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URBAN SOIL 4 FOOD

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Project led by the City of Maribor

Summary

The Urban Soil 4 Food (US4F) project reached its end, and this last Journal aims at reconstructing its journey and the impacts it has reached. The City of Maribor, Snaga and Wcycle institute, which bring together the in-house companies of the City of Maribor, work together to implement the *Circular Economy Strategy* of the city approved in 2018. In particular, the Wcycle institute brings within its board the main utility companies of the municipality of Maribor, which greatly facilitates the implementation of this strategy. Material streams of waste produced by the city are then being redirected into the city flows; in the framework of US4F, the focus was on bio waste as well as soil coming from construction works. A great value in terms of stakeholder involvement was notably played by the community gardens during the project implementation, which were established over a 3000m² plot, because people could get in contact with circularity through non-formal educational programs carried out together with local NGOs.

The pilot for the development of a recycle and earth production plant, the main project investment, was supposed to start to be built in the first half of October 2020 but due to a number of delays in the permit process, the instalment is planned by end of 2024 due to a harsh opposition of local inhabitants of having a waste plant close to their homes. A further element of delay was linked to the fact that all three providers for the machinery are not from Slovenia, but from Serbia, Croatia and Austria. Finally, once the permits were approved, there was a civic opposition by local inhabitants to the installment of the plant which triggered a law case (still open). Currently the two options would be either to install the plant and possibly remove it should the case be lost by the City of Maribor, or delay the installment with the subsequent loss of the UIA co-funding.

The urban community gardens have been very successful and active thanks to the very strong engagement of the local communities using them. The trainings as well as the harvesting and community activities gathered much attention and involvement from people, also thanks to the strong commitment of project partners, which raises an issue in terms of sustainability after the project end. At the same time, the gardens had a lot of surplus production which was donated to CARITAS, which has a soup-kitchen, the only ones accepting fresh non-certified food and coming from stores. Currently, there might be more garden tenants coming to this one as some from another garden that were not officially assigned the plots might be relocated, making use of the educational space that is no longer being used.

A very innovative activity within the project was related to the Innovation Cycle that foresaw crowdfunding activities and trainings for startup companies willing to develop circular economy products out of food waste. The crowdfunding program has had the opportunity to bring resources to a number of pilot projects which have had the opportunity to be tested on the market.

Furthermore, a very relevant outcome is the mobile application to put in contact the consumers with the producers of local food. This has been a successful prototype app during the project duration, bringing together farmers with consumers and public administration, for

what concerns public procurement. Currently the app is being expanded to other municipalities in the metropolitan area of Maribor.

Finally, an overall reflection on the main highlights and outputs of the project is provided, in the light of the COVID-19 pandemic, which has obviously globally changed all plans, not only for this project.

The US4F project is over and one of the upcoming challenges is how to ensure that stakeholders will be able to carry out further their activities and how long-term sustainability of circular economy projects can be supported. This is a challenge that is common to all European projects, reason why the issue was already addressed at the time of the application. The most important aspect, especially in terms of circular economy, is to think of the business models for the different project outcomes, such as the soil certification or the urban gardens. A last element of sustainability is also related to the possibility of further elaborating and developing aspects and elements of US4F within a new project, like in the Food Wave project, in which Maribor is taking part together with the City of Milan.

Community gardens

The community gardens have probably been amongst the most successful and participated activities throughout the project. This was also supported by the fact that people during the pandemic could and wanted to be in the open air, and many people due to the economic and social crisis needed accessible food.



Image: Community gardens potatoes produce. Source: Aktiviraj se

“During the pandemic people were searching for gardens, really intensively, for two reasons: escaping from the home, some form of detoxification, and the other reason was for the food. Mostly families started to appreciate having this small piece of land where to grow your own food. We think that the next spring will also be the same. We believe that if we are opening a space for thousands of gardens, it will be full rapidly. From the project point of view, the importance of the food chain and the food locally produced went really high as people started to realise its importance.”

*Andreja Kuhar, Aktiviraj se
Community Gardens Coordinator*

The urban community gardens have been very successful and active especially during the summer months. Volunteers were keeping the spirit in the gardens - all the 66 individual gardens were full, even though some people were dismissed as they were not adequately taking care of their plots; consequently, an invitation was open again for welcoming new participants, so that these plots could be reallocated. What emerged is that some people don't know the real effort required for taking care of a garden plot.

All sorts of contests were carried out for the production, such as the biggest tomatoes, or those vegetables with the funniest color or shape, to which many people participated. The

gardens had a lot of surplus production which was donated to CARITAS, which has a soup-kitchen, the only ones accepting fresh food not certified and not coming from stores. For instance, the municipal soup-kitchen is not allowed to collect non certified food, reason why in autumn there will be a certification of the community garden vegetables as locally produced.

A number of workshops were held in the gardens and open to the public, in order to teach people about gardening and food. Even people that own a plot in other gardens were coming to the US4F garden for taking part in the workshops. These were held on a wide number of topics: herbs distillation, herbals, health and immune systems from herbs, no dig garden, seeds production, bees (there are two beehives in the gardens), take care of orchard and food trees, self-sufficiency, movie night about food waste, storytelling to children about nature, wild food, effective microorganisms.

"We've been discussing what will be the sustainability of the garden since the beginning of the project. The garden will stay, but we don't know yet who will manage it and the people there. Also, it is not only individual plots, there is an orchard, a part for children, a garden for social integration and a model garden. Even though we can increase the number of individual plots, there are still 60+ people there to be managed and controlled. This is still a question..."

Andreja Kuhar, Aktiviraj se



Image: Sunflowers in community gardens. Source: Aktiviraj se

There was an ongoing dialogue amongst the municipality and some other community gardens to develop a shared governance model of the community gardens in Maribor, but there still is no specific plan nor leadership of the process within the municipality, for example by appointing a responsible person for community gardens. Community gardeners feel this is a problem also because the gardens are increasing in number throughout the city, and the

management of such spaces cannot only be left to volunteering, as it is extremely demanding to organise activities, ensure the dialogue amongst gardeners and keep the interaction alive.

Despite the ambition of sustaining the facilitation of the process after the end of the project duration, before the postponement, this was not further carried out, therefore the gardens have remained run by the city but there has been a radical reduction of community activities within the gardens.

Innovation Circle

Another component of the project was the support of the innovative products in the field of circular economy, especially within the agri-food sector.

The E-zavod institute is responsible for the development of the innovation trainings and workshops within the project. Due to the great interested arisen in these activities, more workshops than planned were carried out and the partners are now thinking about how to prolong these activities beyond the planned period and outside of the the official US4F activites, as a possible project spin off.. For instance, there were five planned workshops for exchanging experiences in innovative urban gardening but instead six were made due to the high demand. The topics of interest identified were many, some lately selected for the workshops on the exchange of experiences in innovative urban gardening were:

- Organic gardening
- Sustainable gardening without digging
- Composting
- Planting through the season, crop rotation, good combination of plants
- Growing seeds on our own
- Fruit trees
- Biologically dynamic was of gardening

The workshops firstly made poster sessions to identify needs and obstacles. On 12th February 2019 was the first workshop, "do it yourself – urban gardening for everyone", which was an open public event with 64 participants. There was notably as speaker Miša Pušenjok, who is a well-known and established agricultural consultant and vegetable specialist at the Agricultural and Forestry Institute Maribor. The US4F project was also presented in the show. The second event had the same speakers with 33 people but differed from the previous one because it was held in a retirement home – the active people were interested in having a garden. The third workshop was held on 17th April 2019 targeting schools, with 30 people (teachers, parents and some students aged 13-14 years). In fact, there used to be the tradition in Slovenia to have gardens in schools, which is now starting up again.

Concerning the innovation in urban gardening workshops, participants chose 50 topics during the first meetings and starting from there, the top 6 were selected depending on needs:

- *Why grow organic in your community gardens.* The speaker was Martina Bavec, the responsible person for organic labelling in Slovenia. Participants were people with urban gardens and there was a buffet set up by a social company preparing local food products.
- *Sustainable gardening without digging soil.* There were 42 participants, which were potential tenants of urban gardens. This was a practical workshop in the urban garden Maribor Culture Capital, with whom there is a good cooperation.
- *Composting - key steps.* The speaker was the president of permaculture in Slovenia, there were 30 participants and again it was very practical by using worms in the US4F garden.
- *Planting through the season - importance of crop rotation.* It had 30 participants, and due to the rain it was held in the pavilion of the Capital Culture garden.

- *What seeds can we grow on our own.* It took place on 5th September 2019 in the US4F garden and 22 participants attended.
- *Planting food trees in biological dynamic way.* It was an extra workshop with 22 participants who planted apple trees.

Overall, participants were 60% women of different ages, who attended mainly for hobby and to get healthy food.

Furthermore, the reader will remember that in previous journals a call was opened for the selection of ten products to be mentored. As a result, twenty ideas were submitted to the open call and evaluated by a jury composed by the E-zavod institute and the City of Maribor. All the projects are connected to the circular economy, waste food, agriculture and gardens. The selected ten projects were supported with indirect funds for receiving advisory and support for materials, as they were supposed to develop the selected products with two prototypes. The support depended on the project needs and a public procurement process was carried out with three offers to select the cheapest option to be provided to the chosen projects (i.e. in terms of material or service).



Image: Prototypes of circular economy products

Furthermore, a crowdfunding campaign was carried out for five selected projects. Some were selected through the same open call for the mentoring program, others were found through other channels. All projects underwent an interview to assess the potential success of their product for a crowdfunding campaign. They received support to develop video campaigns, which were carried out through the platforms Indiegogo, Kickstarter and the local one Adrifund.

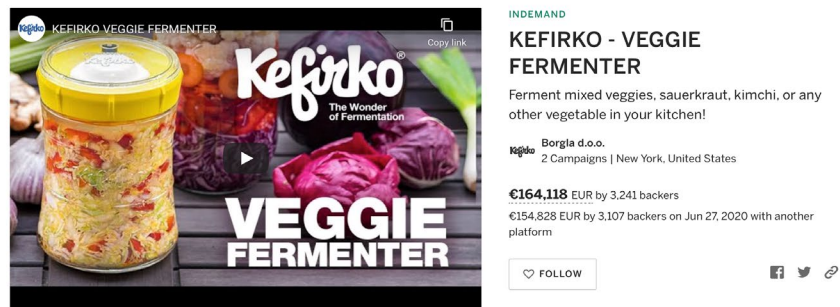


Image: crowdfunding campaign of the Veggie Fermenter

What makes a project crowd fundable?

- 1) Wide public of users;
- 2) Interesting story behind to attract people to support the project;
- 3) Products should not have a very low price;
- 4) Large social networks support the possibility of reaching the aimed goal.

In fact, it is not the platform that makes the difference but the social network of the promoter. If projects don't reach the aimed target they will lose the collected money, meaning that the entire effort will vanish. When this happens many projects reapply with lower targets and promote more their product. The risks in fact are:

- aiming too high
- not being proactive enough

"We are promoting the products, but this does not make a big difference. You have to be proactive by yourself. Crowdfund is also used for the testing of product, a sort of pre-marketing. You will get information on the products if they are sellable or not."

Darko Ferčej, E-zavod

Based on this experience, the learnings from E-zavod have been:

- There is a growing interest in local agriculture, this was lost over the past decades but is returning;
- It was very interesting what arose from modules with SMEs, as in the crowdfunding campaign it was very important to identify the most important aspects, that determined the role and recognition of the importance of local food production;
- In the first workshop, there was a very wide audience with from one hand very specific questions related to their specific needs as well as on the other hand broader questions. Partners can handle this audience if they are well prepared to answer such spectrum of questions and particular demands;
- The second slot of workshops was appreciated by the audience, as it focused on how the EU is supporting concrete local projects. Although it is hard for people to

understand non-infrastructure projects funded by the EU, it is a positive exercise against EU-skepticism;

- The activities were “food for thought” for politicians, showing them they can impact on quality of life of people;
- Finally, the US4F project was awarded a certification and presented to the EU Commissioner for Cohesion and Reforms (Elisa Ferreira) during the Cities Forum 2020 in Porto, which was very important to ensure political support at local level.

Short Food Chain Distribution Platform

The Institute of Innovation and Entrepreneurship set up a web platform to address food cycles in Maribor. The main issue is that Slovenia is less than 40% food self-sufficient, therefore there was the ambition for US4F and other projects and initiatives to impact on increasing the local production. In fact, Slovenia produces much more milk than it consumes internally, up to 120%, but not enough vegetables, as these are produced between 25% and 30%, as opposed to the nearly 150,000 tonnes of imported vegetables in 2012. At the same time, in Slovenia there are around 60,000 farms and half a million hectares of arable land, but many small local farmers have a vegetable production but struggle to sell it because they are too small to access the large distribution systems. Therefore, we have an evident mismatch between demand and supply.

When the US4F project started in 2017, in order to establish a local food chain and label, the first important step was to create a relationship of trust and collaboration with the farmers of the region of Maribor. The project's team visited farmers in their farms or houses, trying to identify their needs and the difficulties they were encountering in the food distribution practice. Therefore, the initial phase for this was to map existing farmers, their products and needs, to then match them with potential procurers. Over the first year of the project, the main activity has been to carry out a questionnaire with local producers to better assess the number and capacities available. The questionnaires were structured around a number of items:

- Production
- Seasonal offer
- Accessibility and opening hours
- Contact
- Offer in other languages
- Registered business
- Type of produce

The conclusion drawn out of these first encounters was that local farmers have little trust in big food distribution organisations such as markets and supermarkets. Moreover, with online shopping increasingly substituting commerce and physical markets, farmers often complain of the loss of personal contact with the customer, limiting the human nature of commerce and the bargaining practice. As a result, most of them prefer to sell products directly from the production site or their own house. To elaborate the content, over 60 meetings were held, 20 with support institutions such as the Ministry of Agriculture, and many others with local NGOs. As a result, there have been interviews of 18 ecological producers and 83 regular farmers. At this stage a lot of information has been gathered on the type of produce but not precisely on the quantities, which will have to be a further step.

In fact, farmers also don't trust to give information on quantities of their produce as they don't know exactly what could be done with the information. The local food would serve to provide canteens in schools and elderly homes, therefore integrating the supply of the public sector. What emerges in fact is that 10% of the interviewed farmers are already supplying the public sector filling the gaps, not as main producers, whilst the remaining 90% works with private households. In terms of sales to the public, most people would go to buy directly from farmers

but only 5% use Solidarity Purchase Groups (a system of collective purchasing whereby consumers cooperate to buy from producers, aiming at an ethical and fair exchange).

The following step was to work on an alternative solution for them to participate in a food distribution system that would be sustainable for both the producers and the consumers, not having to rely on bigger scale distribution companies. The result of this process is the Inno Rurbs smart App, showing local citizens the offered quantity and availability of the local production. The application is currently being tested and farmers are completing surveys to assess the use and functionality. The US4F developed an app used by B2B, therefore mainly farmers and public sector and later also the tourism sector. The App for Public Administration will serve as a means of information to prepare the public tenders, as currently each school runs its own tender, so it is important to give them accurate information and possibly create the basis for setting up green public procurement criteria.

Currently public contracts are for 5 years, which is not ideal for business plans, so there should be extension for food up to 10 years. For this, there must be an identification of the available quantities and needs of the Public Administration. Because each institution procures individually, the quantities are small so farmers could manage to deliver it. Furthermore, a network of local farmers, which is one of the ambitions of this process, could directly bid for contracts with the public sector. Farmers are already starting to recognise the potential that this service can offer in terms of new business and optimisation of their efforts.

Project challenges

The US4F project has surely had a number of challenges which impacted on the development and results. The COVID-19 pandemic crisis has created or exacerbated a number of challenges, namely the limitations of the activities because of the restrictions, such as social distancing and no gatherings, and the prolongation of the project which forced the partners to adjust their budget.

These are the main critical areas:

- Public procurement, exemplified by the delays in the waste plant;
- Sustainability of activities after the project, exemplified by the community garden;
- Participation of inhabitants, due to the Covid-19 health safety measures;
- Capitalisation on the project results, which had great difficulty in taking place due to Covid and internal change of personnel within the administration.

In terms of public procurement there has been a very limited uptake on behalf of local companies to the public tenders, as previously described, this is due to the challenges companies are facing under the present emergency and will probably last for quite some time.

Long-term financial sustainability appears to be one of the most critical areas. In the case of the community gardens this was exemplified by the fact that the gardens are being run directly by the City and no longer by Aktiviraj se, with a radical reduction of community activities.

In terms of participation, this was already one of the points of attention within the project, as public opposition animated the development of the main project outcome, the waste plant. Furthermore, little public attention is given to circular economy and sustainable food models. Community garden activities engaged public, and the crowdfunding campaigns managed to reach out to certain communities, but overall the public participation was limited not only because of the pandemic.

The last criticality is in relation to the capitalisation activities as the engagement of the project outcomes was not as wide as expected as the main project activity was eventually not carried out, therefore not supporting an exchange of the innovative elements of the project with other cities.

Below is a more comprehensive overview of the challenges faced within the project US4F at this stage.

MAPPING URBAN SOIL 4 FOOD AGAINST THE ESTABLISHED UIA CHALLENGES

Challenge	Level	Observations
1. Leadership for implementation	Low	The Municipality has been working in close relationship with the local partners and all have been very collaborative to develop activities together, for example even in relation to a sensitive issue such as the postponement of the payments due to the prolongation of the project, partners have found a common agreement. Yet the missing of the essential part of the project, the waste plant, has undoubtedly affected the partnership cooperation.
2. Public procurement	High	The public procurement has proven to be the main challenge of the project as it first delayed and then annulled the development of the main component of the project, the waste management facility.
3. Integrated cross-departmental working	Low	The cooperation amongst departments has been successful.
4. Adopting a participative approach	High	Public engagement towards the project was mainly negative as public opinion opposed the implementation of the project pilot. Some participation was carried out in order, less problematic, parts of the project, such as the community gardens, nevertheless with great limitation during the pandemic.
5. Monitoring and evaluation	Low	The monitoring and evaluation activities have been in order
6. Financial Sustainability	High	This has been a great challenge of the project. Firstly, it was not possible to assess the sustainability of the pilot plant as this was not implemented. The community gardens, one of the most sensitive parts of the project in terms of financial sustainability is being run by the city with hardly any larger community engagement, which has been the cause of it stopping at the end of the project.
7. Communicating with target beneficiaries	Medium	Communication activities have been regularly taking place.

8. Upscaling

High

Maribor over the years has been very active in promoting the circular economy model and the US4F activities, but the fact the main component of the project was not carried out, namely the pilot plant, means that there wasn't information to be shared on the most innovative project element.

Take-aways

Having the project reached its end, some key elements can be gathered as learning points for the Maribor community as well as for other cities:

- Do not center your main project activities around an infrastructural development: the public procurement delays and then the public opposition to the development of the pilot plant, main project component, taught us that this makes the project development and success very precarious and dependent on external elements;
- Make civic participation one of the main pillars of the project, not only in activities and topics in which the public can more easily engage, such as in community gardens, but also in more complex parts, like the business models - this will ensure the long terms sustainability of activities because there is a community of reference;
- Make circular economy something that really enters in people's lives by showing not only technical aspects of material reuse but also the impacts on everyday life, on the reduction of personal waste, on the financial benefits that circularity can bring.