems identified, as well as social and institutional contexts, the WP4-lead suggests two general criteria for an ongoing evaluation:

- **relevance** (whether actions undertaken address the goals set),
- **inclusiveness** (communication, team building).

More detailed criteria can be developed by the partners for their specific city labs, although they should consult the WP4-lead in order to ensure the coherence of the work package contribution.

A comprehensive list of **indicators** should be developed by each city, in cooperation with their academic partner, and consulted with the WP4-lead. The number and format of indicators will depend on the specificity of a given SONNET city lab. Nevertheless, they all should refer to the general evaluation objectives.

The **evaluation objectives** are the following:

- To assess the level of inclusiveness of the city lab process.

Are all the relevant parties involved? Do all the participants consider a city lab team complete? What parties may have been excluded from the city lab? Why? Are the specific objectives of the actions known and understood by all the participants? Are the expected results of the actions known and understood by all the participants?

- To assess whether the city lab process is led in a dialogical way.

Are all the voices and interests involved acknowledged? Do all the participants consider their point of view discussed and addressed? Is there a procedure set for rising concerns and proposing changes and corrections? Is this procedure consistent throughout all the stages of the city lab process? How are decisions made? (especially: is there a participatory decision-making procedure in place?)

- To assess the relevance of the actions undertaken to the goal(s) set.

How were actions and interventions chosen and designed? What were the actions considered and dropped? Why were they dropped? What was the rationale behind the actions chosen? Did anything come up as a surprise in the process? What did not work and why? How did it influence the process?

The criteria of inclusiveness, dialogue and relevance are broad and flexible not only because labs are diverse in terms of goals and context. It is also because evaluation is an ongoing process that should be open to revision, especially regarding the choice of indicators, and alerted to the possibility of 'goal displacement'. The latter emerges when reaching the criteria for evaluation and achievement of "success" become an ultimate goal of the process. Box 6 illustrates this problem in a greater detail.

*“Sometimes ‘success’ might be more of a hindrance than a help, as it suggests tangible solutions (...). This can diminish the notion of having **a license to fail**, thereby inducing participants to avoid more experimental ideas. It is also not uncommon for experiments to have unintended, but not unwelcome, outcomes. For example, testing guidelines for citizen participation might not result in further use of guidelines within the municipal administration, but rather made civil servants more aware and more practically engaged with the very issue of public participation itself. Had the experiment employed **pre-fixed evaluation criteria** for ‘creating guideline-based modes of working’, the experiment would have to be deemed a failure and fundamental values would have been lost or obscured” (Scholl et al 2017: 152).*

Box 6: License to fail – a necessity of ongoing reflection on evaluation criteria and indicators

The ongoing evaluation consists of **three main areas**:

1) Evaluation of the process:

Aims to reconstruct, understand and monitor a co-creative process of the lab and of the ideas' development. It would focus on the displaying roles of the participants (to make sure that all the relevant voices are acknowledged), identify internal and external factors that support and limit the process at each of its stages, and offer recommendations that may help to increase the inclusiveness and efficiency of the process. It is recommended for the SONNET city lab team to organize reflexive sessions with academic partners by the end of each of the city lab process' stages (see: evaluation methods below). That would allow summarizing what has happened at a given stage, assessing the level of realization of the goal(s) set, as well as to identify potentially displaying new factors that had not been foreseen before, and that may require to be adapted to in the following stage of the process. Such reflexive sessions would also support systematizing the data gathering, to be further used in preparing the final city-specific report and outcomes evaluation.

2) Ongoing evaluation of experiments:

The process would benefit from evaluating experiments undertaken on an ongoing basis. That means monitoring how they are exercised, trying to assess the upcoming outcomes. Possible bottlenecks and obstacles can be spotted and addressed as they occur, to correct the actions in order to meet the goal(s). To what extent such evaluation can be done systematically would depend on the given actions/ experiments, their length and complexity. However, it is recommended to plan an ongoing monitoring of the interventions. It would allow confronting the presumptions and plans with actual users' behaviour, exploiting advantages of the city lab methodology to its fullest.

3) Methods evaluation: which methods work best and for what purpose?

Learning and innovation, being explicit goals of a city lab, are dependent on the methods applied. At the same time, the methods themselves are to be tested in this experimental process. Hence it is important to ensure that the methods of intervention are co-created and chosen in a participatory way, so that they can provide learning opportunities to all the partners involved. Methods can be adapted, and even reshaped, as a result of the reflexive sessions after each stage



of the city lab process. The SONNET city lab team shall also monitor to what extent a given method of work is comfortable and acceptable to different participants, and book time for adjustments that different partners may need. It should be explicitly discussed how the given method would contribute to a learning experience for each of the parties involved.

Some inspiration

- Reflexive monitoring in action - an integrated methodology to encourage learning within multi-actor groups or networks as well as institutional change in order to deal with complex problems

An ongoing evaluation will rely mostly on **qualitative methods**. This is because of the experimental nature of the SONNET city labs and their limited scale. It is recommended to exercise the following methods:

- Participants feedback sessions:

After each activity the feedback from participants should be collected, align with the evaluation objectives. If possible, the sessions shall have an FDI-like form (moderated discussion among participants; minutes shall be taken), because that would provide an additional opportunity for a dialog building a shared understanding of the process, and for learning. Otherwise, the feedback may be collected in a written form. The specific questions for discussion and/ or for a feedback form should be consulted with the city's academic partner, in order to ensure the coherence of the method's use throughout the whole city lab process, as well as to ensure the data relevance for answering overall SONNET research questions.

- Reflexive sessions with the academic partners:

After completing each stage of the SONNET city lab process (i.e. at least three times throughout the whole process), the city lab team should organize a dedicated evaluation session with academic partner's representatives. The sessions may be in-person (preferable) or online meetings. There are three main objectives of the reflexive sessions:

(1) These sessions aim to discuss and **analyse the actions and achievements of the previous stage of the process** (in terms of inclusiveness and relevance), and develop potential corrections for the upcoming activities, assessing their embeddedness in the overall developments within SONNET. In other words, those reflexive sessions are to ensure on an ongoing basis that city labs would not deviate from the main direction of the SONNET project.

(2) These sessions provide an opportunity to **reflect on the enabling and impeding conditions** (mainly institutional, social and cultural) for social innovation development, by analysis of the obstacles and difficulties experienced at the given stage of the city lab process. Combining the perspective of the SONNET city lab lead (what was experienced



and what was done) with an 'external' perspective of the academic partner (what can be observed and reconstructed), allows to exploit the dual nature of a SONNET city lab (space for social innovation development, and a very example of SIE), and collect materials needed for answering SONNET research questions.

(3) Finally, reflexive sessions are to **enhance transdisciplinary learning** between practitioners and academics (see section 4 [Wrap-up 4: Evaluation City labs as a process of learning](#)). The specific format of the reflexive sessions is to be decided together by the city and its academic partner. Some inspiration can be found here:

- [SONNET City Council Calls](#):

Every 6 weeks 90-minutes long online meetings of SONNET's City Council (CiC) are organized. The calls gather the SONNET cities' representatives, academic partners' representatives, WP4-lead and the SONNET scientific coordinator. Except for discussing current affairs within the work package, those meetings shall be devoted to an ongoing evaluation of the SONNET city labs developments, enabling peer-to-peer learning among the six cities involved. Before each meeting, each city representative shall submit to the WP4-lead a brief update on the current stage of their process, tackling potential difficulties and unforeseen conditions. Those are to be discussed among representatives of all the cities. That shall allow, on the one hand, helping to come up with solutions to particular problems (relying on a broader pool of expertise and experience), and on the other hand – learning from others' experiences. The brief updates prepared by the cities will further help to systematize the city-specific final reports. The scheme for the updates can be found in the Appendix 3.

Your toolkit for this stage

- [Blueprint](#) - to test and improve by crafting a detailed overview of your operations and resources
- [Improvement triggers](#) - to test and improve by understanding what is most effective in your work

3.4.2. Outcomes evaluation

The final phase of the evaluation process is the evaluation of outcomes. While relying heavily on the ongoing evaluation, it is still a separate endeavour. It focuses on the assessment of the results of a SONNET city lab, asking whether its goal(s) was/were met, and how activities undertaken throughout the process contributed to the enhancement of social innovation in energy in a given city context.



Criteria for outcomes evaluation:

- **relevance** (whether actions undertaken met the goals set),
- **inclusiveness** (whether the results address/ involve all the relevant parties),
- **outreach** (scope of the results and chances for scaling up).

The outcomes **evaluation objectives** are the following:

- To assess social innovativeness of the results.

Do the outcomes display practices and/ or arrangements, such as novel business and service models, novel narratives and behavioural routines, novel collaborative governance arrangements? What are they? In what way are they new? Are they perceived as novel by the participants?

- To assess a disruptive potential of a lab in a given city context.

Do a city lab realization and results impact current institutional and social practices within a city? If so, in what way? How are those practices received by the relevant actors? What are the chances for embedding them into existing institutions?

- To assess learning outcomes of a lab.

Was a lab perceived as a valuable learning experience by various participants? [if not, why? what was missing?] What was experienced as valuable? What were the lessons learned from this experience? How can this learning be leveraged?

The outcomes evaluation is to be conducted using **qualitative methods**, supplemented by **quantitative data** available (e.g. number of participants, number of users, number of interventions, if applicable: quantitative results summary, such as energy usage data, etc.) It will use materials developed and data collected throughout the ongoing evaluation and collect additional data on the results to meet the objectives. Recommended method is IDIs (individual in-depth interviews) with participants and representatives of parties involved and affected by the city lab process. If suitable, FDIs (focus group interviews) may be conducted.

The outcomes evaluation should be conducted by the academic partner of a given city. Each academic partner is expected to provide outcomes evaluation-based input to the city-specific final report. Furthermore, academic partners are required to prepare an **evaluation report** on their city lab (an internal SONNET working document) as a contribution to the overall evaluation of SIE city labs within WP4. A format of those evaluation reports is to be developed together with city partners during the SONNET City Council calls. The format shall represent and adjust to a variety of goals and methods of intervention exercised in different city labs.

Your toolkit for this stage

- Logic model - to assess the 'if-then' relationships between the inputs, outputs, outcomes and impact of the lab

Evaluation: wrap-up

Ongoing evaluation

- very important process of an ongoing reflection on the actions undertaken and their expected results
- a major space for cooperation between SONNET cities and their academic partners
- two general criteria for an ongoing evaluation: relevance and inclusiveness
- each city lab team should develop the comprehensive list of indicators
- the process should be open to revision of evaluation criteria and indicators
- ongoing evaluation serves to assess:
 - the level of inclusiveness of the city lab process
 - whether the city lab process is led in a dialogical way
 - the relevance of the actions undertaken to the goals set
- the ongoing evaluation refers to three main areas: process, experiments and methods
- the following qualitative methods should be used:
 - Participants feedback sessions
 - Reflexive sessions with the academic partners
 - SONNET City Council calls

Outcomes evaluation

- it is the final phase of the evaluation process
- criteria for outcomes evaluation: relevance, inclusiveness and outreach
- outcomes evaluation serves to assess:
 - social innovativeness of the results
 - a disruptive potential of a lab in a given city context
 - learning outcomes of a lab
- based on the materials collected throughout an ongoing evaluation, as well as additional qualitative data and available quantitative data
- the outcomes evaluation should be conducted by the academic partner, who is required to prepare an evaluation report

Wrap-up 4: Evaluation

4. CITY LABS AS A PROCESS OF LEARNING

City labs are designed to increase our ability to learn. Learning is understood here as acquiring new or modifying existing knowledge, skills or attitudes. The ability to learn increases our capabilities to respond to changing conditions and new challenges. City labs open up the space for experimentation, that is for collaborative brainstorming about ideas that might work, and a space for trying these ideas out. City labs may also encourage incremental, small scale improvements of practices that already have been proven to work.

Ideally, the space for experimentation should – at least temporarily – free lab participants from existing limitations (political, social, organizational material, etc.) and allow them to creatively think about challenges and visions for the future. A possibility to distance yourself from the current circumstances paves the way for so-called **double loop learning**: questioning the original problem definition and goals and changing not only in knowledge about the problem and possible solutions, but also changing the participants’ attitude towards the problem and solutions, including the underlying assumptions, preferences. In contrast, in the case of **single-loop learning**, the problem is predefined, and the goals are set. Learning focuses on finding the best solution by trying various options; the problem definition and goals are not questioned but may be further refined.

Achieving double loop learning is crucial for city labs. It does not mean however that all ‘old’ ideas, problem definitions and goals need to be ‘beheaded’. It means that they should not be taken for granted and adopted without a critical examination.

Box 7: Balancing revolutionary and small steps transformations: single loop and double loop learning

Source: Argyris and Schön, 1996

In the city lab process, we do not only learn how to address a particular issue, but we learn how to cooperate with others in order to address issues of our common concern. To use an example: we do not only learn how to increase energy efficiency in publicly owned buildings or how to design a more just energy system. We also learn how to collaboratively discuss, make decisions, obtain and produce new knowledge, cope with conflicts and evaluate outcomes of actions. In this section we will focus on the question:



How to maximize learning?

Addressing this question openly and at the early stage of the process is crucial for durability of lab outcomes and for overcoming the danger of ‘solutionism’. Instead of focusing on a practical outcome of the particular process (the solution), we should use labs as an opportunity for building individual, organizational and institutional capacity for learning that will improve governance

processes in the future. From the perspective of an organizer of a city lab (i.e. public administration in SONNET's case) it is strategic to unpack the question of learning by asking: who should learn about what, for what purpose, and how the learning process should be organized (Scholl et al. 2017)? This specifically relates to the question of positioning a lab in organizational structures of the local government. Usually, to facilitate experimentation and learning, labs are placed outside of the sectoral structure of a municipality as a somewhat separate organizational entity. Simultaneously lessons arising from lab experiments need to be translated into practice of administrative operations and policy making. This requires establishing the links between the labs and 'outer world'. If these links do not exist, urban lab experiments are prone to being meaningless beyond the group of people directly involved (see section 5.1. Building connections between city labs and local government). Below we present city labs design principles that maximize learning.

Identifying aims and participants



- First identify the major aims of learning: what is the learning expected to contribute to the overall purpose the lab? What are the intended outcomes?
- Carefully select the participants in a learning process: given the major learning aims, who should participate and why? And at which level (lab or individual experiments)?

Formulating goals and designing a structure



- Jointly formulate the major aims of learning. This may start out as a very open process, with inputs from all participants, but should result in only a handful of learning goals. Too many learning goals make a structured approach impossible to implement effectively.
- Design the structure of the learning process: plan a sequence of 'sources of new information' (e.g. experiments, actions, inputs from external experts) and joint reflection sessions. Reflection should not be organized only at the end, but also during the course of an experiment or project.

Capturing the lessons learned: planning & budget



- Each reflection session should produce a 'learning report' describing what has been learned. The jointly formulated learning goals must provide the structure and focus here, but always check for important lessons derived from unplanned, emergent learning.
- Allow time for learning in the overall planning and reserve some budget for professional facilitation: the time and facilitation skills required for joint learning processes are generally seriously underestimated. Without sufficient investments, learning is unlikely to produce worthwhile results.



However, learning does not only take place within and around the city labs. It also unfolds through dialogue with those who work in different locations (e.g. cities) on similar issues and have similar roles and working backgrounds. SONNET provides a unique opportunity for sharing experiences and learning from each other. Within SONNET there are processes built in that enable that exchange. Considerable part of the project meetings is devoted to **a critical collective reflection** on past experiences from broadly understood lab-like processes and ongoing challenges of SONNET city labs. Reports from city labs undergo a process of **peer review**. First, the feedback is individually provided by a representative of another SONNET city, and second – during the project meeting – city representatives jointly evaluate city lab performances and give recommendations for improvements on the specific level of each city lab, as well as on the general level of city lab methodology.

There are a number of other learning tools (other than group reflection or peer review) that might be further utilized by SONNET partners, although they are not explicitly built in the SONNET project structures. A list of such tools together with examples of their use was prepared within the CASCADE project, an EU founded three-year project (2011-2014) of networking and peer-to-peer learning on local energy leadership.

- **Mentoring** allows a city to receive advice on specific project(s)/ initiative(s) by one or more other cities. The visitors (mentors) and host (mentee) together build an understanding of the local situation and challenges. The mentors provide specific recommendations to the mentee and then explore together new ideas and solutions. The mentors can also directly benefit from the visit by taking advantage of other mentors' knowledge and experience.
- **Work shadowing** involves one or two people from one city spending a period of time with one or more people from another city who work in the same field or on similar projects. The aim is to facilitate an exchange of expertise by observing first-hand how things are done elsewhere, thus providing inspiration and new ideas for working methods.
- **Study visit** offers peers from several cities the opportunity to visit another city and see first-hand how that city has successfully implemented its energy and climate change policies, projects and/ or initiatives. It also allows the host city to showcase its projects, gain external insight and get recommendations for improvements.

Box 9: Peer-to-peer learning methods in CASCADE project²

The project results deliver a good illustration of the twofold nature of learning, mentioned at the beginning of this section: On the one hand, we learn how to cope with certain types of challenges and on the other we gain new knowledge on how to learn in a most effective way. In the first area CASCADE provides good practices collection, offering inspiration to city experts and decision makers on how to improve the implementation of climate change and energy policies in their cities. In the second area it offers a tool kit with peer to peer learning tools (see: Box 9).

² Source: <http://www.cascadecities.eu/cascadecities/toolkit/Mutual-learning-tools> (accessed: 15.01.2020).

5. CITY LABS – COMMON CHALLENGES AND WAYS OF ADDRESSING THEM

This section presents a brief overview of challenges that seem to be common for lab-like approaches. The overview is based on the analysis of academic literature, research reports, as well as a facilitated and documented exchange of experiences among practitioners and researchers involved in SONNET³.

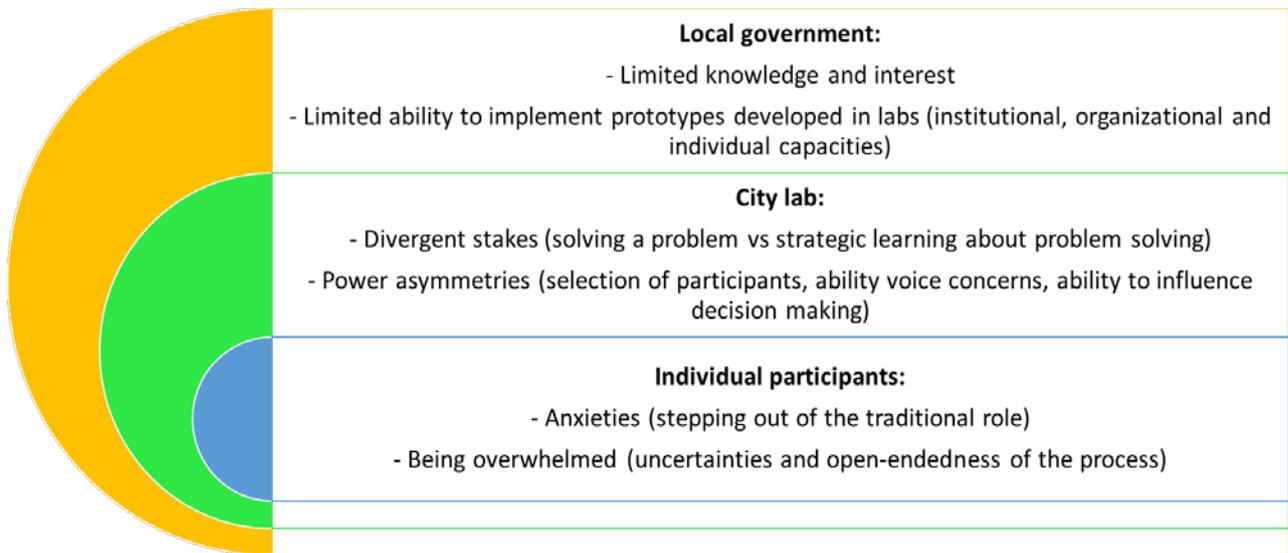


Figure 3: City labs - the three levels of challenges

As shown in the box above, the challenges are divided into three groups. The first group captures challenges in the relationship between city labs and local government. They are encapsulated in a question:



How can city labs be integrated in local governance structures?

³ Group reflection and plenary discussion on failures and successes of collaborative research and decision-making approaches was conducted during the SONNET Rotterdam meeting.



The second group refers to the challenges of diversity and power asymmetries within the lab. The relevant question here is:



How to cope with the diversity of values and interests of lab participants and with power asymmetries between them? (i.e. unequal abilities to realize interests and fulfil values due to the socio-economic status or position in organizational structures)

The last group of challenges relates to individual dilemmas experienced by lab participants and leads to the following question:



How to cope with emotions triggered by a city lab process with an open-ended result that requires stepping out of the traditional role?

We address these challenges and propose some practical solutions below.

5.1. Building connections between city labs and local government



Within SONNET, city labs are perceived as innovative tools facilitating sustainable energy transitions. Our aim is to explore SONNET city labs potential to overcome transition barriers such as limited citizen engagement and slow adaptation of new technologies. These long-term goals require a strategic approach to dissemination of lessons learned and solutions developed within the labs. Typically, integration of a city lab approach in local governance structures poses a great challenge. Those who were not immediately involved in the experiments may lack an understanding of what a lab is and what is the value of lab results and may have no motivation to explore them. In one of the reports comparing lab experiments across different European cities the authors state:

'Ultimately, when trying to disseminate and embed the lessons learned, the labs were confronted with the consequences of their outward-looking approach to involvement of urban stakeholders, which, more often than not, resulted in a lack of involvement of and embedding of lessons with key local governance stakeholders' (Scholl et al., 2018).

This is why it is worthwhile to build up a network of support around the lab, for example by:

- **partnering up** with other collaborative initiatives, establishing connections with stakeholders from various domains and municipal sectors (Scholl et al., 2017);

- building **institutional back-up**, that is actively looking for support and engagement of high ranked city officials and policy makers (across political parties) acting as ambassadors or embedding labs in policy documents (Scholl et al., 2017);
- doing **gap analysis**, that is critically asking: what needs to be in place, and when, in order to organize city labs and implement innovation developed within city labs? For example, do we need new or modified procedures, communication channels, position related responsibilities, institutional and individual capacities? (Giannouli et al., 2018).

These networks should evolve along with the new knowledge and perspectives emerging in the labs. The evolution should be guided by asking what needs to be spread by whom and why. Developing these networks helps getting political legitimacy for the experiment.

5.2. Navigating through the diversity of city lab participants



City labs by definition involve a diverse array of participants (citizens, inhabitants, community representatives, members of different types of organizations, users, academics, officials, etc.). By definition city labs create a space for dialogue and stimulate open-minded experimentation. In practice, it requires dealing with conflict of interests and values and with power relations in a context of social, political and economic inequality. This is not only demanding, it can in fact be felt as endangering and exhausting. “Struggles with plurality” often results in activating the highly educated urban elite while leaving out marginal and non-traditional actors.

'The risk is that, often without even realizing it, instead of exploring new ways and possibilities, urban labs end up proposing solutions that perpetuate existing challenges rather than address them' (Scholl et al., 2017).

To avoid the risks of perpetuating status quo and to avoid exclusion it is important to:

- anchor diversity of views and equal participation of all members at the strategic level within the lab,
- ensure that potential partners represent different perspectives, knowledge and influences on the lab,
- reach out and create relationships and trust with marginal, alternative actors and ensure that their perspective is not lost along the way,
- support participants in exploring and discussing possible frictions, rather than avoiding them.

Acknowledging differences between participants (including power asymmetries) requires adjusting participation methods and tools to the **specific needs**. This may involve using various forms and channels of communication, providing support for different groups, e.g. through helping them to build capacities for participation, active encouragement for voicing ideas,



opinions and concerns. In fact, it is advisable to use professional facilitation throughout the process of 'labbing' (see Box 10).

Dialogue spaces can be 'sites of oppression, which may be based on opinions, ethnicity, gender, age, style of dress, disabilities, or supposed lack of knowledge' (Wakeford et al. 2013). Collaborative interventions, like city labs, can create new power inequalities because participants do not necessarily look for knowledge and learning but can use the participation for self-interested oriented strategic purposes. Hence, tools are needed to deal with the ethical consequences of the fact that city labs are used to develop arguments in the political struggle. City labs should address these kinds of challenges explicitly and actively facilitate and mediate between conflicting interests.

Box 10: Facilitation and mediation – an antidote to power inequalities

Source: Struminska-Kutra, 2018

The challenges described above are complex and characterized by unpredictable dynamics. They should be addressed in the daily operations of city labs (e.g. by using professional facilitation), but it is worthwhile to establish a **reflection group** composed of experts and experienced practitioners. This group would help to reflect on the lab processes, mediate between different stakeholders, offer a superior decision-making structure, and facilitate ethical reflection.

Addressing these problems helps to create mutual trust and enhances a transition from participation to **co-ownership**. Encouraging participants to initiate and operate their own processes within the lab significantly contributes to durability and dissemination potential.

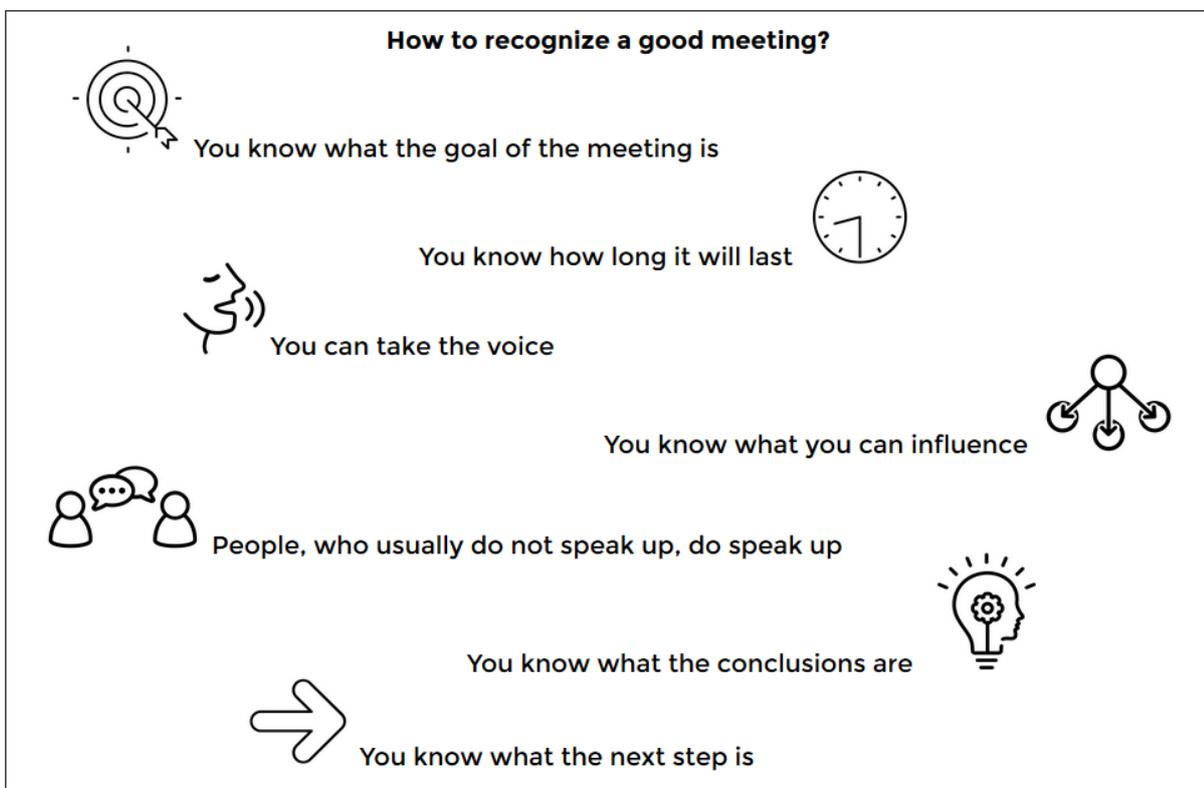
5.3. Individual challenges: managing anxieties



Participation in city labs is challenging on a personal level. It requires communication and collaboration across sectors which poses a range of basic communication challenges. Establishing a common language, understanding mutual expectations and aligning agendas (at least their major points) turned out to be among major challenges of collaboration mentioned by experts and practitioners involved in SONNET. **Transdisciplinarity requires translation** between the diverse groups participating in the lab⁴. This task is time consuming but should be perceived as an investment, because the ability to effectively communicate is an indispensable condition for building **trust** between actors engaged in the process. Building trust is in turn a necessary condition for building a safe space for experimenting and failing. City lab participants need to feel support of the lab group that will compensate for vulnerability produced by stepping out of the traditional role.

⁴ The issue of language is also relevant in communicating with groups outside of the lab. This includes reflecting on using the term 'city lab' itself – it might be easier to communicate the intervention as 'research project'.

Individual feelings of safety constitute micro foundations of the lab processes. Professional **facilitation** has an important function in securing this feeling. A facilitator is responsible for the process of communication and building relationships of trust in the lab. When organizing labs, it is worthwhile to establish a separate role for a facilitator guarding the form of the process and social dynamics behind it. Some of the measures used by facilitators might be very simple, but substantially contribute to the quality of communication. Although aspects of communication and relations building remain relatively unaddressed by the academic literature on labs, experience of practitioners (including the experience of SONNET academic and non-academic partners) indicates its central role for success of participatory processes.



Box 11: How to recognize a good meeting⁵

⁵ Based on: Facilitation emergency, <https://facylitacja.com> (accessed: 15.01.2020).



6. ORGANIZATION AND MANAGEMENT OF THE PROCESS

6.1. Distribution of responsibilities

The successful realization of SONNET's WP4 relies heavily on the ability of partners to cooperate both in the process of developing each transdisciplinary city lab, and across all city labs in SONNET. To this end, in the following sections we will discuss the roles and responsibilities of all partners in this WP, as well as specific tasks to be conducted in the course of each city lab development, timeframes and resources to be used.

This WP is coordinated by Agata Dembek (**WP4 Lead**) at ALK and co-led by Ania Rok (**WP4 Co-lead**) at ICLEI.

Each city lab (with the exception of Basel) has its leader, who is a city representative, and a co-leader, who is an academic representative (for the division of responsibilities between academic and city partners see section 2.5 Transdisciplinarity: roles of academics vs roles of practitioners). The **city lab leader** is responsible for the coordination of the respective city lab development process and delivering the final 'Report on the SIE city lab: specifying insights regarding processes (incl. enabling and impeding conditions) and contributions of SIE'. The report should be prepared according to the provided template and submitted on time – in a first draft to the WP4-leader and then in its final draft to the **quality reviewers** (see section 6.4 Timeframes).

Besides the preparation of the report, each **city lab leader** together with its **co-leader** are responsible for ensuring (for the division of responsibilities between the two, see Box 4 in section 2.4 Transdisciplinarity: roles of academics vs roles of practitioners):

- data collection in line with ethical guidelines and safe storage of the documentation on a secure institutional server, e.g. filled informed consent forms, audio recordings and transcripts of interviews, notes from meetings and other important documents (for more details on how to store research data see the deliverables D8.4, D9.1 and D9.2 about data management and ethics);
- efficient communication within their city lab team;
- active participation in regular City Council calls and updating the WP4 leader on the process of the city lab development;
- organization of opening and closing events;
- ongoing evaluation of the city lab development process (for more details see section 3.4 Evaluation);
- review of the first draft of the deliverable 'City lab guide: Co-creating SIE city labs: harnessing the potentials of SIE for cities' (D4.8).

Table 3: Distribution of responsibilities between SONNET partners across the city labs

Task	Partner	Individual	Role
Coordination of SIE city labs	ALK	Agata Dembek	Leader
	ICLEI	Ania Rok	Co-Leader
Warsaw city lab	WARS	Dominik Kołodziejczyk	Leader
	ALK	Agata Dembek	Co-Leader
	GEM UoS	Joachim Schleich Sabine Hielscher	Reviewers
Antwerp city lab	ANTW	Jana Deforche	Leader
	DRIFT	Julia Wittmayer	Co-Leader
	GEM BRIS	Carine Sebi Lorna Humphreys	Reviewers
Bristol city lab	BRIS	Richard Lowe	Leader
	UoS	Sabine Hielscher	Co-Leader
	DRIFT ANTW	Maria Fraaije Jana Deforche	Reviewers
Mannheim city lab	MANN	Agnes Schönfelder	Leader
	ISI	Karoline Rogge & Heike Brugger	Co-Leaders
Grenoble city lab	ALK WARS	Marta Strumińska Dominik Kołodziejczyk	Reviewers
	GREN	Fabien Dupré	Leader
	GEM	Carine Sebi	Co-Leader
Basel city lab	MANN DRIFT	Agnes Schönfelder Flor Avelino	Reviewers
	ZHAW	Manuel Grieder	Leader
	ZHAW	Devon Wemyss	Co-Leader
Evaluation of SIE city labs	GEM ALK	Anne-Lorraine Vernay Boleslaw Rok	Reviewers
	ALK	Agata Dembek	Leader
	DRIFT	Julia Wittmayer	Co-Leader

6.2. Communication

Efficient communication is key in successful collaboration in each city lab, but it also enables fruitful cooperation between all six SONNET city labs. Therefore, the internal communication in WP4 is based on dialogue within each city lab, between the WP4-leader and each city lab, and across the city labs.



Dialogue within each city lab

It could be helpful for each city lab to create and share among its partners an online folder (preferably in the [SONNET owncloud](#), within the city lab subfolders within the WP4 folder) – this would enhance collaborating, exchanging information and keeping everybody informed. It could include a document covering details of the city lab development process (describing previous and ongoing phases of the initiative). The following information could be relevant: names and contacts to all city lab partners with descriptions of their responsibilities in the process, minutes or notes from the meetings, any important decisions and agreements made up to date, a timeframe for further steps, photos, etc. In such folders partners could also store documentation relevant for the city lab (e.g. results of an energy audit). Given the open and participatory nature of a SONNET city lab, such a freely accessible folder would be of great help for any new partners joining the process along its evolution. However, in addition to online collaboration, the success of any city lab process relies heavily on face-to-face interactions. Each city lab should discuss among its partners the form and frequency of such meetings.

Dialogue between the WP-leader and each city lab

The WP4-leader is available for discussing any issues arising in the process of developing the city labs. As the city lab process is by definition open-ended and somewhat unpredictable, it is of particular importance to stay in touch and discuss any issues that might emerge at any stage of the process. The WP4-leader is also responsible for monitoring whether the deadlines are met and organizing regular online calls to ensure each city lab keeps up with its schedule. Problems pertaining to a particular city lab can be addressed directly to the WP4-leader. However, there is a designed space for open discussion of any issues (but also opportunities) among all SONNET city labs with the regular City Council calls.

Dialogue across the city labs

It is vital to give space for all SONNET city labs to share experiences, ideas, doubts, (initial) results, lessons learned etc. with each other. Due to the fact that each city lab will evolve at its own pace, it is hard to introduce any rigid structure for this kind of exchange of experiences. This dialogue between the city labs will take place predominantly during our regular City Council calls (the dates of these calls have already been established for the next six months), but also during SONNET project meetings in Warsaw in July 2020 and in Switzerland in January 2021 (during dedicated workshops, as well as through some informal exchange of experiences).

6.3. Opening and closing events

Each SONNET city will organize two local events on 'Social Innovation meets Energy Transition'. These events will be held in order to officially launch and close the given SONNET city lab. Both the opening and closing events should last around 4 hours and gather approximately 50 participants. Among people invited to the city lab events should be all parties (potentially



engaged in the development of the city lab, i.e. city administration officers, grid operators, politicians, users, NGOs, scholars, energy auditors, activists, local residents etc. Thanks to the diversity of participating groups, these events could contribute to bridging old and new energy system actors. Local media should also be invited to both events in order to ensure proper visibility. The standardized participants' list template is available in Appendix 5 and in the [SONNET owncloud](#) (/SONNET cloud/04_WP4 citylabs/09_Citylabs templates).

The aim of the opening event is to present all partners involved in the city lab the rationale behind it, and to inform a diversified audience about ongoing and planned activities. The goal and potential impact of the city lab should be presented, but the corresponding challenges and opportunities could also be discussed. It would be advisable to invite representatives of all engaged parties to deliver short speeches during the event. This would serve as an opportunity to get insights into the sheer diversity of perspectives related to the given subject. It would also create space for networking and strengthening social ties between various stakeholders who normally have limited chance to meet and discuss energy-related issues of their mutual concern.

The aim of the closing event is to present the main results and achievements of the city lab. This event will give space to an open discussion about lessons learned, further steps that could be undertaken in order to scale up this initiative, potential future cooperation, as well as possible ways of further dissemination of the results. This event will also serve as an opportunity to discuss insights from other work packages that could be of relevance to the city (e.g. studies of SIE-fields in WP3 or policy network analysis in WP2).

6.4. Timeframes

The table below gives detailed information about the schedule of all tasks to be conducted in WP4. This timetable does not yet include any potential impacts arising from the COVID-19 pandemic, which will be discussed after the submission deadline of D4.1.

Table 4: WP4 timetable

When?	Where?	What is done?	Who is involved?
March 1, 2020	Via email	Transdisciplinary research protocol for SIE city labs - sending for review	Agata Dembek (ALK) to Karoline Rogge (ISI), Maria Stadler (ISI), Julia Wittmayer (DRIFT) and Ania Rok (ICLEI)
March 9, 2020 1.30 - 3.00 pm	Online call	Discussing current issues on city lab developments	City Council
March 16, 2020	Via email	Sending D4.1 deliverable for quality review	Agata Dembek (ALK) to Gert Vandermosten (ANTW) and Maria Fraaije (DRIFT) with Karoline Rogge (ISI) in cc



When?	Where?	What is done?	Who is involved?
March 30, 2020	Via email	Submitting D4.1 deliverable approved by the WP4-lead	Agata Dembek (ALK) to Karoline Rogge (ISI)
March 31, 2020	EU Portal	Submission of D4.1 deliverable: Transdisciplinary research protocol for six co-creating SIE city labs	Karoline Rogge (ISI)
April 1, 2020	Via email	Sending D4.1 Transdisciplinary research protocol to city lab teams	Agata Dembek (ALK)
March/ April 2020	Various locations	Opening events	All city labs
April 2, 2020 1.30 - 3.00 pm	Online call	Discussing current issues of city lab developments	City Council
June 15, 2020 1.30 - 3.00 pm	Online call	Discussing current issues of city lab developments	City Council
Around June 2020	Via email	Draft version of a format for a city lab evaluation report	Agata Dembek (ALK) to city lab leads
July 27, 2020 1.30 - 3.00 pm	Online call	Discussing current issues of city lab developments	City Council
September 21, 2020 1.30 - 3.00 pm	Online call	Discussing current issues of city lab developments	City Council
April 30, 2021	Via email	Draft versions of city lab reports to be send for internal review	All city lab leads to Agata Dembek (ALK)
Spring 2021	Various locations	Closing events	All City labs
May 31, 2021	Via email	Sending the city lab evaluation reports	City labs' academic partners to Agata Dembek (ALK)
June 30, 2021	Via email	Sending city lab reports for quality review	City lab leads to quality reviewers with WP4-lead and Karoline Rogge (ISI) in cc
July 20, 2021	Via email	Sending city lab reports to the WP4-lead	City lab leads to Agata Dembek (ALK)
July 24, 2021	Via email	Submitting city lab reports approved by WP-4lead	Agata Dembek (ALK) to Karoline Rogge (ISI)
July 31, 2021	EU Portal	Submission of D4.2-D4.7 deliverables: Reports on the SIE city labs	Karoline Rogge (ISI)
December 2021	Online call & via email	Discussion on the draft version of the city lab guide (D4.8)	City Council
January 31, 2022	Via email	Sending the city lab guide for quality review	Agata Dembek (ALK) to Adrienne Kotler (ICLEI), Gert Vandermosten (ANTW) with WP4-lead and Karoline Rogge (ISI) in cc



When?	Where?	What is done?	Who is involved?
February 21, 2022	Via email	Submitting D4.8 deliverable approved by the WP4-lead	Agata Dembek (ALK) to Karoline Rogge (ISI)
February 28, 2022	EU portal	Submission of D4.8 deliverable: city lab guide: 'Co-creating SIE city labs: harnessing the potentials of SIE for cities'	Karoline Rogge (ISI)

6.5. Resources

There are in total 71.4 person months (PM) for WP4, including the tasks:

- T4.1 Transdisciplinary dialogue: ALK – 7.3 PM; ICLEI – 0.5; all other partners – 0.2
- T4.1-4.7 City labs: BRIS – 10.4 PM; ANTW – 7.5; WARS - 7; GREN 5.5; MANN – 5.5; all academic partners – 2.7
- T4.8 Evaluation of SIE city labs in urban areas: ALK – 6.5 PM; DRIFT – 0.6; ICLEI – 0.5; all city partners – 0.3; all other academic partners – 0.1

Additionally, each SONNET partner has a budget, which can be used in this WP, covering travel costs, translation of material, etc. (see SONNET budget: 500 Euros ALK, GEM, ICLEI and all of the cities (with Basel's budget maintained by ZHAW); 1,000 Euros DRIFT, ZHAW, ISI and 1,500 Euros UoS. Please bear in mind that the travel budget is for all research in the field, including WP2 and WP3). Each city also has 2,000 Euros in total for the opening and closing events.

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Appendix 1: Template of SONNET city lab reports

A word template for the city lab reports with the necessary logos and visual identification is available on the [SONNET owncloud](#) (/SONNET cloud/04_WP4 citylabs/09_Citylabs templates).

Expected length of a document: 30-50 pages.

Objectives of the city lab reports:

- Detailed reporting on the activities undertaken and their results;
- Reflection on the process, considering cross-cutting issues (socio-economic, socio-cultural, socio-political) and enabling and impeding conditions;
- Reflection on a city lab as SIE and its contribution to SONNET objectives.

The document shall be based on a systematic report on the city process, and on its ongoing evaluation, that is necessary for analytical reflection. The transdisciplinary research protocol contains guidelines on the ongoing evaluation process and outcomes evaluation (see section 3.4 [Evaluation](#)).

1. Introduction

The introduction shall consist of information on the city context, emphasizing factors relevant for energy transition and social innovation.

1.1 Information about city lab-like activities before SONNET

This section will serve as a reference point for the SONNET city lab analysis. It shall consist of a description of the city's experiences with the city lab methodology and lessons learnt from the previous experiences with transition-oriented and participatory activities.

- What have been city-led initiatives towards energy transition & their outcomes up to date?
- What have been other initiatives towards energy transition (private, civic) & their outcomes up to date?
- Which were areas/topics tackled by those initiatives, and which have been neglected, and why?

1.2. Understanding of SIE for SONNET

This section shall present the city's understanding of SIE, to be further operationalized in a SONNET city lab. It shall consist of a description of how the understanding of SIE goals and methods were developed, alternatives eliminated, justifications, parties involved and their role. If possible, the section should also report the learning outcomes from the city's previous experiences with SIE.



- How is SIE understood in the city lab? What are its major characteristics?
- How was it decided? If any, what were other options considered?
- Who was involved in defining SIE in the city?
-

2. SONNET city lab

The city lab scheme is divided into four phases: **(1)** setting the stage and challenge structuring (incl. team formation, actor and system analysis), **(2)** agenda and goal setting, envisioning and determining possible major pathways, **(3)** experimenting (incl. network building), **(4)** evaluation. Following this scheme, we suggest dividing the city lab reports into four parts accordingly.

2.1. Setting the stage and challenge structuring

This part is to describe the preparation phase of the city lab process. It is important for this phase to be participatory and flexible, because it shall ensure that all the relevant parties are included in the co-creative and dialogical process at further phases. During this phase the following actions are likely to be undertaken:

1) ISSUE

Identification of an issue: What is an energy related issue that is to be addressed by a city lab? What is the rationale behind the choice?

Elimination of alternatives: What other issues were considered and dropped? Why?

Parties involved and their roles: Who was involved in the process of identifying an issue?

Previous efforts addressing the issue and their outcomes: Has the issue been addressed by the city so far? In what way?

Embeddedness in the broader context: How is the issue related to the city's current strategies and policies?

2) TEAM

Team formation: How is the city lab team composed?

Purposes and rationale behind team composition: What did the process of team formation look like? Who was included and who was excluded? What was done to ensure that all the relevant parties were included and treated on equal terms?

3) NEEDS

Needs diagnosis tailored to the issue identified: How was the process of needs analysis conducted? What were the methods, timeline, outcomes?

2.2. Agenda and goal(s) setting, ex-ante analysis

This part is to describe the goal(s) setting process, as well as envisioning and determining possible major pathways. It is important for two main reasons. First, it sets the frame and provides the basis for a learning process, that is one of major objectives of city labs methodology. The analysis shall allow the development of conceptual tools to be used further at experimenting phase (i.e. to be best prepared for different scenarios to occur). Second, this phase shall enhance the



collaborative potential of the lab, aligning agendas and fostering plurality, so that participants would identify with the goal(s) set and with their roles. During this phase the following actions are likely to be undertaken:

1) GOALS

Goal(s) choosing process, based on issue identification and diagnosis:

What did the choice of the goal(s) process look like? What methods were used? What parties were involved? Who was excluded and why? What is the rationale behind the choice? What alternatives were eliminated?

Embeddedness in the broader context: How is/are the goal/s related to the city's current strategies and policies?

2) EX-ANTE ANALYSIS

Ex-ante analysis of enabling and impeding conditions (institutional, social, economic, individual): enhancing the plurality of views of city lab team members.

What methods were used? What were the analysis results?

Foreseen scenarios - identification of milestones and bottlenecks (possibly prototyping):

What methods were used for the collaborative development of those scenarios?

**optional:*

3) Ex-ante analysis of the roles of parties involved (possibly prototyping):

Who has to do what for different scenarios? What was done to ensure that less skilled and less powerful groups were equally included in the process?

2.3. Experimenting (incl. network building)

This part is to describe the testing and experimenting activities during the city lab. Their ongoing analysis, that shall display in the report, serve to tackle and understand their innovativeness and learning potential. During this phase the following actions are likely to be undertaken:

1) OPENING EVENT

What were the goals and activities? Who participated?

2) EXPERIMENTING

How did the process of experimentation evolve?

What methods were used? What was the timeline?

What were the indicators to measure success of particular activities?

Were any prototypes developed and tested? What were the results?

What did the decision-making process look like?

Who was involved in particular tasks and why?

Were there any procedures developed for rising concerns, proposing changes and corrections? How were the responsibilities divided between the partners?

3) CLOSING EVENT

What were the goals and activities? Who participated?



2.4. Evaluation:

This part is to report on the process and the results of an ongoing evaluation.

1) ONGOING EVALUATION

Ongoing evaluation of the process:

Were all the relevant parties involved? What parties may have been excluded from the city lab? Were all the voices and interests involved acknowledged? Were there a procedure set for rising concerns and proposing changes and corrections? How were decisions made? (especially: is there a participatory decision-making procedure in place?)

Identification of novelties and surprises:

Did anything come as a surprise in the process? How did it influence the process?

Identification of obstacles and shortcomings:

What did not work and why? How did it influence the process?

Ongoing evaluation of experiments:

How were actions and interventions chosen and designed? What were the actions considered and dropped? Which corrections were implemented, and activities repeated? What are the direct results of the experiments and activities? How are the results evaluated?

Were there any difficulties and/or constraints for their realization? If so, what were they? Did you anticipate them before launching activities? How were they solved/addressed?

Methods evaluation:

Which methods worked best and for what purposes?

2) OUTCOMES EVALUATION

How was the evaluation conducted?

What were the city lab results? What is the scope of the results and chances for scaling up?

What were the most important lessons learnt in the process?

3. Analytical reflection as a summary

The summary shall consist of the authors' reflection on their city lab as SIE, and particular conditions in which it was exercised.



Appendix 2: Checklist for city lab stages

This appendix consists of a checklist of questions and topics, proposed by the WP4-lead as a supporting tool for monitoring and ongoing coordination of the SONNET city lab process across the four main stages.

1. Setting the stage and challenge structuring (incl. team formation, actor and system analysis)

*i) initial/ pre-existing information on the **city context**, emphasizing factors relevant for energy transition and social innovation*

- What have been city-led initiatives towards energy transition & their outcomes up to date?
- What have been other initiatives towards energy transition (private, civic) & their outcomes up to date?
- Which were areas/topics tackled by those initiatives, and which have been neglected?
- ...

*ii) **understanding of SIE**: definition formation process, alternatives eliminated, justifications, parties involved and their role, possibly: learning outcomes from previous experiences with SIE*

- How is SIE understood in the city lab? What are its major characteristics?
- How was it decided? If any, what were other options considered?
- Who was involved in defining SIE in the city?
- Did the understanding of SIE change, compared to previous projects about social innovation in energy? If so, how? What were the reasons for this change?
- ...

*iii) **identification of an issue**: process of needs analysis and problem identification, elimination of alternatives, parties involved and their role; previous efforts addressing the issue and their outcomes*

- How was the issue (to be addressed in the city lab) identified? Was the needs analysis conducted?
- If so, how was it done and by whom? What were the outcomes of needs analysis?
- Does addressing a chosen issue contribute directly to a city's policy towards energy transformation? If so, in what way?



- What other issues had been considered to be addressed by a city lab?
- Have there been other projects addressing a chosen issue in a city? If so, what activities did they consist of? What were their outcomes?
- ...

iv) **team formation**: *who is included and who is excluded, purposes and rationale behind team composition*

- Who is involved in a city lab planning?
- Who is involved in a city lab's work and activities? How were those people chosen to participate? How are they involved?
- Were there any parties who declined participation? If so, how was it justified?
- Were there any parties affected by the issue, who were not included in a city lab? If so, for what reasons?
- ...

v) **needs diagnosis** *tailored to an issue identified: methods, timeline, outcomes; institutional context conditioning the problem identified; "who decides about what should be learnt?"*

- How was the diagnosis conducted? What methods were used? What was the scope (i.e. what parties and events were considered)?
- Who was involved in the diagnosis process? What were their roles in the process (i.e. who did what?)
- What was the timeline of the diagnosis process?
- What were the outcomes of the diagnosis? How are they used to set the goals for a city lab?
- ...
-

2. Agenda and goal(s) setting, envisioning and determining possible major pathways

i) *based on issue identification and diagnosis: **goal(s) choosing process**, parties involved, justification of a choice, alternatives eliminated; emphasis on institutional conditions to enhance/limit the choice of goals; methods of collaborative choice and choice evaluation*

- What goal(s) was/were chosen for a city lab?
- How were they chosen? (describe the method and the process)
- What goals were considered but not chosen? Why were they dropped?



- Who was involved in a choice of the goals? What were the roles of different parties in the decision making?
- ...

ii) *ex-ante analysis of **enabling and impeding conditions** (e.g. institutional, social, economic, political); **foreseen scenarios** (identification of milestones and bottlenecks; possibly prototyping)*

- What do you consider the desired outcome of a city lab?
- What milestones do you expect to be reached through the process?
- What are the factors that are likely to enhance/support this outcome to occur? What needs to be done to tap them?
- What obstacles and difficulties do you consider may occur? What may be the bottlenecks for the process? What do you do to avoid/solve those?
- ...

iii) [**optional*]: *ex-ante analysis of the **roles of parties involved** (collaborative process of agency distribution)*

- What are the roles and responsibilities of different partners in various possible scenarios?
- How do you ensure that interests of more vulnerable groups (regarding socio-economic status, skills etc.) are recognized?

3. Experimenting (incl. network building)

i) **conducting experiments**: *description of methods, timeline*

- What experiments and activities are being undertaken within a city lab?
- Does a city lab consist of prototyping and experimenting activities? What kinds and how many of them? How were they designed? By whom?
- What methods were used to conduct activities?
- Who was involved and how?
- What is the timeline of those activities?
- ...

4. Evaluation



i) **ongoing evaluation** of experiments; possibly: implementing corrections and repeating

- What are the direct results of the experiments and activities? How are the results evaluated?
- Were there any difficulties and/or constraints for their realization? If so, what were they? Did you anticipate them before launching activities? How were they solved/addressed?
- ...

ii) identification of **novelties and surprises**:

- What went differently than expected? How?
- ...

iii) identification of **obstacles and shortcomings**: what did not work?

- Are there any objectives of activities that were not met? If so, which ones?
- How are shortcomings identified? Could they have been prevented? If so, how?
- Are there any repetitive or corrective actions planned/undertaken?
- ...

iv) **learning outcomes and methods of evaluation**: which methods work best and for what purpose

- What are the learning outcomes from the activities executed? How are they tackled and described/measured?
- How do you recognize the learning outcomes to occur? How do they display? What are the indicators?
- Who is involved in the learning outcomes assessment? What methods are used for the assessment? How were the methods of assessment chosen and developed?
- ...

v) **city lab outcomes**:

- What is the scope of the results and chances for scaling up?
- Did the conducted experiments reframe/enrich our initial definition of SIE? In what ways?
- What enabling and impeding conditions (institutional, social, economic) were identified in the course of the city lab development?



Appendix 3: City Council Calls - update scheme

Date | City | Author's name

1. What is the current status of the city lab process?
2. What activities were undertaken within your city lab in the last six weeks?
 - type of activity
 - objectives of activity
 - methods employed
 - actors involved
3. Successes, challenges and lessons learned:
 - What were the successes?
 - Were there any problems encountered during this period? If so, what were they? How were they addressed?
 - If any, do those challenges require changes in the city lab plan and/or design? If so, what changes would be required?
4. Is there any support needed from WP4 lead and/ or other SONNET cities representatives at this stage of the process? If so, what is needed?



Appendix 4: Documents to be written in English

As a part of the ongoing monitoring of the process, all SONNET cities are asked to prepare brief notes in English on the following topics:

- 1) Reflexive sessions with academic partners (see section 3.4.1 [Ongoing evaluation](#))
- 2) Participants feedback sessions (see section 3.4.1 [Ongoing evaluation](#))
- 3) Opening and closing events (see section 6.3 [Opening and closing events](#))

These notes will later serve as a base for writing the city-specific final report, as well as the evaluation report. It is highly advised that the most important information on the above-mentioned issues would be written down in real time in order to keep track of the city lab process as it evolves. The notes should be uploaded to the SONNET cloud on an ongoing basis, to allow the WP4-lead and all the six SONNET cities' representatives to keep track of the developments of the city lab processes.



Appendix 5: Participant list and informed consent form

Word templates for these two documents with necessary logos and visual identification are available on the [SONNET owncloud](#) (/SONNET cloud/04_WP4 citylabs/09_Citylabs templates).

The documents shall be translated into local languages.

[City] SONNET City Lab
Day / Month / Year

Participant registration

By signing this form, I agree to participate in the SONNET project.

- I understand that the results of this event will be used for research and be published on the SONNET website, research blogs and academic journals.
- I understand that, unless I explicitly give my permission, research data I provide (e.g. notes taken on event discussions) will be kept anonymous and confidential.
- I understand that my participation is voluntary and that I can stop participating at any time.

**By indicating “Yes” in the final column of this form, I agree to allow SONNET partners to photograph and film me during this event – taking place in [city] on [date] – and to use these photographs and videos in any internal and external communications referring to the SONNET project. This includes, but is not limited to, digital distribution on the websites of the organisers, and via the organisers' social media channels, as well as distribution in event-related publications.

Name	Profile <i>(i.e. Scientific Community; Industry; Civil Society; Policy maker; General public; Media; Investor; Customer)</i>	Email (optional)	Would you like to receive updates and news from:		Do you agree to have audio-visual materials of you circulated as part of the SONNET project (see above)**	Signature
			the [city name] City Lab?	the SONNET project?		
			Yes/No	Yes/No	Yes/No	



PARTICIPANT INFORMATION: [City] SONNET City lab
Project title: Social Innovation in Energy Transitions (SONNET)

We would like to invite you to participate in a research project examining the diversity, processes, contributions and future potentials of social innovations in the energy sector (SIE). This information sheet has been put together to help you decide whether or not you wish to take part. We would very much value your participation, but taking part is entirely voluntary. If you decide to take part, you are still free to withdraw at any time without giving a reason. If having read this information sheet you would like to find out more or discuss any aspect of the project prior to deciding whether to participate, please contact the researchers (NAME) using the contact details overleaf.

WHAT IS THE PURPOSE OF THE STUDY?

The SONNET team is interested in examining the diversity, processes, contributions and future potentials of social innovations in the energy sector (SIE). We want to assess – critically and reflexively – the contributions and future potential of SIE towards sustainable energy transitions in Europe. SONNET investigates how, to what extent and under which enabling conditions diverse types of SIE help to overcome transition barriers; such as limited citizen engagement. Ultimately, we aim to capture the diversity of social innovation in the energy sector in Europe, characterize the contributions of different types of SIE and their success to making energy more secure, sustainable and affordable.

The research is conducted as part of the Horizon 2020 call: 'Building a low carbon, climate resilient future: secure, clean and efficient energy' and thus funded by the EU Horizon 2020 programme. The project brings together 13 European partners including six academic partners, and six city regions in Belgium, France, Germany, Poland, Switzerland, United Kingdom. We hope that the results of this research and the broader project will be used to inform future energy policies in Europe. For more information about the wider project please visit the SONNET website: <https://sonnet-energy.eu>.

WHY HAVE I BEEN INVITED TO PARTICIPATE?

As part of the work, we are co-creating a city lab in each SONNET city (Antwerp, Basel, Bristol, Grenoble, Mannheim, and Warsaw) to collectively initiate and observe current and unfolding social innovation in energy processes and their enabling and impeding factors. We are interested in examining how social innovation activities enable sustainable energy transitions related to socio-economic, socio-cultural and socio-political issues i.e. making the energy transition more secure, affordable and sustainable.

DO I HAVE TO TAKE PART?

It is up to you to decide whether or not to take part. If you decide to take part, you are still free to withdraw at any time and without giving a reason.



WHAT WILL HAPPEN TO ME IF I TAKE PART?

Your local city administration partnered up with a research team will invite you to several local activities in which you can take part. For instance, we might put on a workshop to discuss energy poverty issues in the local area and practical ways to address them, introduce householders to a new application that helps to reduce energy consumption in people's home, or trial novel investment practices to finance energy efficiency measures in public buildings. The research team will join some of the activities to listen in and contribute to the discussions and activities.

WHAT ARE THE POSSIBLE DISADVANTAGES AND RISKS OF TAKING PART? WHAT ARE THE POSSIBLE BENEFITS OF TAKING PART?

We hope that the results will contribute to open and informed debate on the subject of social innovation in energy transitions.

WILL MY INFORMATION IN THIS STUDY BE KEPT CONFIDENTIAL?

The research material will be kept strictly confidential and will be available only to members of the research and city administration team. Recordings and visual material, if consented, will be kept on password protected laptops and/ or online storage spaces.

I would like to reassure that as a participant in this project you have several very definite rights.

- First, your participation is entirely voluntary.
- Second, you are free to refuse to answer any question.

WHAT SHOULD I DO IF I WANT TO TAKE PART?

Please read carefully through the participant information. Please sign the registration form.

WHAT WILL HAPPEN TO THE RESULTS OF THE RESEARCH STUDY?

Excerpts of research material may be made part of the final research report, teaching materials, academic papers and funding proposals. The research data (e.g. interview recordings, notes from workshops, etc.) will be stored in a secure institutional server and retained for a period of 10 years after the project ends.

WHO IS ORGANISING AND FUNDING THE RESEARCH?

SONNET is a Horizon 2020 research initiative, responding to the call for research on 'Social innovation in the energy sector'. The project has started on the 1st of June 2019 and will run for three years. SONNET is coordinated by Fraunhofer ISI, Germany.

WHO HAS APPROVED THIS STUDY?

This research has been approved by the Social Sciences & Arts Cross-Schools Research Ethics Committee (C-REC) of the University of Sussex.

CONTACT FOR FURTHER INFORMATION

NAME OF RELEVANT RESEARCHER AND CONTACT DETAILS

Project coordinator

D4.1 | Transdisciplinary Research Protocol



Prof. Dr. Karoline Rogge
Deputy Head of the Competence Centre Policy and Society
Fraunhofer Institute for Systems and Innovation Research ISI
Breslauer Strasse 48, 76139 Karlsruhe, Germany
Phone: 0049 721 6809-126

If you have any concerns about the way in which the study has been conducted, please contact the Chair of the Cross-Schools Research Ethics Committee who reviewed the project: c-recss@sussex.ac.uk.

THANK YOU!



Appendix 6: EC summary requirement

CHANGES WITH RESPECT TO THE DOA

No substantial changes, but more detailed elaboration of SONNET city labs development process, as well as information on how to conduct evaluation and prepare final city-specific reports.

DISSEMINATION AND UPTAKE

This deliverable will be made publicly available via Zenodo.

SHORT SUMMARY OF RESULTS (<250 WORDS)

Deliverable D4.1 presents the transdisciplinary research protocol for SONNET's SIE city labs. It proposes a shared understanding of the role and methodology of SONNET's city labs and provides SONNET cities and researchers with guidelines for how to conduct a city lab that at the same time answers local needs and meets overall SONNET objectives. The protocol offers a philosophy of conduct that we believe would allow to exploit to the fullest the contributions of the six SIE city labs to SONNET's research objectives and ambitions. The protocol addresses the specific dual role of the city labs in WP4 and in SONNET. On the one hand, they are perceived as an experimental space for social innovations in energy to unfold. On the other hand, city labs themselves are seen as SIE, novel in diverse ways through doing, thinking about and organizing towards energy transitions.

The protocol provides an overview of transdisciplinary lab-like approaches, defines city labs for SONNET and embeds them in the overall SONNET objectives, research questions and other research activities. It outlines and depicts consecutive stages of the SONNET city lab process. It further discusses learning opportunities and potential challenges specific for transdisciplinary city lab work. The protocol also describes organizational arrangements within WP4, division of responsibilities, timelines and resources.

EVIDENCE OF ACCOMPLISHMENT

This deliverable. Note that the project team can find the supporting documents on [SONNET's owncloud folder for WP4](#) (SONNET cloud\04_WP4 citylabs\01_T4_1 Transdisc dialogue).