



ICT - Information and Communication Technologies

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Executive summary

This deliverable is the third and last progress report on the MAZI pilot in Zurich. It documents the activity within eight months (M25-M32) under the label “Phase 3 – Implementation and evaluation” when also the MAZI pilot workshop was organized (May 23-25, 2018). The implementation of the MAZI pilot in its main site, the Kraftwerk1 cooperative housing, was chosen to take the form of a hybrid collective photo exhibition by the name Kunstwerk1. From this deployment the Zurich team has drawn practical and theoretical lessons, which are at the basis of a wide variety of additional spin-off projects using already, or being prepared to use, the MAZI toolkit locally and abroad. This report presents all these instantiations, contextualized in the main, ‘knowledge transfer’, framing of this pilot. In addition, in the following three months (M33-35), “Phase 4 – Evaluation and Documentation” is scheduled to produce all necessary documentation, some of it to be included in the MAZI toolkit, e.g., the part on stories and guidelines, describing the lessons learned through this particular situation.

The MAZI project team has been broadening the scope of the Zurich pilot. One part of the time dealt with networking of actions that (self-)identified as similar or convergent. Sessions of the pilot workshop focused on networking of a) housing research and action projects through Co-Lab Research at TU Delft, Wohnforum at ETH Zurich, INURA network, either locally in Switzerland or internationally through the INURA coop initiative; and of b) urban garden projects (i.e., Prinzessinnengarten in Berlin, Stadionbrache and Wunderkammer, and more recently Park Platz in Zurich). There is also a more long-term component of action in the pilot, to facilitate and engage in learning processes through structures like the Openki platform, and to develop and curate knowledge hubs, i.e., L200 living laboratory.

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1. Introduction

This final report on the MAZI pilot in Zurich has two main parts. One part reports on the ongoing design process, and is divided in three sections. First, the pilot progress is documented together with some lessons learned from the MAZI action at Kraftwerk1, the main pilot site. Second, the community engagement that have been further stimulated in Zurich and beyond is overviewed. Third, the MAZI pilot workshop that took place in Zurich between May 23 and May 25, 2018 is presented, as a major cross-fertilization event.

After reporting on the advancements until the present moment in the pilot process, the second part engages in a brief discussion on the lessons learned from the Zurich pilot such as how the various project activities converge toward the pilot objectives, both research and action, and the pilot's impact on the MAZI toolkit. The last section proposes as seeds for the future, the production of hybrid spatial infrastructure. The many events organized in the MAZI project around the story of cooperative housing and living in Zurich have converged in the creation of a hybrid living lab in a central location of Zurich, namely the L200 neighborhood space managed as a commons.

Table 1. Spheres of action in the Zurich pilot (M18-M32)

	Kraftwerk1	Knowledge transfer in Zurich and abroad
DIY technology	Kunstwerk1 MAZI zone Kunstwerk2 (Gruempfi) MAZI zone	Hybrid Letterbox Pop-ups; Wunderkammer MAZI zone; L200.digital zone; Park Platz nimm.platz zone; Openki course on DIY networking
Lived space	(Self-)representations at the Pantoffelbar; participatory practices in KW1 assemblies; occasionally @Stadionbrache	NeNa1, PARLA, Kreis 5's shops network; L200 space integrating activities of NeNa1, Kreis 5 and PARLA
Networking and dissemination	Internet salon; 'Enter the entrance hall', 'The different city' book	CoHab initiative in Athens; INURA coop initiative; larger planning, urban studies and transdisciplinary research communities; research and action communities: INURA, CAPS

The domains or spheres of action in the Zurich pilot were presented in the second version of this deliverable (D2.8), and above is an updated version of this table (Table 1), completed with the pilot actions between June 2017 and August 2018. According to the information provided in Table 1, the first part of this document reports on the progress so far within the ongoing pilot design process. Based on the lessons learned from the project work, the second part of this last deliverable on the MAZI pilot in Zurich proposes a structure of related activities (Table 2), in light of the pilot's role as a boundary object in interdisciplinarity (refer to deliverables D3.2, D3.3 and D3.4), and draws some useful lessons and impact for the co-design of the MAZI toolkit.

2. Progress report on the Kraftwerk1 pilot

2.1 Kunstwerk1: MAZI Zone at Kraftwerk1

At Kraftwerk1 Hardturm is the main part of the ongoing design process of the MAZI pilot in Zurich. The first “offering” of the Zurich pilot team to Kraftwerk1 residents was a hybrid collaborative photo exhibition, by the name Kunstwerk1, described in detail in Deliverable D2.8, and which was initiated with scanned slides from the 1995 art installation called Sofa University. This was a landmark event at the beginning of the Kraftwerk1 design process, leading a few years later to the realization of the project.



Figure 1. Sofa University hybrid photo exhibition at Kraftwerk1 by the MAZI pilot team.

The exhibition had significant value for the inhabitants, former participants in the Sofa University, and visitors, independently from the existence of its digital layer, as proven during the opening but also from the fact that the annual magazine of the Kraftwerk1 cooperative included photos from the exhibition (see Figure 2).



Figure 2. 2017 Annual magazine of KW1 including photos from the Sofa University exhibition.

This flashback to the past of Kraftwerk1 reactivated the debate regarding a long lasting tension between values and pragmatism, that we may call utopia versus ‘dirty utopia’. The latter term is advanced by architects Hofer and Wirz (2016), the developers of Kraftwerk1, to refer to transformations of initial ideas for alternative forms of living in order to become reality in the current housing market conditions. During the opening of the exhibition this debate took the form of public argumentation between residents of Kraftwerk1 Hardturm, co-founders, and some participants who, despite their engagement in the early days of the project collaborative development, finally did not live in the cooperative. Similar discussions took place in smaller groups during the exhibition.

The debate came at a very relevant moment, since at the time of the exhibition opening, Kraftwerk1 won the idea competition (Ideenwettbewerb) that the City of Zurich launched for a new cooperative housing complex in a contested location in the city, Kochareal, by the name Kochquartier, <https://kochquartier.ch/>. But not all of the Hardturm residents have appreciated, what they perceived as a ‘celebration of the founding group’. The MAZI team thus came to realize that many current residents are not actually aware of the history of this famous housing cooperative, and that they are not necessarily interested in it. Also it became obvious that sharing common space between people with different taste, needs, and background is a serious challenge in collective living. In context, for instance, a communication challenge for the pilot team was to explain in what way the Kunstwerk1 hybrid installation could be considered art (kunst). Another difficulty proved to be communicating the fact that Kunstwerk1 is a “dynamic” exhibition. That was so, even when the first ‘overlay’ in print was added, by using photos taken during the exhibition, as we thought it was a creative and playful way to invite people to add their own overlays by uploading photos to NextCloud. But that did not happen for a combination of (possible) reasons.



Figure 3. The second version of the Kunstwerk1 exhibition including photos from the vernissage (in colour).

On the one hand, the team realized that the idea was not communicated in appropriate manners, despite the informative description and posters, as it was not well understood. “Too complicated”, was the opinion of Philipp Klaus who has a long experience with what works and what does not in this community. On the other hand, at the time of the first phase of the exhibition the access to the MAZI Zone was not straightforward, due to the strange behaviour of the MAZI captive portal in MAC devices, those owned by the majority of the Kraftwerk1 residents, as we learned from the Intranet survey (see D2.7). For this we chose to use the so called MAZI “dual mode” requesting those connecting to type the URL <http://kunst.werk1>. Trying to guide people to enter the MAZI Zone during the various small events organized to engage people in the collective hybrid exhibition, the team realized that this step was too demanding from most of them. In addition, even those residents who did understand the project proved reluctant to share their photos, and some of them told us that they need to think which ones to choose; they eventually chose to refrain from uploading photos that may be judged too personal and could generate unnecessary discussions around them etc.

In preparation of one of the Kraftwerk1 working group’s meeting in the Pantoffelbar, the MAZI team was contacted to remove the Kunstwerk1 prints from the exhibition panels. The person who made this request was actually not informed of the long-term experimental nature of the exhibition, but this contact led to a series of meetings and conversations, also with other members of the group, that drew the attention in the pilot to the Kraftwerk1 outdoor spaces, of which the group is responsible. This implied the connection with the community garden Stadionbrache, located in the immediate proximity of the Kraftwerk1 Hardturm settlement. Eventually Stadionbrache hosted a part of the MAZI pilot workshop in Zurich (presented in detail in Section 4), and provided the connection with the Wunderkammer urban garden in Zurich, hosting already a MAZI zone, and with the Prinzessinnengarten in Berlin; and later to a third garden in Zurich, the ParkPlatz (<http://park-platz.org>).

At this moment, the MAZI team was not sure whether to keep adding more photo ‘overlays’ to the print out version of the Kunstwerk1 exhibition, because this was meant to be a DIY example clarifying the initial idea, but

risking to being perceived as the main ‘authors’ of the exhibition, a total failure from our perspective. Thus the final decision was to do a new beginning, this time more participatory, by publicly questioning the whole project. More specifically, we launched an open call for participation, “Wie weiter?” (“What next?”), asking people to answer “Yes” or “No” to the ongoing Kunstwerk1 exhibition, with the help of the hybrid letterbox, and offer alternatives for the use of this empty, after our initial intervention, wall.



Figure 4. participatory process for feedback on the Kunstwerk1 exhibition through the Hybrid Letterbox.

Most of those residents who participated were positive, meaning that they expressed interest to continue the exhibition. We received, however, one philosophical remark “to do nothing” and two important negative comments: “I don’t like the glorification of the Kraftwerk1 founders” and “Need for change” meaning that the Kunstwerk1 exhibition lasted long enough... Taking these two comments seriously, the MAZI team decided to refresh completely the exhibition, with a very different topic, and to drop completely the name “Kunstwerk” (in this report we keep counting the different “phases” of the exhibition as Kunstwerk2, Kunstwerk3, etc. for simplicity). As a first step, we removed the Kunstwerk1 photos, and put the written letterbox cards on the wall, allowing some more time for feedback but also to gain some time to brainstorm what could be the next step.



Figure 5. “Wie weiter?” feedback on hybrid letterbox cards.

A practical answer integrating the feedback from the “What next?”/“Wie weiter?” action came unexpectedly, when the yearly “Stadionbrache” football tournament, “Gruempi 2018”, with a majority of Kraftwerk1 participants, was announced with colourful signs on the walls, while at the same time the 2018 FIFA world cup in Russia had started and thus the Pantoffelbar was transformed into the collective football watching room. Philipp thought that we could organize a photo exhibition of previous tournaments. Luckily, the person organizing the tournament and collecting photos was working at the office next door! When we asked about photos from previous years, he was very eager to share those photos, even enthusiastic because our planned exhibition would be the best advertisement for this year’s event, of which he was the main organizer and thus cared a lot.

The MAZI team's expectation was that the complete resetting of the exhibition with a new theme, targeting a different audience, and with photos taken by the residents themselves, would have a different acceptance within the residents groups. In the meantime, the new and much improved captive portal functionality of the MAZI toolkit was launched, and it was time to create a proper splash page as well as a new concept for SSID and URL. The new splash page of the Pantoffelbar local MAZI Zone invites now people directly to the NextCloud photo sharing folder, made even more explicit through the chosen SSID and URL: gruempi.photos.

The idea that a MAZI Zone is literally a simple digital representation of the visible exhibition with more photos, and the possibility for upload -instead of a more complex set of applications- was to be tested for the next two months until the next "fresh" exhibition will be curated by the MAZI team. The MAZI Zone was designed to play the role of a supporting digital layer, and nothing more (no etherpad, no guestbook), which is used just to offer "more of the same theme" but also to preserve the memory of the project.

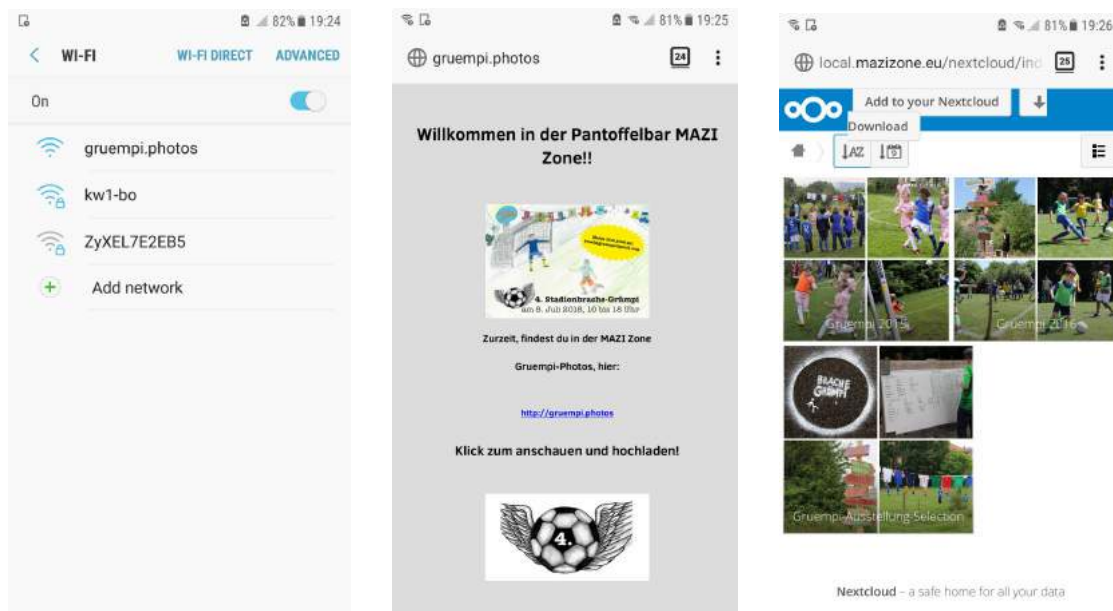


Figure 6. The interface of the gruempi.photos MAZI Zone.

The replacement of the black & white and red tones with the colourfulness of the football field looked refreshing. And from the very first moment that we installed the new photos of the hybrid exhibition a young man that had participated in the previous years of the Gruempi football tournament recognized himself, and looked happy to see those photos exhibited. After a few months celebrating the past of Kraftwerk1, it was time to celebrate its future!

The Zurich pilot team was truly relieved. This time the exhibition was better appropriated by the community and now we had a simpler and more powerful concept to communicate: The empty wall was offered to residents to produce their own temporal photo exhibitions, if requested with the MAZI team's curating help, sometimes related to an important event like the "Gruempi" or the "cleaning day" and the like, and sometimes not.



Figure 7. The ongoing Gruempi photo exhibition in the Kraftwerk1 Pantoffelbar since June 2018.

After the end of the summer, the statistics of the MAZI portal showed a moderate use of the MAZI Zone (around 30 people downloaded the photos), but it was very positive that the new photos from Gruempi 2018 were uploaded and thus the archive grew to include the latest event. On the other hand, a somehow discouraging, but also rather informative event took place. In parallel with the hybrid Gruempi photo exhibition and collection installation, some of the residents created a small photo exhibition of this year's tournament on the wall of the corridor, informing the interested people that they can share their photos from through a gmail account [sic!].



Figure 8. The poster close to the Pantoffelbar featuring an “alternative” photo exhibition of Gruempi’s photos.

This situation reminded a previous similar DIY reaction to create a community-driven working group in parallel with the Internet Salon initiative of the MAZI team (see Section 2.2 below). Perhaps none of the two were a coincidence. There is still to find out, through a coming feedback action, whether it is along with the independent spirit of the Kraftwerk1 community, or a reaction to an initiative of ‘outsiders’ working for an EU project. On the positive side, these reactions reflect the fact that the MAZI team’s interventions have touched on real needs, and generated similar ‘alternative’ initiatives. At the same time, this is not representative of the whole community, which in parts has been, and still is, very supportive and eager to find out what the new ‘project’ will be.

2.2 Side events and personal feedback

Most of the gatherings organized to engage people in the design process of the Kraftwerk1 MAZI zone were framed more widely around the topic of technology. As described in the previous deliverables the pilot team initiated a generic working group by the name ‘Internet salon’, which was introduced through the Intranet survey and was framed around the most popular topics selected.

The average participation in the gatherings of the Internet salon group had been four to five people, but not always the same ones. During these gatherings we received very useful feedback on technical details of the toolkit, the access difficulty (captive portal) being a consistent complaint. The Internet Salon, nevertheless, being proposed by outsiders of the tech-savvy residents did not seem to be very engaging. Instead, without notification within the Internet Salon, some of the group members created a new working group at Kraftwerk1 by the name the “Intranet/Portal support group”, which was concretely framed around a specific need, namely better understanding of the functionality of mein.kraftwerk1.ch site, but still a topic that could be very well taken place inside the Internet Salon group. Was it a coincidence that this group creation happened in parallel with our efforts to facilitate such a discussion or it was some sort of “reaction” to these efforts? Perhaps the need for “owning” the process instead of being guests to an external facilitation group, depending on a project that will end soon?



Figure 9. Projected slide presenting the concept of the new Portal support group at Kraftwerk1.

Of course, there are no clear answers to such questions and it is perfectly possible that such a group would have been created without the launching of the Intranet survey and the initiation of the Internet Salon group by the MAZI pilot team. In any case, we decided not to insist toward this direction at Kraftwerk1, and focus the pilot learning activities on DIY networking at the city scale through the Openki platform, for instance, the Openki course on the Organic Internet at <<https://openki.net/course/uEGBuQRvcGq25w7ep/the-organic-internet-build-your-own-local-network>>.



Figure 10. The current description of an Openki course on the Organic Internet.

Another notable interaction around the toolkit was initiated from one of the Kraftwerk1 residents who was engaged in the MAZI discussing sessions on technology. He came with the suggestion for a new functionality of the MAZI toolkit. He wished to add 3G connection to the MAZI Raspberry Pi, to use it while travelling to a country with limited connectivity. It was interesting that upon return he held at the Pantoffelbar an evening event integrated in the Kunstwerk1 photo exhibition, showing photos and video projections from his travel, and also using the exhibition wall to show traditional handicrafts. The space has been always used for screenings or communal gatherings, yet this specific event has been a good sign for the potential to manifest its hybridity in the long term, if equipped with a MAZI zone, through residents' use of the MAZI toolkit capabilities. Before reaching that mature phase, however, the experience during the MAZI project framework proved so far that mediation in various forms is necessary (more on that in Section 4).

So, the presence of the MAZI zone in the Kraftwerk1 Pantoffelbar generated various interactions and non-intended consequences, being a very good example of a triangulator, in other words, an element that brings strangers in contact. In this case it means that the MAZI zone created a 'presence' that enriched the pilot activities through reactions that were neither mediated nor expected by the MAZI team.

In addition to the small group of technically savvy Kraftwerk1 residents, who offer constant support and feedback from their own perspective, the pilot team had the chance to be in contact with many of the project founders, notably Andreas Hofer, Andreas Wirz, and Hans Widmer. The team had thus the chance to interview them informally several times regarding the pilot intervention, and how it could be improved. Most of the key points

that came out of these professional conversations are related to participatory practices. And indeed, a key conflict behind Kraftwerk1's Intranet implementation was the lack of participation in its design process, and its closed, proprietary, software source code.

An important realization was, for the pilot team, that although participatory practices are part of a fundamental building block and identity feature of the Kraftwerk1 community, to achieve it in practice is quite difficult. That means that a clear need exists and digital technology could help in its provision. But it is such an important and complex issue. For instance, people demand participatory processes and at the same time lack the required time to invest in them. This means that whatever technology is proposed to such a community should not be experimental but rather provide a high level of professionalism to be successful, because participation is a topic taken seriously at Kraftwerk1.

Participation and inclusion was somehow also the key element of an interesting suggested application, which could be developed and integrated in the MAZI toolkit. One of the Kraftwerk1 residents works in facilitating participatory design process of different scales, and has expressed true interest for two very specific applications, already included in his professional activities, but using commercial tools.

First, in such a diverse and multicultural society there is a big need for translation tools. The facilitation company of the Kraftwerk1 resident uses professional equipment, with personal radio receivers handed out to every participant, which is very expensive. *Would it be possible to stream the translations through a local WiFi network and allow participants to tune in their preferred translation channel using simply their smartphone?*

Second, when a participatory process involves many individuals, as often in Zurich such processes engage hundreds of people, it is crucial to provide multiple feedback channels. A commercial service used in such cases are online live feedback tools like *PollEverywhere*. It would be really easy to implement such a self-hosted service that would offer exactly the same user experience without the extra burden of creating an account and typing a URL and special code to enter the room's channel. The WiFi coverage would ensure that all participants in those polls are in the room.

3. Beyond the MAZI pilot

The slow rhythm of development of the MAZI zone at Kraftwerk1, imposed by the feasible (or acceptable) levels of Kraftwerk1 community engagement, which is a long-term process in any context, has allowed the Zurich pilot team to use their resources toward spreading the MAZI ideas in various communities in Zurich and beyond. More specifically, in parallel with the Kraftwerk1 pilot, the team became active to inform other local initiatives, on how they could be potentially enabled through DIY networking technology, one of the selected tactics within the knowledge transfer framing of the pilot (refer to Section 6, and in Section 3 of D2.8). The following sections report on ongoing work with spin-offs of the Zurich pilot at Kraftwerk1.

3.1 MAZI Zones in Zurich

During the implementation phase of the MAZI pilot in Zurich, four permanent MAZI zones have been installed. The first MAZI Zone is the Kunstwerk1 photo exhibition in the Pantoffelbar at the Kraftwerk1 Hardturm settlement. The second MAZI zone was at the Wunderkammer urban garden (see Figure 11), introduced already in the second version of this document (D2.8, Section 3.2).



Figure 11. The MAZI Zone installation in Wunderkammer and a screenshot of the first interviews recorded with the use of the MAZI Interview Archive application.

The 'knowledge' framing of the Zurich pilot is meant to disseminate, in addition to information and practical lessons on DIY networking technology, knowledge regarding alternative forms of living accumulated in the Kraftwerk1 ongoing project. Previous versions of this document mention the constellation of neighborhood organizations that support further projects in Zurich, and among these initiatives are the neighborhood association Forum 5im5i, and the NeNa1 housing cooperative (refer to Section 3 of D2.8). In the Kreis 5 district of Zurich, which is the neighborhood of Kraftwerk1, there is already a tradition of citizen led actions. In recent years, the Forum 5im5i generated a series of actions meant to preserve neighborhood life, in the midst of steady increase of rental prices. In some of these actions NetHood had actively participated. In the context of the MAZI project, Thomas Raoseta proposed to create a local network of small neighborhood shops, which will enable their owners to organize themselves to preserve their businesses (briefly documented in D2.8). This proposal has generated a series of meetings and conversations that crystallized in the foundation of a new neighborhood association by the name gim5i+ that is the current tenant of the L200 neighborhood space at Langstrasse 200, <http://langstrasse200.ch> (see also NetHood's vision of this space at <http://nethood.org/l200/>).

A more recent MAZI zone is installed at the L200 neighborhood space, which is currently providing a temporal transition between the project phase of engaging with a community and the following phase of making an offering of DIY technology. Within the framing of the Zurich pilot, also other projects are initiated that are still in preparation. That means building a community basis (refer to Banerjee and Chakravorty 1994, cited in D2.8) to whom to introduce through practical examples the DIY technology offering. Mostly after such a preliminary phase, slowly, those community members and groups who are interested to engage with the MAZI toolkit will take it in their responsibility and transform it according to their needs and vision.



Figure 12: The very first day that the L200 MAZI zone (running “silently” over one month) exposed to the public through a big display in one of the windows, two people frequenting the two bars across engaged with the L200 “digital whiteboard”. One of them proved to be a technical expert and had some difficult questions on the actual privacy guaranteed by such a network.

From its very first months of operation, the L200 space has been very effective in engaging additional groups with the ideas of the MAZI project. Most advanced are interactions with activists from a non-profit organization defending women’s rights. This organization took the initiative to organize at L200, with NetHood’s technical support, a workshop on the potential role of the MAZI toolkit for facilitating campaigns by similar organizations, which will take place after the submission of this document.

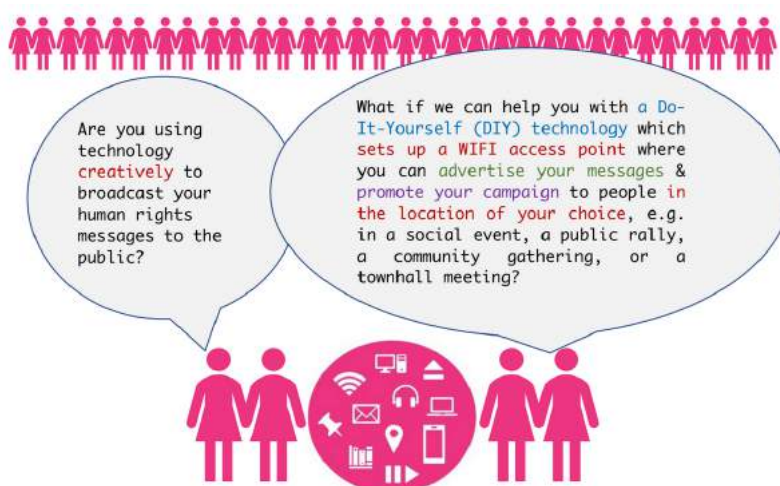


Figure 13. MAZI Toolkit Workshop at L200: image out of a flyer draft for women’s rights organizations.

Of course, the MAZI Zone at L200 is presented more comprehensively in Section 7, but below is an image of one of its incipient physical components. It was meant to advertise MAZI concepts on DIY networking technology through the MAZI project flyer, and the book in the German language titled, “Die andere Stadt”, including a chapter by Panayotis Antoniadis on the “Organic Internet”.

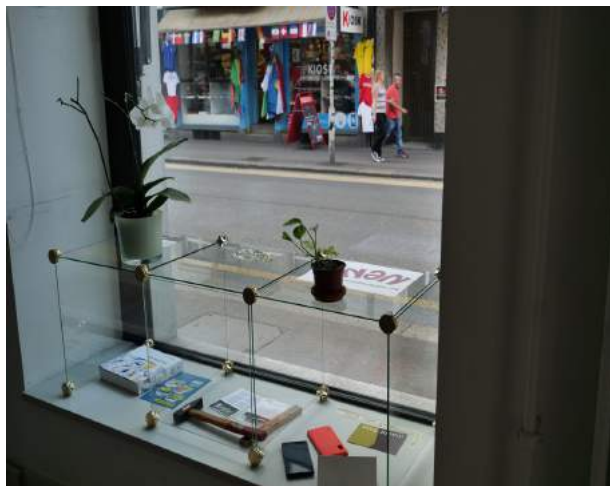


Figure 14. One of the first installations at L200's front window on Langstrasse featuring MAZI printed material.

Moreover, a contact was established with the Park Platz <<https://www.park-platz.org>> after the MAZI pilot workshop in May 23, 2018 that included a big event at Stadionbrache, the urban garden similar with Berlin's Prinzessinnengarten and located just next to Kraftwerk1 Hardturm. Engaging with the Park Platz urban garden project rather than with Stadionbrache proved to work smoother, due to established links between Park Platz and Openki, which has been already presented among the spin-offs of the pilot in Zurich. Openki.net is a platform used to organize a series of courses on DIY networking (Figure 14). At the time of submission of this deliverable a hands-on workshop has been organized by Panayotis (Figure 15), to collectively design and deploy a MAZI Zone in the park, which served first the ongoing festival "Summer für Immer" on September 8, is hosted at the Park Platz Cafe, and hopefully will be maintained over time (the final collective decision for this will taken on the association's assembly on Friday, September 22, after a guest intervention by Panayotis Antoniadis).



Figure 15. MAZI's Openki course featuring in the Park Platz's festival program, and its onsite flyer.



Figure 16. MAZI's Openki course by Panayotis Antoniadis at the ParkPlatz festival (photo by organizers).

Among the outcomes of the Openki workshop on the MAZI toolkit was a playful presentation of the collectively decided MAZI Zone named “nimm.platz” meaning “take a seat”, which offers just a Guestbook for the ParkPlatz. During the festival the participation was moderate, around sixty logins to the MAZI Zone and thirty posts to the Guestbook (around twenty of which by members of the team or close friends explicitly asked to check this new tool). Later we realized that the Raspberry Pi being installed inside a container had very limited outdoors coverage, where most people were because of the good weather. Good news is that the people responsible at ParkPlatz liked very much the concept, and since then the MAZI Zone “nimm.platz” is permanently in the park.

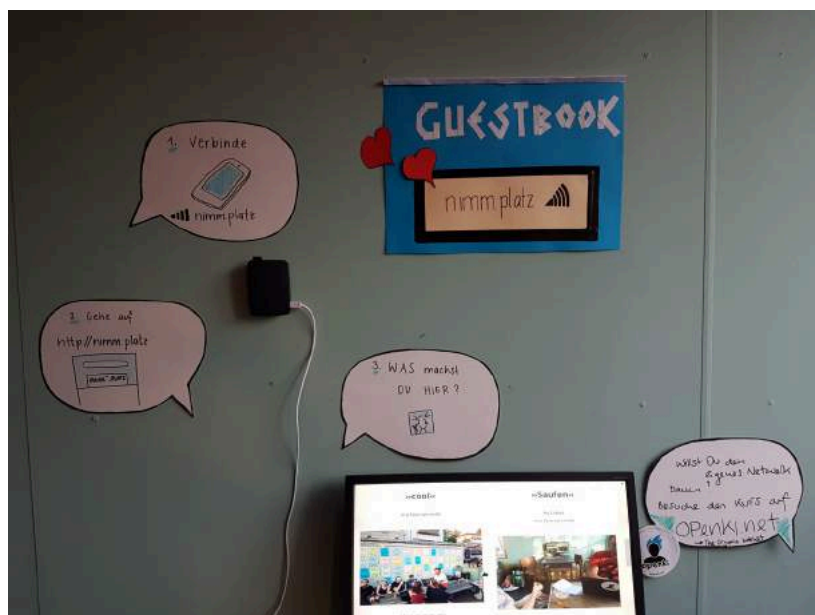


Figure 17. Guestbook on the nimm.platz zone at the ParkPlatz in Zurich.

3.2 International networks: CoHab Athens and INURA coop initiative

For a ‘knowledge’ exchange/transfer framing as that of the MAZI pilot in Zurich to be meaningful and successful, suitable ‘parties’ should be in touch and, nevertheless, willing to actively engage in such cooperations. Beyond the related activities in Zurich, to this end the pilot team has been leading intense activity within two international initiatives, CoHab Athens and the INURA coop initiative (as already discussed in previous deliverables). Although this preparatory phase has not promoted extensively the technological aspects of MAZI, so far it had significant impact in facilitating the creation of base communities and networks that can become soon not only adopters of the more mature versions of the MAZI toolkit but also very effective advocates of DIY networking. This activity is along with the MAZI objective of creating structures for sustainability after the end of the project timeline.

In brief, CoHab Athens is a diverse group that came together to react to the housing crisis in Greece. It was shaped up during the MAZI project within the knowledge transfer framing of the Zurich pilot, in order to provide in Athens a structure facilitating self-organized and self-managed housing and living spaces. The group has transformed in various ways since its inception, and currently is actively searching for available spaces that may be organized collaboratively.

INURA Coop Initiative is a wider working group inside the INURA network, which is slowly built during the last four conferences in Athens (September 2015), Bucharest (September 2016), Havana (November 2017) and Warsaw (June 2018). So far there is progress in terms of familiarizing INURA members with the DIY networking technology. At the last INURA conference in Warsaw, being already the third conference using the MAZI toolkit, the MAZI Zone was called *inura.zone*, hosting valuable material (photos, slides, and documents) also from previous meetings, material which is not available online (respecting many INURA members’ sensitivity to make public personal information).



Figure 18. *inura.zone* at the INURA conference in Warsaw, June 2018.

Moreover, since the conference program was organized around walking tours in the city, the MAZI toolkit has played an important role as a mobile node for data collection. Mostly photographs were collected real-time on the NextCloud functionality of the toolkit, and at the end of the tour an entire library that has been documented in a distributed manner was made available to the tour participants.

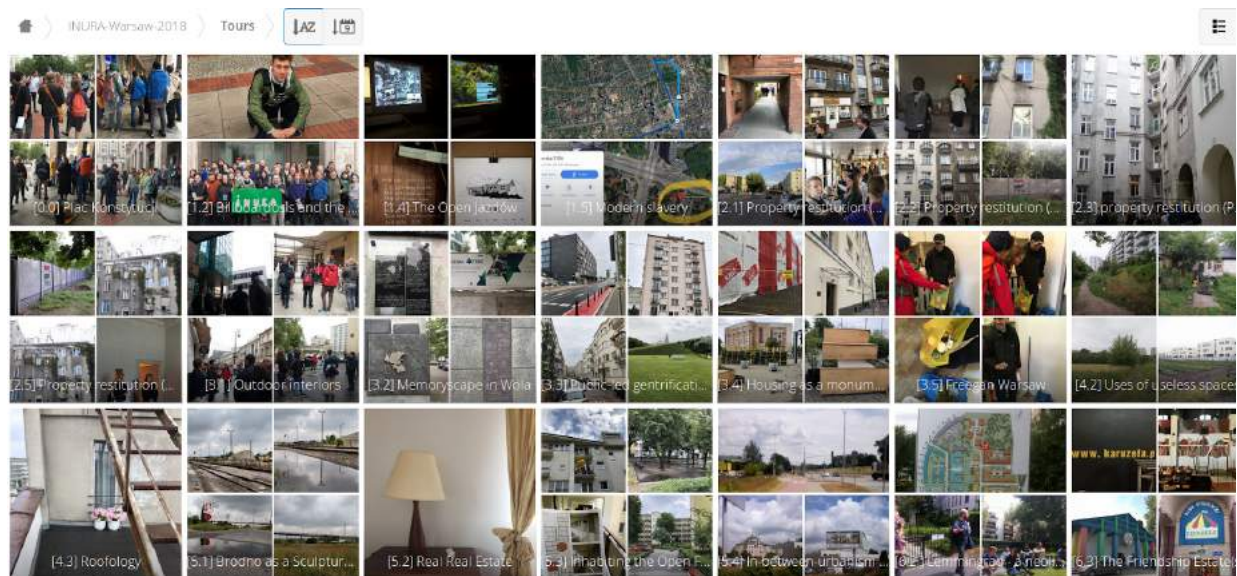


Figure 19. Thumbnail view of the different folders with photos from the INURA Warsaw Tours (see Appendix I).

During the retreat, the INURA coop initiative gathered and recorded the meeting using the inura.zone (Figure 19). Philipp Klaus have described in detail his experience as a MAZI Zone administrator(see Appendix I), which provide very useful insights on the deployment of a MAZI Zone by someone with strong motivation but limited technical skills and prior experience.

MAZI Zone Dashboard

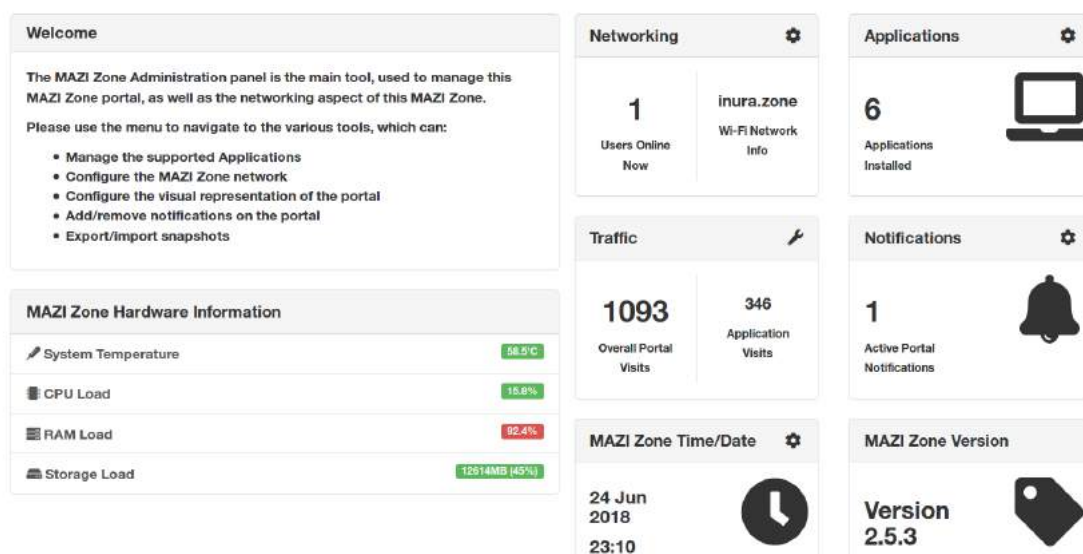


Figure 20. The Dashboard of the inura.zone MAZI Zone, after the end of the INURA conference in Warsaw counted 1093 overall portal visits and 346 application visits (most for the NextCloud application).

As for the INURA coop initiative, the website statement reads, “Most cities around the world are affected by growing capital investments, speculation, upgrading and gentrification. Providing housing without profit is very rare. But it is possible! In cooperative models of collective ownership, (self-)management and decision making, rents do not serve the profits of landlords but they become reinvestment for the needs of the future. Inspired by the ongoing expansion of a new generation of housing cooperatives in cities around the globe, the INURA Coop Initiative intends to intensify collaborations, exchange of knowledge and know-how about these viable alternatives to aggressive real estate development at an international level. In the INURA conferences in Athens, Bucharest, and Havana discussions have already started on how INURA can support the development and

dissemination of knowledge on such more cooperative forms of living and working together. Special focused workshops toward a more concrete framework and action plan will be organized in 2018 and 2019” (www.inura.org/v2/index.php/inura-coop-initiative). For further outreach and collaboration the Zurich Mazi Pilot team connected with the European Network for Housing Research (ENHR) through board member Darinka Czischke who is also coordinator of the ENHR working group “Collaborative Housing” and head of the Co-lab Research Unit at TU Delft (NL). A meeting with Darinka Czischke was followed by the participation of two researchers of her unit at the MAZI pilot workshop in Zurich.



Figure 21. inura.zone for the INURA coop initiative at the retreat in Warsaw, June 2018.

The most important for this vision to be materialized, even before the appropriate software tools and applications were in place, was contributing in the creation of fully functional groups, and independent from the project, in the near future to implement in practice the knowledge transfer processes that the MAZI pilot team in Zurich has envisioned as been facilitated by the MAZI toolkit. No doubt the team will stay in close contact with both initiatives beyond the end of the MAZI project.

4. MAZI pilot workshop in Zurich

The MAZI pilot workshop in Zurich has been titled “Cooperative housing and beyond: the right to the hybrid city.” Being organized during three days in May 2018, between May 23 and May 25, in a certain way it was seen as a celebration of the May 1968 street movements that became a historic call for “the right to the city” (Lefebvre 1996). Five decades later this is an ongoing struggle of our times, to which the research of NetHood adds a novel dimension namely the hybrid -physical and digital- city (Antoniadis & Apostol 2014), and by placing the project of providing housing cooperatives within the struggle for the right to difference in Zurich (Apostol 2015).

Having as the main aim to advance participatory practices in urban production, the workshop was organized by the INURA Zurich Institut and NetHood, and took place in Zurich’s Kreis 5 in the Kraftwerk1 housing cooperative and in the neighborhood space at Langstrasse 200. The MAZI workshop at L200 was the first international public event organized there, which took place just a few days after signing the tenant contract with the city of Zurich.



Figure 22. The MAZI pilot workshop organized in L200, May 25, 2018.

Key people engaged in the cooperative housing movement in Switzerland and abroad gathered for two days to discuss ongoing projects, current challenges, and future possibilities, related to self-management and collective decision making. As main purposes of these interactions were the main action pillars of the Zurich pilot (Section 5), networking, information sharing, knowledge exchange, and collective learning.

The event included guided tours in the housing cooperative projects Kraftwerk1 and Kalkbreite, and workshops/discussions around the following topics: a) knowledge sharing between existing and planned coops with examples from Amsterdam, Athens, Berne, Ljubljana, London, Luxemburg, Toronto, Zagreb, Zurich, and more; b) intensifying platforms of collective learning on cooperatives, self-management, co-living, decision making, and c) cooperative technology and the right to the hybrid city (Internet sharing, Intranets, local networks, cooperative ICTs and more) placed in the context of the projects MAZI, netCommons, PARLA, and the INURA Coop Initiative.

4.1 Kraftwerk1: cooperative housing and beyond

The first day of the Zurich pilot workshop opened up the series of events with a reception at Kraftwerk1's Pantoffelbar. A slideshow from the Kunstwerk1 hybrid exhibition was running while participants coming from different parts of Europe and from various disciplines mingled and got to be introduced to each other. The activities of the next two days were briefly announced and the evening ended in a cosy atmosphere. The morning of the second day, May 24, gathered the guests at Stadionbrache urban garden, from where the Kraftwerk1 tour started. Then the group returned to the garden for the afternoon discussion sessions and garden guided tour. The day ended in the Dachraum of the Hardturm main residential building, with a round table on housing cooperatives. In the following sections, these events are presented in detail.

4.1.1 Guided tour of the Kraftwerk1 Cooperative

The tour of Kraftwerk1 Hardturm location was given by Philipp Klaus, member of the board of Kraftwerk1. The main points covered during the tour are shortly documented below, as most of the presentation was based on questions made from the participants in the tour, reflecting the most important information from their perspective.

History

Urban Revolt and Movement of 1980s in Zurich. Ideas of Utopias were all over. Also ideas of changing the city. 1983 the bolo'bolo by the author p.m. was published. The concept of bolo'bolo is to reorganise the city in neighbourhoods (bolos) with a broad variety of functions, and diversity of people. A neighbourhood is self-organised as far as possible. Many people started believing that these ideas could become reality. Do it and do not expect help from public authorities was the motto! In 1993 the booklet "Kraftwerk1" was published. A bolo should be realised in Zurich's abandoned industrial areas. 1994 the "Kraftwerk-Sommer" was held in a former textile factory: Talks, panels, films, discussions, concerts, parties. In 1995 the "Sofa-University" in the cultural center Rote Fabrik was held in order to discuss further and getting closer to realisation of a project for housing, living, community. Also, when the Wohn- und Baugenossenschafts Kraftwerk1 was founded, Kraftwerk1 became a legal frame of this cooperative housing model. The statutes are valid up to today. Land was found in 1997. 2001 the first people moved in. Around 250 people live and 100 persons work in the premises of the first Kraftwerk1 project. In 2012 the second project was established, in 2015 the third and a fourth one with 150 flats is in planning.

Organisation

The legal form of the „Genossenschaft“ - which translates best to „cooperative“ in English – encompasses membership, administration and management, financial reliabilities etc.

Principally, people pay an amount of money (in Kraftwerk1 CHF 500.-) to become a member of the cooperative. Every member has one voice in the annual assembly where decisions are taken, accounting is approved, and the board members are elected.

All flats, offices and other uses are rented from the cooperative. There are no privately owned spaces. This principle is also called the „third way in housing“ – people rent space and on the same time are co-owners as members of the cooperative.

The cooperative employs several people for tasks such as administration and management, cleaning, maintenance etc.

The cooperative's board has supervisory function. It's members are elected by the members at the annual general assembly.

There is a long list of working groups. The working groups enhance keeping alive the spirit and ideas of the Kraftwerk1 principles, charters, statutes through active involvement, self-management, responsibility towards the groups, the cooperative and the society.

Finances

The project is financed through loans/mortgages of banks, pension funds, public funds and the shares of the members as the law prescribes: people moving in a flat or office pay extra shares of several 1000s CHF as contribution to the financing of the cooperative. Members and non-members can have additional capital /

investment in the cooperative and get a small interest. In total the amount of so called „Own Capital“ is about 10%.

Living in Kraftwerk1

Kraftwerk1 offers a broad variety of flats, as was discussed in Sofa-University and the succeeding participatory processes: from 1 ½ room to 15 room flats all kinds of co-living or single living are reality.

Visiting a shared living flat with 11 adults, 3 kids on 3 floors. There is a TV room with thick theatre curtains, another shared room is for dinners and meetings. Monthly meetings help to manage the daily life or to discuss whatever problems.

There are about 10 shared living flats with 3 to 14 people. They decide themselves who will live in the community. Except for the kids everybody has to be a member of the cooperative.

The decision who gets an empty flat is taken by a committee of tenants and the Kraftwerk1 administrative office.

In case of changing relations within flats such as divorces, youngsters leaving, babies arriving or new partners a conference is institutionalised in order to occupy the used spaces as good as possible. If a solution and agreement is found people move to bigger and smaller flats respectively.



Figure 23: The Kraftwerk1 tour in one of the large collective apartments (WG).

Shared Spaces and Uses

Among the shared spaces you find the „rues intérieurs“, 3 corridors that stride across the whole building on the 1st, 3rd and 6th floor. Three staircases and lifts enhance the vertical allotment of the premises. A rooftop terrace provides open space for everybody.

The „Dachraum“ (roof room) serves for gatherings and assemblies, for parties and collective dinners.

The Pantoffelbar (slippers bar) in the ground floor is a self service bar with coffee machine and fridge with beverages. People gather for chatting, sessions, film or sports watching etc.

In Switzerland common laundry infrastructures are still the main model. In 99% of the premises they are in the basement. In Kraftwerk1 also some machines are in the basement but also there is a „Waschsalon/Laundry salon“ next to the entrance reachable from the main corridor with a series of laundry machines. It is a place where people necessarily meet and also chat.

A guest room provides space for the guests of the tenants as most flats have not much extra room.

A small store opens every evening for two hours in the weekends in the mornings. Fresh vegetables, milk, drinks and other (mostly organic) groceries can be bought. One person is employed to manage the store. About 40 people volunteer to do selling.

A restaurant is run professionally and publicly. It offers delicious lunches and dinners.

Other shops and small business: Hairstylist, bicycle repair shop, architects, designers, urban researchers, writers, NGOs, fundraising institution.

Mazizone in Pantoffelbar

Explaining kunst.werk1 mazizone and exhibition: When arriving at the Pantoffelbar with the Mazi group and the other participants of the workshop the exhibition showed only the results of the survey with the hybrid letterbox: the cards saying „yes“ or „no“ to the continuation of the exhibition. A majority was yes. The arguments added on the cards were mainly positive about the action but also asking for more change (see also Section 2 above).

Housing Cooperatives in Zurich

The map of all cooperative housing projects in Zurich, which was used also in the MAZI supported workshop in Venice Biennale in October 2016; see D2.7, Section 2.3.3) attracted the attention during the visit to the office of INURA Zurich Institute and nethood. The realization that in Zurich there is a long tradition on cooperative housing can be intimidating for people starting new projects in countries with no or very limited such tradition. A great challenge to address in the long-term knowledge transfer processes within the CoHab Athens and INURA coop initiative.

4.1.2 Stadionbrache urban garden

One focus of the pilot workshop in Zurich was on organizational aspects of collective projects like urban gardens, housing and living cooperatives, digital (community) networks, and digital technology cooperatives. Within this networking action, during the afternoon at Kraftwerk1 we started with a collective activity, a community pizza session at Stadionbrache Community Garden, <<http://stadionbrache.ch/>>, during which all workshop participants helped to prepare hand-made pizza at the garden's common stone oven.



Figure 24. DIY pizza session at Stadionbrache during the MAZI workshop.

After lunch, the garden's caretaker and manager gave a short introduction on the operation of the garden and a small guided tour in the various facilities, like the garden plots, the open spaces for members' activities, the compost area, and more.



Figure 25: Stadionbrache’s manager presenting the main activities and principles of Stadionbrache.

The similarities and differences with Prinzessinnengarten were the basis of the very interesting knowledge exchange workshop that followed with the participation also of Vesna Tomse, care taker and manager of the Wunderkammer, another similar project where another MAZI Zone is permanently installed.

The discussion focused around three main themes:

- The inevitability for the inclusion of commercial uses (cafe) in the case of Prinzessinnengarten vs. the state supported Stadionbrache.
- The trade-offs between accepting the temporal use status vs. claiming the space permanently
- The appropriation of the concept of an urban garden by more gentrified or hipster versions
- The different actors and decision making processes, and the important role of the passion for “gardening” by key actors in such projects

After a long discussion on the different perspectives of the different urban garden projects represented in the workshop, there was a session on meaningful ways to continue this inspiring knowledge exchange process and also possible roles of the MAZI toolkit to this respect.

There were two main ideas that came out:

1. One of the most challenging objectives of these projects is to effectively communicate to the public their main values and differentiating characteristics from other more commercial projects. To this respect, the role of technology and especially of the MAZI toolkit can be instrumental both because of its capacity to attach rich digital information to a space but also to its inherent values that create a certain image for the places that use it as a main communication and community engagement channel. The overall message can be strengthened by the establishment of a well-defined network of urban gardens, which could include in their branding a common “global” aspect. Toward this direction Elizabeth Calderon-Lüning brought printed material related to the Berlin pilot (i.e., copies of a Manifesto and a magazine), which is now distributed in similar gardens in Zurich.
2. Stadionbrache being a few meters away from Kraftwerk1, an idea was to consider a more “cooperative” model for owning/managing urban gardens (maybe enacting a similar “compromise” as the one that cooperative housing model represents between squatting and the market). One could imagine also possible combinations with the housing model, by promoting policies that encourage cooperative housing projects to run in parallel open urban gardens as a public service (e.g., Kalkbreite’s open garden).



Figure 26. Roundtable on urban gardens at Stadionbrache, May 24, 2018.

4.1.3 Roundtable on housing cooperatives at Kraftwerk1

The first workshop day ended with a roundtable on collaborative housing projects, reflecting on experiences by participants of new projects with guest inputs from Maša Hawlina (Ljubljana); Alexandros Papageorgiou (Athens); Constance Carr (Luxembourg & Canada); Rainer Telaar, Agencie de L'Energie S.A., Luxembourg; Iva Marcetic (Zagreb); Arie van Wijngaarden (Amsterdam); and Sanna Frischknecht (Warmbaechli cooperative in Bern). Distinguished local experts like Christian Schmid (ETH Zurich) and Res Keller (former CEO Kalkbreite) were also part of this very diverse group. A wide variety of experiences from abroad in different stages were represented, from non-existent in Luxembourg and the rather new CoHab initiative in Athens, to “putting down numbers and building a network” in Croatia and Slovenia, all the way to the already advanced models in the Netherlands.

The Dutch projects were of interest also for the Swiss experts. They were presented by one of the co-founders of the INURA Network, Arie van Wijngaarden and included the following:

- Cooperative “De Samenwerking”, founded 1908, about 900 dwellings:
https://www.samenwerking.org/bestanden/PDF/Informatiebladen/2253-1/samen_december2017spreadlow.pdf
- Woningbouwvereniging Gelderland (owner of collective housing units with a large degree of self-management in an eastern province of NL) (in Dutch): <http://www.wbvg.nl/>
- The project Vrijburg in the new IJburg city extension on reclaimed land:
<https://citiesintransition.eu/interview/co-housing-in-europe-2-vrijburcht-amsterdam>
- Housing initiative Soweto: <https://soweto.nl/de>

The description of so diverse projects, presented additionally from diverse perspectives (e.g., ethnographic, architectural, urban planning, activist).

One of the most interesting parts of the discussion for the knowledge transfer framing of our pilot, was the different suggestions from the more advanced projects to those starting now. For example, Res Keller identified two key elements for the success of a cooperative housing project: financing and giving life to a building (a “Frankenstein”), which is a long process that needs to create links between the people. Another suggestion was the need to focus on real needs and marketing, exemplified with a funny slogan used by the Serbian group in the early days: “do you wait for your parents to die to live alone?” Christian Schmid stressed that the Swiss model is based on years of tradition and new initiatives shouldn’t be overly optimistic. They need to be pragmatic and focus on one or two aspects, while at the same realize that big changes can happen only through wider mobilization.



Figure 27. Roundtable on housing cooperatives at Kraftwerk1, May 24, 2018.

Alexandros Papageorgiou responded to all these informed suggestions with an unexpected finding from the first phase of the CoHab-Athens initiative, the collaboration with the Exarchia neighbourhood association, actualized through a series of workshops. While on the one hand participants reacted negatively to the “Swiss model”, which is too distant from the Greek reality, and insisted on addressing immediate needs in a more pragmatic, down to earth approach, on the other hand they seemed to expect more guidance than we were made to believe. Especially since the cooperative housing model as common in Switzerland is unknown and therefore not well understood in Greece, we had decided to follow a long-term participatory approach, one that would not be misread as just trying to push CoHab's agenda, but that would, instead, allow the voices of all participants to be heard, toward the creation of a collective vision and plan of action. However, at the final evaluation meeting of our six-month series of workshops, we realized that participants were expecting a more “professional” attitude from our side, a set of well-studied solutions to the problem at hand. Then again, had CoHab's members taken strong leading initiative from the start, without really taking participants' views into consideration, it is doubtful whether participants would have trusted them. The main lesson learned from this “failure to deliver” a good solution is that one should try to find the right balance between organic bottom-up processes and moments of initiative or leadership, in order for the initiators to gain the trust of a given community and in order for the community to invest time and effort in a project they believe is worthwhile, a project that they have come to feel as their own.

A second point from Alexandros' presentation that generated an intense reaction was the identification of lack of trust and cooperative culture in Greek society as being among the main challenges for our knowledge transfer. Alexandros was accused for reproducing generalizations and stereotypes that can only harm our already difficult task. So, the limited depth of transferred meanings that are inherent in short presentations provoked a fruitful conversation between people who are “on the same side”, effectively about where to put the emphasis of their common ideas and goals. What the arguments against negative stereotypes actually revealed was the eagerness of participants to encourage each other into being more positive and dynamic. It is important also to take into account that stereotypes do exist -i.e., it is a fact that Greeks have the aforementioned stereotype for their own culture- and although one should be careful not to reinforce such stereotypes, they should not be completely ignored for a successful introduction of new ways of living. The discussion ended with laughs when Vesna Tomse stood up and said: Why you don't just enter an empty building and occupy it?

The overall feeling was that there are many opportunities and desire for more such gatherings, such as the next INURA conferences in Zagreb & Luxembourg and the next ENHR Conference in Athens in 2019 (<https://www.enhr.net/enhrconferences.php>). The different options for collaborations and synergies would be discussed the next day at L200.

4.2 Guided tour of the Kalkbreite cooperative

The last day of the pilot workshop in Zurich, May 25, began with a guided tour at the most recent housing cooperative in the center of Zurich by the name Kalkbreite <<http://kalkbreite.net>>. The visit and discussions were led by Res Keller, initiator and former head of office of the Kalkbreite Cooperative.

In a related article Ileana Apostol (2015, p.167) notes, “Kalkbreite’s recent inner-city mixed use development is the material consequence of a seven-years-long political process, following similar participatory processes that started with Kraftwerk1. It stands as an alternative to a solely profit driven commercial use, the usual choice for city center development, which was the initial proposal for this location. The site selected for the project is a former tramway repair shop in Zurich-Aussersihl that was replaced nowadays by a tramway depot built by the municipality. This large enclosed space has a green roof that functions as a public garden, and is surrounded by the residential development. In its urban context, the civic presence of Kalkbreite makes a difference and is a catalyst for change. Besides offering a residential alternative, which is environmentally friendly and relatively affordable in an expensive housing market, it represents one more step within the conception process of spaces for collective living in cities, and proposes a model of everyday citizen activism for sustainable urban life”.

Below we include a short summary of the points made during the guided tour.

History

The Kalkbreite story (re)started by a small group of people in 2003 or 2004 who had the idea to build a new project on the site of the tramway shunting infrastructure field in Zurich’s District 4..

Already in 1976 an initiative by the social democratic party (Sozialdemokratische Partei Zürich) claimed this area for trams to be converted for housing and working space. But the local municipal transport unit (VBZ) kept the space for its own needs.

A long process of planning on a two fold solution followed: tram plus office & housing. But it took quite a while and huge political efforts until VBZ and the local council were ready to get friends with the idea of cooperative housing on this field. Actually the VBZ wanted to realise more tracks and only a small long building.

However, in 2014, the cooperative Kalkbreite which won the competition 6 years before, opened the doors to the public to show what was realised after a long and intense participatory process with a huge party.

Diversity has always been important. There is a mix of rich and rather poor tenants. As the project is very centrally located in the city it was decided to have no cars allowed. Every tenant has to sign a contract that he or she does not own a car. Up to today this causes discussions in the public: it is not liberal, it is excluding people and so on. But it is not as excluding because all the flats are rented out. In the city of Zurich less than 25% of the households own a car.

Organisation and Finances

Kalkbreite is similarly organised as Kraftwerk1 and other cooperatives.

Living, Working, Sharing Spaces

Like Kraftwerk1 there is a huge variety of flats. An innovation that was also introduced in the „Mehr als Wohnen“-Project is the concept of flats as clusters. The idea is to have more privacy but living in a shared flat. A person or two persons lives in one or two rooms including toilet and bath/shower as well as a small kitchen. On the same time there is shared spaces such as a living room and a ‚solid‘ kitchen. There are flats where 4 families and a couple share 2 kitchen, 3 balconies and 4 common rooms. Another innovation is the „Grosshaushalt“: more than 50 persons from several different living units / flats share common infrastructure, even a cook that prepares dinner.

In terms of shared spaces, there is a big courtyard which is not just for the tenants but also for the public. It can be reached by huge stairs from the street and the different staircases. It is above the tram hall. There are several shared spaces inside the buildings for gatherings, film watching, sharing lunch or dinner etc.

A reception with a receptionist welcomes people and answers questions of whatever kind. Also they manage the reservations for the hotellike guestrooms and seminar/conference rooms.

All the different parts of the building are connected through an inner street, the Rue Interieure.

Other uses

The spaces in the basement and two more floors are for small businesses, offices, medical centres, a birth center, shops, a restaurant and a bar, as well as a cinema with six auditoriums.

There is much more to tell and show. Everybody was impressed. „Ein Stück Stadt“ as the „Kalkis“, the inhabitants of the Kalkbreite project say, a piece of a city came into existence. The media coverage has been enormous and also international attention has been attracted. Parallel to our tour, two other guided tours found their paths through the rich variety of spaces, places, views and people.



Figure 28. MAZI guided tour at the Kalkbreite cooperative, May 25, 2018.

4.3 Beyond cooperative housing

The Kalkbreite tour ended at Langstrasse 200, the location of the newly opened hybrid neighborhood node L200 <<http://langstrasse200.ch>>, a shared space that is self-organized, and collectively managed. Here took place the next session of the Zurich workshop under the name “Beyond cooperative housing”, focusing on specific topics and concrete future activities that connect internationally through the INURA Coop initiative, and develop locally through the Plattform Genossenschaften and NetHood's neighborhood-wide initiative PARLA, among others.

To open up the conversations of this cross-fertilization event, Thomas Raoseta presented a historical perspective of the movement of young cooperatives in Zurich, and made an introduction to the L200 location in the Kreis 5 neighborhood. One of the main aims of the L200 may be formulated as networking localities and bringing in touch people in the proximity; this is along with the PARLA neighborhood project presented by Ileana Apostol (see Section 3.3 in D2.8), as in the long term, deliberative participatory practices will enable the formation of local networks, and may also initiate social learning processes around neighborhood-relevant topics.

At the same time, the project has a transdisciplinary research dimension that pertains to a phenomenological approach to hybrid local networks, considering the interdependence (i.e., being each other's condition of possibility to be) between society and technology, and the latter is approached as artifact and attitude that makes it meaningful. In community networks, this phenomenological take reveals the constitutive conditions that make local technologies relevant and refers to a know-how that is the result of embodied, improvisational, relationship-attuning practice.

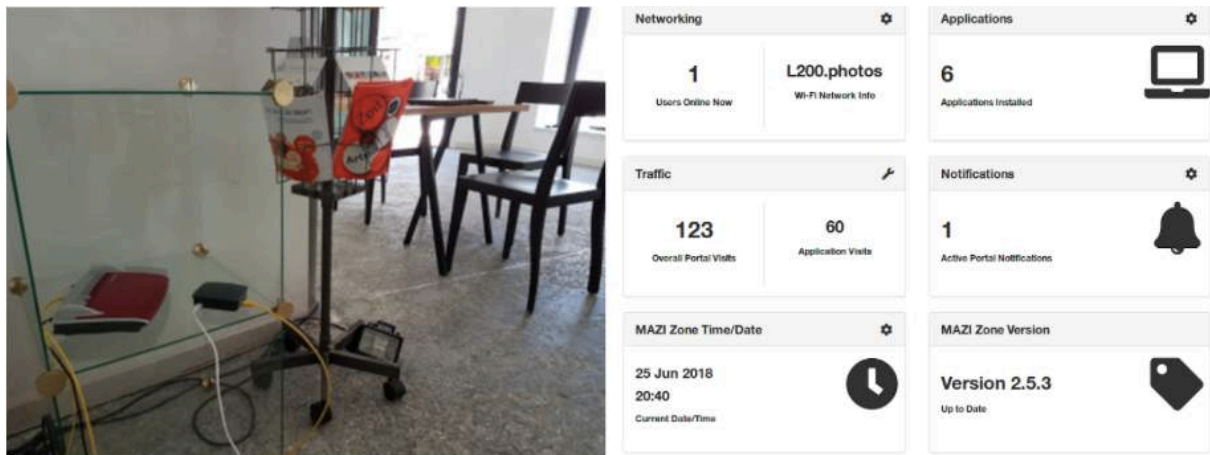


Figure 29. L200.digital MAZI Zone at Langstrasse 200 in Zurich.

This introductory presentation was followed by a round of discussion on the topics “International exchanges and collaborations” and “Collective learning processes” with MAZI partners and guests from Zurich and abroad. We had the chance and the honour to have in the room three similar in objectives but different in form initiatives on knowledge transfer, other focusing more on research and other more on practice.

With regard to shaping future steps in research and action for cooperative housing and beyond, the interventions aimed to bring in touch, and network for potential collaborations, organizations and institutions like and the like, that are active more on the research side, and the INURA coop initiative <www.inura.org/v2/index.php/inura-coop-initiative/>, the work within the MAZI project, and other bridging research and action. The MAZI project has developed some relevant knowledge regarding potential tensions and conflicts between research and action, as it has been documented in the MAZI interdisciplinary framework. There was raised also the question of how to communicate subtle differences between cooperative housing models like bottom-up versus top-down.



Figure 30. 'Beyond cooperative housing' roundtable at L200, May 25, 2018.

As methodologies for connecting researchers and activists or initiatives between them were proposed the MAZI toolkit, including detailed guidelines, and face-to-face on the ground cooperation, learning through play and experimentation. Regarding the development of educational material and grassroots learning processes, the discussions aimed at possible collaborations between organizations and initiatives like the Plattform Genossenschaften, the neighbourhood space L200, the online platform Openki.net etc. Inputs came from Jennifer Duyne Barenstein and Tanja Herdt for the ETH Wohnforum; from Jasmine Palmer (TU Delft & University of South Australia) and Sara Brysch for the Co-Lab Research (TU Delft); from Philipp Klaus for the INURA coop initiative; from Andreas Wirz for Plattform Genossenschaften; from Jens Martignoni on the learning experience with Flexonomix and other simulation games, capable of reaching the people on the ground; and from Panayotis Antoniadis on self-organized learning through the online platform Openki.net.

It has been emphasised the need for a systematic collection of information, from different cases and contexts, creating a common analytical framework. As a potential gathering space for these initiatives was proposed the L200 hybrid node, which may become, as it has been mentioned during the discussions, either “a unique place

to collect all information” or member of a “federation” of independent knowledge hubs. Certainly there was agreement that channels of communication and exchange should be established among researchers, activists and communities, maintaining a reciprocal and balanced flow of knowledge. Furthermore, the aggregation of knowledge on a platform level could result in creating a basis for advocating broader institutional consolidation, on an EU legislative framework level, as well as for sharing resources, fundraising, and cooperating on common output like dissemination visual material and so forth.

For instance, in the case of cooperatives, a coop of coops (like Mehr-als-Wohnen) makes them stronger together, even though it is a more top-down organization. Discussions between coops are needed, but also between coops and the public thus the Plattform Genossenschaften initiative. Also the Co-Lab Research may be a platform for such a task. On a more concrete note, gathering a database would be very useful, of founding-constitutive documents, and of specific practical information on how to build a housing cooperative, and rather than general ideas and suggestions, going more in the direction of somewhat ‘pre-packaged solutions’, of concrete and replicable know-how. In this case is the nature of knowledge transfer closer to replication and overlooking contextual differences, at least temporarily, in order to save time and effort and reach tangible results faster? At the same time aggregating data in a single place and a single way may be acceptable as a starting point, although it could lead fat to centralized power and control over it.

The importance of bringing urban research to the ground, to the communities was stressed, aiming to do do more than sharing knowledge among researchers. More specifically, L200 could have the function of bringing to the public research output like, for example, PhD defenses on relevant topics to the life of the neighborhood (e.g., ETH students presenting their work at L200) as well as a laboratory for researching the neighborhood life directly in the ‘field’. All in all, the round of discussion has been very vivid, and opened many lines of further debates.



Figure 31. Collective notes on L200.digital about possible future steps in the last session of the MAZI workshop.

The L200’s MAZI Zone was used to collect all those ideas on future steps, hinting to the importance of a space like L200 for gathering and making easily accessible information that bridges the local context with the global knowledge exchange networks.

The final session of the day was the Zurich encounter organized in the context of the netCommons project and described in more detail in the D5.5 netCommons deliverable. Under the title “Cooperative technology and the right to the hybrid city”, the discussions aimed at producing synergies and coalitions between digital and urban activists with focus on alternative ICT solutions for cooperative housing projects. An extensive presentation on community networks by Panayotis Antoniadis (NetHood) was followed by a round of discussion including Marcel Waldvogel from the University of Konstanz; Thomas Raoseta from NeNa1 housing cooperative; Lukas Zeller from Gleis70 working cooperative, Zurich; and James Stevens from SPC London among other participants.

4.4 Pilot evaluation and lessons learned

Until the writing of this deliverable we can say with confidence that the Zurich pilot has addressed its initial objectives. In some respects it has been achieved more than expected, a) the adoption of the MAZI toolkit and knowledge transfer within initiatives outside the project’s pilot, with their own resources: (e.g., a group of around ten people are engaged in the CoHab initiative in Athens, three permanent MAZI Zones are already installed outside Kraftwerk1 and more are “ready” when the toolkit will reach its most mature phase) or b) the level of participation in the pilot’s numerous related events, workshops, courses, and more.

It is only in relation to the adoption of the MAZI toolkit by the local Kraftwerk1 community that our initial expectations were higher. But it is not easy to assess whether a different strategy from the pilot team’s side would result to a faster and wider adoption. Some of the reasons that may have played a role in that are analyzed below, and the MAZI team will try to address them during the remaining months of the project.

4.4.1 Limitations and some ways out

Currently throughout Switzerland, affordable high-speed Internet and 4G are available. As a consequence in the pilot based at the Kraftwerk1 housing cooperative, it became a bit more difficult to engage people through WiFi networks. Aside from this overwhelming offer from commercial providers, between the time of writing the MAZI proposal (2015) and the beginning of the MAZI project (January 2016), Kraftwerk1 housing cooperative has implemented its own cloud-based Intranet for internal communications. Some of the main common spaces, Pantoffelbar and Dachraum, were equipped with WiFi also in 2015.

Another limitation in the process of participatory deployment of the MAZI toolkit have been the inherent time constraints of Kraftwerk1 residents, and their focus on many other priorities. The Zurich pilot is located in a housing and living settlement where, after all, the domestic life takes place in parallel with other social activities occurring in public spaces. Certainly, in comparison to other residential projects, at Kraftwerk1 residents engage in a very strong community life, including the time taken for self-governing and operating their life in common. Moreover, Kraftwerk1 Hardturm settlement is a mixed use with office, daycare, commerce, and the associated Stadionbrache garden, besides its residential function. During the duration of the pilot, however, with the exception of a short-term testing MAZI zone in the office building (February 2017), the MAZI zones have addressed on a daily basis mainly the Hardturm residents who would pass-by or spend time at Pantoffelbar, as it is one of the main ‘social’ nodes, or the onsite ‘third place’, as Oldenburg (1989) called those urban spaces where people go for social contact, leisure and relaxation.

All in all, considering this busy communal life, Philipp Klaus noted that the mobilization factor in the pilot has been at comparable levels with similar projects that engage actively the community at Kraftwerk1, based on his long experience with participatory practices in the cooperative. Nevertheless, while there is a so called ‘participation fatigue’, there is an expressed need for tools for participatory practices regarding important decisions for the community life and projects, not indicating though the critical aspect of other imminent needs. In addition to the participation fatigue, there is a ‘research fatigue’ in the community, as such cooperative associations are being studied a lot by social scientists. And as a special case, language barriers still exist between the NetHood researchers and the local community. Philipp compensated for that being the community actor who played the role of mediator or ‘border person’ between the Kraftwerk1 community and the MAZI project. Over the course of the pilot, he also absorbed some related tensions by bringing in the equation trust and personal connections. It is sure that without his mediation, the NetHood team would have much less chances to build, in a short period of time, the necessary credibility for engaging with the Kraftwerk1 residents.

Many of the Kraftwerk1 residents are politically conscious and active in various forms of self-organized and collectively managed initiatives, yet some of them showed either resistance or no interest in technology. On a positive note, however, the design process of the existing Intranet has raised many debates during which conflictual points of view have clashed, regarding the type of digital technology suitable for such a self-managed housing and living project. A transformative momentum is still ongoing, and more detailed information on the Intranet use is presented in the 2017 survey led by the MAZI team (reported on the first version of this deliverable, D2.7).

The timing of technology design and readiness of the MAZI toolkit was not always synchronized with the need to present a technology that can satisfy needs surfaced through discussions at Kraftwerk1. Additional reservations were created by the fact that introducing the MAZI technology to the community has been in parallel with its development, which faced its own unexpected challenges, for instance, the more difficult than expected captive portal functionality, and the introduction of a new Raspberry Pi, not compatible with the MAZI toolkit at one of the most critical moments for adoption.

No doubt the MAZI DIY networking technology brings in elements of innovation that require, on the one hand, permanent feedback from the pilot community for its innovative design, and on the other hand, presence and moderation of the MAZI zone. That may include 'translations' that shift the role of the project partners in the direction of tech mentors or educators, as well as a hybrid space where face-to-face encounters could take place. In the MAZI pilot in Zurich, the Pantoffelbar at Kraftwerk1 provided first the hybrid meeting space, which was followed by a great opportunity to create a hybrid neighborhood node (L200) that includes a MAZI zone from its inception.

What proved to be successful was the organization of 'ready-made' events on the Kraftwerk1 Hardturm premises like the Kunstwerk1 exhibition, where people were invited to participate, slowly getting engaged in the process according to their needs, skills and interests. Personal connections and associating a person to the actions played a strong role, of course, in building trust and engaging community members in the project actions. Two years of work in the pilot show that the MAZI team in Zurich has played well the role of facilitator, by planting seeds for grassroots initiatives, by bringing novel concepts into the current discourse, by not discouraging any suggestions, and in general by adapting to the local culture. MAZI notions and ideas were integrated in an edited book (*Die andere Stadt*) and also in a forthcoming book authored by Hans Widmer (aka P.M.), and the MAZI zone helps also the dissemination of ongoing community events like in the case of the new exhibition in the Pantoffelbar, on the Stadionbrache-Gruempfi Tournament.

Extra effort is needed beyond the 'classical' moderation of a MAZI zone, to create learning experiences and engagement. A way out is structuring extensive preparatory phases to allow the time to shaping groups to whom to pass the 'project objectives' including the understanding of DIY technology, and the project's long-term goals etc. In parallel, together with the organization of informal events and informal related-discussions, the initiation of special interest groups like the Internet Salon at Kraftwerk1 created many opportunities for exchange and collective learning, and in particular it stimulated the creation of a new working group for the Intranet support. That may be due also to the existing DIY culture of the Kraftwerk1 community, however, the pilot gave some impulses to organizing around digital technology topics.

The MAZI project team has been broadening the scope of the Zurich pilot, and below is an overview of these actions:

- initiation of two groups namely the Internet Salon at KW1, and the Co-Hab in Athens, which now operates independently with more than six people in the "core group" dedicating own resources on the project;
- initiation of two projects called the INURA coop initiative, which gathered more than twenty people in each of the corresponding workshops in three subsequent INURA conferences), and PARLA (Participatory Lab) in Kreis 5;
- founding a neighborhood hybrid node to function as a living lab at L200 in Kreis 5;
- networking beyond its locality, through the organization of 'knowledge transfer' events in Sarantaporo, Berlin (Transmediale), Zurich (CoHab: Sharing ideas for sharing space), Bucharest (INURA), Venice (Biennale), Athens (a series of events related to CoHab's activities), Havana (INURA), Warsaw (INURA), and also inviting international guests at the pilot workshop in Zurich;

- creating a related Openki course on the “organic Internet” that has twenty five registered users out of which five-eight participate in each course.

4.4.2 Lessons learned

Since this is the last dedicated pilot deliverable, a more thorough evaluation of the Kraftwerk1 pilot will be included in the last report on self-reflection (D3.13). At this stage we note the most important lessons learned, which refer to necessary aspects in the MAZI toolkit deployment process, and are structured around four main domains namely a) physical elements, b) timing, c) projects, and d) attitude in action and research approach.

Physical elements	Human presence and curation, visibility, illustrative and explanatory material, design of physical locations, establishing living labs and spatial infrastructure for the future
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From a very early stage of the pilot it became obvious that regular physical presence and moderation of the MAZI zone are critical. In promoting innovation goals curation is essential, from creating an atmosphere and reception in the physical dimension of a MAZI zone, to providing illustrative and explanatory material for the technical tools. the role of appropriate design of physical locations and of material, tangible elements, being instrumental. To achieve that, appropriate design of physical locations including suitable material, tangible elements being instrumental. Even more, 'guided tours' of the MAZI zone and its animation are so important, as the produced hybrid space to be lived. Thus the pilot team opted eventually for the creation of living labs that host a permanent MAZI zone, L200 project being the case in point, providing an ecosystem and hybrid space as a commons.

Timing	There is an acceptance curve, slowness of process, in which coexist imminent and long-term needs
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It is critical to build an understanding and also to accept the characteristics of long-term participatory practices. There is an acceptance curve that is necessary to unfold, from the novelty of the toolkit, its capabilities, and understanding the possibilities that open up, to the effective use and eventual appropriation. So it is necessary to accept the slowness of the process as, in the Zurich case also being part of the local culture of practice. Being flexible and in continuous communication with the local groups helps in adapting to the local culture. Another important point is to understand the coexistence of imminent and long-term needs of a community, in the development of novel tools requiring participatory practices that extend over long periods of time.

Projects	formulating concrete projects ('offering') that are (self-)explanatory and easy to understand; learning new skills; developing training courses and collective learning processes
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We learned through the pilot activity that It is critical to formulate the 'offering' through very concrete projects that are relatively easy to explain, and further to pass on to the local actors, which was complemented by tasks' identification. In the process, walking across the moments of uncertainty was realized by focusing on what the project team could put in practice themselves. In addition, on the one hand we had to learn new skills like 'translation' of DIY technology, in the Kraftwerk1 pilot as well as for the processes of knowledge transfer; on the other hand, MAZI partners developed training courses and collective learning processes like the Openki course on the "organic internet".

Attitude in action and research	an organic approach: collaborations with the local groups, engagement of diverse actors and necessity to adapt to the local culture; letting go; identifying the universality of problems, placing them within dynamic processes, being exposed to outsiders' points of
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approach	view
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Less formality than in the academic environment is required while working in the real life laboratory, to create a familiar atmosphere that is conducive to collaborations. The team adopted a less formal take (i.e., the seed approach) in the participatory practices, by not asking for consent forms or using other formal tools. A 'formal' approach was taken at KW1 in the communication, playing by the rules of the game in terms of providing information through currently used media (e.g., portal, posters, flyers). It was very important to engage in the participatory process, many actors from various walks of life, and to identify those interested ones. It was very important to engage many actors from various walks of life, and to identify those interested actors who could take on these roles according to their skills and capacity (CoHab, L200, INURA coop initiative).

By taking an organic approach, the team placed intensive focus on collaborations with the local groups, 'pulling' the DIY technology rather than pushing to 'achieve' the project goals. Furthermore, once the seeds have been planted, it is wise to let go, without claims of authorship but rather as stewards like in permaculture. Finally, the Zurich pilot team aimed to identify the universality of some of the encountered problems, and to further place them within dynamic processes, which imply projects, locations, groups and initiatives, while being exposed to outsiders' perspectives (that comes also from the INURA tradition) can be very empowering.

5. Research and action in the pilot

Note that the pilot team in Zurich had chosen as participatory practices, to shape interdisciplinary structures for information sharing within the pilot framing as knowledge transfer. The next sections detail some of the elements brought into the MAZI toolkit design by specific actions in the Zurich pilot.

Based on the lessons discussed in the previous section that may be placed in various spheres of action (Table 1), next we propose an analysis of pilot activities toward toolkit co-design taking into consideration its role as a boundary object in MAZI's interdisciplinary framework. As argued in related deliverables (D3.2, D3.3 and D3.4), a boundary object is characterised by a back-and-forth process between locally embedded forms and more generic structures that acquire value for universal applicability, and in light of that, the MAZI toolkit is shaped through cross-fertilizations between its two forms, local and generic.

The MAZI pilot in Zurich has been designed on a spiral-type process (Rittel 1984) around four main action pillars, as it can be read in Table 2, all in accordance to the pilot's participatory practices. The pilot workshop has opened various threads for international networking of research and action, to continue beyond the project timeline, based on topics of interest, housing, urban gardens, or community networks, and also through INURA conferences (e.g., at the workshop sessions were present organizers of 2019 INURA conference in Zagreb, and in Luxembourg in 2020).

Aside from extensive networking activities, to make more effective the exposure to novel concepts, the pilot team has been either employing existing tools like guided tours, or developing hands-on experiences during onsite workshops within projects that materialize these concepts (e.g., alternative urban gardens, new forms of cooperative housing, knowledge hubs, neighborhood hybrid nodes, living labs etc). Active listening is a critical way to engage in such actions in order to create the conditions for meaningful conversations and multiple possibilities for cooperation.

There is also a more long-term component of research and action in the pilot, regarding development and curation of knowledge hubs like L200 living laboratory at Langstrasse 200 in Zurich, as well as facilitating and engaging in long-term learning processes through structures like, for example, the Openki platform.

Table 2. Action pillars of the MAZI Zurich pilot

Pilot framing	knowledge transfer			
Pilot participatory practices	interdisciplinary structures for information sharing			
Action pillars	networking of similar actions	developing, employing hands-on experience tools and methods	developing and curating knowledge hubs	facilitating and engaging in long-term learning processes
Examples	cooperative housing; urban gardens; grassroots provision of digital technology (e.g. community networks)	guided tours to existing projects; workshops on related topics; (cultural) events and other social life activities	exhibitions like at the KW1 Pantoffelbar or L200; the L200 living lab	long-term learning like the Openki course on DIY networking technology through the MAZI toolkit

Note that to these action pillars correspond also the roles played by the members of the MAZI Zurich team, discussed in the previous version of this document (D2.8 Section 3.1), as well as in the first deliverable on self-reflection (D3.11 Part I - Theoretical References). For instance, the team has played multiple roles, from being

only a triangulator during events and through simple presence bringing ‘strangers’ in contact, to more elaborate roles such as facilitators or catalysts in networking, during organized events, workshops and guided-tours, and even more time intensive roles as curators of the exhibitions within permanent MAZI zones or of the L200 knowledge hub (see Section 7).

Ongoing engagement in the WP3 on the MAZI interdisciplinary framework has been very helpful, as building networks across disciplines, cultures and countries in the consortium is challenging to a certain extent, due to barriers of language, habits, frames etc. For that, the research position of ‘stranger’ (refer to D3.2 Section 2.2, D3.11 Section 2.2.2, D2.8 Section 3.1) is capable to bring awareness of border relationships, and provide a particular attitude in action. It proved to be useful while engaging with the pilot community as well.

The Zurich team takes a ‘border’ position in their pilot activities, reaching out to other ‘worlds’, and embracing uncertainty with curiosity. Interested individuals or groups were provided hands-on experiences on the knowledge advanced in the MAZI project so they became themselves ‘ambassadors’ in their larger community. As Philipp Klaus stated, “MAZI toolkit should not only be a technological toolkit but also one that defines the rules and roles in processes where the technology comes into action.” Panayotis Antoniadis summarized the team’s understanding, “We don’t bring a solution to local communities. We bring the knowledge of tools that could be transformed to solutions if better understood by a few key local actors” (both in the second self-reflection exercise, D3.11 Appendix IV).

From a research perspective, NetHood takes a phenomenological approach to hybrid local networks, considering the interdependence between society and technology, as being each other’s condition of possibility to be. One of NetHood’s publication (Antoniadis 2017) had significant impact with more than 1900 downloads according to Springer, and is translated in German, with three more translations under way (i.e., Spanish, Italian, French). The success of this publication has led to numerous invited talks and workshops with expenses covered by the organizers (e.g., workshops organized by the projects “toys for commoning” (<http://commoning.rocks/>), “creating commons” (<http://creatingcommons.zhdk.ch/?p=559>), and the forthcoming “Persona Non-Data” festival at La Gaîté Lyrique (<https://gaite-lyrique.net/festival/persona-non-data>), as well as a republication in a Routledge edited book (Antoniadis, forthcoming). This allows for a more careful planning of NetHood’s next publication, which could include the evaluation of the whole pilot process, from beginning to end, resulting to a more rigorous and convincing argument favoring co-designing DIY networking technologies, with the community groups themselves.

On a different note, it is interesting that NetHood had become from a research actor to a subject of research of a PhD student, Alexandros Papageorgiou, and of a post-doc researcher, Aimilia Voulvouli engaged in the Heteropolitics project, <<http://heteropolitics.net>> who are studying from an ethnographic perspective NetHood’s role as a knowledge broker in the Greek digital commons ecosystem.

More recently, the collective design of the L200 project brings a strong transdisciplinary research dimension to NetHood’s activities, by connecting places and people through physical and digital means.

6. Impact of the Zurich pilot on the MAZI toolkit

At the time of the proposal writing, the idea to focus the Zurich pilot on the knowledge transfer framing was based on the assumption that, a plausible scenario for the adoption of the MAZI toolkit is the combination of a technology compatible with the core values of self-organization and self-determination, to be used for capturing and further communicating the local knowledge produced in the remarkable case study of Kraftwerk1 cooperative housing. Some expectations were since the beginning that this community, who invested significant effort over the last years including a recently Intranet service, might be reluctant to engage with a “new” technological tool for basic community needs like social exchanges or more complex participatory processes.

The reality proved us partly right and partly wrong. On the one hand, our assumption that the cooperative housing model would be interesting to understand and translate in different contexts was overwhelmingly verified through the initiation of multiple knowledge exchange initiatives in Europe during the duration of the project. Some were initiated by us like CoHab Athens and INURA coop initiative, which keep growing independently from the project activities, and others by other groups, like the ones that participated in the Zurich pilot workshop described above. On the other hand, when we started the project, we did not understand the extent of the burn-out of Kraftwerk1 and other similar communities, because of various initiatives and individual researchers visiting, interviewing, and observing their everyday life. So the knowledge framing as initially conceived did not prove engaging for the residents of Kraftwerk1, despite the fact that, for instance, through the Berlin pilot was developed a MAZI application (i.e., the Interview archive), which could have been very relevant to the Zurich pilot framing.

However, through the various experimentations on the co-design of the MAZI Zone at Kraftwerk1, and the different spin-offs described above, three non-anticipated practical uses of the toolkit in the context of knowledge transfer were identified:

- 1) **Collective note-taking during events:** a very straightforward way for knowledge sharing is when people from all over the world are present in the same place, like during the events organized in the context of the MAZI Zurich pilot in Venice, Athens, Bucharest, Havana, Warsaw, and Zurich. In this scenario, the MAZI toolkit can be very effective for sharing existing material (e.g., documents, slides, photos) but most interesting collective note-taking using the Etherpad application. In our case this strategy has been successfully applied in two of the MAZI workshops in Zurich (i.e., in the recent Zurich pilot workshop, as depicted in Figure 31, and in “sharing ideas for sharing space” workshop, <http://demo.mazizone.eu:9001/p/zurich_housing_comparison>, also in D2.7). There is, however, a lot of improvement to be done on the facilitation and moderation side, for example, such practices are being experimented with extensively by the Teixidora (Garriga 2018) and Constant <<http://networksofonesown.constantvzw.org/etherbox/manual.html>> collectives. That is a part of our intended work until the end of the project to integrate the best practices from these two recently discovered projects in the toolkit guidelines.
- 2) **Networked branding and identity of urban spaces:** throughout the Zurich pilot it has become more and more clear that a MAZI Zone makes more sense and is better understood when conceived as the digital overlay of a well defined physical space. As in the case of the Prinzessinnengarten in Berlin, this digital space could be conceived as a medium for encoding knowledge produced and/or represented by the community running the corresponding space. But the knowledge accumulated by a specific place can be also transferred to or exchanged with similar places in other cities, as discussed during the Zurich pilot workshop. That is, for example, the creation of a common identity between collectively run urban gardens around the world, encoded in the hybrid design of their MAZI Zones. Currently, two such local networks are running in two different urban gardens in Zurich namely the Wunderkammer and the ParkPlatz, and a MAZI zone at L200, as a hub for these and other grassroots initiatives. Only the discussion on how these different MAZI Zones in Zurich, in Berlin, and elsewhere could collaborate in reinforcing their message to their publics would be a very enriching knowledge exchange process. And if successful, it can become even more open, not only between the protagonists of the initiatives, but also between the citizens that participate in the local co-creation processes.
- 3) **Supporting tool for guided visits:** during the INURA conference in Warsaw the MAZI toolkit proved to be a very effective and practical tool for collecting material during parallel guided tours, made available to all participants during the plenary sessions of the conference. While the same use of the toolkit was tried also

in Bucharest and in Cuba, in Warsaw was really successful as depicted in Figures 18-21 (see also Appendix I). This was not only because of the increasing familiarity of the INURA members with the MAZI toolkit, but also because of the improved preparation based on the failures of the past.

It is important to acknowledge, however, that despite some successful deployments, and the increasing interest by groups outside the project, a MAZI Zone is not yet a well understood and easy to access digital space. As stressed by Philipp Klaus during the feedback meeting after the Warsaw INURA conference: “The concept of a Mazizone as a scheme of DIY networking is very difficult to understand for most people. One main reason is that people are now used to have internet everywhere, really everywhere. And they can do on it whatever they want to do. To understand a necessity or at least an advantage compared to existing uses offered constantly through internet is an enormous challenge if not almost impossible. Also, the 'internet-industry' works with endless resources to develop constantly new needs no-one asked for and some really useful. For me, the most enlightening moments of the mazizone were the deployments in the internet-free INURA retreat in Cuba and in Warsaw by collecting pics and offering documents such as minutes, reports etc. I really enjoyed deploying the mobile mazizone a lot.”

In terms of community adoption, the Zurich pilot realized soon that this depends heavily on temporal dimensions like the readiness of a community, and suitable timing for the initial phases of intervention such as technology ‘offering’. The way out in the pilot was to establish a process around living labs. Similarly to the processes for building cooperative housing, before a concrete spatial materialization and in the case of co-designing MAZI technology, the political processes themselves produce the experience of lived space that is, space which the imagination seeks to change and appropriate.

To this respect, the Zurich team has been successful in employing a “technology pull” instead of a “technology push” approach focusing on preparing the various target communities for adopting the MAZI toolkit in their own terms and according to their own needs without overwhelming participatory design processes. This strategy was partly motivated by some unforeseen difficulties in the toolkit implementation (like the captive portal functionality) but it is now judged by the team as the most appropriate anyway, an assumption validated by the increasing engagement of people in MAZI Zones which were initially thought of as failures, and the increasing number of external groups that wish to experiment with the MAZI toolkit.

Acknowledging the community adoption challenge, the Zurich pilot has invested a significant amount of effort on a collaboration with a like-minded initiative developing a free software self-organized learning platform, Openki.net. In this context, a course on the “organic Internet” has been initiated and constantly attracting more and more participants. That is placing the MAZI toolkit as a core element of a collective learning process around digital literacy or “digital self-defense”, as described by the group C.I.R.C.E, <https://circex.org/>, with which a close collaboration has been initiated after a related Openki course on “self-organized learning” hosted by NetHood and Openki.net: <https://openki.net/event/ABH43behy2DZ4sMaZ/workshop-on-selforganized-learning> (see also <https://circex.org/agenda/zurich-2018/>).

Finally, one of the most critical factors for the progressive adoption of the MAZI toolkit is the combination of permanence of a MAZI Zone, and the continuous commitment of its owner/administrator to update its framing and functionality according to the received feedback, and to improve the presentation and communication of the reasons why someone should invest time and effort to participate in its deployment.

The creation of a dedicated location for this purpose, ideal for experimenting on different hybrid space design approaches like our hybrid exhibition at Kraftwerk1, and whose overall objective is knowledge sharing and collective awareness between grassroots initiatives in different complementary fields has been the most important outcome of the Zurich pilot, as described in the following section.

7. Seeds for the future: spatial infrastructure and living labs

Instead of conclusions this section proposes as seeds for the future, provisions of spatial infrastructure serving and being equipped with MAZI zones. Designing the physical presence and/or environment of a MAZI zone proved to be crucial toward its sustainable future. That brought to our attention the concept of a 'living lab', which refers to the integration of research and innovation through systematic user-centered co-creation processes in real life communities; 'living labs' may be involved in the various phases of the design process.

At the beginning of the 1990s the term 'living lab' has emerged in parallel in the field of operations research focused on urban communities dealing with community-driven technology and social tools (e.g., Bajgier and colleagues 1991), and at the MIT Living Labs (refer to work of William Mitchell, Kent Larson, and Alex Pentland) based on the concept of user experience and ambient intelligence. Living labs' main activities are co-creation, exploration, experimentation and evaluation, during which negotiations take place between a wide range of stakeholders. It is well known that there are various degrees of engagement in participatory processes, noted from early practical experience by Sherry Arnstein (1969) in her article on the 'ladder of citizen participation'. At the lower rungs of the ladder are categories of action like manipulation, informing or consulting, while at the higher rungs these actions become either partnership, delegated power or even citizen control. By creating opportunities and establishing partnerships between designers and those who are actually 'experts' in understanding their own ways of living and working, the 'living labs' are capable to operate at the higher rungs of the ladder of citizen participation during the design process.

For the use of a collective association, NetHood contributed to the acquisition of a central space in Zurich, which is the ideal host for a permanent MAZI Zone in a public space. A future hybrid urban living lab, this physical dimension of a MAZI zone is the L200 space <<http://langstrasse200.ch>>. It was made possible also with support of the CAPS project netCommons, and for an in depth description of the development process of L200 refer to the netCommons deliverable D5.5 on "Alternative internets and the right to the hybrid city", <<https://www.netcommons.eu/?q=content/alternative-internets-and-right-city>>.

L200 is located at the heart of Zurich, in Kreis 5, on one of the busiest and most urbane streets, Langstrasse, which connects two districts (4 and 5) with high quality urban life. It is in close proximity to many active urban nodes including the newly built cultural center Kosmos, the Riffraff cinema, and the convivial Josefstrasse and Limmatplatz. Given its location the rent of L200 matches the market prices, which requires careful organization to maintain the non-profit character of the initiatives that are part of it, and at the same time become a truly open and diverse hybrid space. L200 has an area of 75 sqm to be flexibly organized for various uses throughout the day, and responds to several local needs such as a) to meet fellow neighbors in a common space, b) to promote local shops, ateliers and initiatives, c) to network people, activities and places in both analogue and digital forms, and d) to facilitate collective learning processes on various topics. A main objective of the project is knowledge sharing and collective awareness between grassroots initiatives in different complementary fields.

From the first days of its operation there are several types of activities ready to bootstrap that include participatory processes within the PARLA project <nethood.org/parla>, self-organized learning through the project Openki.net, cooperative housing and sustainable urban living in the NeNa1 project <nena1.ch>, hands-on DIY networking workshops through the MAZI project <mazizone.eu>.

Nevertheless, the selected approach for the operation of L200 is to take advantage of technological tools that will allow the efficient and flexible management of the space as a commons, ranging from co-working and food services during the day, to a wide variety of gatherings and events during the evenings. Eventually L200 will turn into a living laboratory, which is open to the creativity, needs and public demands of not only the organizations involved, but of all the residents of the neighborhood. Thus the role of technology is central not only for the challenging coordination needs, due to the flexible and shared use of the space, but also for building L200's identity and memory, and for encoding some key design choices at different levels, to facilitate the replication of this model in different locations.

As far as MAZI is concerned, L200 has the potential to become the ideal placeholder for a wide variety of hybrid space experiments hosted on the permanent MAZI zone recently named "l200.digital", like for example the hybrid whiteboard (Figure 12). The same MAZI Zone is already facilitating the internal collaboration of the L200 members, like photo sharing or for editing collective notes (Figure 31) during or after events. The fact that the MAZI Zone is used as the offered Internet access for all guests, makes it much easier to engage them in "local" digital interactions. The accessibility to the street level through the large windows and the convivial atmosphere



make it also much easier to attract passers by. So, in addition to the future iterations of our Kunstwerk installation, L200 will be a second place of experimentation with the MAZI toolkit until the end of the project and beyond, the results of which will be included in the final version of the MAZI toolkit deliverable.

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Appendix I. MAZI Stories: inura.zone at the INURA Conference in Warsaw, by Philipp Klaus

Available online at: <http://demo.mazizone.eu:9001/p/mazizone-stories-inura-2018>

Based on our previous experiences with deploying MAZI Zones in INURA conferences we developed a long-term concept: the INURA Zone!

Title: INURA.ZONE - Mazizone at INURA 2018, 28th annual conference	
Initiator	Philipp Klaus
Location	<p>Warsaw, different locations (INURA City part of the Conference)</p> <ol style="list-style-type: none"> 1. Saturday, June 23. New Warsaw University Library, Lecture Hall. Opening lecture, 2hrs 2. Sunday, June 24. Guided Tour [1.5] Modern slavery, Central Warsaw, 3hrs 2. Sunday, June 24. Guided Tour [[2.4] Property restitution. Wola district, Warsaw, 3hrs 4. Sunday, June 24, New Warsaw University Library, Lecture Hall. Academic lecture 5. Monday, June 25. Guided Tour [3.3] Public-led gentrification in Powiśle, Central Warsaw, 3hrs 6. Monday, June 25. Guided Tour[4.3] Roofology, 3hrs 7. Monday, June 25. New Warsaw University Library, Lecture Hall. Academic lecture, 2 hrs 8. Tuesday, June 26. Guided Tour [5.3] Inhabiting the Open Form. Praga district, Warsaw, 5.5 hrs 9. Tuesday, June 26. New Warsaw University Library, Lecture Hall. Academic lecture, 2 hrs 10. Wednesday, June 27. Guided Tour [6.5] Over-participation in Białołęka district (suburban Warsaw, 5.5 hrs 11. Wednesday, June 27. New Warsaw University Library, Lecture Hall. Academic lecture, 2 hrs <p>Additionally the Mazizone was offered during lunches, dinners and after dinner gatherings Zegrze Lake (INURA Retreat)</p> <p>12. Thursday, June 28 and Friday, June 29, permanent deployment either in the meeting room or on terrace when working outside</p>
Date	June 23-29, 2018
Timing	throughout the event nomadic
Framing/ Objective	<p>Main idea is to provide and exchange information for INURA conference participants, and continuing building up an INURA archive.</p> <p>The target group are conference participants</p> <p>Context and motivation:</p> <ul style="list-style-type: none"> - Share photos from previous conferences - Make available documents such as a) annual reports, b) conference information (programme, meetings points, tour descriptions), c) background information of the visited city Warsaw - Set up collectively the retreat agenda (tradition within INURA) - Provide photos for use in a publication on INURA Warsaw - Provide the presentations of speakers on Warsaw - Provide the presentations of conference participants
SSID / URL	inura.zone
Engagement	This year's edition of the INURA conference was held in Warsaw, Poland. From the very strat of

strategy and Outcome	<p>the conference the Mazizone was promoted by Philipp Klaus who is also the secretary of INURA. In order to easier understand the Mazizone was called inura.zone. He asked the present participants to share their photos, The organisers took an enormous effort to show their city by offering 29 different tours in different districts, central and peripheral.</p> <p>Not everybody was in the previous two conferences (Bucharest 2016 and Havana 2017) and also not everybody gave attention to the deployment of those Mazizones or tried them out. However, Philipp Klaus brought the inura.zone to every single tour he participated in, which were 6 tours with 7 to 15 persons. In these groups was a further occasion showing people the raspberry pie and explain how to use it. It really took quite some effort to talk again and again about the inura.zone and showing the raspberry pie powered by a solar power bar as people were more interested in the neighbourhoods, architecture and other developments they were shown and explained. Some people became curious as Philipp Klaus 'constantly' uploaded pics and talking about it. In the evenings academic and public lectures were held in the New Warsaw University Library. The second evening a presentation with screening was held in order to explain better the inura.zone and how to use it. Also, the head organiser of the conference, anthropologist Kacper Polblocki, reminded the participants to use the inura.zone and share photos from the tours and Warsaw in general. In the retreat at Zegrze Lake there were more opportunities to deploy then inura.zone. About 30 people attended the retreat.</p> <p>At the very end of the conference pictures from 19 people were uploaded in the specific folders of the inura.zone and only 4 of the 29 tours were not covered/documented at all.</p>
Successes and failures	<p>The use of the mazizone/inurazone is constantly increasing from year to year, from conference to conference. Unlike the last two years the collective programme setup was not done with Etherpad as the chair of the session did not wish to, mainly because she was not familiar with it at all and on the same time is a very skilled moderator. Some notes were taken in word.docx and then uploaded. This is a new achievement.</p> <p>Philipp Klaus took notes on etherpad from a long discussion in which all people participating in the retreat shared their thoughts and impressions on what they experienced in Warsaw. Of course the notes are very basic as he is not trained in simultaneous writing. One person added / corrected her notes during the session. Asking people to have a look at the document and add, delete or correct did not help, no one did.</p>
Lessons learned	<p>The advantages of the raspberry pie / mazizone of proximity and independence can also become disadvantages. In order to add documents, upload photos, correct texts people need to be rather close to the raspberry pie and can not be active when they are in their hotel rooms or in the garden or wherever. A solution could be offering an www space in a protected webarea.</p> <p>It would be great if a (protected) webpage could be easily synchronised with the SD-Card of the Raspberry Pie.</p> <p>The solar panel power bar is not enough to run the inura.zone, especially in countries and/or seasons without enough sun to charge it. Altogether it went well as the bar was loaded overnight from the plug.</p> <p>In general it was a mistake to depend on my computer to charge both the solar charger and power the Raspberry Pi (when the charger was empty). This made the MAZI Zone dependent on my presence, and my laptop staying open ... couldn't even go to toilet :-). As an admin I spent a lot of time on the folder management on NextCloud, focus on clear structure and well understood names of folders and files. It felt always stressful to ask people to join to hear the often "I cannot access", "you need to type the URL", "what is this?", and so on.</p>
Photos	<p>http://demo.mazizone.eu/nextcloud/index.php/s/CWxy4scto95w8pB?path=%2Finura-zone</p>

Appendix II. Main events' calendar in the MAZI Zurich pilot

M1 Sarantaporo Workshop	M2	M3	M4	M5	M6
M7 'Sharing knowledge for sharing space' workshop Zurich- Athens	M8	M9 2016 INURA Conference, Romania, MAZI Zone	M10 Venice Architecture Biennale, CoHab Athens + NetHood	M11 Lucerne Inter- & Transdisciplinary Day Conference, 1st MAZI Zone	M12
M13 Belgrade Nova Iskra MAZI Zone;	M14 KW1 BG MAZI Zone	M15 Wunderkammer MAZI Zone	M16 Karthago MAZI Zone	M17 NeNa1 'Bio- Internet' MAZI Zone	M18 D2.7 Athens Universse 2017 Conference
M19 PARLA kick-off: NetHood, NeNa1, EXIL.	M20 Wunderkammer MAZI Zone permanent installation.	M21 KW1 1st EEH Concert; KW1 "The other city' book launch; Heizenholz MAZI Zone.	M22 KW1 Kunstwerk1 Exhibition Opening; KW1 Intranet Survey Debriefing.	M23 2017 INURA Conference, Cuba; Mehr-als-Wohnen MAZI Zone; CoHab-Exarcheia monthly meeting, Athens.	M24 D2.8 KW1 2nd EEH Concert; KW1 Internet Salon; Kunstwerk1 Thursdays; Openki Kunsthalle Opening.
M25 Presentation of Co-Hab at NeNa1 by Alexandros Papageorgiou	M26 iMAL conference MAZI Zone; Openki Night hybrid letterbox	M27 University of Aegean + Mosaic MAZI zones	M28 Thinking Toys for Commoning Workshop; Openki festival	M29 MAZI Workshop in Zurich; Kunstwerk1 Feedback; L200 MAZI Zone	M30 Kunstwerk2; ETH reunion MAZI Zone M33 D2.9 ParkPlatz Openki course; MAZI zone

*MAZI Zurich pilot started M13

**The reported period of M18-M24 is highlighted