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The Urban Lab of Europe !

The URBAN SOIL 4 FOOD project Journal N° 3

Project led by the City of Maribor



**CIRCULAR
ECONOMY**



The Urban Soil 4 Food project

The **URBAN SOIL 4 FOOD** project will test a model of urban soil-based economy circle in order to increase local food self-sufficiency and to minimize the city's environmental footprint. The aim is to use cities' internal waste – particularly excavated materials from construction sector – as input material to produce recycled, standardized and certified soil for meeting cities' needs, and notably to be reintroduced to the ground in order to improve soil quality and increase food production. A pilot system for urban soil production including wastes from different sectors will be tested, and urban community gardens will be developed using the standardized soil produced. In parallel, food distribution will be structured around the creation of an urban food chain and local urban food labels, and an Agri Living Lab will be set up where different experiments relating to social innovation, urban environment and agriculture will take place.

Partnership

- City of Maribor
- Institute for Innovation and Entrepreneurship
- E-institute for comprehensive development solutions
- AKTIVIRAJ SE Development of social projects and promotion of active life association
- Snaga
- Wcycle Institute Maribor
- Deltaplan
- Slovenian National Building and Civil Engineering Institute (ZAG)

The report is based on interviews with stakeholders in January and March 2019.

- Brina Lazar, City of Maribor
- Jasna Beršnjak, Andreja Kuhar and Jernej Šorli – Aktiviraj se
- Marko Kac and Janja Viher - ZIP
- Igor Kos – Wcycle Institute

Report approval by Brina Lazar, Urban Soil 4 Food Project Manager

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1. Executive summary

Urban Soil 4 Food has entered the operational phase! Just like the preparation of the soil for the planting, just in the same way the project partners have been preparing for a long time to finally launch the project activities. The most relevant things that have happened in the past six months are the public opening of the community gardens and the prototyping of the service platform.

The community gardens have been prepared by the City, Aktivire.se and many volunteers over the winter months, in order to prepare the space for accommodating the plots, the community activities and the open space. A common effort was made to define the open call process, identifying the criteria for the selection of the people who would have a pro within the garden. Furthermore, great attention was posed on developing the management model of the community gardens. Finally, a number of public workshops were held, for which there was much more interest than expected as there were planned 250 people attending in total but already 280 people were reached even though there are still two other workshops to be held.

The web platform is now ready to be launched, having been prepared both for desktop and mobile phone. Aside of the technical development of the application, a great amount of work has gone in identifying the needs and possibilities of the farmers providing the food as well as the requirements and constraints of the public institutions acquiring the food.

Last but not least, the procurement process for the soil production facility is proceeding. For this,

the rental agreement for the pilot site has been signed and the environmental permits for the development are undergoing, although this will take time due to administrative processes.

A report was published on the conditions of the soil in the City of Maribor, which had a great impact on public opinion as it resulted that many areas are in poor conditions. This highlights the importance of having certified soil, as a certification would show its components. This also allows to enrich existing soil with the needed nutrients, avoiding to saturate it by adding existing components.

Overall, much work has been going into communication of the different project components. For example, for the urban gardens there are different phases related to the selection of the vegetables to grow, the seeding phase, how to plan the garden.

The realisation of activities of the project cannot go without any challenges, which up to now have all been overcome through the partners' cooperation. For example, we will learn about how demanding it can be to involve local farmers when wanting to address their production and sales through a web-platform. We will discover how gardening can be an opportunity for social inclusion but it's often much more work than expected to organise communities.

This and much more is ahead of us in this journal!

2. What happened

2.1 Community gardens are open!

Speaking with Jasna Beršnjak, Jernej Šorli and Andreja Kuhar from Aktiviraj.se, we understand the whole process of the development of the community gardens, and how these last six months have been particularly important to be

able to open this space to the public. We walk through the garden plots in a (surprisingly) sunny day, which makes the colours of vegetables patches amazingly bright.



Community gardens. Source Aktiviraj.se

The garden is beautiful, how did you get here?

We built this garden over the last year with the precious help of many volunteers. We follow the permaculture principles and have therefore tried to use as much as possible what was already on site to make the gardens. We made wood chips out of the trees that were here before. We make many trials and experiments on how things can work differently, we made an experimental model garden with the “four sisters” (sunflower, corn, pumpkin, beans) to see how plants can grow

together in harmony, we experimented with vertical beds with really good results (amazing watermelons, zucchinis and chilly peppers) we established social-integrational garden for work with volunteers, the children-experimental garden is still under construction with main infrastructure already set. During the summer, we had to cut the grass many times to “clean” the land and with that made it each time more pleasant for walking through.

We worked with the motto “If you don’t know, try it, experiment, educate yourself!” because we want to speak out of experience and that is the best way to convince individual gardeners that

come here, to work more nature-like way on their plots. We show them that it works on our examples! Our experimental gardens are almost like a “know-how toolkit” for individual gardeners from the city.

How does the garden build a community?

This garden is an opportunity of social inclusion for many people, as we involve unemployed people, part time employed... and there is also a Palestinian boy volunteering and thinking about taking care of one of the plots to use his time constructively. In fact, the garden is not just about working the land but there are also trainings about how to plant, take care of the soil, plants, etc.

The community is built around doing things together, exchanging. People like to come to speak to one another. For example, last Saturday

we had a social event-work action where all different sections of the gardens were involved in cleaning and tidying up.

Though, I must say that this social garden used up more energy than expected for maintenance! It is still our mission to build a community with all the individual gardeners through workshops, lectures, “open kitchen” days, etc. through season 2020, starting with lectures and movie projections this end of the year.



Garden activities. Source (cc) Eutropian based on Aktiviraj.se images

How is the garden organised?

There are 12.000 m² of garden space, which allows to have 66 individual plots of different sizes, according to the needs of the people (30m² and 50m²). Aktiviraj.se takes care for the garden as a whole. We (organize) work on social-integrational garden and model garden - on

Wednesdays we have between 8 and 15 of the people coming to work on the space, which is very important. The regular maintenance of the space is guaranteed by the Aktiviraj.se team, with one person full time and another two part-time.

What are the biggest challenges that you overcame and that are ahead?

There are always little changes of plan along the way, especially when we actually started building the gardens. The most relevant are probably two: the reaching out to the gardeners through an administrative and bureaucratic process and the impossibility of making use the garden products. The City manages the assignment of the plots, as this is a public space, and this meant we had to work a lot together to develop a call that would serve the purpose and that especially would

meet the timing of the garden. Another thing that was a surprise to us was that it's not possible for us to donate food from the garden to social kitchens because they need certified food, so in the end the food we produce is donated to the volunteers that work here.

An open challenge ahead of us is the development of a sustainable business plan for the garden after the end of the project, we are working on this with the City at the moment.

2.2 Web platform to organise sustainable offer and demand

Our interview with Marko Kac and Janja Viher from ZIP helped us understand how Slovenia is only 30% self-sufficient for food, mainly vegetables, whilst the rest of the food must be imported. For this

reason, the project aims at strengthening the local production by improving the connection between farmers and consumers, primarily institutional ones who have large consumptions.

Web-platform poster. Source: ZIP

The platform is nearly operational, what is the feedback of stakeholders?

The platform has the main function of providing an overview of the produce of local farmers and to put them in contact with potential clients.

For this, the platform is multi-language. The platform targets firstly individuals, secondly restaurants and tourism sectors and thirdly, very importantly, the public authorities.

We have had over 90 meetings with stakeholders, 20 meetings with institutions, amongst which the

Ministry of Agriculture, the Region and local institutes, and tourist providers. There was a strong interest from the Ministry at national level for the proposed solution. An important aspect is that in 2021 there will be the Slovenian gastronomical division, and the app can help ensure that food served is local, for this they need information on the available quantities.

How will the platform operate?

The web application is an innovation in the provision of local food supply.

By end of this year, we expect to have 500 local producers registered on the platform.

There is already a lot of information about farmers' profiles (products, quantities, availabilities of time, etc.) and therefore the platform already has some test information on it.

LOKALNA ZDRAVA HRANA [Ponudniki](#) [Vprašanja](#) [Kontakt](#) [Inno-rural](#)

Odkrijte ponudbo lokalne hrane

Izberite npr "kisló zelje" ali "Pri Baronu" Izberite občino

Kategorije izdelkov

Zelenjava (37) Sadje (18) Mleko in mlečni izdelki (2) Med in čebelji izdelki (1)

Blitva št. ponudnikov: 1
Blitva najverjetneje izvira iz obalnih predelov Sredozemlja. V svojo kulinariko so jo uvedli še stari Grki in Rimljani. Rimski trgovci in vojska so jo ponesli tudi v severne dele Evrope, kjer kljub nižjim temperaturam kar dobro uspeva. Še stare celine.

Brokoli št. ponudnikov: 2
Brokoli je primeren kot dietna prehrana, saj je lahko prebavljiv. Vsebuje sestavine, ki preprečujejo razvoj raka, pomaga pri slabokrvnosti in zmanjšuje nastanek bolezní srca in ožbij. Priporočljivo ga je uživati v nosečnosti. Brokoli vsebuje veliko

Buče št. ponudnikov: 1
Buče imajo zbrane diuretske učinke (pospešujejo izločanje urina), priporočajo pa jih kot prehrano (jedem, ki jih pestijo bolezní kot so protin, vnetje ledvic, revmatizem, vnetje sečnega mehurja in sladkorna bolezen). Buče uživamo kuhane (pine), pečene

Bučke št. ponudnikov: 1
Šele pred kratkim so raziskovalne študije dokazale, kako lahko čudovite so bučke, ko gre za ključne antioksidante – karotenoide. Prav tako so polne luteina, zeaksantina ter beta kriptoksantina (trije ključni karotenoidi za zdravje). Ševeda pri artiki.

Screenshot of the web-platform. Source: ZIP

What is the relationship with the farmers?

Farmers were not happy to provide information about quantities because not all sales are registered and therefore they are worried of having tax authorities reclaiming money.

Having a direct contact with them is necessary to develop their trust.

What are the main ambitions and challenges ahead?

The ambition is for the project to become self-sustainable after the end of project, therefore becoming a sellable product.

The main challenges with clients and farmers are trust because farmers are worried about paying more taxes, but we need to show the potential

profit of the service; that there were similar projects in the past that didn't work, because they were not integrated; and that farmers have a limited technological literacy, so we need to support them to be able to upload all information and keep in contact with clients.

3. Analysis of the project challenges

The US4F project has not encountered any main challenges within the last six months, overall the situation remains rather stable in relation to the previous journals.

Some concern within the project is raised by the participatory dimension, as it is hard to communicate circular economy to a broad public and on the other hand when it comes to having close to home a waste treatment plant, even if not polluting, people reject this option, as it has happened with the first pilot plant location. Another challenge within the project is the financial sustainability of certain components of the project, as these currently are still developing a realistic business plan for the period after the end of the UIA grant. Finally, a major concern is the upscaling of the project.

Not so much within the city where there is a strong political commitment, but rather in other cities in Europe, as the US4F is highly dependant on pre-conditions that have been built over a long period of time. Namely these are the political commitment, even with the recently elected Mayor, the creation of a governance system through the establishment of W-Cycle institute, and ultimately the investment in infrastructure facilities that enable the circular economy within the city, such as innovative waste facility premises.

The table below summarises the various challenges identified within the UIA project, highlighting the main obstacles and how the partnership is trying to overcome them.

MAPPING URBAN SOIL 4 FOOD AGAINST THE ESTABLISHED UIA CHALLENGES

Challenge	Level	Observations
1. Leadership for implementation	Low	There still are no major challenges in the coordination and, as previously highlighted in Journal 2, the change of the Mayor has not affected the political commitment in the project, which remains high due to its strategic role in the city’s circular economy strategy.
2. Public procurement	Low	The public tender for the technology to be implemented within the soil production facility has recently been closed. It was a rather long process due to change of the land where the plant would be built and the identification of the technical requirements for the procurement process. From this experience the city has learnt how important the citizens’ involvement and political commitment are to ensure a successful implementation.

3. Integrated cross-departmental working	Low	<p>For the moment being, the different departments and in-house companies appear to be cooperating well even thanks to the involvement to the WCYCLE institute, which is composed by the different companies. As already explained in Journal 1, being the Cycle board composed by the major in-house companies of the city of Maribor is key to create a structure for cooperation, which is embedded in a strong political commitment.</p>
4. Adopting a participative approach	Medium	<p>The effective participation will not be a problem for the community gardens, but it has proven to be a challenge in the case of the pilot plant, being this something the public struggles to relate with and local communities usually don't want close to home. The rising awareness around the circular economy discourse helps people to get closer to the issues. For this reason the city project partners plan to organise a series of public events in which the functioning of the pilot plant will be explained.</p>
5. Monitoring and evaluation	Medium	<p>Because there are many innovative elements within the project that still don't have a formal certification system, as in the case of the soil production or the pilot plant, special attention will have to be paid by technical partners to create a suitable monitoring mechanism to assess the development.</p>
6. Financial Sustainability	Medium	<p>At this stage both the community gardens and the web platform are aiming at developing a sustainable model for their activities after the end of the project. These two cases represent different extremes of the spectrum. On the one hand community gardens have a hard financial sustainability, especially at the scale of the single garden as it would be easier to create it at a city-wide network scale, as this would have the necessary critical mass. On the other hand the web platform and application have a strong potential of becoming economically viable, as they deliver a service that could have a great interest to the different users (producers and public administration especially). Once again the scale is essential to ensure the functionality, as too few producers or purchasers would be insufficient to feed the system.</p>
7. Communicating with target beneficiaries	Low	<p>Circular Economy is an emerging topic that the wide public is not necessarily familiar with yet, reason why public events are not necessarily attractive to many people. More effective appears to be the creation of events and debates around the practical implementation, as in the case of the community gardens. For this reason, the partners are paying special attention to the development of an engaging communication strategy. Obviously not all challenges with the public can be necessarily resolved through an effective communication. For example, as explained in Journal 2, the location of the soil production facility was changed due to the negative response of local inhabitants, who felt disregarded by the administration for a long time. Such challenges are beyond communication, but rather involve an effective participation strategy in the administration's decisions.</p>

8. Upscaling

High

The project is strongly embedded within the Maribor context and strong experience, which would not be easily replicated in other contexts, especially if adequate financial resources for implementation are not allocated. For this reason, the connection of the Maribor experience with the Action planning of the EU Urban Agenda Partnership on Circular Economy can be extremely beneficial.

The City of Maribor has been very active in promoting their practice but no city has yet expressed interest in replicating the practice, only interest in knowing about the single elements of it for now (such as the gardens or the soil production). This is probably due to the fact that the implementation of such a project due to the fact that the local conditions are not easily replicated. The project is embedded within a strong political commitment, that has brought to a circular economy strategy of the city, the establishment the W-Cycle research centre whose board is composed by representatives of the in-house companies of the city, and finally a substantial investment (also through the use of EU funds).

To upscale the project within the city, the City of Maribor is looking into creating a network of the urban gardens, looking into developing common guidelines for all gardens, which would offer the possibility of replicating urban gardens in new locations.

As the project is heading towards the end, within the next journal the web-platform and the community gardens will have been completed,

whilst the pilot plant will be in the process of being established.



Web platform
Web-platform is nearly ready to be launched.



Gardens
The gardens are nearly nearly complete and used by the community.



Pilot plant
The pilot plant process is at the beginning. The public procurement process is nearly over, based on this the plant will be built and become operational.

Advancement of the main US4F project components. Source (cc) Eutropian

4. Take-aways

The last months of the project have taught the project partners many things, due to the rapid development of the activities into a more operational phase.

Involving the end users is essential to address the real needs: to develop the web-platform a great number of interviews and focus groups were carried out with all relevant stakeholders to identify what they could offer, what they needed, what they aspired for.

Communities are built around common experiences: the community gardens are not just

a sequence of private plots but a common shared space only when you ensure that people actually do things together, like cleaning or harvesting but also having fun!

Planning time ahead: the implementation of local projects often ends up requiring more time than originally hoped for, as there are no possibility for extensions of the project, the local time has planned ahead the request of administrative permits, like environmental ones.

5. Coming next!

The winter months are ahead of us and in a circular economy project the seasonal cycles are very important and must be taken into account.

The community gardens will still be running but will be “quieter”, with the soil resting and getting ready for a blossoming spring. During the autumn there will be the preparation of the orchard with fruit trees. The last two public workshops will be held, reaching many more people than originally expected. The ambition is to create a network of urban gardens within the city, therefore the Municipality is looking into how to develop common guidelines throughout the city, which would offer the possibility of replicating them also in new locations which would be suitable for food production. So, in the coming months there will be some work to be done with all the gardens and the municipality to reach common agreement on new regulations.

The web platform and app will be finished and made public. Most of the action in winter will move towards the realisation of the web-platform, which will be operational and ready to connect local farmers with consumers, promoting short distribution chains. The goal is

to target age group 15-35, younger generation to recognise and be involved in the consumption of local produce.

The project will start to work with the local kitchen, as planned in the application, but due to finances it cannot be a newly established one, therefore the idea is to link local produce to a rented existing kitchen (jams, seasoned vegetables). There is a middle school for gastronomy where there are 15 stoves, so everyone could cook simultaneously. They have already spoken to the headmaster who is willing to rent out the space. The plan is for people to take home the produced jars and part of it can go to social projects in the city. This action will be closing the circle from production to consumption, as the city will buy produce from the local farmers involved in the web platform and the kitchen activity will be in autumn and winter because produced vegetables will be preserved.

Finally, the upcoming months will be particularly relevant for the development of the soil production facility, which will be under construction and ready to create fertile soil out of urban waste. This is essential for the real implementation of the project.

Urban Innovative Actions (UIA) is an Initiative of the European Union that provides urban areas throughout Europe with resources to test new and unproven solutions to address urban challenges. Based on article 8 of ERDF, the Initiative has a total ERDF budget of EUR 372 million for 2014-2020.

UIA projects will produce a wealth of knowledge stemming from the implementation of the innovative solutions for sustainable urban development that are of interest for city practitioners and stakeholders across the EU. This journal is a paper written by a UIA Expert that captures and disseminates the lessons learnt from the project implementation and the good practices identified. The journals will be structured around the main challenges of implementation identified and faced at local level by UIA projects. They will be published on a regular basis on the UIA website.



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