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Task Leader: **Andreas Unteidig (UdK)**
Author: **Andreas Unteidig (UdK)**
Panayotis Antoniadis (NetHood)
Ileana Apostol (NetHood)
Mark Gaved (OU)
Gareth Davies (OU)
Harris Niavis (UTH)
Stavroula Maglavera (UTH)
James Stevens (SPC)
Elizabeth Calderon-Lünig (CG)
Anna Heilgemeir (CG)



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Executive summary

The objective of this deliverable is to outline the first draft of a framework that allows and supports the interdisciplinary comparison of the different MAZI pilots towards the generation of knowledge applicable in the development of the MAZI toolkit as the concrete outcome of the project.

To achieve this, we first elaborate on the background of this task, namely the interrelationships of concepts of inter- and transdisciplinarity. Through this we develop the argument for an approach that is decisively iterative, problem-oriented and practice-focussed. Building on this, we outline the purpose of this framework as an instrument for interdisciplinary comparison and learning, and reflect it through the main concepts of comparing as a sociological project.

On these grounds, we further describe the different elements and structures that we intend to apply, question and refine during the course of the project. In this early stage of the pilots, it is however important to stretch the provisory character of the strategies outlined in this deliverable, as the intent is to adapt the learning framework according to the learning processes evolving over time.

In this first version of the Deliverable 3.5, we introduce as the main element of the framework a catalogue of questions to be answered in a period of 3 months from each of the pilots. This questionnaire is structured in analogy to the projects' objectives as described in the DoW, and will serve as the basis for structured comparison of the pilots during the cross-fertilization events – the first one to be conducted after the submission of this document.

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1. Introduction

This report represents the first of three reports throughout the MAZI project that will propose, develop, and reflect upon an interdisciplinary framework for comparisons and cross-fertilization strategies of the MAZI pilot studies. As the first report, we focus here on providing background and laying out our initial ideas that will be tested as the pilots developed and then reconsidered in the light of the initial pilot study research and MAZI partner interactions around the domain of DIY networking, approached by partners from different disciplines.

The report will first outline the importance of the framework in carrying out our research as a highly interdisciplinary consortium. It will then highlight some examples of frameworks in order to provide background information leading to the development of our own framework, which will be explained and illustrated in the following. Furthermore, this report contains the initial application of the framework in order to provide the basic grounds for carrying out the pilots as well as the indication of future possibilities for the framework to evolve.

1.1 From interdisciplinarity to transdisciplinarity

There have been numerous efforts to analyse the differences between the various *-disciplinarity research paradigms, not always in full agreement. Perhaps the simplest way to express their main characteristics, overlapping at times, is through a few keywords as suggested by Klein in the “Oxford Handbook on Interdisciplinarity (Frodeman et al, 2012, p.16). More specifically, multidisciplinarity is characterized by “juxtaposing, sequencing, coordinating”, interdisciplinarity by “integrating, interacting, linking, focusing, blending”, and transdisciplinarity by “transcending, transgressing, transforming”.

The first related events and gatherings attended by project partners that eventually led to the MAZI project were clearly “interdisciplinary” in nature, since our explicit approach was to try to bridge the ‘two cultures’ of science---on the one side the world of the arts, humanities, and interpretive social sciences, and on the other side, the world of science and technology (Snow 1959)---using the concept of DIY networking and hybrid space as the mediator. Our first gathering at Dagstuhl led to numerous events dealing with similar topics (see D3.2), and its rather “laissez faire” approach proved to be very successful (Antoniadis et al. 2014). But as we were progressing with our understanding of the design space and succeeding to build some bridges between the “two cultures”, the more we became convinced that DIY networking is a technology that can have a positive impact in certain cases. This understanding led to the MAZI project and the launching of four pilot studies engaging practitioners and activists in real deployments of DIY networking solutions toward their particularized objectives. Without realizing it, we slowly drifted from an interdisciplinary team discussing about linking and blending our complementary disciplinary competences, to a relatively big transdisciplinary project that focuses on real-life problems requiring strong cooperation with different actors outside the academia.

Reading the “Handbook of Transdisciplinary research” (Hadorn, 2008) one realizes very quickly how much more complex and case-specific is transdisciplinarity compared to interdisciplinary research. “Dealing with values and uncertainties is one of the core difficulties in transdisciplinary research, practice and related capacity development. In many cases this turns out to be one of the most important stumbling blocks.” However, “ontological and epistemic foundations of participating disciplines are strongly value-loaded. If these value dimensions are hidden or neglected, transdisciplinary collaboration may turn out to be largely superficial or driven by power-constellations representing underlying values.” This means that “a laissez-faire type of leadership, which hopes that the different parts of the work of transdisciplinary teams will grow together organically has not proven successful. Rather, the different parts have the tendency to diverge, making integration at a later point in time even more difficult. Thus, integration has to be part of the project from the start. However, management should not take the opposite position and try to determine the outcomes in too much detail because projects must be flexible and allow for some dynamic development” (ibid, p. 387).

To address these challenges we have decided to follow an iterative multi-layer approach that allows a “back-and-forth” between

- 1) a more scientific, interdisciplinary, analysis of the outcomes of the pilots, which aims to encode the produced knowledge into specific templates, guidelines and customization options of our boundary object, the MAZI toolkit (see D3.2), and
- 2) a more problem-oriented, transdisciplinary approach focusing on developing technology that can address the local needs and aspirations of the community involved in each pilot. Especially in the first year of the project we will be careful not to alienate any partner and keep an open mind to the different methodologies brought by our academic partners and respecting the problem-oriented mind-set of our activists, by “deliberately using everyday language and avoiding scientific terms”, as recommended by Hadorn et al (2008, p. 415).

1.2 Purpose of the framework

The discussions about interdisciplinary research as outlined above and elaborated in D3.2 is of central importance to MAZI, both because of the disciplinary diversity of the consortium as well as because of the central assumption that DIY networking can only be brought forward by applying a prismatic approach to thinking, conceptualizing, designing, developing and testing respective applications within the different pilot studies – and ultimately in the implementation of the learnings into the MAZI toolkit.

Hence, this framework, together with D3.2, describes a learning process, aiming at creating a mutual understanding of basic assumptions, world-views and methodologies between researchers from different disciplines, promoting mutual respect and a self-reflective attitude toward our own collaboration, being a highly diverse consortium in which each and every partner comes from a different background and brings a unique perspective. It aims at doing so in providing the structure to not only bring together different perspectives, but also for performing as “Reflective Practitioners” (Schön 1983), as practitioners that “descent into the swamp” (through reflecting on our ongoing processes with the structure proposed in 2.2) in order to find and define the problems we share – and ultimately want to solve – by rigorously watching and questioning our own practice (through comparing the outcomes of applying 2.2 and in and beyond the context of the cross-fertilization events).

Consequently, the framework is seen as a constant work in progress that provides the necessary structure to overlook and coordinate the different pilot studies toward enabling comparison, cross-fertilization, and the extraction of useful knowledge beyond the activities of the project and beyond specific disciplines. Through this framework, MAZI will also self-reflect on our own interactions throughout the duration of the project, and contribute to the theoretical body of literature regarding interdisciplinary practices (to be carried out in D3.2-3.4) based on our own “experiments”.

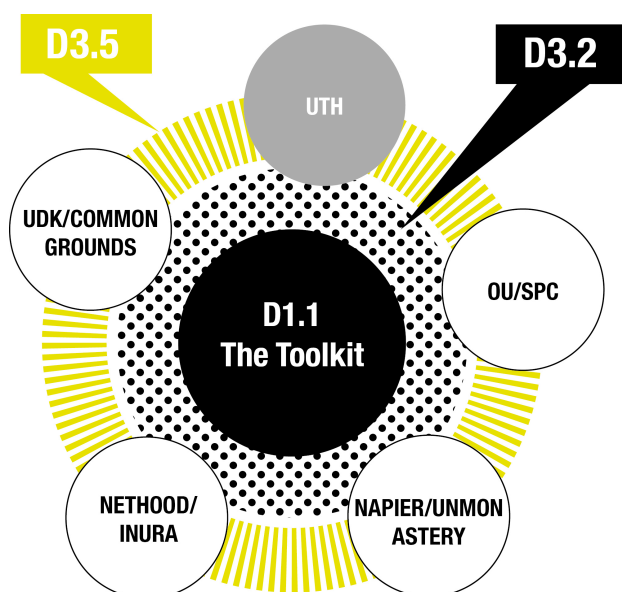


Figure 1: A graphic representation of the main building blocks of the interdisciplinary framework that will guide the interactions between the MAZI partners. The MAZI toolkit described in detail in D1.1. will be the concrete outcome of the project, a proper boundary object “sitting in the middle” between the different “social worlds” of the project represented by “couples” of each the pilot study and completed with our engineers from the University of Thessaly. The comparative framework developed in D3.5 will facilitate the comparison of the experiences by using the toolkit in the different pilot studies and D3.2, this deliverable, will be responsible for finding a “common ground” between the different perspectives and make the required translation to the toolkit’s “language” (i.e., list of functionalities, customization options, templates, guidelines, etc.).

The relationship of this framework to the wider context of work package 3 is as follows: Whereas D3.1 will cover the state of the art in hybrid space research within the different disciplines that are directly or indirectly shaping the project, D3.2-3.4 will describe the vocabulary and methodology needed with regards to using DIY networking as a boundary object across and beyond those different disciplines. While these deliverables elaborate on the generation of relevant knowledge within and across disciplinary borders, this framework (D3.5-3.8) will describe how knowledge will be generated within the project on a schematic level. It will thus inform and provide perspective for the development of methodology, metrics, and related KPI's to enable comparative assessment of each pilot, which will be carried out in D3.8-3.10. 3.8 will then define an analysis methodology, integrating elements of the individual partners' disciplinary approaches, and will take into account metrics and corresponding KPIs that best suit the strategic goals and detailed objectives to be implemented in each of the pilots. In doing so, this task stands in strong interdependence with the experiments carried out as well as the insights generated within them, as it informs these processes as much as it gets informed by them.

This framework will furthermore describe a series of cross-fertilization events that will ensure that the design and evaluation of the different pilots will allow us to draw some high-level conclusions, and that successful strategies can be replicated between pilots. For this, the framework takes two high-level objectives originally stated in the DoW as starting points for informing the evaluation of the strategic objectives both of the individual pilots as well as of MAZI in general:

O.1 Develop a DIY networking toolkit for the easy construction and deployment of a MAZI zone:

One or more wireless access points hosting a web application as a captive portal, including optionally a physical container and visual representation including input and output devices, a data collection and analysis platform. The toolkit design and development is based on the following principles:

- Rely on existing FLOSS software, from very simple applications to sophisticated distributed solutions, mobile sensing devices, and recent developments in open data and open hardware.
- Adjust existing solutions to take advantage of the special characteristics of DIY networking, like de-facto physical proximity, anonymity, and physical presence.
- Make it easy and comprehensive to combine the different elements by non-expert users according to their respective contexts and use cases.
- Provide a wide variety of customization options that allow the administrator of a MAZI zone
 - to decide on the framing of the proposed application, the wording used, rules and constraints, visualization of the information gathered, and more,
 - to construct an appropriate container (e.g., a built structure or a mobile cart), and/or visual representation of the local networks (e.g., a poster, a balloon, an urban intervention)
 - to decide on the data collection rules (e.g., the permanence of the information, the level of transparency, etc.)
- Offer a rich set of recommended templates depending on the context and objectives, which can be dynamically enriched and evaluated based on their actual use in different environments promoting
 - face-to-face interactions and exchanges
 - inclusive participation in public discourses
 - local knowledge and collective awareness
 - local action and social cohesion
 - sustainable lifestyles

O.2 Design and develop pilot experiments in close collaboration with local actors and communities, bringing together researchers from different disciplines, practitioners, activists, and citizens toward increasing the collective awareness in localities and the enrichment of MAZI toolkit through real-life experimentation, making sure that the pilots

- aim to address real needs and respect specific constraints of local communities
- produce easily replicable processes
- set realistic goals that reflect the needs of citizens and local communities

1.3 The comparative method

The pilot studies in the MAZI Project are current situations in the cities of Berlin, Zurich or London, which require research methods that employ contextual, cross-cultural and specific local knowledge, exchanged during participatory and collaborative processes. Urban studies in general as well as design theory and practice derive knowledge from various fields of social sciences such as sociology, anthropology, geography, political science and political economy. In the following paragraphs we make a brief overview of comparative methods that are relevant to research in the related fields. This exploration is meant, nevertheless, to provide a broad context to the discussion of comparative methods in design. In the study of urban form and design, there are different approaches to comparative studies that deal in one way or another with the issues of the comparative method in social sciences.

French sociologist Emile Durkheim is referred to as the father of sociology, due to his contribution to establishing the field within social sciences. At the end of the nineteenth century he argued that comparative sociology is not a specific branch of it, but sociology itself. The relevance of comparative research is confirmed by the method's capability to go beyond pure description and to explain facts (Durkheim, 1982 [1895]). Moreover, he advised, comparisons in sociology are not about contrasting reality with an ideal society. They deal rather with analyses of the manner in which a society conceives itself over time, because in his view the most relevant aspect of a society is the idea of itself. Therefore, according to Durkheim the comparative method in sociology considers temporal ideological analyses between "the authority of tradition" and "the coming into being" of a society¹. In and across all the MAZI Pilots such temporal analyses will be employed and by means of comparisons we may understand, for instance, the emergence of particular situations, implied processes and the evolution of such collective awareness platforms for sustainability and social innovation.

At the same time when Durkheim elaborated on the sociological method, Franz Boas --an American pioneer of modern anthropology-- published an article about the limitations of the comparative method in anthropology. He is known for applying the scientific method to the study of human societies and cultures, and was therefore interested in the effects that historical connections have had upon the growth of cultures. Boas pointed at the limitations to the method, due to the fact that comparison of "similar cultural phenomena from various parts of the world in order to discover the uniform history of their development makes the assumption that the same ethnological phenomenon has everywhere developed in the same manner" (Boas 1982 [1896], p.274). This is an important point to be taken into account in the study of the MAZI Pilots in comparison, while exploring their similarities and differences. In contemporary comparative urban studies, for example, a call for contextual takes was formulated by Jennifer Robinson (2011) as "a revitalized and experimental international comparativism that will enable urban studies to stretch its resources for theory building across the world of cities", which "would need to be significantly more tentative and uncertain than at present, as it draws different contexts into conversation." Such an urban theory on a world scale could be "characterized by multiple, frequently unsettled and hopefully unsettling conversations about the nature and the futures of cities

¹ "[Ideological conflicts within a society break out between] different ideals, between the ideal of yesterday and that of today, between the ideal that has the authority of tradition and one that which is only coming into being. Studying how ideals come to evolve certainly has its place, but no matter how this problem is solved, the fact remains that the whole of it unfolds in the world of the ideal. [...] It is by assimilating the ideals worked out by society that the individual is able to conceive of the ideal. It is society that, by drawing him into its sphere of action, has given him the need to raise himself above the world of experience, while at the same time furnishing him with the means to imagining another" (Durkheim 1982, p. 425).

in the world" (p. 19). Many of the events and activities in the MAZI Project are structured around similar conversations, more or less unsettling, that have the capability to uncover surprising findings and to stimulate creative and innovative further steps of action. As at present the influence of global economy is very strong on city governance in most of the researched situations in the MAZI Project, we draw accordingly on urban studies by political science scholars that deal with this relationship comparatively, so to bridge the development of cities and places with comparative studies in political science.

Between the two world wars in the United States, a subfield of political science, which dealt with comparative studies of political processes and institutions, was generated by the scientific study of political systems of various European countries. Towards the end of the 1960s, within the field developed the argument that the scientific method in political science is inevitably comparative (Harold Lasswell in Rustow & Erickson 1991), and also that, whether by means of the scientific method or by means of qualitative analysis, comparison of case studies leads to the development of theory (Collier 1991, p.7)². For the MAZI project, the understanding of the MAZI Pilots in comparison is aimed to lead to a comprehensive framing of the MAZI Toolkit.

In the context of political science, however, there is concern with the techniques of comparison. Often comparative method refers to the systematic analysis of a small number of cases, drawing on the definition of comparative studies formulated by Dutch political scientist Arend Lijphard (1971). In an analysis of the comparative method Lijphard identified its weak capacity to sort out rival explanations. This limitation might be solved either by increasing the number of cases or by reducing the number of variables. If there is a large number of variables, he proposed the analysis of "comparable cases." Comparable cases are considered those cases in which similarities are found among variables that are not central to the analysis, and in which differences are among the key variables. At the same time, stronger theory and the idea of a research cycle would be able to remove the problems associated with the comparative analysis of a large number of cases.

These elements are taken into consideration in the identification of 'a good case' for the MAZI Pilots, their number, as well as in their analyses and interpretations in comparison. As further developments of the field of comparative studies in political science outline the advantages of keeping the research analysis for a small number of cases. In advocating this method, Harvard professor of political science Sidney Verba advised the need to command the cases in order to assess sophisticated hypotheses, which he called a "disciplined configurative approach" (1967). From Giovanni Sartori, an Italian political scientist specializing in the study of comparative politics, we learn that the comparative method should avoid conceptual "stretching" (1984). Conceptual stretching refers to certain loss of the initial conceptual meaning through application of a concept to a large number of cases. Because the concepts that we could apply to a broad range of cases are mostly abstract and unworthy of scholarly attention, Sartori suggests using in comparative studies a relatively small number of cases. Under these conditions, appropriate application of the concepts is capable to highlight particularities and specific meanings within the comparative method. Moreover, the studies in symbolic anthropology of Princeton emeritus professor Clifford Geertz add to the comparative method the requirement of a "thick description" of a human behavior (1973). A thick description does not refer only to a detailed description, which places the research data in context, but also to the contextualization of research findings to explain both practices and discourse within a society, which bring the discussion full circle to Durkheim's arguments in "The Rules of Sociological Method" (1982 [1895]).

In addition to the sociological, anthropological and political dimensions of the particular cases, there is a physical dimension to be taken into consideration. Every place generates its own situations and influences the spatial as well as technological solutions. Therefore, we draw our understanding by looking also into the broad studies of urban form. Detailed narratives regarding the historic evolution of urban form are based on qualitative comparative studies that focus on several particular cases, while exploring various socially constructed features of cities. Spiro Kostof published in 1992 two historical cross-cultural urban studies, in which the factors for analysis were determined according to their contribution to the physical structure of towns. In "The City Shaped" he discussed five patterns of organization according to the manner in which their

² As for the benefits of the comparative method, Berkeley professor of political science David Collier provides a compelling explanation. Currently we understand that "[c]omparison sharpens our powers of description and can be an invaluable stimulus to concept formation. It provides criteria for testing hypotheses and contributes to the inductive discovery of new hypotheses and to theory building" (Collier 1991, p.7).

physical overall layout developed over the centuries. In “The City Assembled” Kostof deconstructed urban form into its constituent elements and proposed five main categories, completely separate from the structural patterns identified in the first study, namely the city edge, divisions, public places, the street and urban processes. Kostof mentioned the arbitrariness of this classification though, due to the particularity of the urban form that its social content generated.

Furthermore, from the tradition of urban design and studies that focus on the social construction of space, Amos Rapoport elaborated cross-cultural comparative studies in order to structure the theory of environment-behavior relations (1977). In doing research about vernacular design, he revealed the variability of the definition of cities, as cognitive and taxonomic processes. By means of comparisons he redefined the understanding of urban form in social terms, according to people’s values, ideals, purposes, choices, activity systems. He highlighted the significance of the relationships among elements and of the underlying rules in the organization of urban space. If taking into consideration the relationships and the organizing rules, urban design could be defined as the organization of space, time, meaning, and communication. Rapoport pointed out that urban design varies with the nature of the environment, cultural differences, values, as well as with the intricate concept of environmental perception.

2. The MAZI framework

2.1 The Framework

MAZI will build on and learn from the diversity of our consortium as it will engage in carefully structured interdisciplinary working sessions, in which MAZI partners will keep their different “disciplinary” hats and try to integrate their different perspectives into a comprehensive and meaningful comparison.

This process, as visualized in the figure below, is driven by four MAZI pilot studies carried out in collaboration between the MAZI academic and community partners, as well as with the wider academic and non-academic audience. The pilots will take place in different cities, and address the needs of different communities, using different instantiations of the MAZI toolkit. Indeed, DIY networks are by construction anchored to specific geographic locations, and thus regard context-specific needs that are mostly known to local actors; also they might change over time. Consequently, different types of applications will be relevant at diverse times and places. This framework aims at providing a structure to critically assess the practices in carrying out the pilot work in these different settings, and, despite and because their heterogeneity, to establish dimensions of comparability across the different pilots. This framework thus serves to facilitate the transfer of valuable knowledge necessary for both the success of the individual pilots as well as the conceptualization of the toolkit as a high-level objective across pilots and disciplines.

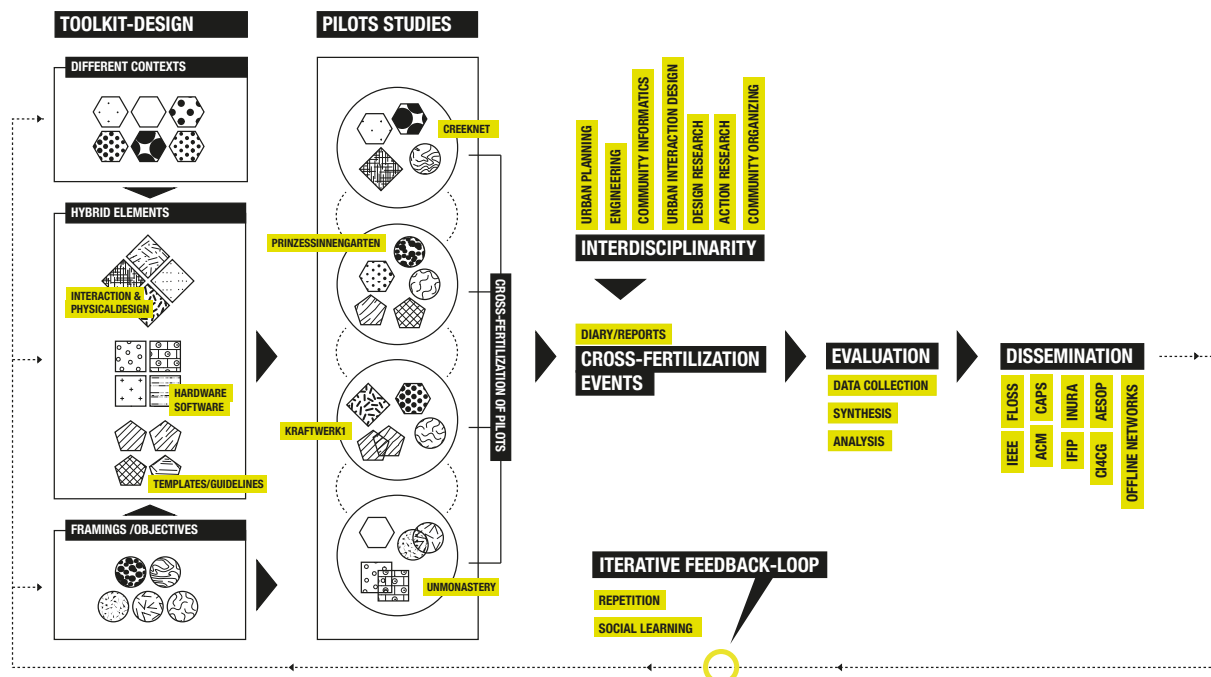


Figure 2: Each of the pilots consists of multiple variables, here described as contexts, hybrid elements and framings/objectives, that will evolve and change over time. Their combination and interplay will be subject of planned experimentation within the four different pilots, in each of which a rich set of knowledge will be generated. This knowledge will in the process be discussed, challenged and enriched with perspectives both out of the consortium as well as beyond the project boundaries. For this, we will have a framing set of comparative questions to be reported on before each of the cross-fertilization events (questions see 4.3, events see 4.4). **These periodical reports will enable us to draw conclusions by comparing the evolvement of the pilots themselves as well as how they are perceived and performed by their respective teams over time.** Furthermore, we will continuously disseminate and debate the findings and experiences of our project work in international journals and conferences, hence reflect on the progress in multiple, interdependent dimensions. These reflections will circulate back into the singular pilots, informing the next stage of the projects iterative process.

To facilitate the process described in Figure 2, the framework is understood as circular and iterative, and foresees the following elements in place to support the interdisciplinary generation, application and transfer of knowledge:

- 1) **Diary/Reports (see 2.2)**
- 2) **Cross fertilization events (see 2.3)**
- 3) **Evaluation (D3.8)**
- 4) **Dissemination**

2.2 A framework for processual comparison

We anticipate that the different activities carried out by the different pilots will meet the specifications of the objectives of MAZI to different extents, based on how mature their work is and on the rationale that they are using to steer their work.

The following is an initial version of a catalogue of questions to be answered by each of the pilots before each cross-fertilization event (see 4.4). These reports will be evaluated towards the generation of knowledge about inter- and transdisciplinary issues occurring within and across the pilots as well as about the very collaboration in the interdisciplinary consortium itself. This knowledge will be discussed during the cross-fertilization events and will inform the further proceeding of the pilots as well as be disseminated through papers, articles and the like. These questions are however a mere start and will evolve and change over time, as we anticipate the practice carried out in the respective pilots to point the consortium to more refined or merely different criteria of success.

I. Project Management Updates

- >> What is the current state in regards to your pilots' political and social context? Have any significant changes/developments occurred?
- >> Which activities have taken place within this reporting period?
- >> Have benchmarks/activities been met/done?
- >> What are the biggest challenges and how are you planning on resolving them?

II. High-level knowledge relevant for toolkit conceptualization

- >> To what extend is (/will be) your pilot rely on FLOSS software and open hardware?
- >> Which software/hardware components are you (planning to) applying?
- >> Which learnings, components or principles seem valuable for inclusion into/consideration for the design of the MAZI toolkit at this point?

User Experience

- >> How is the current state of your pilots' MAZI zone perceived by users in regards to comprehensibility?
- >> What are learnings and experiences to implement into the design of the toolkit as being used by non-experts?

Customization/Physical Design

- >> What are current ideas/options in regards to framings, wording, visualization, physical representation?
- >> How are you proceeding with user data? How transparent is the collection of data?
- >> How could your current considerations for your pilot be translated into templates to be applied in the toolkit?

III. Community

Community Outreach general situation

(e.g. Actors/Stakeholders, Difficulties)

- >> How do you involve local actors and communities in the processes of your pilot?
- >> How do you involve external researchers and the wider consortium into the pilot?

Community Needs

- >> What community needs are being identified / have been filtered out to work with MAZI?
- >> How were they determined as being grounded in real life/specific community settings?
- >> Which community specific constraints are you experiencing in your pilot?

Expectation Management/Goal Setting: How are expectations towards the pilot developing?

- >> What are expectations towards MAZI by the local community?
- >> How do they relate to your team's expectations?
- >> How do you set and discuss goals with the local communities?
- >> What are the top-3 goals for your pilot?

Ownership

- >> How do you deal with owner-/authorship in your pilot? Who is and who feels responsible?
- >> What are issues in regards to trust and sense of ownership with local communities?

IV. Individual criteria for success

- >> What are criteria of success particular to your pilot that are not yet listed in this questionnaire?

2.3 Cross-fertilization events

Across the timeline of the different pilots pilots, the MAZI consortium will hold multiple cross-fertilization events that aim at the interdisciplinary comparison of the pilots and at drawing high-level conclusions in regards to and guided by the dimensions of comparison in alignment to the project objectives (as described in 1.2). These events thus institutionalize the continuous discussion and comparison of the experiences in carrying out the different pilot studies for the sake of learning from each others successes and failures.

Additionally, external research and activist communities will participate in the respective events to ensure the project's continuous grounding in real-life needs and perspectives, since it is only through the formation of a large and dynamic community of relevant groups and individuals that the usability and design of this technology can become attractive for a wider society. In turn, this is a critical requirement for reaching the objectives of social cohesion and location-based collective awareness.

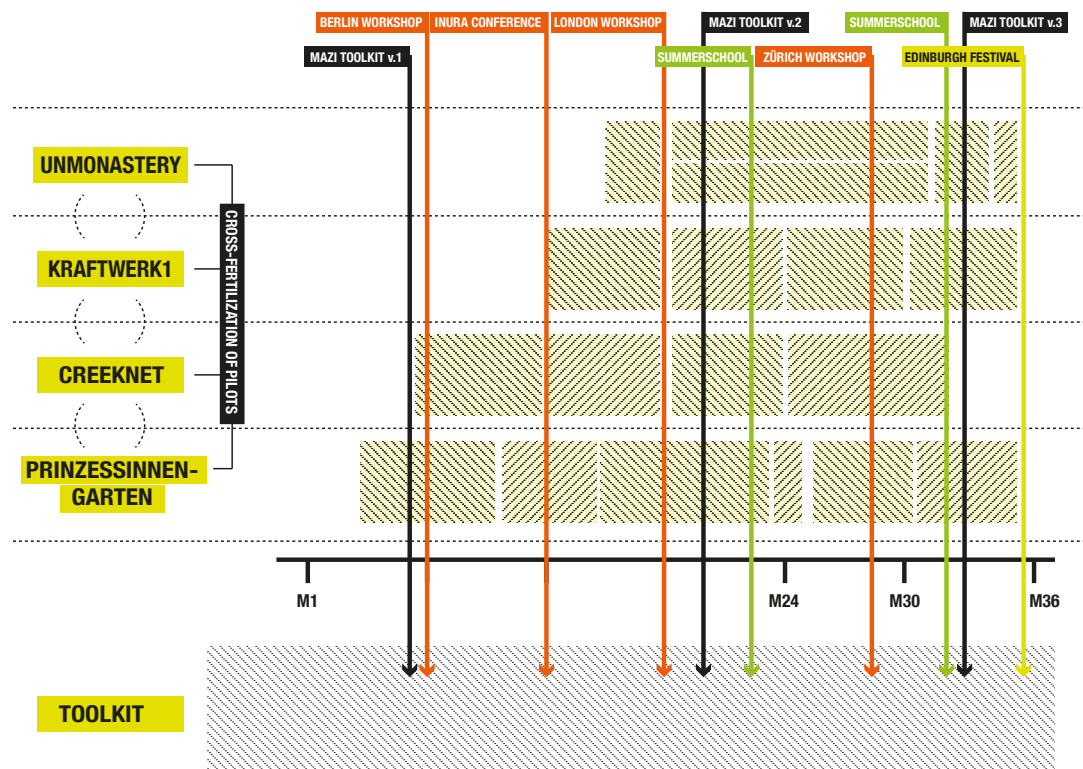


Figure 3: The four different pilots are carried out in a cascading timely manner in order to allow the maximum possible cross-fertilization in terms of methodologies, successful strategies and lessons learned.

2.4 Using the framework

In order to ensure the framework's purpose, partners will be asked to report on the matrix described in 4.4 in a sequence of 3 months. Additionally, each cross-fertilization event and consortium meeting (see next point 4.6) will provide a time slot for discussion and comparison of these reports as well as of the respective knowledge generated through this comparison.

Hence, the framework should enable its users to:

- continuously reflect on own pilots
- continuously compare in-between the different pilots
- become aware of general as well as specific issues emerging at a very early stage
- generally share experiences across the consortium and towards a wider public (feeding into D3.2-4)
- apply successful strategies of singular pilots in multiple/different contexts as well as to avoid mistakes made/challenges faces

3. Application of the framework/Initial questionnaire

The following chapter provides first insights into the consortium's different pilots through a first report on the questions posed in 4.4. Please note that the Berlin pilot is the only practical dimension of MAZI that has officially started at the time of submission of this document, hence the reporting given is largely of anticipatory nature.

In order to support the tracing of developments and thus the efforts to create mutual learning experiences from comparing the four different processes, each pilot section begins with the description delivered initially for the DoW. These descriptions thus are seen as a starting point for the developments described in the following questionnaires.

3.1 Initial pilot descriptions

3.2 UdK Berlin/Common Grounds

Berlin University of the Arts will collaborate with Common Grounds in developing, establishing and testing a MAZI framework that facilitates and supports the vivid civic discourse about the future use of public land in Berlin, specifically about one of the most prolific symbols of bottom-up development in Germany's capital: The Prinzessinnengarten.

Prinzessinnengarten is a social and ecological urban agriculture project that has been founded and is being maintained and developed by Common Grounds e.V. since 2009 on designated public land. With hundreds of engaged neighbours contributing, the 6000 square meter vacant lot in the centre of the city has been transformed into a publicly accessible garden, right outside a metro station in the inner city district of Kreuzberg known for its diversity, alternative culture, history of political movements – but also for an steadily increasing processes of gentrification. Today, the space is home to more than 500 varieties of vegetables in the city, but also serves as a multifunctional place hosting various kinds of initiatives and sociocultural activities. With estimated 60,000 visitors and more than 1,000 volunteers per year its appeal extends far beyond the immediate neighbourhood. Central topics addressed by the garden and its users as well as visitors include participatory city making, public discourse, biodiversity, nutrition, recycling, environmental justice, climate change, and food sovereignty. Prinzessinnengarten serves as a platform for all kinds of practical social-ecological activities, including gardening, repairing bikes, beekeeping, re-use workshops, lectures and public discussions, film screenings and artistic interventions, with the overarching goal of exploring sustainable future ways of urban living. As a central characteristic of the project, Prinzessinnengarten peruses a horizontal and radically democratic approach. It is open to everyone to get involved in process of knowledge exchange and informal learning. Furthermore, through the opportunity to contribute and to participate in open workshops, through the garden café and a variety of cultural events, the Prinzessinnengarten has become one of Kreuzbergs most popular and lively meeting place.

In the summer of 2012, despite its popularity as a public good, the grounds of Prinzessinnengarten were put up for sale and its existence was threatened. The initiative launched a campaign including open letters to the Berlin Mayor and the Senate and a petition, which attained more than 30,000 signatures and was well recognized in both the national and international media. This support helped to achieve an agreement with the city administration to stay on its plot until 2018 (coinciding with the conclusion of MAZI). Based on the renewed threat, Common Ground seeks to initiate a strong process of citizen participation by making the future of Prinzessinnengarten, and, from there, the urban future of Berlin a widely discussed topic. The goal is to establish a nucleus for public conversations that are embedded in the rich tradition of spatial negotiations and the ongoing discussion about the use of public land in Berlin. The pilot aims at creating novel possibilities to allow and facilitate more direct forms of participation for city development issues, which ultimately address the topic of future orientated, socially and ecologically sustainable forms of urban development. In regards to

these questions, Prinzessinnengarten as a very central and visible place in Berlin is seen as an optimal testing ground for new forms and methods of participation. MAZI will serve as a central and facilitating momentum in this process.

Prinzessinnengarten is designed and performed as an open space for public discourse and peer-to-peer learning processes. Decidedly focusing on the locality, Prinzessinnengarten is reluctant to offering internet-access to its visitors, given the surrounding environment with many co-working spaces and media agencies, which proposes a scenario of patrons coming to the garden in order to get professional work done. Deploying a DIY network therefor promises a novel opportunity to share local knowledge without the risk of diluting the collective focus on the site itself. Thus, this pilot serves a twofold purpose, namely [DISCOURSE] the initiation, support and enrichment of public discourses about the future of the site and public land in general, and b) [KNOWLEDGE] the open and collaborative generation of knowledge about the complexity of this topic, both fostering and building on the already cultivated and ongoing processes of informal learning in the existing framework of Prinzessinnengarten.

3.3 Open University/SPC

The Open University will work with SPC to explore community interactions via a local network. This pilot will engage a diverse population within a limited geographical area, Deptford, in South East London, UK. Deptford is an inner-city area with a mixed socio-economic profile, including low income neighbourhoods, artist communities, student populations attending a range of institutions including Goldsmith's College, Ravensbourne College and the University of Greenwich; and urban professionals. Formerly a wealthy area, economic activity declined with the closure of the nearby dockyards, though a process of redevelopment and gentrification is underway, which has led to local debates about the identity and future of the area.

SPC has worked in Deptford since 2001 and has contacts with local people, community groups, social enterprises, higher education and business interests in the area. SPC has been running a community wireless network OWN (Open Wireless Network) to provide free street level internet access utilising the latest low cost and low power equipment since 2008, developing from their 2001 original network. The task of maintaining the network and supporting users' needs is focussed around a weekly community workshop ("wireless Wednesdays") hosted in SPC's Greenwich lab (<http://bit.spc.org>). At its peak in 2010 the network had 60 mesh nodes and 400 users per day in an area of approximately 4 square km. However, it has proved difficult to develop persistent services on top of network infrastructure and numbers of participants have dwindled.

SPC would be interested in exploring how this activity may be revitalised, and investigating services that are relevant to local communities' needs and interests. This pilot proposes the development of "CreekNet" – a DIY network to link together communities running alongside Deptford Creek, the waterway that forms the natural boundary between the two neighbourhoods of Greenwich and Deptford. As a waterway that leads to the River Thames it has been the historic focus for economic and social activities and is currently undergoing rapid redevelopment. Potential participating communities include an education centre, local community arts venues, boat-based communities, and local colleges. As well as extending current network connectivity provided by OWN and other providers with a MAZI supported DIY network infrastructure, CreekNet will deploy services to support local interactions. This pilot will cover three aspects of MAZI: [CONTACT], building relationships across the diverse population that lives in small geographical area but with very different characteristics and sharing information about

The location for new arrivals [INFORMATION] in order to help build a sense of collective awareness; with [DISCOURSE] to engage community members in discussions around shared interests, and debates about the identity and future potential of their lived environment. It is intended this will explore the extent to which a MAZI toolkit can provide an alternative media channel to current means of debating local urban development issues.

Services may include local development and hosting of websites (e.g <http://superglue.it>), decentralised cloud storage (<http://storj.io>) and community centred explorations of the Internet of Things (e.g.

<http://dowse.equipment/>). There is an interest in community managed resources that have security integrity, given the post-Snowden environment.

3.4 Nethood/INURA

Kraftwerk1 is a cooperative and grassroots housing and workspace project with three settlements located in and around Zurich. It started as an experiment in the real estate crisis of the 1990s, departing from the vision of a worldwide movement of appropriation of former industrial areas, toward shaping “a new civilisation beyond work.” Kraftwerk1 became a collective, self-organized, environmentally and economically sustainable urban alternative, within a mix of residential, social and commercial spaces. The first settlement was completed in 2001 and is housing around 270 people in 81 residential units (suites) of various compositions and sizes, from individual housing to collective living (2 to 13 room suites), which are self-financing and define their own social structure. Additionally, more than 100 people work in small businesses of all kinds in the settlement. A restaurant (14 gault millau points), a hair-salon, a self-managed shop and a kindergarten are some public services provided in Kraftwerk1.

As Kraftwerk1 was not supposed to become an island disconnected from its larger context, there are multiple ways in place to connect it with the city, the outside economy, and the countryside (e.g., through exchange of agricultural or industrial products). Its members maintain a direct link with farmers in the proximity of Zurich, through food supply and temporary commitment on the farms. For visitors, there is guest room provision, and the commercial and office spaces on the premises establish further networks. Through the process of development and (daily) living, Kraftwerk1 contributes to the renaissance of traditional cooperative movement in Zurich. Its members developed environmental standards, operational concepts, and collaborative activities in dialogue among themselves and the elected cooperative bodies. Kraftwerk1 cooperative expanded in 2012 with a second settlement providing space for 85 inhabitants, including flats for handicapped people. In 2015 another settlement will be inaugurated in the proximity of the Zurich Airport for 240 people living and 90 working. More cooperatives in Zurich based on similar ideas are: Mehr-als-wohnen, Kalkbreite, Wogeno, NENA1, and more.

The INURA Zurich Institute's office rooms are situated in Kraftwerk1 since the very beginning. As a member of the cooperative, but not within a board, Philipp Klaus (INURA) is actively involved in different working groups and decision making processes at the cooperative's assemblies. In Kraftwerk1 lives also the writer "P.M." who is one of the key persons behind the movement of alternative settlements in Zurich. The pseudonym P.M. was chosen as the combination of letters represented the most used initials in the Swiss phone book. In 1983 P.M. published the book “bolo’bolo” which has been translated into 6 languages, followed by a series of books on alternative living. Today, P.M. is representing Neustart Schweiz, an umbrella association of various cooperatives built by the principles of Kraftwerk1. As such he is in charge of communicating the ideas of Neustart and the various “success stories” in Switzerland for socially and ecologically integrated neighbourhoods at an international level. Panayotis Antoniadis (NetHood) supports Neustart's activities in Greece by translating the new book by P.M. (2014), documents and building links with local actors. Currently Neustart develops a new nationality-neutral concept called “500”, referring to the approximate number of inhabitants in such a project: <http://o500.org>. This pilot will use the KNOWLEDGE framing and aims to support this endeavour of the Kraftwerk1 cooperative by providing software tools and guidelines from the MAZI toolkit that will help the members of Kraftwerk1 to share their knowledge and experiences with their Greek counterparts. The collaboration with the Kraftwerk1 in the MAZI project is favoured by the fact that the Kraftwerk1 community is already sensitive in issues of ownership and application of ICT infrastructure. Currently an Intranet is realised where local collaborative applications will be soon installed and thus Kraftwerk1 is both an ideal user community of the toolkit but also an invaluable source of knowledge about the design and use of local applications in confined environments. Moreover, Kraftwerk1 is organised in a basic democratic manner and decision making is very inclusive. This means that Philipp Klaus as both a partner of MAZI and a member of Kraftwerk1, will have the opportunity to propose the adoption of the MAZI “offering” for Kraftwerk1 through the democratic processes of the cooperative and engage its members in discussions and deliberations around its design and expected use. But also, he can follow closely the use of the application

over time, discussing with friends and colleagues about their experiences, and play the role of a “permanent” catalyst throughout the process.

3.5 Edinburgh Napier University/unMonastery

The rationale for creating MAZI toolkit (social cohesion, local knowledge, conviviality, participation in decision-making, self-organization, knowledge sharing, education, sustainable living) are all shared objectives of the unMonastery project: to create a sustainable, convivial, horizontally organised community of the unMonasterians, and to build meaningful relationships with the local community. As such, the unMonastery is specifically suited for co-designing and testing the toolkit.

One important aspect of the unMonastery work where using a networked tool could be really useful is making unMonasterians visible for the city; during the first prototype in Matera (Italy) a lot of time was spent on figuring out how to live and work together, and working online with the global network. All this work remained invisible to the neighbours. The reverse was also true - unMonasterians only met people who were brave enough to come and talk to them in person. Having a mobile DIY network with local applications specifically designed for aiding physical meet-ups would have been very useful.

Individual unMonasterians are often cultural nomads; they arrive at unknown worlds, which they need to relate to as more than mere tourists. Sharing living and working space, they must work to develop long term relationships and collaborations within the local community. After the closing of the Matera prototype, a small mission formed in Athens to explore the evident growth environment there. The unMonastery is subject to many inquiries and continue to make scouting excursions, to collect information about new places, which are proffered as a potential home.

A key aspect of the unMonastery work is the documentation, visualisation and communication of data as a means of engaging with communities. In Matera, they installed an open energy monitor, tracked electricity, water, and food consumption and waste production. unMonasterians can co-design and test MAZI toolkit for collecting and sharing data among communities. Another important motivation is developing tools for keeping track of each other’s personal well-being in distance.

The unMonastery BIOS game is a technique, which can be used as a design fiction tool for participatory design activities for MAZI toolkit, that is already under development and very close to the Critical Design methodology that was successfully used by NU during the UrbanIXD project. unMonastery will be an ideal testing and development pilot for MAZI toolkit, as both are based upon the idea of developing a vibrant community among strangers in multiple contexts: within a newly occupied building, in a new city, and connecting local actors with their global counterparts. NU would collaborate with unMonastery in documenting the role of the MAZI toolkit in the setup of a new community. It is envisaged that the toolkit will both support the creation of the community but also could be incorporated into various installations as a means of engaging with the wider populace. Based on a methodology of critical design NU and unMonastery will work together to create a series of provocative installations pieces by which to raises awareness of specific issues within the local community.

3.6 First reports on developments within reporting period

The following presents the answers of the pilots to a first application of the framework's questionnaire. As the pilots are in the very early stage of their roll-out, many questions are not able to be answered in this version and will become relevant in the next versions to follow. Pilot 4 refrained from answering the questionnaire at this point, as this pilot is scheduled to start in M15. Consequently, it will be portrayed in the later versions to come as well. To enable comparison, the answers of each pilot have been compiled under each section.

I. Project Management Updates

>> What is the current state in regards to your pilots' political and social context? Have any significant changes/developments occurred?

BERLIN

In comparison to our initial pilot description, we have revised and broadened our pilot concept and expanded the initial scope. Instead of limiting our perspective on a participatory process for one specific site, we decided to entail a wider neighborhood perspective and to include other related initiatives in our MAZI activities. The Neighborhood Academy inside Prinzessinnengarten hereby remains the nucleus of our pilot as well as the location where the offline network will be centrally deployed – the MAZI/Berlin network will thus manifest the “hybridization” of the Neighborhood Academy.

Berlin University of the Arts will thus collaborate with Common Grounds e.V. in developing, establishing and testing a MAZI framework that facilitates and supports the vivid civic discourse about socio-ecological transformation, urban and rural bonds, rights to the city and collective learning. The point of departure lies in the future use of public land, specifically in Berlin. The Neighborhood Academy, hosted and founded by Common Grounds e.V., “Nomadisch Grün” and the Swedish artist, Åsa Sonjasdotter, is the platform through which these questions are discussed.

The Neighborhood Academy in Prinzessinnengarten is a self-organized open platform for urban and rural knowledge sharing, cultural practice and activism. The Academy draws on processes that determine our every day life as well as the coexistence of plants, people and animals. It opens a space for the questions: How can we learn from each other in ways that relate to the world and engage in and with it? Can this be done through methods that are similar to the approach of a gardener – that are caring for and nurturing life processes? How can the work we do in our neighbourhoods also help us understand relations in larger and more complex contexts? How can we cooperate with initiatives in communities, other cities and rural areas in ways that influence these contexts?

This bottom-up academy combines different knowledge- and experienced-based formats: non-standardized knowledge, hands-on know-how, sensuous narratives and research methods. People, organizations and projects from different neighborhoods come together. Participants can come from Kreuzberg or Oderbruch just as likely as from Detroit or the rural regions of Greece to find common ground for learning and teaching. The Academy in Prinzessinnengarten supports and builds communities. Invited initiatives work cooperatively on shared issues and develop so-called Manuals – simple action guidelines – accessible and usable for the public and stored in the Archive of Commitment.

The main outline of the revised pilot:

- ▶ Participatory prototyping of the MAZI-Toolkit in local, trans-local and neighborhood-wide processes around the bottom-up development of community-oriented and sometimes community-contested spaces linking together social, cultural and ecological aspects of our urban life (e.g. we will include some of the instructors of the planned NAK summer school into the design process of the first MAZI/Berlin prototype)
- ▶ Inclusion of and networking with other related local initiatives and fostering synergies and cross-

fertilization through Micro-Festivals and mobile MAZI installations.

- ▶ Support of locating, analyzing and discussing local engagement and activism as spaces of learning (i.e. collective learning), providing a hybrid framework for knowledge generation, transfer and archiving
- ▶ Provide an interface for contact between Neighborhood Academy (NAK) and the surrounding neighborhood.

The following is a more detailed description of this project-expansion.

Initially, the MAZI-Project was focused on a civil participatory planning process for the future use of the space of the Prinzessinnengarten. However, the circumstances regarding the future of the space have changed, as the Berlin Senate has begun to enforce a new property policy, according to which all city- and borough owned lots are being “clustered” into 4 categories. Forms of future usage and marketing perspectives of previously unused or temporarily used spaces will be decided through this mechanism. The plot currently housing Prinzessinnengarten will undergo this process in the fall of 2016. The possibility for a civic participatory process, as proposed in 2012 by the community project and the Berlin district of Friedrichshain-Kreuzberg, is not foreseen in this new procedure. Against this backdrop, we decided to place the pilot on a broader base in order to secure the pilot’s sustainability.

At the same time, it has become clear that the questions which appeared in the community project of Prinzessinnengarten are being posed by numerous other neighborhood initiatives in the district of Berlin-Kreuzberg, which, despite their diversity, share a commitment to the bottom-up development of community-oriented spaces, linking together social, cultural and ecological aspects of our urban life.

Thus, the Berlin pilot of MAZI reframes its focus from the development of Prinzessinnengarten to the development of Kreuzberg as a social, cultural, political, economical and ecological ecosystem and asks the following question:

»In what future Kreuzberg do we want to live in? And how can we connect different actors within a neighborhood like Kreuzberg to exchange, learn from one another and articulate a common vision?

Neighborhood Academy in Prinzessinnengarten as a platform for collective learning

The Neighborhood Academy is a discursive platform in Prinzessinnengarten for the investigation of global socio-ecological topics with departure in the local. Questions around topics such as access to the city, climate breakdown, migration and affordable rents, are central to relevant contemporary discourse around the future of Berlin. The work of the Neighborhood Academy in Prinzessinnengarten is embedded in a community of practice, locally as well as internationally. Locally, it connects and cooperates with different groups and communities in urban as well as rural contexts working with political, economic, artistic and grass-root knowledge. On an international level it invites groups, professionals, artists and NGOs through residencies to share their knowledge and experience with local groups in Berlin and Brandenburg.

The local and/or mobile MAZI network is indented to be serving as an interface as well as tool for the processes of generating, archiving and disseminating knowledge within this “academic” structure. It should serve as a local research platform – an information hub – for teachers and students of the Neighborhood Academy as well as visitors of the garden. It also aims at being a possible gateway between initiatives working on similar topics. A main Interest is to reinterpret the concept of “neighborhood” – from the local to the global, from the specific to the universal.

LONDON

The Deptford Creek area is being rapidly changed due to urban development. Since the MAZI project was initiated (January 2016) there have been new housing developments built, and tenants from existing properties evicted to enable the demolition of art studios and their replacement by new housing apartments. The general trend is for taller buildings including tower blocks which will affect current provision of long distance wireless links to community network users from SPC’s main location. Preparations are continuing for the large scale Thames Tideway infrastructure project that will require massive tunnelling work on the edge of the Creek and require removal by road (100 trucks/day) or water (500 tonne barges that will require dredging of the Creek

and environmental impact). Representatives of Thames Tideway have been engaging with the local residents including potential MAZI participants (e.g. The Minesweeper Collective artists' boat community).

We believe there are general concerns about the rapid change to the physical environment, the change of population due to the economic changes (e.g. established population being moved), and resulting social and environmental changes (e.g. pollution affecting biodiversity, social and cultural bonds of residents changing).

ZURICH

The Kraftwerk1/NeNa1 pilot takes place in a very good political moment, since the citizens of Zurich have voted in a 2011 Referendum to increase the percentage of affordable dwellings, most of them built based on the cooperative housing model, from 25% today to 33% by 2025.

This popular decision has generated significant activity around this model, and thus our "knowledge transfer" objective is shared by various important actors including the City Council, local grass-roots initiatives like the recent NeNa1 cooperative, or research interdisciplinary centres like the Wohnforum at ETH Zurich, which makes it much easier to establish collaborations and draw attention to our own research work within MAZI.

More specifically, we have identified as the two main "target" groups of the intended knowledge transfer process: NeNa1 (a local transfer within Zurich), and INURA Athens and Co-app building (an external transfer within Athens). In this sense, Kraftwerk1 will play mainly the local knowledge "provider" by sharing their experiences, and NeNa1 and Athens groups, rather than being seen as the knowledge "consumers", they will play the role of knowledge "interpreters" for their specific circumstances. However, we expect significant benefits and stimuli from those interactions also for Kraftwerk1 (e.g. self-reflection, community building, etc).

>> Which activities have taken place within this reporting period?

BERLIN

Within this period a first approach to the above-mentioned initiatives was made. Two workshops have been carried through, in order to bring together the different actors, and to collect needs and generate ideas on the possible applications of MAZI.

First workshop:

The first workshop was an internal meeting with artists, experts and members of the different initiatives in Berlin. The goal was to facilitate a first contact between participants/initiatives, and to introduce MAZI as a project and its possibilities as a tool within the Neighborhood Academy's Summer Program 2016 – with the wish to extend it

- 1) for a long term use
- 2) for the cooperating initiatives and artists

Framed within the general topic of Collective Learning, a series of discussions on Content, Formats/Methods, Roles/Actors and Material brought a first insight into the common concepts, issues and needs among the initiatives.

Collective learning, being the form of pedagogic principle of the Neighborhood Academy and the connecting practice of the initiatives, we defined the main realms of knowledge production as following:

- the construction and deconstruction of narratives
- making operational structures in the politics around us visible
- understanding the self as part of political narrative
- and understanding and developing internal operational structures

These results were important to create a common ground for the understanding of our work as an academy and the work being done within the initiatives themselves – to highlight the learning aspect of community work

and political activism.

Second Workshop:

The second session brought together members of two Berlin initiatives, namely Stadt von Unten (City from Below) and Kotti & Co (an important tenant movement initiative in Kreuzberg). Taking them as case studies, a speculative exercise around the possibilities of MAZI as a tool for their specific needs was developed. The result was a number of applications ranging from metaphoric to concrete.

LONDON

The Creeknet pilot starts Month 5 (May 2016) with community engagement and a series of "MAZI-Monday" events have been held to initiate conversations, understand local challenges, and identify potential participating groups. Additionally, SPC have drawn on their network of existing contacts to promote the MAZI project and informally establish project relationships with potential participants.

ZURICH

The Kraftwerk1 pilot has not yet officially started according to the DoW. However, due to the intense activity around the core objectives of the pilot, NetHood and INURA Zurich Institute have been active since the first months of the project concerning two types of activities:

- ongoing engagement with the activities of the new cooperative housing project, NeNa1, <http://nena1.ch>, and the connected neighbourhood association, 5im5i Forum, <http://5im5i.ch>. This situation is due to the particular interests in these grass-roots civic initiatives of the NetHood members --Ileana Apostol, Jens Martignoni, and Panayotis Antoniadis are registered members of these associations-- as well as due to Philipp Klaus' support to such recent forms of civic activity. Moreover, as urbanist Ileana Apostol is been taking an active role within the 5im5i Forum board, and the "social" and "architecture and urban design" NeNa1 working groups, and Panayotis Antoniadis is member of the NeNa1 "technology group".
- linking with interested groups in Greece (Co-app building and INURA Athens) to establish the framework for a potential knowledge transfer process during the pilot; organization of related meetings and events, most notable being the forthcoming 5-day workshop at the Greek pavilion at the Venice Architecture Biennale "From Urban Commons To Co-housing Practices", co-organized by Panayotis Antoniadis (NetHood) and Constantina Theodorou (Co-app building, Athens). See <http://venicebiennale2016.gr/en/events-2/>.
- introducing a new collaborative project inside the INURA network, called the INURA co-op initiative, whose goal is to extend the knowledge transfer process beyond Athens and include members of the network in Berlin, London, and other cities where there is interest in co-housing models.

>> What are the biggest challenges and how are you planning on resolving them?

BERLIN

For now we have not encounter significant challenges, and our community outreach has been met with interest and open mindedness. Engagement with various contacted groups for knowledge transfer is advancing well.

A risk we see within the project is surpassing actual needs of the community in search of possible uses of the DIY-network. Seeing that resources within community initiatives are most often strained in form of time and economic means, it is vital to create situation where the MAZI is an *added value* and not an *added burden*. We are meeting this risk through:

- 1) the intense pre-surveying of needs through the community workshops,
- 2) by developing a MAZI-prototype for the Neighborhood Academy that has the easy potential of being multiplied by other initiatives, and
- 3) in a very early stage, focusing on questions of content production, editing processes, maintenance and

adaption/multiplication.
LONDON
<p>Minor changes. Initial planned mechanisms indicated in Description of Work (e.g. use of liquid democracy tools) may be reviewed depending on how appropriate they are for the specific collaborations that may emerge. At this stage of the pilot (two months into the six month 'Community Engagement' phase) it is too early to confirm the firm definition of scenarios we will pursue. This is dependent on the outcomes of this participatory-orientated research approach.</p> <p>A major challenge is the external urban development factors in the Deptford Creek locality that may mean local actors we had planned to work with may no longer be in the neighbourhood, or may have more important challenges to face and hence not have the capacity to engage with the MAZI project.</p> <p>There is a potential power imbalance between the funded project partners and local participants: we cannot recompense for their engagement. It will be therefore important to identify collaborations that also bring long term benefit to participants as well as the MAZI project team.</p> <p>'Research fatigue' may be an issue that has to be managed with many of our potential participants operating with small margins of spare resources (time, energy) and only able to manage limited engagement with researchers: some have already committed prior time to supporting external researcher activity.</p> <p>We have to consider ethical challenges and will be required to submit an application to the Open University's Human Research Ethics Committee which will clarify potential challenges we need to address, e.g. data privacy.</p>
ZURICH
<p>For now we have not encounter significant challenges, and our engagement with the various contacted groups for knowledge transfer is advancing better than expected. There are however two important anticipated challenges:</p> <ol style="list-style-type: none"> 1) the active involvement of the Kraftwerk1 residents in the design and use of the MAZI technology. This is specially difficult in the case of Kraftwerk1 because there have been recently long debates around the design of their local Intranet that have created certain trauma, by exhausting the topic, but also because of questionnaire fatigue: Kraftwerk1 being a very well-known and sought-after case study of cooperative housing, attracts many researchers from various disciplines aiming to analyse this success story and extract knowledge. <p>We plan to address this challenges by starting simple, with UdK's Hybrid letterbox as our main input device, which is playful, non-intrusive and can bridge various digital divides. For more sophisticated participatory design processes, we will invest more of our energy inside NeNa1's "technology group" in which Panayotis Antoniadis is already an active member. This group's members have initiated the "distributed identity management" task, which involves people outside NeNa1 and who have started an online collaboration: https://tree.taiga.io/project/heribender-distributed-identity-management/.</p> <p>As for Kraftwek1, we will start by interviewing and discussing with Philipp Klaus, who works, lives and is a member of various boards in Kraftwerk1, and then reach out the wider Kraftwerk1 community only when we feel well-informed. The fact that Philipp Klaus is a regular participant in the cooperative's assemblies offers the ideal entry point, and the debates around the MAZI propositions in this context will provide invaluable input on the most important needs/requirements and challenges that the MAZI toolkit would need to address.</p> <ol style="list-style-type: none"> 2) the big differences between the Swiss and Greek contexts might discourage significant engagement from both sides. More specifically, initial reactions by both Swiss and Greek contacts reveal a certain reservation on the practical benefits of knowledge transfer, given current huge differences if analysing the political, economic, and social contexts in the two countries. <p>To address such reservations we are constructing a less ambitious narrative according to which the key objective of these interactions is to identify a set of fundamental ideas that are not context-specific but</p>

can be used as a basis for local interpretations. This can be very helpful also for the Swiss side.

II. High-level knowledge relevant for toolkit conceptualization

>> To what extent is (/will be) your pilot rely on FLOSS software and open hardware?

BERLIN

N/A

LONDON

Where possible our project will take an 'open' approach. It is likely that the software will be FLOSS here possible as a philosophical position but the hardware will not be open in all cases: as one aspect of 'sustainability' we will seek to recycle and reuse existing hardware which will mean closed hardware in most cases. In some cases we will be exploring custom designed and built hardware.

ZURICH

The Kraftwerk1 pilot will fully rely on FLOSS software as far as the deployment of MAZI zones is concerned. Our only interaction with non-FLOSS software will be the study of the existing proprietary Intranet application at Kraftwerk1, which can give us many insights about the ICT needs of the residents. If it is possible we might attempt some integration of the MAZI application to the Intranet (e.g., provide access to the Intranet through the MAZI nodes or include in the Intranet a frame with the output of the MAZI application).

In terms of hardware, we will use open hardware to the extent that it can fulfil the basic performance requirements of the MAZI zones that we will deploy.

>> Which software/hardware components are you (planning to) applying?

BERLIN

N/A

LONDON

As we are at Month 2 of the community engagement process we cannot yet confirm our final selection for MAZI toolkit prototypes. However we are considering the use of the following:

- Hardware: Android phones, Raspberry Pi, off-the-shelf environmental sensors
- Software: PirateBox

Note this is a sample and not a definitive list.

Necessary adjustments:

Android phones: flashing and rooting to allow full access to the hardware components and custom software installation.

Addition of sensors to Raspberry Pi's or similar small format computers to enable environmental data collection.

Environmental hardening of casing to enable operation in all weather conditions, potentially submerged.

Autonomous operation in public areas means we have to consider the risks of theft or vandalism.

Equipment is likely to be sited away from easy access to mains power so alternative power approaches need to be considered: optimising systems to reduce power requirements, and running from batteries. Alternative power generation systems to be considered e.g. solar panel, wind generators.

Development of interfaces to enable deployment, configuration, and maintenance by non-technical experts.

We cannot assume our users will be hackers or engineers.

ZURICH

We will start with a customized version of the Hybrid letter box, connected to a simple forum collecting success stories and failures in the everyday life of Kraftwerk1, an easy way for Kraftwerk1 residents to communicate with the outside world and tell their story. Then we will proceed accordingly.

>> Which learnings, components or principles seem valuable for inclusion into/consideration for the design of the MAZI toolkit at this point?

BERLIN

N/A

LONDON

Environmental monitoring has emerged as a theme. Open data approaches to storing and disseminating data to enable collected data to be reused by others, not necessarily related the original purpose (e.g. environmental river data becoming a resource for generating art pieces). A key theme emerging is the gathering of data to trigger conversations: so the primary technical activity might be quantitative data gathering (e.g. mapping radio activity) while the purpose may be the initiation of conversations that then take place using MAZI tools or elsewhere (e.g. engaging neighbourhood groups in debate around the data that has been collected, such as understanding local environmental conditions and considering what responses might be made).

Optimising systems for low power usage, and alternative power generation.

We cannot assume our users will be hackers or engineers so systems must be able to be set up and maintained by non-experts where possible for long term sustainability.

ZURICH

N/A

User Experience

>> How is the current state of your pilots' MAZI zone perceived by users in regards to comprehensibility?

BERLIN

N/A

LONDON

At this stage we are still beginning to engage with the local publics and we do not have demonstration tools, but are focussing on exploring neighbourhood challenges and how locally deployed and managed networked technologies might support the resolution of these challenges.

ZURICH

N/A

>> What are learnings and experiences to implement into the design of the toolkit as being used by non-experts?

BERLIN

N/A

LONDON

Potential users are limited in: technical expertise, time, and other resources. The toolkit must be accessible to non-computer professionals, affordable, and robust.

ZURICH

N/A

Customization/Physical Design

>> What are current ideas/options in regards to framings, wording, visualization, physical representation?

BERLIN

As an initial prototype and point of inception, we want to create a tool spreading knowledge between actors present within the Neighbourhood Academy. The Academy and its teachers are in the privileged position of networkers between different actors and initiatives, meeting and engaging with a diverse array of people working on similar topics of the Academy. The Prinzessinnengarten as well, functions as a melting pot of different people visiting and exchanging with one another. Following the ecological principles of a gardener, where you cannot take out of the earth without putting something back in, we want a tool to capture and beacon these encounters and make them accessible to others.

As it is now, we have a set number of people, within the Neighbourhood Academy, serving as “networkers” or leading receivers of information. This is a privileged position but also bears the burden of taking care and sharing this information. The networker also carries the role of editor of this information when she/he transfers this knowledge to others. The MAZI-prototype wants to connect to this explicit figure, giving a tool of beaconing this information, allowing for the structuring of information, editing, archiving and sharing this information in a low-threshold manner.

The Berlin-pilot-MAZI wants to:

- develop an analogue ritual/situation for collecting information
- develop a semi-structured interview guide
- develop a #-tagging-system for structuring collected knowledge
- developing an interactive way of presentation
- finding a simple way of broadcasting selected material

LONDON

We are exploring metaphors to help with linking conceptualisations: our pilot study is likely to engage a number of different actors that are linked by their proximity to and interactions with Deptford Creek but they themselves have very different ambitions. Concepts explored so far are:

- Piercing the veil of unknowing: gaining knowledge, and also alluding to the presence of invisible radio transmissions all around us
- Hydrarchy: the hierarchy of who has access to, and decision making influence over a watercourse (Deptford Creek)
- Anchorites: an analogy between religious hermits and the idea of ‘digital hermits’ within the community who are only visible and connected via networked communications; also a double meaning with the anchor as a symbol representing Deptford (a former important port area)

ZURICH

For now we have not any concrete ideas. Our current effort is to decompose the target knowledge into different categories (bootstrapping, finance, sharing space, decision-making, legal issues, etc) that will make it easier from people to understand what we are expecting from them.

>> How are you proceeding with user data? How transparent is the collection of data?

BERLIN

We don't plan to record user data, like profile or activity information of the receiving user, other than the main input (interviews) provided by the interviewee. The main objective of the MAZI toolkit in this pilot will be to retrieve knowledge. Given that the information we collect is only accessible to the devices in its proximity, we create a hybrid space in a "protected" environment.

LONDON

We are recording interactions with potential user groups and reporting on the SPC blog. We have not implemented the MAZI toolkit so no other data is being collected as yet.

We are beginning the process of clearing the collection of data through the Open University's Human Research Ethics Committee and we will be asked to clarify our procedures regarding data collection to ensure we work in accordance with recognised academic and legal standards, e.g. British Educational Research Association guidelines (<https://www.bera.ac.uk/wp-content/uploads/2014/02/BERA-Ethical-Guidelines-2011.pdf>)

ZURICH

We don't plan to record user data, like profile or activity information, other than the main input provided, which will be aggregated and visualized accordingly. The main objective of the MAZI toolkit in this pilot will be to retrieve knowledge, and given that our pilot takes place in a "protected" environment we would like to experiment with radical forms of anonymity to this respect. However, based on the interactions with the other pilots we might consider deploying other types of MAZI zones that record user data in later stages.

>> How could your current considerations for your pilot be translated into templates to be applied in the toolkit?

BERLIN

NA

LONDON

We are recording data matched against project objectives and Work Package Tasks.

We have developed a framework for mapping community requests against WP1 Tasks.

ZURICH

Our current effort is on "engagement with the community" and "setting the scene". If one could extract a template out of this process, this could be called "immersion", referring to a genuine and unconditional engagement with the communities' activities, something like the "insider view" approach in ethnography. As the MAZI members have different degrees of engagement in the communities in Zurich namely NetHood being active in NeNa1 and INURA Zurich Institute more in Kraftwek1, they could play alternative roles in this process of "immersion". For instance, an initial phase of the process is triangulation, or the connection between strangers, and then a more advanced phase is mediation, potentially leading to a higher degree of involvement as catalysts for community action.

III. Community

Community Outreach general situation (e.g. Actors/Stakeholders, Difficulties)

>> How do you involve local actors and communities in the processes of your pilot?

BERLIN

The group involved at the first stage are experts working in the different initiatives/projects with local communities. Learning from their experiences gives all participants a better overview of some core requirements for MAZI can be extracted, to be then developed in the following stages with the communities

through the implementation in each case.

LONDON

Regular public engagement events: 'MAZI-Mondays' which are hosted by at a number of local places to encourage different communities to attend and find out about MAZI.

Using existing network of SPC contacts in the Deptford area to promote activity and draw in interest

'Cold calling' local actors/organisations we believe would be suitable collaborators.

Promotion of activities through SPC website blog.

Currently developing mailing list to keep potential participants informed of progress.

ZURICH

We actively participate in the local activities and become an integral part of the communities that we wish to engage with, and from this standpoint we also contact other relevant local actors.

>> How do you involve external researchers and the wider consortium into the pilot?

BERLIN

Besides the development of an interdisciplinary framework for comparisons and cross-fertilization strategies of MAZI pilots, a general event with the wider consortium will take place in July the 14th and 15th, where the current state of the MAZI pilot will be introduced.

LONDON

Public dissemination via SPC blog. Attendance at associated London-based events and promotion of MAZI work. In the future we plan to start an Open University blog. We are collecting contact details for a mailing list.

Use of MAZI website.

ZURICH

We organize and participate in various events, seminars, informal meetings and conferences, like the panel on "Networking, comparing, and integrating urban commons initiatives in research and action" at the IASC Regional Conference in Bern, May 10-13 2016, or the forthcoming 5-day workshop in the Greek Pavilion at the Venice Architecture Biennale, October 25-30th (see also above).

Community Needs

>> What community needs are being identified / have been filtered out to work with MAZI?

BERLIN

MAZI/berlin is momentarily being thought in three dimensions:

1. As serving the community in place
Knowledge hub/archive, tool for organization, material database etc.
2. As a tool for knowledge and content generation
Research tool, collaboration tool
3. As an interface to the outside
Other initiatives, broader neighborhood, external workshops, etc. Make the initiatives and their work more visible.

LONDON

- Engagement with local environment (wildlife, environmental conditions).

- Understanding of environmental conditions: concerns around Thames Tideway infrastructure project's environmental impact
- Data as a resource for wider use, appropriation by a range of communities: data may be collected for one purposes then repurposes for use by others, e.g. environmental data then resused as a resource for generating art.
- Engagement of local and schools communities with Deptford Creek

ZURICH

For Kraftwerk1: In relation to the outside world: Communication, networking, leverage, exposure, dissemination of ideas; In relation to the internal life: Social integration, living together, conviviality

For NeNa1: Attract new members, establish shared values for future co-living

For Greek teams: Create processes that can engage people in activities that can provide solutions to the economic, political, and social crisis

>> How were they determined as being grounded in real life/specific community settings?

BERLIN

A first group of needs has been extracted from the two workshops concluded so far with the different initiatives. The needs arise from their experience in a long trajectory of work with specific communities in Berlin.

LONDON

Conversations with local organisations and individuals (Creekside Education Trust, Redstart Arts, the Minesweeper Collective) and through MAZI-Monday gatherings. Conversation are ongoing with other groups being identified.

ZURICH

Through active engagement and related theoretical/archival research.

>> Which community specific constraints are you experiencing in your pilot?

BERLIN

All initiatives are bound to the limitation of time, lack of economic resources, limitations of voluntary commitment and the significant political pressure that underlines their day-to-day work. These constraints will always be the boundaries of the implementation of MAZI within the initiatives. Taking this aspect into account in every step of the way will be vital for the sustainability of the project implementation.

LONDON

Limited time for people to attend events, or commit to collaborations. 'Research fatigue' wariness of engaging with a research project that may not lead to positive outcomes.

ZURICH

Language barriers, limitations in time availability and voluntary work.

Expectation Management/Goal Setting: How are expectations towards the pilot developing?

>> What are expectations towards MAZI by the local community?

BERLIN

There is an overall curiosity about MAZI and its potential as an added value for the community. A motivating effect has been the deep interest of the political approach of the project – community ownership of technological development, community owned data, DIY technology and self-organizations. These aspects have

quickly been linked to the political visions of many of the initiatives when speaking of community owned housing, self-sufficiency and community organizing around shared issues. The location-based quality of MAZI is an facet that engages the community members we have interacted with since it stresses the importance of the local.

The concrete expectations of MAZI are too early to be assessed. What is clearer is what MAZI should not be: a technological gimmick, a working layer on-top of an already strenuous working situations, a means for itself.

The expectation of the first prototype in the Neighborhood Academy is structural improvement due to technical support, a specific working tool to collect and spread information, make interactions with different neighborhoods in the Academy visible, lighten the burden of the figure of the “networker”.

LONDON

High prestige as EU funded: expectation of significant resourcing and expertise

Technical expertise that may resolve local challenges

Provision of equipment and ongoing maintenance

Academic expertise that may help resolve local challenges, e.g. around evaluation

ZURICH

N/A

>> How do they relate to your team's expectations?

BERLIN

We are motivated by the interest of the community, see it as important not to create expectations that we cannot meet within the project.

The common political interest surpasses our expectations and is an unexpected common ground with other initiatives that can be the growing ground for further prototypes and joint activities within the project.

LONDON

Does not completely align with our ambitions: rather, we seek to collaborate on implementations of networked technologies that will be customised, maintained, and developed by local groups themselves, with some initial resourcing and support by the MAZI team. Our goal is to reach a point where collaborators take on the systems themselves and independently interact with other similar groups (e.g. participants in other MAZI locations) without the intervention or support of the MAZI project partners.

ZURICH

N/A

>> How do you set and discuss goals with the local communities?

BERLIN

Through re-occurring workshops with key community leaders and a close integration of partners into the dissemination of our results and activities. We keep the process closely curated by the Berlin-Team to create a space of trust and a spirit of co-working. This process can be opened at a later stage.

LONDON

MAZI-Mondays, and through arranging individual meetings with each group. We are considering additional mechanisms and these will emerge as the project develops, we look to other teams in MAZI through cross fertilization activities for examples of best practice.

ZURICH

Engaging in their activities

>> What are the top-3 goals for your pilot?

BERLIN

- To address real needs and respect specific constraints of local communities
- To produce easily replicable processes
- To set realistic goals that reflect the needs of citizens and local communities

LONDON

- Helping local communities articulate their own challenges and work with them to apply networked technologies that can support the resolution of these issues, that they will maintain and develop themselves without the need for MAZI partner support, over months or years, independently from MAZI.
- By improving understanding and encouraging playful and imaginative uses for information accumulated locally, we hope to demonstrate its value for a wide range on environmental and cultural applications in the neighbourhood so conditions can be reported more widely and effectively.
- To forge links between neighbourhood groups and individuals, extending understanding of how shared information can impact on sustainability of respective initiatives and common good.
- To draw on insights derived from the MAZI framework (D3.5) to inform the development of our pilot work.

ZURICH

- Knowledge transfer
- Social integration
- Collective action

Ownership

>> How do you deal with owner-/authorship in your pilot? Who is and who feels responsible?

BERLIN

Although we see the MAZI as a collective project, we have to respect the fact that there are different roles and responsibilities within the project. The Berlin-Team, made up of UDK and common grounds, have a strong curating and decision-making role. We make this explicit and transparent in our work with communities. The community initiatives and other actors invited into this process are collaborative thinkers and are vital in the forming of the project and its results. The ownership of the MAZI will probably lie with the actual user and carer for the same. This will first and foremost be the Neighborhood Academy and its teachers in the first piloting phase.

LONDON

We have only reached the initial conversation stage of our engagement but are clear in conversations that we seek ownership to reside within participating groups and individuals. Our goal is to establish relationships that enable ownership to move to the local participating groups. Within the Creeknet team (OU and SPC) there is complementary expertise and we seek to work together to provide a unified authorship.

ZURICH

We decided to avoid bringing up the issue of authorship but participate as equals in the local activities but also in the knowledge transfer process that we are putting forward as a collective project.

>> What are issues in regards to trust and sense of ownership with local communities?
BERLIN
N/A
LONDON
Concern by local groups over whether they will have the expertise to take ownership of MAZI toolkits, concern over the resource overhead involved (time, money, development and maintenance of expertise). We are at an early stage so these issues have not surfaced in detail.
ZURICH
In general, the biggest issue is the perceived imbalance of motivations and degrees of commitment, and the treatment of technology as an end rather than as a means.

IV. Individual criteria for success
>> What are criteria of success particular to your pilot that are not yet listed in this questionnaire?
BERLIN
<ul style="list-style-type: none"> - The MAZI becomes a working tool used in the every-day of the Neighborhood Academy, - The content generated by and for the MAZI grows organically - The awareness raising and capacity building around the topic of DIY Networks, ownership of technology/data, self-organized digital networks as an additional layer of perception when it comes to the work for a right to the city - An engagement and openness of other initiatives to reproduce or develop own MAZIs
LONDON
<ul style="list-style-type: none"> - To what extent are the MAZI toolkit interventions maintained by the groups themselves rather than MAZI team member? (sustainability focus) - What impact has the MAZI toolkit had on the collaborating group's own measures of success? - Considering to what extent we meet criteria identified in D3.1, D3.2 and D3.5 MAZI research work
ZURICH
Bootstrapping of new cooperative housing initiatives outside Zurich, inspired by our knowledge transfer process and/or building links between residents of existing cooperatives and members of new initiatives in Zurich (e.g., between Kraftwerk1 and NeNa1)

4. Discussion

4.1 Conclusions

This very first “trial” of the questionnaire as a central element in the framework for interdisciplinary comparison already provides us with an interesting resource for discussion and mutual learning. While it is too early for the respective pilots to deliver answers to each of the objective’s set of questions, we, for example, learn from each others framings as they developed within the last couple of months: All three pilots take place within the context of socio-economical and ecological developments connected to the nexus of housing, privatization and the right to take part in the shaping of the city. However, we learn about stark differences in regards to the pilot’s respective communities’ position in these processes: Whereas the groups involved in the Berlin area focus on how to learn about the processes and relevant ideas from one another, the team in Deptford aims at making connections and creating meaning in a situation of immediate and rapid change. The team in Zurich however is situated in a well-working alternative to the developments the communities of the two other pilots are facing as threads. Here, the goal seems to be to transport the knowledge generated in the process of gaining this position to other contexts, where it is much needed.

We also learn about the challenges and strategies in regards to community outreach, on which all three described pilots focus decisively on in order to become active parts of their contextual settings. We can start comparing how the partners differ or align in their attempts to understanding the local setting, in identifying relevant actors, in reaching out to them and bringing them on the table as well as in gaining a level of trust in the social environment that enables the teams to create work that is consequently grounded in the respective communities life-worlds. First alignments in terms of methodological approaches to this, for example, seem to be:

- Introductions of MAZI to groups and sub-groups
- Workshops or regular meetings (such as London’s “MAZI Mondays”) for learning about issues on the ground & sensitizing communities for technological “thinking”
- Workshops for co-creation and participatory ideation/design
- Becoming “part” of the community, engaging with the individuals and groups outside the MAZI framework in order to enable the collaboration within it

These approaches are of course grounded in different realities, however tell us about challenges that occur across the projects initiation phase, for example the asymmetry in resources such as time or funding and a general sense of “research fatigue” within communities that are getting used to being a “subject” to researchers. It will be very helpful for the projects learning process towards the design of the toolkit to exchange ideas on these challenges, to learn from each other and one’s own mistakes and success stories, and to systematically find mutual ways through these and other problems.

In regards to the communities themselves, however, we can already find indications of a “spreading” of subjects, suggesting that engaging with one community in most cases means the engagement with a particular ecosystem of communities, groups and individuals that act as stakeholder in the chosen environment. Consequently, the needs identified by the partners in their respective processes so far cover a wide range: from more concrete visions of collaboration and organization to wider concepts around conviviality, from ideas about how to generate, collect and transfer knowledge to efforts in connecting city dwellers to natural environments and its hazards, from showcasing and transferring knowledge from success stories to the outside to enabling others to apply this knowledge in responding to their environment in crisis.

While these initial examples mostly regard to the consortium’s effort towards “setting the scene” on the ground, we expect this framework to support us in collectively generating also the operational and technical knowledge and the respective ideas needed to successfully engage with the different communities in creating DIY networking frameworks that are based on and answering to the community’s needs.

4.2 Next Steps

This is the first version of the interdisciplinary framework for comparison across the different pilots of MAZI, and will be developed as the project and its constituting pilots are progressing. As elaborated in section 1.1 of this document, MAZI is understood as a transdisciplinary project by the consortium. Hence, our methodology starts with the use of "everyday language", as illustrated in the questionnaires, in order to allow the pilots to develop in a natural and bottom-up way and to avoid intimidating or alienating the non-academic partners and the communities connected to them, before pushing for integration towards the development of the MAZI toolkit. The material gathered in this deliverable will provide grounds for initial analyses, aiming at extracting useful information about the context of the different pilots and the languages, discourses and modi operanti of the partners in charge.

While these initial examples mostly regard to the consortium's effort towards "setting the scene" on the ground, we expect this framework to support us in collectively generating also the operational and technical knowledge and the respective ideas needed to successfully engage with the different communities in creating DIY networking frameworks that are based on and answering to the community's needs.

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