



## ICT - Information and Communication Technologies

Project Acronym: **MAZI**  
Project Full Title: **A DIY networking toolkit for location-based collective awareness**  
Grant Agreement: **687983**  
Project Duration: **36 months (Jan. 2016 - Dec. 2018)**

### D3.3 DIY networking as a boundary object in interdisciplinary research: vocabulary and methodology (version 2)

Deliverable Status: **Final**  
File Name: **MAZI\_D3.2\_final.pdf**  
Due Date: **31 December 2017 (M24)**  
Submission Date: **12 January 2018 (M24)**  
Dissemination Level: **Public**  
Task Leader: **Ileana Apostol (NetHood)**  
Author: **Panayotis Antoniadis, Ileana Apostol (NetHood), All Partners**

## The MAZI Consortium

Consisting of:

Organisation Name	Short Name	Country
University of Thessaly	UTH	Greece
NETHOOD	NH	Switzerland
Edinburg Napier University	NU	United Kingdom
Universitat der Kunste Berlin	UdK	Germany
The Open University	OU	United Kingdom
Slacktivist Limited	SPC	United Kingdom
INURA Zurich Institute	INURA	Switzerland
Common Grounds	CG	Germany
UnMonastery	UM	United Kingdom

### Disclaimer

This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License



## History

Version	Author	Date	Status
1.0	Ileana Apostol	9/11/2017	Initial Draft
2.0	Ileana Apostol	19/11/2017	Draft
3.0	Panayotis Antoniadis	10/12/2017	Draft
4.0	Ileana Apostol	20/12/2017	Draft
5.0	Ileana Apostol	5/1/2018	Final draft
6.0	Panayotis Antoniadis	9/1/2018	Final draft
FF	Stavroula Maglavera	10/1/2018	Final

## Executive summary

This document is the second version of MAZI deliverable developing an argument and a methodology exploring the potential role of DIY networking, in particular, MAZI toolkit, as a boundary object in interdisciplinary research. The common ground established in trying to bridge different design cultures and 'social worlds' is presented here from two main perspectives defining the two parts of the report. One broader perspective (Part 1) consists in descriptions of MAZI toolkit's contextualization, by means of MAZI cross-fertilization events and other spaces of interaction, negotiation, and convergence, which take place both offline and online during the project timeframe. Out of the partners' participation in the surveys following the cross-fertilization events (analysed in D3.12 on self-reflection), it appears that the MAZI toolkit plays the role of a boundary negotiating artifact, based on which is drawn the contours of a potential relational space capable to facilitate collaborations in achieving MAZI objectives. The other perspective (Part 2) is a proposal for a set of triangulating or moderating elements, online or face-to-face tools, that are meant to be used in interdisciplinary collaborations toward designing the toolkit, as a boundary object. Upon agreement within the consortium, those methods that prove to be useful in practice will be included in the final MAZI interdisciplinary framework. Note that MAZI toolkit, and its use for the deployment of different MAZI zones in MAZI pilot studies, playing the role of a boundary object is understood as boundary negotiating artifact, as boundary infrastructure, and most importantly as process.

## Table of Contents

<b>HISTORY .....</b>	<b>3</b>
<b>EXECUTIVE SUMMARY .....</b>	<b>4</b>
<b>TABLE OF CONTENTS .....</b>	<b>5</b>
<b>1. INTRODUCTION .....</b>	<b>6</b>
<b>2. PART I – CONTEXTUALISATION WITHIN MAZI TIMELINE .....</b>	<b>7</b>
2.1 <i>The MAZI cross-fertilization events .....</i>	<i>7</i>
2.1.1 Pilot workshop in Deptford .....	8
2.1.2 Self-reflections on the cross-fertilization event in Deptford .....	11
2.1.3 The 2nd CAPS Community Workshop in Volos .....	12
2.1.4 Working notes from the cross-fertilization events .....	15
2.2 <i>Spaces of interaction, negotiation, convergence.....</i>	<i>17</i>
2.2.1 MAZI consortium workshops and plenary sessions.....	18
2.2.2 MAZI specialized workshops .....	19
2.2.3 Online exchanges .....	19
2.2.4 Surveys .....	20
2.3 <i>First steps toward shaping a MAZI relational space.....</i>	<i>20</i>
<b>3. PART II – MAZI TOOLKIT AS A BOUNDARY OBJECT .....</b>	<b>21</b>
3.1 <i>Github repositories.....</i>	<i>22</i>
3.1.1 Guidelines wiki .....	22
3.1.2 Github issues.....	23
3.2 <i>The MAZI demo server.....</i>	<i>25</i>
3.2.1 Story telling with Etherpad and NextCloud.....	25
3.2.2 Wordpress blog .....	26
3.2.3 Interview archive.....	27
3.2.4 LimeSurvey questionnaire.....	28
3.3 <i>Face-to-face interactions.....</i>	<i>28</i>
3.3.1 A pattern language .....	28
3.3.2 MethodKit.....	30
3.3.3 Positioning cards.....	32
3.4 <i>Local representations of the toolkit.....</i>	<i>33</i>
<b>3 FUTURE STEPS .....</b>	<b>35</b>
<b>REFERENCES.....</b>	<b>36</b>
<b>APPENDIX I – DOCUMENTING THE CROSS-FERTILISATION EVENTS (FROM THE SELF-REFLECTION EXERCISE #3) .....</b>	<b>37</b>
<b>APPENDIX II – LIBERATING VOICES – A PATTERN LANGUAGE CARDS BY DOUGLAS SCHULER .....</b>	<b>41</b>

## 1. Introduction

The first version of this deliverable (D3.2) presents how the boundary objects are defined in the related literature (Section 1.3). From the evolution of the concept, the boundary 'objects' are characterized by plasticity and ambiguity, and as people act toward and with them, they derive their materiality from action (Star 2010, p 603). Noting from the beginning this most important aspect, it is possible to expand their understanding from material objects to processes as well, and it is within this understanding that the next sections present elements of the processes of interdisciplinary research and action in MAZI.

At the same time, the literature refers to “the boundary negotiating artifacts” (Lee 2005) that during the project process may transform the interdisciplinary divides. In the deliverable D3.11 on self reflection, in the section on theoretical references (pp. 8-14), a daring proposition is made to shifting from territorialities to relational spaces, advanced as appropriate environments for collaborative practices. In this thesis, that is developed further in the deliverable D3.12, the boundary object plays such a negotiating role between disciplines' frames and territories.

Shifting into relational spaces demands, nevertheless, complex understandings of the problems and their potential solutions. Thus the experimentation and co-design of DIY networking may be approached also as “boundary infrastructures” that according to Bowker and Star (1999, p. 313) are complex networks of boundary objects that exist at the intersection of multiple infrastructures. This perspective on the topic may be taken into account in the process of conceiving MAZI toolkit as object of negotiations in MAZI consortium, and as explained in the Part 2 of this document, it creates the space for exchange of methodologies and for sharing of rather systemic understandings between disciplines and fields of action. Moreover, there is a ‘back-and-forth’ process between weakly and strongly structured forms, between generic and specific characteristics of the object of design (dealt with in this document and in the Section 3 of D3.12 on self reflection), that conveys to the boundary object that necessary ‘interpretive flexibility’ (refer to Bowker and Star 1999) facilitating different ‘social worlds’ to collaborate without consensus.

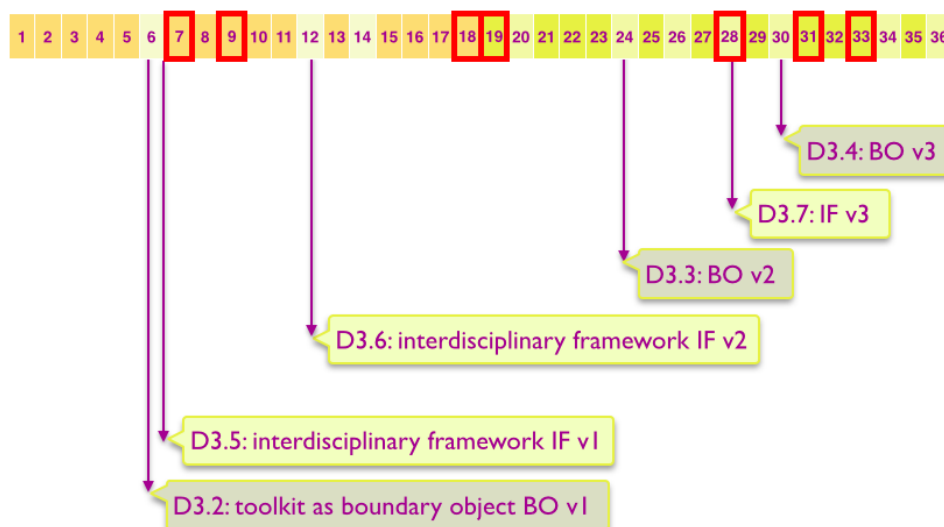
The material of this deliverable is structured in two parts; it is a result of these various understandings of the boundary object. The first part discusses in detail the contextualization of interdisciplinary applied research projected on MAZI timeline. A key element of MAZI collaborative work is presented up front, namely the cross-fertilization events. Although the MAZI cross-fertilization events have been mentioned several times in previous deliverables, this section explains the reasoning behind these milestones, and their sequence in the project canvas that is weaved by a multitude of spaces for interaction, negotiation, and hopefully convergence. Although the first presentation of these spaces and the related activities and outcomes within the project process is highly descriptive and only partly self-analytic and reflective, the deliverable D3.12 documents in more detail the reflections of the project partners on their activities in these spaces. Therefore, the second part of this document deals with the different ways to co-produce MAZI toolkit or parts of it through conversations, active listening, negotiations between partners etc; while these are online and face-to-face tools, they represent at the moment the toolkit itself. The fact that the toolkit is also the concrete outcome of MAZI as a whole makes this process even more meaningful and productive, in the sense that it contributes not only to the development of a common understanding between the project’s partners but also in the overall quality of its core outcome. The document concludes with a section on the future steps to be taken during the final year of the project.

## 2. PART I – Contextualisation within MAZI timeline

As the related literature stresses that contextualization is an essential characteristic of a boundary object (Star 2010; Bowker & Star 1999), in this section the contextualization of MAZI DIY networking is illustrated through the project's spaces of interaction, negotiation and convergence. The high-intensity moments of these spaces of interaction are the initially planned MAZI cross-fertilization events, which happen as a rhythmic sequence that allows periods of concentrated work locally, later on bringing valuable insights and practical experiences in the consortium meetings.

It is important to note that placing DIY networking in the conversation has been experienced with since January 2014, when partners of MAZI began organizing various interdisciplinary events and workshops around this concept, and not as a concrete toolkit at that time, perceived as a possible boundary object between researchers from different disciplines, local authorities, and activists (Antoniadis et al, 2014, 2015). In these events the interest in an innovative way of using ICTs capable of supporting local interactions (conceived and made possible since the early 00s but until today have not reached a wider audience) seemed to bridge disciplinary differences and other ones too, by brainstorming on different applications, or by identifying challenges and opportunities of DIY networking, and so forth. At the same time, the “interpretive flexibility” of the concept allowed interesting exchanges between different social worlds, which eventually led to the interdisciplinary MAZI.

During the three years time frame of MAZI, seven cross-fertilization events have been scheduled to generate the necessary moments of interaction. A pilot workshop every year, beginning with the Berlin pilot workshop in the first year, continuing in the second year with the London pilot that organized a workshop in Deptford, and ending with the one in Zurich during the last year of the project. In addition, MAZI partners organized in the first year a MAZI workshop hosted at the 2016 INURA conference, and also MAZI summer schools in Volos were scheduled during the following two years; the 2017 summer school became, however, a conference and workshop at the level of the EU CAPS program. The final cross-fertilization event is scheduled toward the conclusion of the project, in the form of a festival in Edinburgh, UK, by the name of “Liquid City”. Moreover, the timeline of interdisciplinary work in MAZI is punctuated with written documents that are to be published before or after the cross-fertilization events.



**Figure 1:** MAZI timeline showing the cross-fertilization events (in red), the milestones for deliverables on the boundary object (BO) and interdisciplinary framework (IF)

### 2.1 The MAZI cross-fertilization events

This section explores this mechanism of interdisciplinary exchanges that we call in the project cross-fertilization events. In general, the word 'cross-fertilization' designates an interchange or interaction, for instance, between different ideas or cultures, or only between various categories, and implies in its meaning a broadening or productive nature. If one considers the cross-fertilization of ideas, then it refers also to methodologies, to

successful strategies, and to lessons learned in the process. Therefore, in the organization of cross-fertilization events, MAZI aims to combine short-term experimentation in the host city, methodological discussions, and dissemination activities. Eventually the consortium would like to structure a learning process, allowing the cross-fertilization of successful strategies between pilot studies inside the project and beyond, by synthesizing the respective experiences and lessons, imagining future actions beyond the project timeframe, and by transferring this knowledge to diverse environments.

The cross-fertilization events offer opportunities for 'common group learning' (Rossini and Porter 1979, and refer to D3.2, the first version of this deliverable) followed in complementarity with 'integration by a subgroup or individual' in the local pilots, while working all together on producing MAZI toolkit as well as comparing and evaluating the lessons learned from the different pilot studies.

Within this framework, one of the main challenges that has been addressed in the project is the ongoing shaping of a common vocabulary, the MAZI glossary, and various concepts of the glossary are documented in D3.2, and in D3.11 and D3.12 on self-reflection. These collaborations are structuring a dynamic process that shifts between the concrete context anchored in the real life of the pilots, and the more abstract environment of the research project. The next Section 1.2 mentions a set of identified tensions between research and action to be discussed during project plenaries, workshops and in future surveys. For example, among these tensions are the perceived project's presence in the pilot locality, or the necessity to schedule in cross-fertilization events also project-to-project sessions, aside from the reporting plenaries, as discussed in the debriefing of the recent event in Deptford (Section 1.1.4; in the Section 5, future steps, in D3.12 on self-reflection).

In the local context of the pilots, researchers, practitioners and community actors come together at different stages of the project, in the occasion of interdisciplinary workshops and seminars, bringing in contact all MAZI partners with the details of a pilot's environment, and allowing them to actually experiment with MAZI zones, which are successful instantiations of MAZI toolkit. At the same, the project partners have the opportunity to engage with local actors who are not part of MAZI, but are invited to become part of MAZI community, to learn more about the capabilities of DIY networking through practical examples, and to give invaluable feedback about their own perspective. Furthermore, after the cross-fertilization events MAZI partners are asked to self-reflect and describe their own view of the process, the challenges faced, compromises that they had to make, and new perspectives that opened up for them.

The cross-fertilization events that took place during the first year of MAZI namely the pilot workshop in Berlin (July 2016) and the MAZI workshop at the INURA Conference in Bucharest and in Sibiel, Romania (September 2016) have been already documented in the MAZI deliverable D3.6 on the interdisciplinary framework. Hence the following sections describe the cross-fertilization events that took place during the second year of the project, and analyse the initial lessons learned from them. These are the pilot workshop in Deptford, UK (June 2017), and the initial Volos summer school that transformed into a well-attended event of the EU CAPS program under the name of 2<sup>nd</sup> CAPS Community Workshop in Volos, Greece (July 2017).

### **2.1.1 Pilot workshop in Deptford**

The second MAZI Cross Fertilisation event was held in Deptford, London on 20-21 June, 2017 organised by SPC and the Open University. This brought together all the members of the MAZI consortium to the geographical focus of the second MAZI pilot and members of the MAZI Advisory Board, along with pilot participants from the Deptford area (see Deliverables 2.4 and D2.5), local residents in the area, members of SPC's network of members and associates, community technologists, and members of the public encouraged by promotional materials (posters and digital media). Events were held in local community venues to encourage residents' participation: the first sessions were held in a local cafe, which encouraged participation from passers-by and customers, two community venues (Creeside Education Centre, and the Stephen Lawrence Centre) to a closing community picnic in a local park and viewing of local artists' work.

Key goals were:

- To enable MAZI partners and the Advisory Board to better understand the Creeknet pilot context and explore the DIY networks of Deptford Creek in the broadest sense through interaction with the Creeknet MAZI team and local residents

- To engage Creeknet pilot participants and local residents with the wider MAZI, the overall goals and the other pilot situations and studies
- To share stories and strategies relating to neighbourhood challenges, supporting network development, sharing resources and promoting sustainability. Discussions structured by the key MAZI concepts of social cohesion, conviviality, knowledge sharing, and sustainable living
- To experience the Deptford Creek area through guided tours and activities
- To try out MAZI toolkit under development, and engage with local installations

A series of structured discussions, hands on workshops, open conversations and guided tours were undertaken, moving across the Deptford Creek area from north to south over the two days.



**Figure 2:** Community mapping session and discussion of key MAZI concepts in the shadow of local urban developments

Here is a **structured summary** of this cross-fertilization event:

- **Profile of outsiders (of MAZI consortium):** Community activists, artists, local residents, boaters, passers-by, MAZI community participants, community technologists and designers, local business people and non-profit organisations (including Hoy Cafe, Creekside Education Centre, Stephen Lawrence Centre, Friends of Brookmill Park, Friends of Deptford Creek).
- **Relationship with the outsider group:** MAZI community participants, SPC subscribers, Open Wireless Network (OWN) operators and local associates, members of the public attracted by promotional material (posters, eventbrite online invitation and passers by joining in at public venues).
- **Role of MAZI consortium in the event:** (a) Introduction of DIY networking as a tool for supporting network development, sharing resources and promoting sustainability. (b) Facilitating discussions around themes of social cohesion, conviviality, knowledge sharing and sustainable living (c) Sharing of MAZI experiences across the pilot studies and consideration of how insights might be applied in the Deptford context (d ) Basic demonstration of MAZI toolkit portal.

- **MAZI proposals:** DIY networking techniques, including community mapping and technology enhanced toolkits as a means to support network development, sharing resources and promoting sustainability in the face of rapidly changing local environment (urban development, changing population).

#### Community suggestions/ideas:

- Preserving memory of local landscape through curating collections of photos, audio interviews and films hosted in MAZI zones along the Creek.
- Sensing the Creek: environmental monitoring of conditions of the local environment due to concerns about building work associated with gentrification and Thames Tideway infrastructure project, community gardening monitors and cameras.
- Making the invisible visible: telling stories, connecting existing residents with incoming new residents.

#### Challenges identified:

- Comprehension of terminology: different meanings understood by terms deployed during the event (e.g. the multiplexity of potential meanings for the terms 'networking' and 'sustainability'). A concern that the project team needs to be careful about, and more specifically how we communicate to ensure equitable and welcoming participation: one colleague suggested that within the project "we have adopted a vocabulary attuned to the combination of academic and technical tasks we have to fulfill, which could easily swamp the uninitiated".
- Ensuring MAZI tools are relevant to local circumstances and usable by non-technical experts.
- Ensuring onward sustainability of the system beyond the project's funded period: concern by local residents that this will be just another project that comes and goes. Caution by local residents of committing resources to a system that might not be supported in the long term.
- The need to create a social infrastructure that enables MAZI tools to be self-sustaining and not dependent on project team for onward support.

*The principal challenge for the pilot is to initiate and then sustain contact and engagement with local people, their campaigns and communal activities. Once relationships are forged to remain relevant and reciprocal, to contribute unconditionally whilst nursing underlying requirements to research active situations and monitor changes in conditions.*

**MAZI zones tested:** Standard MAZI toolkit as community information exchange and internet gateway (Hoy Cafe and Steps), Birds Nest public exhibition resource (Undercurrents gallery), Friends of Brookmill Park information (Redstart Arts), Bluetooth beacon trail (12 nodes), individually customised toolkits for Deptford based contributors: Karen Barnes, Terry Edwards and Gordon Cooper.

#### Overall feedback:

- Value of public sessions (hosted in public places allowing people to drop in and join in) was recognized and also the need for cross-fertilisation events to allow detailed exchanges between project peers
- Useful opportunity to discuss key concepts identified in Description of Work, within MAZI team and with external participants' perspectives as they relate to a pilot study location, which helped ground these terms in real situations
- Challenge for organising team in achieving desired levels of public attendance
- Value in having Advisory Board members present though greater clarity required over their role
- Value of range of session types, and to be able to visit different localities and best understand the pilot study context
- Good initial use of evaluation processes to enable project partners to reflect on the event, though more documentation and dissemination actions required

The event has been described in MAZI deliverable D2.5 ('Design, progress and evaluation of the Deptford CreekNet pilot (version 2)') and disseminated in three blog posts by James Stevens (SPC):

<<http://wrd.spc.org/pearled-two/>> describes the activities as we swept up and down the Creek exploring public spaces and meeting local people on those very hot days; and at  
<<http://friends.deptfordcreek.net/event/creeknet-xf-symposium/>> and  
<<http://friends.deptfordcreek.net/event/creeknet-xf-symposium-2/>>



**Figure 3:** Participants in Deptford cross-fertilisation event selecting stickers to represent their self-identification (e.g. local resident, community activist, technologist, MAZI team member, pirate)

### 2.1.2 Self-reflections on the cross-fertilization event in Deptford

The meetings and interactions with the Deptford local group was a memorable and rich experience, especially due to its impressive diversity of people, and the creative atmosphere that surfaced during enthusiastic and informative moments at the pilot workshop. MAZI partners' reflections on the event are summarized below from their survey responses.

#### *What was the highlight (or highlights), interesting moments during your interactions with the locals?*

MAZI partners who responded to the survey seem to be in agreement that one of the highlights of the pilot workshop in London were the interactions with locals from the Deptford Creek area. One of the choices made by the organizers (James of SPC) was to hold the events in public spaces. Well received by the participants was seeing a range of local places, and be welcomed into local working spaces like James' studio and the Birds' Nest (community bar). Needless to say, it was important that good weather allowed also working outside, including a successful Creekside Discovery Centre hosted Low Tide Walk (environmental discovery tour on the bed of the Creek) and the closing picnic in the park.

Gathering in public spaces resulted into a more genuine and somewhat fluid course of action, as passers-by could also drop in and join the conversation, for instance, on the first day at The Hoy Café. Among the highlights of these conversations were Karen Barnes' and Gordon Cooper's presentation of their art and photography related to the place and David's historical references and personal memories of sailing on the Creek; they showed their perspective on the area, how it has changed, and helped the MAZI partners understand to a certain extent the local conditions through the way these community participants were describing the different places. "It was also

very vivid to see the fragility of the social structure in Deptford, from the precariousness of some locals, the small coffee shop in the shadow of the mighty constructions going on. It was so plastic and tangible, the use of power in the urban realm; the locals being literally pressed between the narrow margins.” The diversity of local knowledge was interesting and the workshop made possible to link up locals, friends and collaborators to share ideas, experiences, doubts and hopes for community outreach work.

***What was the highlight (or highlights), interesting moments during your interactions with MAZI partners?***

First it was noted that “the Deptford partners in particular were very welcoming hosts and made the atmosphere very convivial,” mostly as they organized also more informal meetings that led to knowing people as individuals. Furthermore, it was great to have partners in the same place together for nearly four days (we met with the Advisory Board members the evening before the cross fertilisation event, and had a partner-specific project meeting the following day), giving us lots of opportunity for informal, unscripted yet really valuable information sharing, catch up on what was happening in each pilot and find out what each was working on. MAZI advisory board members Jörg Stollmann and Douglas Schuler were also present. On the one hand, this created the need for the project to justify and argue the project and its processes on a different level, while on the other hand, they presented us with interesting, highly informed outsider perspectives.

More specifically, opening the conversation about issues such as

- the differing understandings of the researchers’ and activists’ role(s) in the local community,
- the challenge of MAZI vocabulary and the necessity to put together a MAZI glossary,
- the need to exchange information and know-how on community based research processes and workshop methods that would help build towards engagement with MAZI,
- what ‘tools’ are to be in the toolkit (seen as wider than the software and networking hardware). Some technical questions were clarified during Harris’ (UTH) presentation, and noting that “the technical guidelines online are good and accessible but there is no narrative around it that makes it understandable for an outsider as to why MAZI is an interesting community resource”, including future work on “the pre-tech part of the toolkit.” As such it generated suggestions for future exchanges in the consortium.

### **2.1.3 The 2nd CAPS Community Workshop in Volos**

In the initial plan of the project we have scheduled in the second year a summer school during which, while teaching students about DIY networking, we could advance our thinking and test some of the lessons learned in practice. Toward the end of the first year, however, we developed an understanding that it would be very good to create opportunities for more interaction within the research community, and particularly peer exchanges with other CAPS projects. One chance was offered in February 2017, during the Digital Social Innovation Fair in Rome, Italy; more details on this event we provide in the next section (see MAZI consortium workshops). In Rome it became obvious that we may transform the MAZI cross-fertilization event in Volos from a ‘classical’ summer school into a broader event of the CAPS community. Thus in July 2017 the 2nd CAPS Community Workshop was collocated with MAZI Summer School and successfully organized by the University of Thessaly in Volos, Greece.

The event’s agenda featured a CAPS workshop respectively during four days between 10-14 July 2017, and on July 12 there has been a plenary of all the present CAPS projects at the 2nd CAPS community workshop; see the program online at <[https://capssi.eu/event/2nd-caps-community-workshop/?instance\\_id=44](https://capssi.eu/event/2nd-caps-community-workshop/?instance_id=44)>. The MAZI workshop took place on July 10. The day began with the keynote talk of Andreas Unteidig and Elizabeth Calderon Luning, from the Berlin team, with the title “Digital Commons, Urban Struggles and the Right to the City?” and continued with the other three MAZI stories namely “Bridging the DIY networks of Deptford Creek” presented by Mark Gaved and James Stevens; “Living together: realistic utopias in Zurich” presented by Ileana Apostol and Philipp Klaus; and “Unmonastery: a 200 year plan” presented by Michael Smyth and Katalin Hausel.



**Figure 4.** MAZI pilots presentations: Berlin, Deptford, Kokkinopilos, Zurich (clockwise)

Presenting MAZI pilot projects to a different audience than either MAZI consortium or the communities at the pilot location was a useful exercise, different than the common conference presentation due to the peers' awareness of the CAPS context and their advanced experiences in engaging with the real world, and in some cases even co-designing technology relevant to local communities. To stress this aspect of action research, the afternoon session of MAZI workshop was dedicated to a hands-on experience with MAZI toolkit and participatory design, which was introduced by the talk of Harris Niavis and Panayotis Antoniadis called "The MAZI toolkit and its applications".



**Figure 5.** The hands-on workshop on MAZI Toolkit

During the session the audience was split in small groups, working on three different topics guided in the deployment of the MAZI toolkit by a MAZI partner. Three scenarios were chosen to be equally relevant to the CAPS event, and dealt with the specific location on the premises of the Tsalapata Building namely a MAZI Zone was configured for the cafeteria where the community took lunch; one for a concert that took place during the workshop week, and finally a MAZI Zone for the CAPS Community Workshop that was deployed also on July 12, the day of the plenary. As a workshop highlight was noted the “competition” between the different MAZI Zones in Volos, asking people to close theirs not to “confuse” people.



Figure 6. MAZI zone(s) at the plenary of the 2nd CAPS Community Workshop

Here is a **structured summary** of this cross-fertilization event:

- **Profile of outsiders:** researchers and practitioners engaged in CAPS projects.
- **Relationship with the outsider group:** MAZI project partners are a part of the CAPS community.
- **Role of MAZI consortium in the event:** organizer of the event and active participant in disseminating the ideas, findings and practical knowledge on DIY networking and the MAZI methodology to other CAPS projects' partners; and also networking within the CAPS community.
- **MAZI proposals:** three MAZI zones relevant to the activities at the location of the event, and most importantly to create a list of participants and also facilitate the communication during the plenary of the CAPS Community Workshop.
- **Community suggestions/ideas:** creative ideas for possible uses of the MAZI Toolkit like configuring a MAZI Zone at a concert including a page that introduces the band; and a suggestion that was realized during the

CAPS Community Workshop, to use post-it with the active applications on the MAZI Zone poster like a playful presentation of what is inside the active zone (see figure above).

- **Challenges identified:** sensitivity of the SD cards with consequences regarding the reliability in saving data and the need for regular back-ups.
- **MAZI zones tried out:** different elements of the MAZI Toolkit namely etherpad, nextcloud, interview tool, and guest book.
- **Overall feedback:** interestingness of the tools; synergy created with the CAPS project EMPATIA that led to various ideas on how the produced ICTs could be merged or co-designed, including collaborations on of methodologies and sharing of experiences with participatory practices in a future workshop (see also the workshop at the C&T 2017 Conference in Troyes, France, June 2017); the formation of an interested group in interdisciplinary research staying in touch for exchanges regarding methodologies, relevant literature, participation in conferences and publications etc.



**Figure 7.** The EMPAVILLE game of the EMPATIA project at the 2nd CAPS Community Workshop, July 13, 2017

## 2.1.4 Working notes from the cross-fertilization events

The survey of self-reflection exercise #3 asked questions related to the cross-fertilization events regarding

- each partner's understanding of the other partners;
- her own role in the project;
- the relationship between research and action;
- the design of your own pilot;
- ideas for MAZI toolkit in general, which are documented in D3.12 Section 1.

The following paragraphs synthesize the answers to the question:

### ***What could be done differently to improve the next pilot cross-fertilization event?***

The answers to this question suggest ways of understanding the relationship between research and action. After the pilot workshop in Berlin, synergies but also tensions between research and action have already been formulated in an initial form (see D3.6 Section 6 and Section 7.1.3):

- Innovation versus pragmatism: When to (not) design
- Paid research versus voluntary work, or: The difference in currencies
- Facilitation versus authorship: Different levels of involvement
- Creating expectations versus creating openness: Managing anticipation
- Added work versus added values: Context-sensitive development
- Formality versus informality: the “informed consent” tension

Some of these tensions were devised after the experience of the Deptford workshop as well, for instance, paid versus non-paid work, together with some additional points about:

- time intensive versus ad-hoc work
- a strong divide between project-logic (consortium meeting on deliverables, project updates etc.) and engagement in local practice; manifested in language (a vocabulary attuned to the combination of academic and technical tasks we have to fulfil, which could easily swamp the uninitiated)

Thus the suggestions for improvement are interesting not only for the organization of the next cross-fertilization events but also from other points of view regarding our interdisciplinary work, each partner’s aspirations about what the project might become, how the pilot activities could be sustained after the end of the funded project etc. Moreover, there was a suggestion for structuring the events, making a clearer distinction “between cross-fertilisation that happens between partners and disciplines, as opposed to a wider, more general cross-fertilisation between pilots, locals etc”, and at the same time to make clear “the purposes of each session”, and “be clearly signposted and promoted” accordingly:

- a cross fertilization of ideas across partners,
- a dissemination activity to the public,
- a participatory engagement activity with local participants.

If nothing else, that shows that the complexity and multilayered reality of MAZI is internalized by the partners, having the potential to shift into the collaborative phase of *leadership as partnership*.

There is a series of organizational suggestions provided here as a list of categories:

- a **temporal** dimension included small group gatherings; smaller groups to review the real scenarios experienced by pilots to date; one additional meeting day without a fixed agenda (as in an unconference); more time to drift and reflect on progress, as previous experiences show that the extra time allowed informal conversations to develop;
- a **spatial** dimension in the form of “a shared conversation space, so discussions can continue afterwards, and enable those who explore the MAZI toolkit as a result of attending to build a community of users, supported by MAZI team.” ... “to build a critical mass of users who can support each other once the project funding has finished;”
- **content-related activities** implying “work together on the guidelines for the Toolkit and speak of the exit strategy of MAZI”; “hands-on sessions with the MAZI toolkits and attendees should all walk away with a copy to try for themselves, in return for signing up to the mailing list. Demonstrating easy to understand utilization of the toolkit essential”; “we need evidence of actual benefit of using MAZI. details of experience reflections of users, suggestions voiced responses granted.” ... “some focused and structured discussions on some of the more complex implications that have been revealed during the use of MAZI toolkit in different settings and in the pilot studies; issues around ideas such as ownership, power, trust, safety, identity, privacy, independence, anonymity, responsibility, visibility, materiality, and the meaning of terms such as “community”, “participation” etc could be addressed, perhaps leading to new publishing collaborations.” ... “how will the results of the project be carried on/ presented to the world / left in the world.”
- **MAZI and the local community** reflections as “engaging with the local community in more playful (and maybe purposeless) ways to allow them to bring up what concerns them truly” and “MAZI more like a guest to a ‘local’ event rather than the ‘protagonist’”

- reflections on the work **within MAZI consortium**, with respect to answering “the pre-event questionnaires and reading the written material in advance to avoid some redundancies or wasting precious time in the interdisciplinary exchanges between the project partners”, “explaining and understanding each other’s disciplinary processes and approaches”, “to examine our own practice as project partners and make explicit linkages during the event through the theoretical framework discussed in previous deliverables, through the concepts within this framework could be used as “tools of analysis” of our own practice and interactions with each other.”

## 2.2 Spaces of interaction, negotiation, convergence

In the process of interdisciplinary action research in MAZI, there is a multitude of complementary moments to the cross-fertilization events; together they configure the interaction space where communication, active listening, negotiations and eventually convergence and consent may happen. These complementary moments are either face-to-face gatherings like plenary sessions, consortium workshops and other specialized workshops, or realtime online exchanges such as conversations by email or video calls, collective work on online documents (e.g., google docs or etherpad) or on the project wiki etc. In addition, the common surveys in the MAZI consortium are considered as 'meeting points' (refer to the D3.2 on the boundary object, Section 4.3), whether they are questionnaires, interviews, or self-reflective exercises. Each of these spaces and their role in the interdisciplinary interactions are presented in more detail in the following sections, as spatial contextualizations, where the MAZI boundary object is emerging through collaborative action.

Before proceeding to the presentation of these diverse forms of exchange and interaction, and of some of the outputs of our collaboration on DIY networking during these events, let us suggest an incipient structure for analysis of the synergies and tensions that appear along the way. On the one hand, as mentioned in D3.11 on self-reflection (pp.8-10), the MAZI partners are engaged in the project with different degrees of commitment, which play an important role in how they deal with the various tasks at hand. On the other hand, the tasks vary as the pilot projects themselves are very diverse.

Moreover, the set of tensions identified in the deliverable D3.6 on interdisciplinary framework (pp.29-31) between researchers and community activists are very likely to apply to the interdisciplinary work of the consortium too. A proposal is to take into consideration these tensions as well as those sketched through the survey answers, as presented in the previous section; and a set of specific tensions to the interdisciplinary research, as illustrated below in Table 1.

**Table 1. Building awareness regarding some of the tensions in the MAZI research and action**

Tensions in MAZI research and action		Building awareness about these tensions
innovation	pragmatism	Bringing the topic in the conversations regarding the interests of the local community shaped around each pilot, and how the MAZI action may serve their objectives while experimenting with DIY technologies and innovation goals.
paid research	voluntary work (more or less)	Dissemination happens in all conceivable circles, and with it the generation and accumulation of “capital” of any kind; what seems profoundly different is the “currency”, with which the different capitals are denoted (e.g., publications, community credibility, etc). This point has been described in more detail in the depiction of the INURA conference (D3.6 Appendix B).
facilitation	authorship	MAZI is a collective project, however, there are different roles and responsibilities within MAZI, and some of them have been explored in more detail in the D3.12 deliverable on self-reflection Section 3.

creating expectations	creating openness	While aiming to incorporate the needs, wishes and conceptual frames of the relevant stakeholders into the design of the prototype, it is not possible to fulfil the preferences of each and every participant in these processes. Therefore, not to risk disappointing the partners, it is necessary to carefully communicate the structure and aim of the co-design sessions. The goal, again, is to create tools with sufficient openness to allow for creative appropriation, productive misuse and the alteration of the prototype to fit the needs, contexts and circumstances of more than just one community.
added work	added values	It is critical to amplify existing processes instead of creating new ones in the pilots' locations. Learning together how to anticipate any developments as added values, and not as additional fields for work on top of already strenuous working situations or (not) to project the MAZI toolkit as a means for itself.
formality	informality	There are various recurrent reflections including what type of information is really needed for the research and whether some compromises can be done (like the discussion generated by the incident regarding the consent forms in Berlin), making a habit of engaging in collective discussion about what a more collaborative approach might look like, and in identifying what it is done and what kind of data is collected, toward becoming 'reflective' practitioners.
time intensive	ad-hoc work	On the one hand, there are tasks to be done on the spot and on the other hand, participatory practices require time to enable them to unfold.
project-logic	engagement in local practice	Between the two goals and objectives (research and action), there is need for an integrated line of collective action, an outcome oriented interaction between the project partners to systematically go through our insight on pilot level and exchange strategies on this level, work together on the guidelines for the Toolkit and speak of the exit strategy of the project.
active listening	divergent vocabularies and meaning making	There is a 'thin' version of active listening, through empathy, i.e., considering the other as being right, intelligent or by at least assuming that what the other says is making sense (Sclavi 2006).
openness in breaking through own frame	staying within the frames and comfortable territoriality	There is a 'thick' version of active listening, through exotopy or extra-locality, requiring a displacement of yourself from the assumed set of alternatives, from your "frame", in order to be able to displace the interlocutors from their own frame. This version implies reciprocal recognition and respect, and a gentle elaboration of the trauma involved, as there is always some degree of trauma related to conflicts (Sclavi 2006).
curiosity and exploration of the unknown	uncertainty of the role(s) to be played	It is necessary as a guide and stimulus for new exploration to shaping relational spaces for interdisciplinary collaborations and even more, the quality of these spaces is critical.

### 2.2.1 MAZI consortium workshops and plenary sessions

MAZI partners have been working together in other formats along with the cross-fertilization events, including the scheduled plenary meetings that take place every six months. After the project kick-off in Volos, in January 2016, and the subsequent opportunity to present to the group an existing community network in the Sarantaporo Valley, there were one day project plenary meetings in Berlin (July 2016), Rome (January 2017), Deptford (June 2017) and also the project review in Volos (July 2017). There are suggestions, however, to allocate

time in the plenary for more interactive sessions than the usual serial reporting that leaves little room for in depth exchanges, and therefore, there will be experiments with different options during the following plenary meetings in Brussels (February 2018) and in Zurich (May 2018), as well as during the second MAZI summer school in Volos (July 2018). For instance, in Brussels, there is scheduled a special plenary session, whose agenda is being prepared out of the recent survey (the self reflection exercise #3). Such sessions are meant to complement the experience gained in the field during the cross-fertilization events, with (post-)reflective and deliberative action that implies negotiations between all partners, across pilot work.

In addition to the MAZI plenary sessions, the partners interacted in workshops attached to other events, and that offered them exposure to the other communities like at the 2016 INURA Conference (D3.6 on the MAZI interdisciplinary framework, Appendix B), and mainly to the CAPS community either at the DSI Fair in Rome, where MAZI has been present in the exhibition space and the partners exchanged information with other CAPS projects, or during the four days of the 2nd CAPS Community Workshop in Volos (Section 1.1.3 of this document).

## **2.2.2 MAZI specialized workshops**

There has been MAZI exposure to other research communities in dealing with a specific topic, for example, urban commons and participatory design. In May 2016 at the IASC (International Association for the Study of the Commons) Regional European Conference in Bern, a conference panel was organized with the title “Networking, Comparing, and Integrating Urban Commons Initiatives in Research and Action” (documented in D2.7 on the Zurich pilot Section 3.4.2) that was well attended and stimulated fruitful discussions.

Recently at the 2017 Community & Technology Conference, a select group of CAPS projects namely MAZI, Commonfare, EMPATIA, and netCommons collaborated in the organization of a workshop titled “Participatory Design, beyond the local” (June 27, 2017), which has been documented in more detail in the netCommons deliverable D3.3 Section 4.1. The workshop aimed at stimulating and opening a debate around the capacity of Participatory Design and other co-design approaches to deliver outcomes and methodologies that can have an impact and value for reuse, well beyond the local context in which they were originally developed. As projects like those funded within the EU CAPS program pose new questions to PD and, more generally, to any co-design endeavor, it is very likely that the main concerns consist in the scalability of participatory practices and their results. Such issues and more were discussed within the day based on presentations of papers and local case studies. Maurizio Teli, Peter Lyle and Mariacristina Sciannamblo from Madeira Interactive Technologies Institute, working on the Commonfare project, Kalinca Copello and Michelangelo Secchi from the University of Coimbra and Carlo from Ippolita working on the EMPATIA project, Gareth Davies from the Open University and Ileana Apostol from NetHood working on the MAZI project, and Panayotis Antoniadis from NetHood working on the netCommons project have discussed with the other participants in the workshop project insights, both theoretical concerns as well as practical experiences.

By and large the overall objective of the workshop has been reached, to build a community of researchers and practitioners – working in the field of participatory design, interaction design and similar approaches – who are going beyond the local in their professional practice and wish to explore the limits and challenges of their activity through comparisons, critical analysis, and storytelling, with the will to outgo their own disciplinary perspectives. The various accounts are to be published in a forthcoming report, and in some of the participants have met a month later in the 2nd CAPS Community Workshop in Volos. In future events that this group will organize, the conversations will be taken to comparing approaches and methodologies from different disciplinary perspectives.

## **2.2.3 Online exchanges**

The MAZI online exchanges are usually spontaneous or by demand, instead of regulating them into frequent 'online meetings', a decision made mainly to keep the creative spark and interestingness of the interdisciplinary work in MAZI. Examples of such interactions on demand are work on deliverables that has been discussed sometimes through video calls, other coming up issues to be solved through email conversations, or collective publications and presence in conferences (e.g., the panel at 2016 IASC Conference in Bern, papers' participation in the design conference 2017 “Design Next” Conference in Rome, CAPS community workshop, or the forthcoming presentation in the 2018 ICLS symposium in London, etc).

## 2.2.4 Surveys

In the first two years of MAZI, the partners have answered three self reflective exercises, two questionnaires, and have interviewed each other using also the interview tool of the MAZI toolkit. The results are documented in previous and current deliverables, and the answers make a large part of the progress in building understandings about our similarities and differences toward interdisciplinary collaborations.

## 2.3 First steps toward shaping a MAZI relational space

Given the above opportunities to interact and exchange information, hands-on experiences and specific knowledge, and keeping in mind the tensions that inevitably appear in collaborations, the Table 2 overviews the progress made in the first twenty four months of the project toward a more collaborative interdisciplinary climate for the design of the MAZI toolkit.

**Table 2. Spectrum of attitudes in the collaboration of MAZI partners**

Spectrum of attitudes in the collaboration of MAZI partners		Effects of shifting between the two attitudes (from the left column to the right column)
exercising leadership	letting go	Empowering many initiatives coming from the pilot teams to contribute to the overall conceptualization of the MAZI toolkit as a collaborative process
rigidity in the comfort zone	flexibility in action	Stimulating (social) imagination as discursive design, elaborating on what could be done to accomplish the project goals
critique and counterbalancing	taking action	Proposing action steps in the project, which shape a different space eventually leading toward enhanced interdisciplinary collaborations
laissez faire	structuring the collaborative process	Defining together the course of the final year of the project, of course, in accordance with the initial framework
do it on the spot	planned action	Shifting from acting on the initial project prescriptions toward developing the project according to shared understandings within the project framework
pushing what I know well	observing what is needed	Changing the mindset from the research - action dichotomy to reflection-in-action, and building an understanding by acting in the real life laboratory
decontextualized 'requirements' for design	finding out about community needs; providing technical explanations	Moving the design lab from the office into the real world, as a cross-cut intervention in the ongoing urban/rural processes, as well as creating plenary explanatory sessions across-disciplines, to co-design the MAZI toolkit and prepare a project's exit strategy

### 3. PART II – MAZI toolkit as a boundary object

This part of the document presents elements of a methodology to co-design MAZI toolkit. One of the characteristics of a boundary object is an inherent dynamic process, shifting between specific or local or strongly structured forms to rather generic or global or weakly structured forms. The MAZI interdisciplinary research translate back-and-forth between such poles, namely the ‘strong’ pilot(s) version and the ‘weak’ common (project-wide) version of the toolkit. In this process, the MAZI toolkit plays the role of a boundary object, which can be appropriated by the different groups while developing concrete local solutions and corresponding instantiations of the toolkit --the MAZI zones-- in a continuous back-and-forth negotiation between the ‘strong’ structure of these concrete installations and the ‘weak’ structure of the generic toolkit. Moreover, as Bowker & Star (1999) note regarding the theory of the boundary object, the pilot representations of the toolkit need to be ‘plastic enough’ in order to adapt to the requirements of the local context, while the common (project-wide) version of the toolkit shall be ‘robust enough’ as it shall insure a common identity and may be transferred to other contexts, beyond MAZI, where it could be customized.

In the MAZI collaborative work, the action to record and interpret the negotiations during the design process of MAZI toolkit are listed together with the explorations of the similarities, differences and tensions appeared in the interdisciplinary team toward shaping a relational space (see Section 1.3). These are the future steps to be taken toward enhancing the the MAZI interdisciplinary framework (see deliverable D3.6, p.32).

Recording the toolkit negotiations are initialized in the four pilot teams. The aim is to interpret the complex task of negotiation while placing the MAZI toolkit as a boundary object first between the local actors, who work with a specific disciplinary perspective on participatory design (for individual answers per pilot refer to D3.6 Appendix III and D3.12 Appendix I). These four disciplinary perspectives that are applied in very different environments are a) co-designing (infra-)structures versus designing solutions in the UdK - Common Grounds pilot in Berlin; b) participatory action research in the OU - SPC pilot London; c) interdisciplinary structures for information sharing in the NetHood - INURA pilot in Zurich; and d) speculative design: participatory creation and dialogue in the NU - unMonastery pilot in Greece. They are illustrated in the current scenarios of MAZI pilots (D3.12 on self-reflection).

The results of the first two rounds of developing pilot scenarios are documented in the deliverable D3.12 dealing with self-reflection exercises, in the Section 3 that synthesizes reflections on MAZI toolkit (from the answers to the self-reflection exercise #2, May/June 2017 and #3), and in the Section 2, the scenarios of MAZI pilots narrated in the self-reflection exercise #3 (November 2017). Eventually the analyses and interpretation of negotiations will focus toward a commonly MAZI agreed outcome, during a process in which the consortium members act with and toward the “boundary negotiating” object: the common version of the MAZI toolkit.

At the same time, collective work on MAZI toolkit generates a network of boundary infrastructures that address the complexity of the project consortium. In other words, methodologies and insights related to specific problems will be meaningfully shared, once the partners become more familiar with each local context and every disciplinary perspective of the pilots. In the endeavor to facilitate interdisciplinary collaborations, over time there has been developed a world of tools from which a few are selected in this document to be used in parallel, and to be tested in future moments of interaction during the last year of MAZI.

The different types of triangulating elements for interdisciplinary work are divided into three categories, according to the actual “forum” where the corresponding interactions will take place. First, the **github repositories** of the MAZI toolkit at <<https://github.com/mazi-project>>, *portal* and *guides*, which offer two concrete options for a “participatory” creation of the toolkit namely

- The “issues” feature that allows to anyone to propose features, report problems, and more
- The “wiki” feature of the guides repository used to collectively edit the full set of guidelines of the toolkit in a “raw” form, which will be later transformed to more user-friendly format.

Second, the **demo server** of the MAZI toolkit (<<http://demo.mazizone.eu>>), in essence an instance of the toolkit itself, its public online version, where the different applications are customized to serve the goal of facilitating the discussions around the toolkit and our experiences with it in real life deployments. More specifically:

- An **etherpad template** for recording individual stories from MAZI Zone deployments in a structured way
- A **NextCloud folder** for uploading photos from those MAZI Zones described in the etherpad documents

- A **wordpress installation** featuring the most interesting stories in the form of a blog combining the etherpad stories with the photos into a nice narrative
- An **Interview Archive** with answers to a specific set of questions by all partners of the projects, but also outsiders
- A **Limesurvey questionnaire**, again answered by the project partners but also visitors

Third, through **face-to-face interactions** in the upcoming cross-fertilization events and other meetings around specific methodological elements that will complement the toolkit and become part of its guidelines:

- a **pattern language** or a set of generic categories that could be adapted to many contexts and situations;
- a set of **MethodKit cards**
- a set of **positioning cards**

Note that the key role of this deliverable is to spell out and finalize the available means of collective work around the function, form, and description of MAZI toolkit as the tangible project's boundary object. This happens at a moment that all pilots are in full activity, and all partners have a similar level of familiarity with the toolkit and most importantly with some challenges from its deployment in real life.

Making this collaboration public and using MAZI toolkit's demo server and github repository as the main venues for it, has significant advantages:

- It brings the discussion and reflection as close as possible to its object of research
- It can potentially include more external actors who have already started to participate through opening github issues and posting in our demo server's guestbook; more is expected as soon as the demo server will be prepared as a proper 'meta'-forum for discussions on the toolkit.
- It makes the project more transparent, and thus easier to approach and to engage with, based on trust; these are very important aspects for its future sustainability, beyond the end of MAZI.

After this 'common' representation(s) of the toolkit toward the outside world are established and continuously co-created by the partners of the project, the representations developed inside the different pilots (e.g., specialized posters in the local language or guidelines addressing a very specific audience) will form the local representations of the toolkit, exactly as in the 'back-and-forth' process described by Bowker & Star (1999). The next and final deliverable will report on this process initiated upon the publication of this deliverable, and possible adaptations of the presented spaces of collaborations and negotiations around the MAZI toolkit as a boundary object (Part 1). The following sections present each of these tools.

### 3.1 Github repositories

#### 3.1.1 Guidelines wiki

The GitHub is "a development platform inspired by the way you work. From open source to business, you can host and review code, manage projects, and build software alongside millions of other developers" (<<https://github.com>>). In addition to a wide range sophisticated tools for the organization of group work it offers a very well designed and efficient wiki for every code "repository". This wiki was selected as the main platform for the editing of the "raw" material of the MAZI toolkit guidelines and since it is the closest representation of the toolkit itself will be the prime forum for negotiation amongst partners on different understandings of the toolkit's elements and how these should be presented.

Of course, the toolkit guidelines will be provided eventually in more usable formats, like a booklet, but this wiki plays the role of an open collaborative environment for the development of the main content and language. And thus it is perhaps the closest representation of a boundary object, due to its tangible and rather concrete nature, as it explains the toolkit both in content and uses in an accessible language. The guidelines of the toolkit are actually the description of the toolkit and a verbal expression of its functionalities.

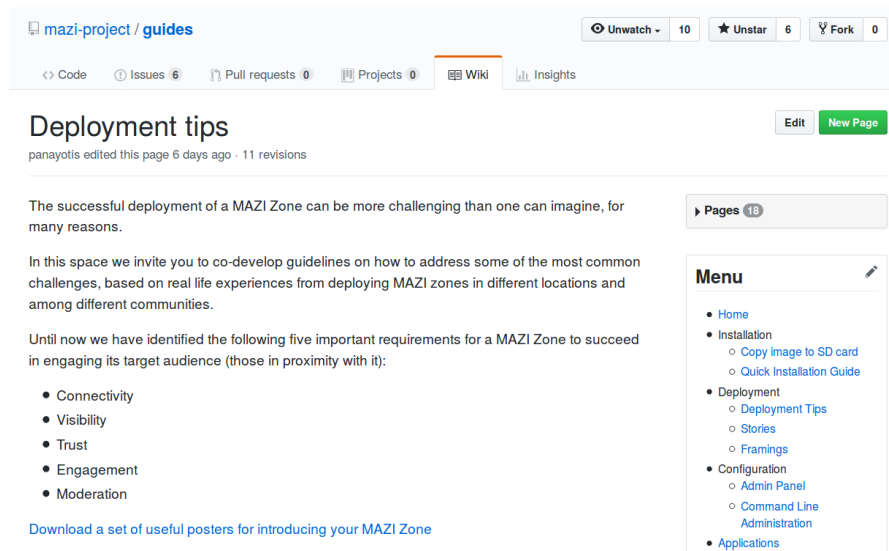


Figure 8. Github Wiki's index page (guides repository)

Additionally, using the history feature of the wiki, one could easily go back to different versions of the guidelines pages, and trace the evolution of the back-and-forth process in comparison with other activities and self-reflection exercises planned for the last year of the project.



Figure 9. Github Wiki's history feature (deployment tips page)

### 3.1.2 Github issues

Every code repository on Github is equipped with the “Issues” functionality which is in essence a discussion forum with custom tagging and labeling functionalities, filtering, and linking between issues and the so-called “pull requests”. Initially designed as an organizational tool for programmers, it has been increasingly used for the

provision of feedback by users of the software, who are not necessarily technically competent but have a certain level of motivation. There are even efforts to use this feature for “user-centered” design methodologies, while there are numerous tools that integrate github issues into more sophisticated “agile software development” methodologies like Scrum that is a well-defined process framework for structuring group work.

There are practically no successful FLOSS applications that do not use github repository for helping the core team to collaborate, to engage external contributors, and to receive feedback from users. Etherpad, NextCloud, Framadate, Limesurvey, and of course the MAZI applications Guestbook and Interview archive are all under discussion in github forums. NextCloud provides a good example on how the “Issues” feature is used widely both for technical issues and “feature requests” by non-expert users (See <<https://github.com/nextcloud/server/issues>>).

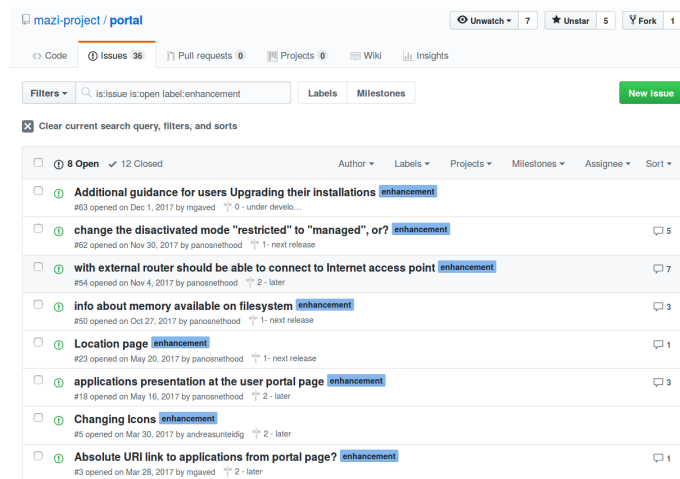
One downside is that answering issues can be a time-consuming activity but in the long-term is very rewarding, because these discussions bring closer the developers with the users of software and provide an invaluable level of transparency on both sides. They also help outsiders to understand better the project and the development team, to engage in the design and even in the software development as contributors, which is the primary goal of the github platform. This may be the only way to achieve long-term sustainability, the engagement of a wider community, beyond MAZI.

To engage those that are overwhelmed with the overall surrounding of the “issues” forum (by itself is very friendly and usable, but there are neighbouring menu items with unknown concepts for most people like “pull requests”), a good practice is for those already using the platform to “transfer” comments and feedback from external people and “quote” them in the new issues created. The corresponding entry, and the hopefully productive discussion under it, could be even shared with them to encourage them to create the next issue by themselves. (See for example, a recent issue created after a request by an engaged community member in the Zurich pilot: <<https://github.com/mazi-project/portal/issues/74>>)

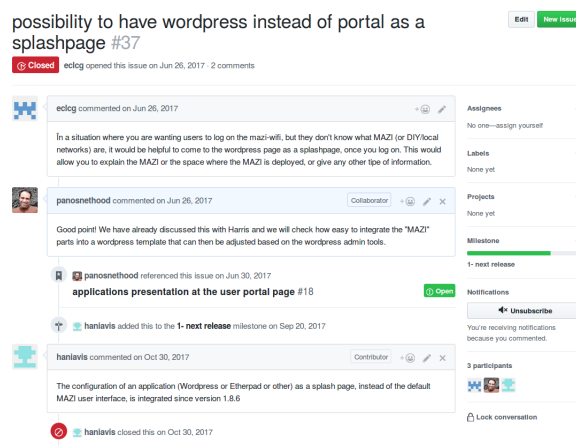
Being a good github issues manager is an art that requires, for instance, the appropriate labeling to create welcoming discussion forums; the consistent definition of milestones and their regular update. Also “welcoming” new users and valuing all contributions is critical for the creation of an online space that is attractive and collaborative. For example, the Openki.net platform in Zurich uses a wide variety of labels that are meant to encourage useful feedback from non-technical issues like “Conceptual question”, “Opinions needed”, “User eXperience (UX)”, and others, or engage new collaborators like “Good first issue”, “Mockup needed”, and more. There is also a lot of effort to create transparency and openness in the decision-making process regarding important design details of the platform (see <<https://github.com/Openki/Openki/issues>>). Part of the MAZI “boundary object” exercise will be to define similarly motivating labels for the “issues” forums of the MAZI repositories instead of the “default” github labels used today, like “enhancement” and “help needed” that are too generic.

Until now, inside MAZI, we have started using the github issues mostly for internal exchanges, between the more and less technical members of the project; due to a critical mass of activity generated between MAZI partners, also people external to the project (four in total) started opening issues that range from small bugs to advanced feature requests, including an offering for a translation in Italian.

However, one cannot ignore the fact that github might be intimidating for some people, inside or outside the project, with or without help from “insiders”, and so this will not be the only way available for people to participate in the development of the MAZI toolkit at large, as described below.



**Figure 10.** Screenshot of the issues labelled as “enhancement”, on December 20th, with varying “milestones” in the main mazi-portal repository



**Figure 11.** Screenshot of a specific issue initiated by a pilot partner, a very good idea soon implemented and made available with the v2 of the toolkit.

## 3.2 The MAZI demo server

MAZI’s demo server, <<http://demo.mazizone.eu>>, features all available applications in the MAZI toolkit. The intention is to use all of them, with the exception of the Guestbook which is mostly addressed to external users of the toolkit, and is already active, as ways to facilitate discussions around the MAZI toolkit between the project’s partners and beyond.

### 3.2.1 Story telling with Etherpad and NextCloud

For example, as a part of the toolkit was created a repository of stories from experiments with MAZI zones, for which a template was proposed that is still in a draft form (phase 1), soon to be collectively improved. Below is an example of such a story that follows the template: <<http://demo.mazizone.eu:9001/p/mazizone-story-zurich-kunstwerk1-panos>>; this specific MAZI zone is presented in more detail in the MAZI deliverable D2.8 on the Zurich pilot.

**Table 3. Structure of a personal story**

Title: ***Kunstwerk1.1 – Sofa University: yesterday, today, tomorrow***

Location	Kraftwerk1 Pantoffelbar
Date	October 31, 2017 – May 31, 2018
Duration	Exhibition opening: 18:30-22:30
Demographics	Residents of the Kraftwerk1 Hardturm; participants in the 1995 Sofa Universität; friends and sympathisants; researchers; others interested in the topic.
Framing/Objective	<p>An exhibition of photography showing a moment of Kraftwerk1's beginnings, the July 1995 Sofa Universität, which was an artistic installation of lived space that took place in the Shedhalle of the Rote Fabrik cultural center in Zurich during an entire month. Currently it is revived in the Pantoffelbar of the Kraftwerk1 through the photographic lens of Gerda Tobler, and by engaging in conversations with participants in the 1995 Sofa Universität, as well as with Kraftwerk inhabitants and exhibition visitors.</p> <p>The exhibition is the starting point of Kunstwerk1, a series of events at the Kraftwerk1 Hardturm that NetHood and INURA Zurich Institute curate within the MAZI project, to bring together inhabitants around cultural topics, and to stimulate the development of a hybrid community art collection.</p>
Selected configuration / template	Link to the file: <a href="http://demo.mazizone.eu/nextcloud/index.php/s/QdiEwCGd1F2GPqO">http://demo.mazizone.eu/nextcloud/index.php/s/QdiEwCGd1F2GPqO</a>
SSID	kunst.werk1
Participation	At the exhibition opening there were around 30 visitors who participated for a three hours vivid conversation. The uploads on the MAZI zone are ongoing
Failures	There is little participation and engagement with the MAZI zone; we expect that the situation will change after a new event that we'll organize in December 2017, as a starting point for the hybrid community art collection
Successes	Heri, a resident of KW1 Hardturm experienced with digital technology, took over the responsibility of the MAZI zone
Outcomes	<p>An interested group of participants who engaged actively in conversations</p> <p>A physical space designed around the MAZI zone</p> <p>A local community member who took over the responsibility of the MAZI zone</p>
Visual material	Photo of the MAZI Zone (see photo x)
	Photo of the location (see photo y)
	Photo of people interacting with it (see photo z)
	Screenshot of the online activity (see photo w)

### 3.2.2 Wordpress blog

The Wordpress instance in the MAZI demo server will be transformed to a simple collective blog showcasing the most interesting of the stories submitted through etherpad/NextCloud. Soon a few stories from the pilots will inaugurate the blog; the next actions will be to pick-up stories from external users and help them transform these

stories into nice blog entries, rewarding for their authors and very helpful for the dissemination of the MAZI toolkit. Due to its importance, the “MAZI stories blog” will be the last element of the portal to be initiated, in order to gather a wide variety of stories that will make it possible to keep a good “flow” of blog entries with interesting content.

### 3.2.3 Interview archive

To answer similar questions, MAZI partners may use some of the most advanced tools that were developed inside the project such as MAZI interview archive. It will be very effective both in terms of dissemination but also in terms of creating common understandings around the MAZI toolkit, to define a set of questions that partners will answer with the use of the MAZI recorder app and then upload on the demo server’s Interview Archive.

More specifically, the consortium will develop and maintain a set of questions for different possible “roles” of actors that could be interviewed in this context, considering as a starting point partners of the project and those with whom there is often interaction in the pilots; of course the ‘interview’ could be extended to include more “roles” than those existent in the project.

For example, an initial set of questions that will help us bootstrap this process include the following:

Common questions (across all roles):

- What is in your opinion, the role of technology in society? In the city? In the neighbourhood?
- Do you worry about the power of Facebook, Google, etc?
- Do you think that local solutions can complement the social impact of these corporations, and create a different situation in society?
- What does DIY networking mean to you?
- Do you have an opinion of why it could be useful to develop such grassroots technologies?

Community member / potential MAZI user

- Have you tried to participate in a MAZI Zone?
- What are your impressions of this experience?
- What are your suggestions for improvement?
- What other uses of a MAZI zone do you imagine?

Community activist / potential or currently MAZI toolkit administrator

- How would you describe a situation in which the MAZI toolkit is truly useful?
- What did you learn from attempts to install MAZI Zones in terms of:
  - explaining the background and possibilities?
  - its physical representation?
  - approaching and engaging people?
  - (self-)sustainability after your intervention?

Engineer, software developer / interested in open-source software and DIY networking solutions

- Did the MAZI development change your way of thinking, or?
- Did it require any innovative solutions?
- How would you improve the overall architecture of the MAZI toolkit?
- Which features and/or applications do you think are missing?

Researcher

- What is your role in the interdisciplinary work in MAZI?
- What role have you played / do you play during an instantiation of a MAZI zone?
- How have your usual frames had to change to collaborate in the project?
- Have you taken action in the project that was not anticipated at the beginning of the project?
  - What type of action?
  - Why have you chosen to undertake this action?
  - How was it received by the group? Was it useful at the project (team) level?
  - Could you provide a few lessons learned from your experience in introducing technological tools to a community?

The answers to these questions, and possibly more by the project's partners will be regularly updated the Interview Archive application running on the demo server at <<http://demo.mazizone.eu:9091>> and will serve also as a dissemination tool of the project and MAZI toolkit.

### 3.2.4 LimeSurvey questionnaire

LimeSurvey is at the moment the worldwide leading open source survey software, as mentioned on its website <[www.limesurvey.org](http://www.limesurvey.org)>. The website offers collective guidance through numerous forums on related topics (see for instance the page on 'what can be done' at <[www.limesurvey.org/forum/can-i-do-this-with-limesurvey](http://www.limesurvey.org/forum/can-i-do-this-with-limesurvey)>), and Limesurvey's Head of Support, Marcel Minke, founded also a specialized website <[survey-consulting.com](http://survey-consulting.com)> to offer professional consulting and services for the software.

Inside MAZI, in the Zurich pilot (see Deliverable 2.7), LimeSurvey has been used successfully in terms of user perception, efficient administration, and facilitation of generating results. Since it is rather demanding in computing resources and requires some training before using it, the software is not promoted in the current version of the MAZI toolkit (v2.1) but is available to experiment with on the demo server. Although in Zurich LimeSurvey was used for the official survey on Kraftwerk1's Intranet, it was hosted online. In Deptford, however, the toolkit version (hosted on the Raspberry Pi) was considered complex and difficult to manage, and not appropriate to the current community participants who are not technology experts.

During the next months, the common "boundary object" exercise will be carried out, which is a project-wide survey rather than a pilot-wide exercise. It is the co-creation of a detailed survey to be launched toward the end of the project, when the MAZI toolkit will be already mature, and will play a dual role: 1) as a dissemination and awareness strategy (those answering the survey will be faced with interesting questions about technology and society and the role of DIY networking to this respect) and 2) as a way to understand better the usage and overall understanding of the toolkit by external to the project people.

### 3.3 Face-to-face interactions

In the future MAZI consortium workshops we will experiment with some triangulating elements to facilitate communication and exchanges. Such elements are best worked on in analogue formats, and they can serve as facilitators for continuing and deepening the online collaboration around the MAZI toolkit, during face-to-face meetings. The choice of such collectively devised structures for communication are "Liberating Voices" initiated and curated by Douglas Schuler, "MethodKit" initiated and designed by Ola Moeller, and "positioning cards" recently proposed by Maurizio Teli and colleagues.

These elements could be used as existing tools to help MAZI consortium to co-develop the toolkit's functionality and guidelines, but also as an object of design themselves, since MAZI-specific patterns or methodkit cards could be imagined as being a part of the overall guidelines. Especially for MethodKit, one drawback is that the cards are typically not open-source, with a few exceptions. However, the idea is very simple and powerful, and one could easily create their own cards. Moreover, Ola Moeller has been in close contact with partners of the project (especially unMonastery), as he has produced a customized deck for the unMonastery toolkit, and is open to further collaborations; thus it is very likely to produce a customized deck for the MAZI toolkit as well.

#### 3.3.1 A pattern language

In the 2008 book "Liberating Voices: A Pattern Language for Communication Revolution" Douglas Schuler proposes a first draft of a broader pattern language project, as an everyday integrative guide designed to address problems collaboratively, and meet the challenges of current communications revolution. His endeavor is qualified as "a crucial book for our time" being an "attempt to connect people and information technologies in the quest for real democracy" (in the book blurb by Langdon Winner).

The inspiration comes from Christopher Alexander's proposal for a new vocabulary or a "pattern language" to inform the design of complex systems with the consequence of livability in architecture and urban design. In an earlier book Alexander (1964) critiques the design practice of the time: "To help himself overcome the difficulties of complexity, the designer tries to organize his problem. He classifies its various aspects, thereby gives it shape, and makes it easier to handle. What bothers him is not only the difficulty of the problem either. The constant

burden of decision which he comes across, once freed from tradition, is a tiring one. So he avoids it where he can by using rules (or general principles), which he formulates in terms of his invented concepts. These principles are at the root of all so-called “theories” of architectural design. They are prescriptions which relieve the burden of self-consciousness and of too much responsibility” (p.62). The timeless entities from which this novel language is derived are explored in more detail the 1979 book “The Timeless Way of Building.” For instance, Alexander explains, “The more living patterns there are in a thing –a room, a building, or a town– the more it comes to life as an entirety, the more it glows, the more it has this self-maintaining fire, which is the quality without a name” (p.123). Although applied to physical design, the pattern language idea was born in the early era of cybernetics and thus becomes even more relevant nowadays, reflecting on possibilities for co-designing hybrid space.

What does this mean, nevertheless, for communication and information sharing in dealing with future uncertainties? The best way to explain that is in Schuler's own words, “We named our pattern language *Liberating Voices* to signify its descriptive and prescriptive functions. [...] Each pattern contains within it a built-in **confrontation with a problem**, and the application of the pattern is intended to help us **overcome the problem** and bring us closer to a more humane existence. The problem described in each pattern contains features of the world that we think need changing, features that perpetrate the status quo, with its system of few winners and many losers, a category that seemingly includes most people and the natural environment. **The last part of the pattern is the solution**, which summarizes the ideas that people are using to confront the problem, wrestle with it, and make some progress at subduing it, while the problem resurrects itself in another form. A pattern, then, is a form of seed. It contains a reflection of current work and thinking, as well as the vision of a future in which the seeds have sprouted and borne fruit.” (2008, p.3).

## Citizenship Schools



Finding lasting, democratic solutions to deep and complex problems requires citizenship skills. Some are learned in daily life. Others, like deliberating, defining problems, collaborating on projects, organizing, and understanding public institutions and processes are not basic. We need Citizenship Schools in local communities and on the Internet in which citizens can come together with each other and with skilled practitioners and learn from each other.

Figure 12. The ‘Liberating Voices’ pattern card representing ‘Citizenship Schools’

How does it actually work? Let us take the example of the pattern card by the name “Citizenship Schools” for which there is a synthetic ‘verbiage’ as can be read in the Figure x, the card is explained in more detail, according to the above structure namely a) problem; b) context; c) discussion; and d) solution; on the Public Sphere Project website at <<http://www.publicsphereproject.org/node/295>>. The full account of this explanation one may find in the Appendix II of this document and below the main ideas are presented in a synthetic form.

Table 4. The synthetic description of the pattern card representing ‘Citizenship Schools’

Citizenship Schools Card
--------------------------

<b>Problem</b>	<p>Citizenship schools are needed because people are less connected in, and to local communities; thus civic skills need to be learned, in local communities and on the global net, such as</p> <ul style="list-style-type: none"> <li>- deliberating with others</li> <li>- defining problems</li> <li>- collaboration on common projects</li> <li>- organizing</li> </ul>
<b>Context</b>	<p>In order to act effectively toward democratic and lasting solutions that address deep and complex problems citizenship skills are needed. Moreover, it is important to know that there are also experts-civic practitioners, government officials and civil servants, teachers and scholars, civic and community organizers</p>
<b>Discussion</b>	<p>There is a long history of such schools in the US, however, with the emergence of the blogosphere, the topology of the web itself suggested that distributed links among widely dispersed civic sites might lead to new kinds of collaboration. The level most appropriate for new citizenship schools on the web is sites in the mid-range, for</p> <ul style="list-style-type: none"> <li>- gathering and connecting;</li> <li>- allowing collective learning in a distributed, asynchronous environment;</li> <li>- helping to frame a broad civic agenda collaboratively through distributed discussion;</li> <li>- forming a mid-range network of portals to focus attention...</li> </ul> <p>As main challenges identified in building such schools on a commons model is sustaining energy and collaboration, maintaining a high quality of information, and getting citizens to commit time to learning, not to just "graze" for information.</p>
<b>Solution</b>	<p>As the authors mention, there are five basic steps to promoting this pattern:</p> <ul style="list-style-type: none"> <li>- Build Citizenship Schools in local communities, institutions and online that can aid collaborative learning</li> <li>- Develop a site (local and virtual) that include active learning and civic curricula that can be widely shared</li> <li>- Find citizens (lay leaders and experts both) who can serve as teachers and editors who can make minimal but real commitments</li> <li>- Build templates to aid the spread of learning</li> <li>- Create new forms of civic credentials that provide value to both individuals and communities.</li> </ul>

The collection of 136 patterns is presented in the form of analogue cards that we may use in our future specialized workshops about collaborative design of DIY networking and especially on the MAZI Toolkit (see [http://publicsphereproject.org/sites/default/files/001-136.small\\_.pdf](http://publicsphereproject.org/sites/default/files/001-136.small_.pdf)). The examples could keep coming, but which cards are relevant is to be decided during the MAZI workshops. The next sections bring to the fore two other tools that fit MAZI topics and could be played during the plenaries.

### 3.3.2 MethodKit

MethodKit is an initiative to developing and designing specialized sets of analogue cards, in response to the over-digitalization of today's collaborative processes that may become sometimes a barrier to meaningful communication. Its initiator and designer Ola Moeller aims to develop a smart playful analogue tool, as "analogue things are more real and allow less distractions than digital devices. That enables you to focus on what is important, to develop something cool"; it is a reminder "about the most important bits and pieces involved in different areas" (see more on it at [methodkit.com](http://methodkit.com)).

In addition to providing alternative to the distraction that the digital tools bring, MethodKit offers the alternative to the non-developed analogue space where "blank canvases are the rule. (Examples are post-its, whiteboards,

flip charts, chalkboards, notebooks.) That means that workshops and meetings start from zero, every time” (methodkit.com). These cards are meant to structure and facilitate collaborations in a workshop, either as discussion or thinking tool or for mapping or selecting ideas or even simply by being an interface. It is a diagrammatic tool to create things together, for instance to develop projects as a collective.



**Figure 13.** Methodkit, an alternative diagrammatic tool to develop projects collaboratively (Source: MethodKit)

There are ten design principles as the basis of the MethodKit:

- 1) a visual tool with easy to grasp graphics;
- 2) as little information as possible on the cards, to allow room for collaboration and discussions;
- 3) description without direction, so to allow a myriad of ways of working;
- 4) straightforward language as “the more universal the better”;
- 5) the sweet spot between structure and creativity means that to provide support while stimulating creativity, the design aims at a fine balance between chaos and rigid structures;
- 6) discussions are more important than the cards (similar to scaffolding for a building construction);
- 7) create tools out of the reoccurring things, staying constant over time, to bring the focus on what is more important like “discussions, creativity, ideas and strategy”;
- 8) tool that makes you ask important questions;
- 9) covering the essentials, thus the kit making it easier to deal with complexity through summaries and overviews;
- 10) the cards will not do the work for you as the designers are aware that “Mastery over a field is about experience, knowledge, leadership and project management” (methodkit.com).

As an example matching the Liberating Voices “Civic Schools” card may be the “Global Challenges” kit that has for instance a generic card by the name “Education” with the explanatory footnote: “providing education that prepares us for the 21<sup>st</sup> century”. Or through the “Future Skills” kit featuring cards such as “Emotional Intelligence” is explained as “understanding other people and how they feel” might be useful in the work toward learning civic skills. By contrast to the Liberating Voices, MethodKit is not normative, and does not give any political hint or guideline implications.



**Figure 14.** An example of complementing the ‘MethodKit’ (the customized deck for Unmonastery) with the ‘Liberating Voices’ pattern language cards

### 3.3.3 Positioning cards

The positioning cards are a recent proposal for a design tool of digital technologies that supports the emergence of collective intelligence, combining “a political perspective oriented toward nourishing the common” and implying “affective dimensions like joy, sadness, and desire,” through the construction of narratives. To engage with people in the construction of narratives on controversial issues, the methodology draws upon in-depth interviews, focus groups and workshops. For instance, on the cards presented to people at the end of interviews or during a design workshop, one may read one’s way of acting together with the motivations of participants in a project like a) rational motivations, or having an interest in b) reaching consensus in a discussion space, c) being collectively active to redefine the dominant narration of the public discourse, or d) networking and creating a democratic common space. The main purpose is “to discuss the political alignment of design projects, in iterative processes of design involving people in the definition of the technological features to be implemented” and in context the cards are used “to grasp the general political options for a project” (Teli, De Angeli and Menendez-Blanco 2017).



Figure 15. Positioning cards as they are presented to people (Source: Teli and colleagues, 2017)

### 3.4 Local representations of the toolkit

At different stages of the project, there are specific representations of the toolkit depending on the local context, the so called pilot versions of the MAZI toolkit. For illustrative purposes, in the figures below are toolkit representations during interactions with the local community groups, at the pilot workshops in Berlin and in Deptford, and during the offering phase in Zurich and Tsepelovo, Greece.



Figure 16. MAZI toolkit representation: Berlin (left) in July 2016, and Deptford (right) in June 2017



**Figure 17.** MAZI toolkit representation: Kraftwerk1 Zurich (left) and Tsepelovo, Greece (right), both in December 2017

In the iterations between the local/concrete pilot versions and the global/generic common versions of the MAZI toolkit, the goal is to allow lessons learned in a certain environment to inform the action taking place in others, and of course, the final development of the MAZI toolkit, which will encode all these lessons in a tangible form.

### 3 Future steps

The deliverable on the boundary object is an intermediate between the conception of the MAZI interdisciplinary framework and the (self-)reflections and analyses of the context of collaborations on MAZI toolkit. To create a common understanding of the object of design and provide its theoretical background, the first version of the deliverable (D3.2) made an overview of the body of literature on the boundary object, and documented the partners' definitions of DIY networking.

This current document (D3.3) elaborates on the contextualization of MAZI toolkit through the existing spaces of convergence in the project, and proposes a set of online and offline tools for interdisciplinary collaborations, which constitute boundary infrastructures (Bowker & Star 1999) and boundary negotiating artifacts (Lee 2005). As a matter of fact they are the initial representation of the toolkit itself, making it concrete through a 'back-and-forth' process (Bowker & Star 1999) between the pilot version and the common version of the toolkit. In the development of the toolkit, nevertheless, it is necessary to follow a combination of the theoretical and critical interdisciplinary methodologies, integrating concepts and methodologies developed in different fields such as computer science, urban studies, design research, community informatics, and human computer interaction. At the same time, it is critical to shift to a transdisciplinary approach, by means of a shared vocabulary exemplified through the MAZI glossary, and by shaping a relational space that stimulates collaborative interactions (refer to D3.11 and D3.12 on self-reflection).

These two conditions of **integration and transdisciplinarity** generate the future steps to be taken during the last year of the project. The next and final version of this deliverable (D3.4) is due in six months, and will document the negotiations at the level of the consortium, the tensions appeared and the ways out, and how the predicted effects of various shifts of attitudes have been effective toward **co-designing the MAZI toolkit**. These findings will contribute to concept formation and will be documented in the final report, as the MAZI contribution to the body of literature on the boundary object.

## References

- Alexander, Christopher and colleagues. 1977. "A Pattern Language: Towns, Buildings, Construction"
- Alexander, Christopher. 1979. *The Timeless Way of Building*. NY: Oxford University Press
- Alexander, Christopher. 1964. *Notes on the Synthesis of Form*. Cambridge Mass: Harvard University Press
- Antoniadis, P., Apostol, I., Gaved, M., Smyth, M. and Unteidig, A. 2015. DIY networking as a facilitator for interdisciplinary research on the hybrid city. In: *Proceedings of Hybrid City 2015: Data to the People*, University Research Institute of Applied Communication (URIAC), University of Athens, Athens, Greece, pp. 65–72.
- Antoniadis, P., J. Ott, and A. Passarella (eds.). 2014. *Do It Yourself Networking: an interdisciplinary approach* (Dagstuhl seminar 14042), Dagstuhl reports, 4(1): 125-151.
- Bowker, G.C. and Star, S.L. 1999. *Sorting Things Out: Classification and Its Consequences*. London: MIT Press.
- Lee, C. P. 2007. Boundary negotiating artifacts: Unbinding the routine of boundary objects and embracing chaos in collaborative work. *Computer Supported Cooperative Work*, 16, 307- 339.
- Schuler, Douglas. 2008. *Liberating Voices: A Pattern Language for Communication Revolution*. Cambridge Mass: MIT Press.
- Sclavi, Marianella. 2006. *The Place of Creative Conflict Management in Intercultural Communications*. Conference on Deliberative Democracy: New Directions in Public Policy Dispute Resolution, Cambridge MA June 28-30.
- Star, S.L. 2010. This is Not a Boundary Object: Reflections on the Origin of a Concept. *Science, technology, & Human Values* 35(5): 601-617.
- Teli, M., De Angeli, A. & Menéndez-Blanco, M. 2017. The positioning cards: on affect, public design, and the common. *AI & Society: Journal of Knowledge, Culture and Communication*. <https://doi.org/10.1007/s00146-017-0779-3>

Online sources and MAZI project deliverables:

- D2.5: Design, progress and evaluation of the Deptford CreekNet pilot (V2)
- D3.2: DIY networking as a boundary object in interdisciplinary research (V1)
- D3.5: An interdisciplinary framework for comparisons and cross-fertilisation strategies on MAZI pilots (V1)
- D3.6: An interdisciplinary framework for comparisons and cross-fertilisation strategies on MAZI pilots (V2)
- D3.11: MAZI as an experiment in interdisciplinarity: the outcome of a self-reflection exercise (V1)
- D3.12: MAZI as an experiment in interdisciplinarity: the outcome of a self-reflection exercise (V2)

Public Sphere Project project and the ongoing collection of patterns online at  
<http://www.publicsphereproject.org/patterns/>

## APPENDIX I – Documenting the cross-fertilisation events (from the self-reflection exercise #3)

The D3.12 documents the reflections of the partners on the interactions in past MAZI cross-fertilization events, identifying important moments and lessons learned regarding:

- Your understanding of other partners
- Your role in the project
- The relationship between research and action
- The design of your own pilot
- Ideas for the MAZI toolkit in general

In addition, from the partners' reflections on the past cross-fertilization events, in the following tables are those regarding the recent cross-fertilization event in Deptford, June 2017

**Table 1. Interactions with the locals**

What was the highlight (or highlights), interesting moments during your interactions with the locals?
First, the involvement of members of the public who had come into the venue on the first day (The Hoy Café) to purchase coffee, and because of their interest in what was going on, they decided to stay and contribute. This confirms James (SPC)'s correct decision to hold the event in a very public place. It was great to have people dropping in and joining. It was great to hear stories from locals about their perspective on the area and how it has changed: there seemed to be real discussion even amongst locals about what was happening in the local area. I learned some new stories. It was great to give the local artists the opportunity to show their work at the event (photographs and prints). It was good to see a range of local places, and be welcomed into local working spaces. As the local organisers it got us thinking about different ways of working in CreekNet and also gave us the opportunity to build new connections across people from the same geographical area. The relaxed end to the event allowed for more open discussions and this was a useful way to end proceedings.
Meeting with new faces and being able to talk them through the project as a whole, at which point it started to take better shape. To link up friends and collaborators to share ideas together. Working outside was a success the lowtide walk and post walk chat were fun for all and once we escaped the SLC we all felt better!
The mapping exercise, the different perspectives of the two locals on their neighbourhood, perhaps the understanding of each other's condition through the way they were describing the different places. Meeting Sophia, a greek artist from my neighbourhood in Athens, now living in London. Some people taking advantage of our workshop to visit the Creek (and eat!)
I was very interested in the work of the bookleteers and have been using their publishing tools a lot since then. This would be a great add-on for MAZI! It was also very vivid to see the fragility of the social structure in Depford, from the precariousness of some locals, the small coffee shop in the shadow of the mighty constructions going on. It was so plastic and tangible, the use of power in the urban realm; the locals being literally pressed between the narrow margins.
Some interesting conversations with local residents in the café about their experiences of living in the area and their daily lives and concerns. Both long term residents with deep knowledge of aspects of history of the area, and also people who had moved there more recently. The diversity of local knowledge was interesting.
Visiting James' studio and the Birds nest (community bar). These were the two places that advanced my understanding of the context the most.

All interactions with inhabitants; especially the day at the Hoy, the creative atmosphere with the exhibit, small groups workshops, and mostly the enthusiastic, informative moments during the discussions on the maps. The picnic in the park; meeting friends and 'residents' in an informal non-lucrative way... The moment of opening up to what the residents keep dear at heart: Karen - her art and photography related to the place; Gordon – contributing his wisdom, mostly in the interview; David Leal – memories of sailing on the Creek

The conversation about the key concepts, within a small group. It was very open and everyone shared their experiences, doubts and hopes for community outreach work.

The involvement and passion of locals in Deptford was inspiring. The workshop ended even up involving people passing by and joining the workshop. The mapping session on where to install mazizone along needs of the locals was very interesting.

General observations:

- (1) The Deptford experience was very memorable and rich in its impressive diversity of people connected to the MAZI-pilot in London – from local avantgarde and on the edge artists, to community servants (bookleteers) to gardeners, to activists, to environmentalists to... it is a very rich group of people.
- (2) All interactions with inhabitants; especially the day at the Hoy, the creative atmosphere with the exhibit, small groups workshops, and mostly the enthusiastic, informative moments during the discussions on the maps. The picnic in the park; meeting friends and 'residents' in an informal non-lucrative way...

**Table 2. Interactions within the consortium**

What was the highlight (or highlights), interesting moments during your interactions with MAZI partners?
Talking to the Advisory Board members who attended and hearing their perspective was interesting. It was great to be able to show MAZI partners the Creeknet setting, and hear their progress: it was really important to have a MAZI meeting where we could all catch up on what was happening in each pilot and find out what they were working on, we have very limited opportunities to share knowledge and ideas over such a period of time. It was great to have Harris present so we could ask some particular technical questions. It was great to have partners in the same place together for nearly four days, this gave us lots of opportunity for informal, unscripted yet really valuable information sharing (and enjoyable friendship building!).
In terms of MAZI information exchange I think we missed the best of an opportunity, low attendance left us with the awkward situation of presenting core knowledge to those few attending rather than to make time for one another in more detailed and enjoyable exchange as peers. I think we all felt a bruised sense of relief it was the summer break and so we had are best interactions at the picnic, and once the review practice was over. Sharing a more relaxed period together talking and eating together in my garden ! If truth this is all that is required and rather ironically all we had in mind to convene but lost control of in the run up to the meet-ups and other public sessions. The stephen lawrence centre was a disaster – their ineptness and disinterest shocked me! I was already too far gone to react well. Sorry about that.
The “competition” between the different MAZI Zones in Volos, asking people to close theirs not to “confuse” people.
One key need that came up during the cross-fertilization event was the need to exchange information and knowhow on how we build the community processes building up toward their engagement with MAZI. The technical guidelines online are good and accessible but there is no narrative around it that makes it understandable for an outsider as to why MAZI is an interesting community resource.
The best part of this was the more informal socializing, getting to know people as individuals. The Deptford partners in particular were very welcoming hosts and made the atmosphere very convivial. Being involved in the evaluation interviews was also interesting and helped to reflect on ideas and approaches.

It was very worth-while to have both Jörg Stollmann and Doug Schuler present. One the one hand, it created the need to justify/argument the project and its processes on a different level, on the other hand, they presented us with a highly informed outsider perspective, which was super interesting.

Opening the conversation about what issues don't work (e.g., the role(s) of researchers, lacking vocabulary and the necessity to put together a MAZI glossary, what 'tools' in the toolkit)

I really enjoyed planning a 'pilots' gathering to be able to contribute to the pre-tech part of the toolkit. (This has not happened yet.)

The Deptford pilot was really interesting as they involve people that are not stakeholders but people that now the neighbourhood (geographically and socially) very well and are important figures in its social life. To involve an artist who uses a cart for artistic actions is a great idea and big value. Installing a raspberry pie in the cart is an excellent way to use the Mazizone as a mobile tool as the artist roams around in the neighbourhood and the city.

**Table 3. Lessons for next events**

What could be done differently to improve the next pilot XF event?
<p>There was a tension at some points between the Deptford event as to whether it was a cross fertilization of ideas across partners, or as a dissemination activity to the public or a participatory engagement activity with local participants. This tension sometimes hindered conversations. It could be all of these (though trying to do all was very tiring for us) and each session needs to be clearly signposted and promoted. Future events should consider partner-only sessions, and also in general to be clear about the purposes of each session, to allow local participants the opportunity to attend sections of the event but not feel obliged to attend all of it. MAZI partners are being paid to attend but it's a big request of local participants to attend during working days: perhaps an evening session should be considered. The Advisory Board's attendance was valuable but not well focused. The Advisory Board should be invited to future such events, and it should be made clear to them what their purpose is for attending. We should make better use of their expertise, as 'critical friends' who can offer input. Future cross-fertilisation events should allow the opportunity for small group gatherings: perhaps the last half day should be reserved so conversations that start during the initial sessions can be given the space to develop through small groups: partners could raise topics as the meetings progress. In Deptford there was one example of this which flourished as a group topic in the park. Events should be two days long. I was worried this would be too long but the extra time allowed informal conversations to develop. Make sure there are hands-on sessions with the MAZI toolkits and attendees should all walk away with a copy to try for themselves, in return for signing up to the mailing list. We should have a shared conversation space, so discussions can continue afterwards, and enable those who explore the MAZI toolkit as a result of attending to build a community of users, supported by the MAZI project team. We need to build a critical mass of users who can support each other once the project funding has finished. Events should continue to give MAZI partners the opportunity to see the local landscape.</p>
<p>I am looking forward to it being done differently next time. Gathering those who really haven't invested time and energy in the process already with those heavily invested takes more care and attention. We have all adopted a vocabulary attuned to the combination of academic and technical tasks we have to fulfill which could easily swamp the uninitiated. Demonstrating easy to understand utilization of the toolkit essential. The how to install and manage the PI less so. More time to drift and reflect on progress.. smaller groups to review the real scenarios experienced by pilots to date.. we need evidence of actual benefit of using mazi.. details of experience reflections of users, suggestions voiced responses granted.</p>
<p>MAZI more like a guest to a "local" event rather than the "protagonist"</p>

As the cross-fertilization events work right now, there is a strong divide between project-logic (consortium meeting on deliverables, project updates etc.) and engagement in local practice. I miss an outcome orientated interaction between the project partners to systematically go through our insight on pilot level and exchange strategies on this level, work together on the guidelines for the Toolkit and speak of the exit strategy of the project. We have one more year and how will the results of MAZI be carried on/ presented to the world / left in the world.

As this event will be towards the end of MAZI, the event could be focused on deeper discussion and analysis, with good documentation in order to inform the final deliverables and outputs. This should be a consolidating period for the project so it could be difficult to assimilate a great deal of new input if there is not enough structure to focus attention on the key goals. A clearer distinction could be made between cross-fertilisation that happens between partners and disciplines, as opposed to a wider, more general cross-fertilisation between pilots, locals etc. These are different types of activities that require a different way of working. More work could be done on understanding and articulating the insights gained so far and the learning that has happened over the duration of the project. Smaller groups might be able to work together in a more structured way, perhaps comparing knowledge gained from across the pilots. There could be time spent on explaining and understanding each other's disciplinary processes and approaches. Perhaps there could be more direct use of the theoretical framework discussed in previous deliverables in order to examine our own practice as project partners and make explicit linkages during the event. The concepts within this framework could be used as "tools of analysis" of our own practice and interactions with each other. There are many sociological concepts discussed in D3.11, and it might be helpful to work on providing concrete examples drawn from the pilots that illustrate what these concepts mean in practice. Currently the linkages between theory and practice could be stronger. For example, there could be some focused and structured discussions on some of the more complex implications that have been revealed during the use of the MAZI toolkit in different settings and in the pilot studies. This requires careful management, perhaps lead by experienced facilitators from outside of the project. The main themes and ideas that are raised in these discussions should be captured and recorded. For example, issues around ideas such as ownership, power, trust, safety, identity, privacy, independence, anonymity, responsibility, visibility, materiality, and the meaning of terms such as "community", "participation" etc could be addressed. The key goals from the DoW could be used to structure these discussions. This type of structured discussion would help to examine the issues in a deeper way, perhaps leading to new publishing collaborations.

One additional meeting day without a fixed agenda (as in an unconference). There's always many emerging issues that would be worth engaging with as a co-present group, but never any time for that beyond a public event and the general meeting-marathon.

Answering the pre-event questionnaires and to read the written material in advance to avoid some redundancies or wasting precious time in the interdisciplinary exchanges between the project partners. Engaging with the local community in more playful (and maybe purposeless) ways to allow them to bring up what concerns them truly

Maybe less presentations and more discussion.

## APPENDIX II – Liberating Voices – A Pattern Language Cards by Douglas Schuler

### Citizenship Schools

Pattern number within this pattern set: 96; online at <http://www.publicsphereproject.org/node/295>

**Verbiage for pattern card:** Finding lasting, democratic solutions to deep and complex problems requires citizenship skills. Some are learned in daily life. Others, like deliberating, defining problems, collaborating on projects, organizing, and understanding public institutions and processes are not basic. We need Citizenship Schools in local communities and on the Internet in which citizens can come together with each other and with skilled practitioners and learn from each other.

**Problem:** Some of the skills of citizenship, like basic communication and cooperation, grow from skills we learn in daily life. Others, like deliberating with others, defining problems, collaboration on common projects, and organizing are not so basic: they, often, need to be learned. Not long ago, associations and intermediary institutions—social and professional clubs, religious congregations, neighborhood schools—rooted in local communities were the main places where these skills were learned. Today, there are fewer contexts in everyday life to learn them. People are less connected in and to local communities and often learn about what's important in the media. Increasingly, general discussion about political and civic issues is occurring on and through the Internet. But it is easier to find information on the Net than to learn reflexively with others. The Net only partly lends itself to learning collaborative citizenship skills. Further, many lower-income people, in the U.S. and around the world, still lack access to the Net. Therefore, citizenship schools are needed to build civic skills in both local communities and on the Net.

**Context:** In order to act effectively, people need to learn and apply the skills of citizenship. Everyone who wants to find a democratic and lasting solution to deep and complex problems needs these skills and they are open to anyone to learn and teach. But there are also experts-civic practitioners, government officials and civil servants, teachers and scholars, civic and community organizers

**Discussion:** Citizenship Schools originated in South Carolina in 1959, and quickly spread throughout the South through the Highlander Folk School in Tennessee. In the late 1950s many Southern states had literacy tests, that required people to be able to read and write, and sometimes answer "citizenship" questions (generally designed to exclude blacks from voting). Teaching large numbers of African-Americans in the South to read, write, and learn about citizenship was critical in the larger struggle for civil rights, including the right to vote. According to Andrew Young and Ella Baker, movement leaders, the Citizenship education program was the "foundation on which the entire movement was built." (1) But communities with Citizenship Schools had few ways to make connections with other communities that lasted over time. Eventually, as the early fights for civil rights were won, the schools faded.

The spirit of the schools lived on through the decades that followed in hundreds of civic training programs conducted by organizations and local communities. Faith-based community organizations like the Industrial Areas Foundation train local clergy and lay organizers who learn to conduct campaigns and forums to build consensus on issue agendas like housing, school reform or job training. Environmental watershed, forestry, ecosystem restoration and justice movements and others, teach citizens and youth to collect data and monitor environmental quality while building skills of civic trust and cooperation. And new civic movements to build a new model of the public and civic university are growing, like the Council on Public Engagement at the University of Minnesota.

Citizenship Schools have also been tried online. In 1994, the American Civic Forum met to try to address a widely perceived crisis in political life and civic culture in the U.S. The Citizenship Schools were an important model and a Civic Practices Network (CPN) was built, to use the newly emerging technology of the Internet to build skills of citizenship. CPN, launched that year, sought to facilitate broad and multimedia sharing of best cases, civic stories, mutual evaluations, and mentoring opportunities. Other independent civic networks also emerged around this time, including LibertyNet in Philadelphia, and Civic Net. Despite the growth of the Internet, however, no broad network connected and nurtured these activities.

As the web matured beginning around 2000 finding information on many topics of civic interest-public deliberation, the environment, youth, education, health care, communication-became relatively easier for individuals. But the new problem was how to link these groups together to not only provide information in their

own specialized subfields, but to create an active environment for teaching, learning, and collaboration while also building a larger sense of solidarity in citizenship. National civic portals to aggregate the growing number of civic sites and discussions on the Net were one proposed answer. But by 2003 or so with the emergence of the blogosphere, the topology of the web itself suggested that distributed links among widely dispersed civic sites might lead to new kinds of collaboration in which a great deal of the work of gathering and connecting is done by sites in the mid-range. This is the level most appropriate for new citizenship schools on the web.

Therefore, to build Citizenship Schools in local communities and institutions it is necessary to build a framework that can support many local organizing efforts with curricula and training routines that are distributed, shared, inexpensive, flexible, and sustainable. These can be done in local communities, through institutions like schools and universities, and on the web.

Local citizenship schools would necessarily be the result of pooled efforts among many active local civic organizations across different areas. Many could benefit from local government support. In Seattle, for example, the Department of Neighborhoods provides leadership and skills training to many neighborhood, environmental, and other civic groups.

Citizenship Schools through university extension and outreach could train new expert practitioners rooted in local communities. For example, at the University of Minnesota, the Council on Public Engagement reaches out to both scholars and academic staff to redefine the teaching and research mission of the public university. Potentially, certificates and university credit through university extension services and community colleges could provide individuals valuable learning resources that also support and reinforce the extended investment of time, attention, and civic commitment.

New Citizenship Schools on the web could allow collective learning in a distributed, asynchronous environment; help frame a broad civic agenda collaboratively through distributed discussion; and form a mid-range network of portals to focus attention without the initial high costs of building national space. Schools on the web could support and integrate both local and statewide efforts. The CPN is one online model indicating that there is significant demand online for serious learning material about civic practice. Deliberative-Democracy.net demonstrates how key blogger-editors can be recruited for a civic site and distribute the labor of a serious, ongoing conversation. The Liberating Voices Project [check best name] is also a key example of a distributed learning collaborative.

For the pattern to be realized online, moderate-sized hubs with committed editors will need to be seeded and a few models created. Possibly, Citizenship Schools on the web could ally with university partners, particularly in civically oriented extension programs, to provide credentials and a modest flow of support. Their life-cycle is potentially renewable. If a network of citizenship schools succeeds, it could become self sustaining, using commons models with relatively little ongoing external support.

The biggest challenge in building Citizenship Schools on a commons model is sustaining energy and collaboration, and maintaining a high quality of information. As noted, a commons model requires moderate levels of commitment from a wide core. Many of the contributors will be citizens, academics, policy makers and administrators with other jobs and commitments. Rewards will be intrinsic. A second challenge is to get citizens to commit time to learning, not to just "graze" for information.

The main critics of the concept might say that Citizenship Schools are an anachronism and depend on communities of face-to-face solidarity that are less relevant by the year. Learning doesn't take place this way anymore, despite the fact that the Citizenship Schools would be on the web. Further, getting individuals to make long-term commitments at adequate levels will be nearly impossible.

**Solution:** There are five basic steps to promoting this pattern: (1) Build Citizenship Schools in local communities, institutions and online that can aid collaborative learning; (2) Develop a sites (local and virtual) that include active learning and civic curricula that can be widely shared. (3) Find citizens (lay leaders and experts both) who can serve as teachers and editors who can make minimal but real commitments; (4) Build templates to aid the spread of learning; and (5) Create new forms of civic credentials that provide value to both individuals and communities.