

# SHARING

## Stocktaking and assessment of typologies of Urban Circular Collaborative Economy Initiatives

### Case Study

*Maribor – Fostering “cooperative economy  
networks”*

## Contents

1	Executive summary.....	3
2	Overview of the territorial context .....	4
2.1	Profile of the area .....	4
2.2	Status quo, needs and objectives of Urban Circular Collaborative Economy Initiatives in the region 6	
2.3	Policies and regulatory framework affecting the Urban Circular Collaborative Economy.....	8
3	Presence and usage of Urban Circular Collaborative Economy initiatives .....	11
3.1	Main stakeholders in the Urban Circular Collaborative Economy arena .....	11
3.2	Presence of Urban Circular Collaborative Economy initiatives.....	11
3.3	Usage of the initiatives .....	14
3.4	Compliance with SDG indicators.....	15
4	Assessment of impacts .....	17
4.1	General trends.....	17
4.2	Selection of initiatives.....	19
4.2.1	Selected initiatives .....	19
4.2.2	Assessment of impacts per initiative .....	21
4.2.2.2	Sharing Food.....	24
4.3	SWOT analysis.....	25
5	Conclusions and recommendations.....	27
5.1	Conclusions.....	27
5.2	Recommendations .....	28
	Annexes .....	31
	Annex 1: Typologies/domains of Urban Circular Collaborative Economy initiatives.....	31
	Annex 2: List of local sources.....	33
	Annex 3: List of interviews.....	35
	Annex 4: The 2019 SDG Index for European Cities: ranking and scores.....	36
	Annex 5: City Scores for each SDGs .....	37
	Annex 6: Survey results.....	39

# 1 Executive summary

## Fostering cooperative economy networks



### Overview

Compared to the past, when the city of Maribor had fewer initiatives in the field of collaborative and circular economy, nowadays the territory is progressing quickly, and it acts as a forerunner in the country. As a matter of fact, After the world-wide economic crisis, to spur its economic growth, the city of Maribor wants to find a way to stimulate its economy by using new circular economy models. Cooperative networks are expected to stimulate the economy. Additionally, circular management of city's resources is expected to bring about positive environmental impacts.

### Recommendations

- 1 **Better knowledge:** Promotion of the initiatives and projects could lead to greater usage and subsequent greater environmental, economic and social impacts.
- 2 **Better regulation:** Reduction of legislative burdens on small initiatives should be achieved through simplification of the regulatory framework and contraction of legal acts and statutory acts.
- 3 **Better funding:** The municipality should try to extend the network of relevant institutions to the local private sector and make greater use of the Public Procurement Act.

### Impacts

#### ENVIRONMENTAL

- 1 Reduction of natural resources use
- 2 Prevention of food waste
- 3 Production of quality soil
- 4 Increase of recycling practices

#### SOCIAL

- 5 Increased interactions between users
- 6 Increased savings
- 7 Easy access to good quality products

#### ECONOMIC

- 8 Creation of employment opportunities
- 9 Generation of savings



### INITIATIVES SCREENED:

- Urban soil 4 food  
Community garden/waste collection/treatment
- Cinderella  
Waste collection/treatment
- Robin food  
Food sharing

<https://www.collaborativexcircular.com/>

## 2 Overview of the territorial context

This Chapter gives an overview of the characteristics of the area considered, and links them with the territorial needs and objectives as regards the Urban Circular Collaborative Economy. It provides insights on the existing policies and regulatory framework affecting the development of Urban Circular Collaborative Economy initiatives. Finally, it identifies the main actors operating in the Urban Circular Collaborative Economy arena.

### 2.1 Profile of the area

The city of Maribor is located in the North-Eastern part of Slovenia, close to the Alps and the Pannonian lowlands, only 18km away from the Austrian border. With 147.5 per square kilometres of surface area, Maribor is ranked 40<sup>th</sup> among Slovenian municipalities<sup>1</sup>. However, in terms of population, Maribor is the second largest city in Slovenia, with 103,789 inhabitants in 2018<sup>2</sup>. As a result, the population density in Maribor is higher than the national average: 785 inhabitants per square kilometre, against 121 inhabitants per square kilometre in the rest of Slovenia. However, the population density per square kilometre in Ljubljana remains higher, with 1065 people per square kilometre.

On average, Maribor and the Podravje region, region in which the city is located, perform weaker on various economic indicators when compared to the rest of the country. The average monthly net earnings in Maribor reach EUR 1084, which is lower than the average net monthly earnings in Ljubljana (EUR 1298,96) and lower than the national net monthly earnings (EUR 1162,67)<sup>34</sup>. The highly educated employed persons in the Podravje region earn on average EUR 120 per month less than the national average of EUR and EUR 320 a month less than in the Central Slovenia region with the same level of competence<sup>5</sup>.

The unemployment level in Maribor is higher than the central parts of Slovenia. Among the people aged 15-64 (i.e. working age population), about 52% were employed or self-employed, which is less than the Slovenian average (60%). Among the active population of the municipality, as of data from March 2019 10% of the registered were unemployed persons, which is more than the national average (7.9%<sup>6</sup>). Among the unemployed there were - as in most Slovene municipalities - more women than men.

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<sup>1</sup> Mestna Obcina Maribor. Mestna občina Maribor v stevilkah 2018. Available at: <https://www.stat.si/obcine/si/2016/Municip/Index/94>

<sup>2</sup> Mestna Obcina Maribor. Mestna občina Maribor v stevilkah 2018. Available at: <https://www.stat.si/obcine/si/2016/Municip/Index/94>

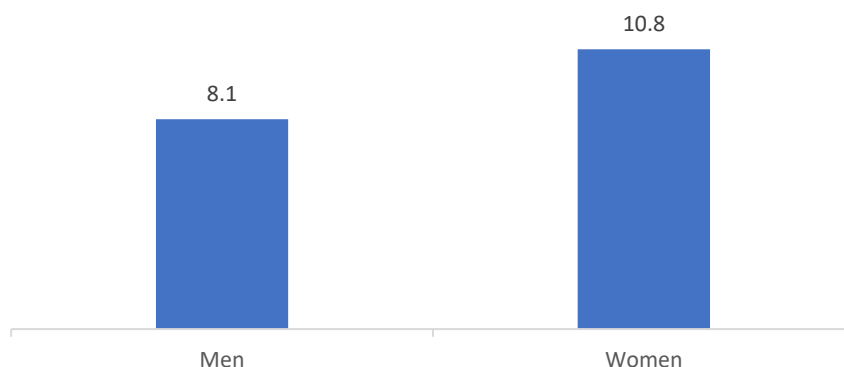
<sup>3</sup> Statistical Office of the Republic of Slovenia (SURS). Povprečne mesečne plače po dejavnostih [SKD 2008], občine, Slovenija, mesečno. Available at: [https://pxweb.stat.si/SiStatDb/pxweb/si/10\\_Dem\\_soc/10\\_Dem\\_soc\\_07\\_trg\\_dela\\_10\\_place\\_01\\_07\\_010\\_place/0701041S.px/](https://pxweb.stat.si/SiStatDb/pxweb/si/10_Dem_soc/10_Dem_soc_07_trg_dela_10_place_01_07_010_place/0701041S.px/)

<sup>4</sup> The data are from December 2018.

<sup>5</sup> Statistical office of the Republic of Slovenia (SURS). Stopnja registrirane brezposelnosti. Available at: [https://www.ess.gov.si/trg\\_dela/trg\\_dela\\_v\\_stevilkah/stopnja\\_registrirane\\_brezposelnosti](https://www.ess.gov.si/trg_dela/trg_dela_v_stevilkah/stopnja_registrirane_brezposelnosti)

<sup>6</sup> Statistical office of the Republic of Slovenia (SURS). Stopnja registrirane brezposelnosti. Available at: [https://www.ess.gov.si/trg\\_dela/trg\\_dela\\_v\\_stevilkah/stopnja\\_registrirane\\_brezposelnosti](https://www.ess.gov.si/trg_dela/trg_dela_v_stevilkah/stopnja_registrirane_brezposelnosti)

*Figure 1: Level of unemployment in Maribor by gender (June 2019, %)*



*Source: Employment Service of Slovenia<sup>7</sup>*

The city faces several demographic challenges. The average age of the population is 45 years old, which is higher than the Slovenian average (42.9 years). Moreover, in Maribor 100 people aged 0-14 years correspond to 178 persons aged 65 or more. This ratio is higher than in the rest of Slovenia, where for 100 people aged 0-14 years there are 125 people aged 65 or more. It shows that the average age of the population of Maribor rises on average faster than in the rest of Slovenia.

The data on the education structure show that Maribor does not have a high share of highly educated people and is surpassed by smaller cities in the country. This can be explained by the process of highly educated people leaving the city in the recent years. During the last 16 years, the total number of residents fell approximately 1% annually<sup>8</sup>. A large share of Maribor's young citizens decides to study in Ljubljana, and after completing their studies do not return home due to the lack of suitable job prospects<sup>9</sup>.

According to the city's Sustainable Urban Strategy, the country's independence process and the subsequent centralisation in the early 1990s affected Maribor, which was one of the most important industrial centres of former Yugoslavia. With the country's independence, the city lost access to former markets. Joining the EU in 2004 only exacerbated the city's struggle in transforming to a fully functional liberalisation of space and economy<sup>10</sup>. The prevailing business activities are services, mostly retail trade, construction, various business and personal services. The level of innovative products/services is quite low and according to the Strategy, Maribor must find an efficient, economic way to restructure

<sup>7</sup> Employment Service of Slovenia. Available at: [https://www.ess.gov.si/trg\\_dela/trg\\_dela\\_v\\_stevilkah/stopnja\\_registrirane\\_brezposelnosti](https://www.ess.gov.si/trg_dela/trg_dela_v_stevilkah/stopnja_registrirane_brezposelnosti)

<sup>8</sup> Integrated Sustainable Urban Development Strategies. UDN Peer Review Report. Maribor (Slovenia). Available at: [https://ec.europa.eu/regional\\_policy/sources/conferences/udn\\_ghent\\_2016/report\\_maribor.pdf](https://ec.europa.eu/regional_policy/sources/conferences/udn_ghent_2016/report_maribor.pdf)

<sup>9</sup> Sustainable Urban Strategy of the Municipality of Maribor (TUS-MOM). Available at: <http://www.maribor.si/dokument.aspx?id=28079>

<sup>10</sup> Sustainable Urban Strategy of the Municipality of Maribor (TUS-MOM). Available at: <http://www.maribor.si/dokument.aspx?id=28079>

and overcome the burden of tradition, i.e. transforming the energy and labour-intensive manufacturing into service, financial and innovation related activities<sup>11</sup>.

Culturally, the city has established itself as an opened cultural centre in the country with important cultural institutions located in the city, such as University of Maribor, University Library (UKM) and the National Theatre (SNG Maribor). In 2012, the city of Maribor was awarded the title of European Capital of Culture, thereby proving the city to be able to offer quality cultural events. The business culture is on the other hand assessed primarily as a rather conservative one. According to the representative of the Municipality of Maribor interviewed, people tend to be more sceptical towards new (business) ideas than in other parts of the country and tend to see new development mainly from the cost-related point of view. Starting a new project in the city is therefore not taken for granted and it usually takes effort for policy makers to convince the general public in the benefits of the new developments<sup>12</sup>.

Given lower economic indicators as compared to the central part of the country, the city of Maribor wants to find a way to stimulate its economy by using new circular economy models. The concept of “cooperative economy networks” will help to strengthen the collaboration between different types of stakeholders in order to set the path for the new business development in the city. Additionally, circular management of city’s resources is expected to bring about positive environmental impacts, such as reduction in resources use, lower CO<sub>2</sub> input, etc. Urban Circular Collaborative Economy initiatives are thus seen as an important tool to advance the economic and business development in the city.

Therefore, the main objective of this case study is to understand what kind of impacts the selected initiatives are bringing to the city. Special emphasis will be placed on economic impacts. The selected initiatives for detailed analysis (see Chapter 3), represent the principle of a “collaborative economy network”, as all initiatives have been based on a collaborative approach between different types of stakeholders. Publicly funded and privately initiated initiatives from two domains “Food sharing” and “Sharing organisation and decisions as cooperatives” have been included in the selection. Furthermore, this analysis will provide a possible conclusion on whether these initiatives are generating expected impacts and recommendation on how to leverage the entrepreneurial approach (functioning) and impacts of these initiatives.

## **2.2 Status quo, needs and objectives of Urban Circular Collaborative Economy Initiatives in the region**

When referring to the status quo, needs and objectives of Urban Circular Collaborative Economy Initiatives in Maribor, it is important to understand why the city of Maribor decided to adopt the Strategy for the transition to circular economy and what it wants to achieve with it.

The Municipality of Maribor is currently the only municipality in Slovenia planning to redirect its operations into the model of “circular management”, with 80% of the city’s operations planned to be transitioned into a circular economy model covering services such as waste management, water

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<sup>11</sup> Ibid.

<sup>12</sup> Based on the interview with the representative of the Municipality of Maribor conducted on 22/07/2019.

management, construction, land use and mobility. It is the first and so far, the only municipality in Slovenia with a Transition Strategy towards the circular economy system, which has been adopted in 2018.

According to the Strategy, the transition into circular management of the Municipality shall be achieved through “cooperative economy networks”. These networks refer to the collaboration between different representatives of civil society, such as enterprises, NGOs, and population from various age ranges, or between different sectors of the economy with the purpose of managing the city’s resources in a circular way. Managing city’s resources via “cooperative economy networks” will not only lead to lower environmental outputs, but it will also help developing new business opportunities in the municipality, creating high-quality, predominantly green jobs, new added value and a new economic boost.

Transition into circular management does not include just the field of municipal waste, but also includes the implementation of the concept in seven sectors, such as construction, industry, energy, water management, land use and mobility in the city. It is a fully comprehensive approach to the transition of the city’s management of its resources. The approach is based on cross-sectoral cooperation in the handling, processing, re-use and development of resources in the selected sectors.

An example of the cooperative economy network model in the field of circular economy is the Wcycle Institute. Five companies, which are wholly or partly owned by the municipality, formed a separate and unique umbrella project – the Wcycle institute – to implement the transition into the management of public services in a circular way. Maribor city does not have and does not want a landfill, nor does it want a waste incinerator, as it was repeatedly expressed publicly by the citizens of Maribor. The city therefore had to find a different and innovative way for waste processing. Public companies in the city identified the need for a platform for circular economy and five public companies decided to create the Wcycle Institute. The Institute serves mainly as a platform for the project development and project implementation of these five stakeholders. Circular management of city’s resources via an institute is unique feature of city’s resources processing for Maribor and this approach establishes Maribor as a pioneer city in developing innovative processes of waste handling. The expected positive consequences of this kind of approach are the emergence of new business opportunities in the municipality, which will be beneficial for the people and the economy; the creation of high-quality green jobs, new added value and a new economic network boost<sup>13</sup>. These objectives partially correspond to the economic situation of the Municipality of Maribor and the region in which the city is located. Namely, majority of economic indicators of the Municipality and the Podravje region in general remain on average lower than the country’s national averages. Therefore, one of the objectives of the Strategy is to support the economic boost of the city with more long-lasting and sustainable business opportunities, while at the same time process the generated waste and deliver it to other sectors, in the form of excess heat or wastewater.

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<sup>13</sup> Wcycle Institute Maribor. 2018. Strategy for the transition to circular economy in the Municipality of Maribor. Available at: [https://circulareconomy.europa.eu/platform/sites/default/files/strategy\\_wcycle\\_final.pdf](https://circulareconomy.europa.eu/platform/sites/default/files/strategy_wcycle_final.pdf)

Participants at the workshop organised as part of the study<sup>14</sup> agreed that collaborative and circular economies in Maribor are developing and growing. Their extent cannot yet be comparable to other bigger (European) cities, since both economic models are in the development phase in the city. The challenges and obstacles exist, nevertheless the progress compared to the previous years has been made, which can among other be seen by several recently awarded EU projects. Simultaneously, people's and city's governance awareness about the positive impact of both types of economic models is growing as well. The main problem is lack of awareness and readiness by major local and national decision-makers to start working on the projects. Communication between relevant institutions is often lacking and the success of the project depends highly on the personal network of an individual within the relevant institutions. Projects that do come to light, only do so due to European funding as a result of successful tendering. There is a general problem of the project's sustainability. When funding gets exhausted in later stages of the projects, the latter often tend to terminate. Workshop participants agreed that opportunities can mostly be found in the area of mobility, elderly care services, food self-sufficiency and space sharing. Additionally, the successful projects (Urban Soil 4 Food, Cinderella, etc.) give opportunity for the future project value chains (knowledge sharing, experience sharing between the projects)<sup>15</sup>.

### **2.3 Policies and regulatory framework affecting the Urban Circular Collaborative Economy**

As mentioned in previous chapters, Maribor wants to transform the management of the city's resources (land, waste, construction, energy, mobility, water) using circular economy approach. The city wants to achieve this through the inclusive collaboration of different types of stakeholders in the form of "cooperative economy networks". The expected benefits of such approach are linked to positive environmental outcomes, as well as fostering new business development, creation of new quality jobs and ultimately boosting the city's economy. In order to ensure the city's transition to the circular economy management modes, regulatory and legislative ground had to be established.

Maribor's policies on the circular economy developed almost simultaneously with related policies at the national level. The recognition of the concept of the circular economy can be found in the Smart Specialisation Strategy of Slovenia<sup>16</sup>, adopted in July 2015. The Strategy recognises the circular economy as one of the priority areas for focusing country's development investments, critical knowledge, capacities and competences, and it was acknowledged as an area in which Slovenia has an innovative potential for positioning itself in global markets, thereby strengthening the visibility of the concept<sup>17</sup>. In October 2015, Slovenia adopted the Framework Programme for the transition to a green economy with the action plan for the implementation and plan of the activities of relevant ministries and

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<sup>14</sup> Workshop organised in Maribor on 26/06/2019.

<sup>15</sup> Based on the conclusion from the workshop.

<sup>16</sup> Smart Specialization Strategy. Available at: [www.svrk.gov.si/si/delovna\\_podrocja/strategija\\_pametne\\_specializacije](http://www.svrk.gov.si/si/delovna_podrocja/strategija_pametne_specializacije)

<sup>17</sup> University of Maribor. Slovenian Companies and Circular Economy. e: Slovenian Entrepreneurship Observatory 2017. Available at: <http://ipmmp.um.si/wp-content/uploads/2018/02/SPO2017-monografija.pdf>



government services. In the Programme, the green economy is understood as the process goal through which Slovenia would become a competitive economy while considering the constraints posed by the natural environment. The Programme connects the green economy to several concepts, such as green growth, a circular economy, industrial symbiosis, efficient use of resources and sustainable development<sup>18</sup>.

In June 2016, Slovenia also adopted Waste management program and Waste prevention program. A step further towards a commitment to the circular economy as part of the national strategy was made in October 2016, when Slovenia became a member of the Ellen MacArthur Foundation, an institute which works with governments, economies and educational institutions to promote the transition to circular economy modes. In May 2018, Slovenia published an umbrella document called Roadmap towards circular economy in Slovenia, prepared by the Ministry of the Environment and Spatial Planning. The main objectives of the project are to identify and evaluate the regional and local potentials of Slovenia for the transition to a green and circular economy. The Roadmap provides recommendations on the priority areas of the Slovenian transition process to the circular economy. Recommendations are based on identification of good practices and identified opportunities and barriers for the national transition.

The Municipality of Maribor followed the regulatory progress made at the national level and adopted almost at the same time its own local versions of the documents. As stressed above, the Municipality of Maribor remains the only municipality in Slovenia that adopted a comprehensive municipal Circular economy strategy. In addition to that, Maribor adopted in March 2015 its own Waste management strategy (a year before the national one) and in February 2016 its own Sustainable urban strategy<sup>19</sup>.

The Municipality is less active in the field of sharing economy, which in Slovenia appears to be limited to civil society initiatives, and not so much to government strategies. On a national level, the sharing economy relates to the concept of social entrepreneurship. The Social Entrepreneurship Act was adopted in March 2011 and started to apply in January 2012. Based on the Act, the Government of Slovenia adopted in 2013 also the Strategy for the Development of Social Entrepreneurship for the period 2013-2016, which ensured the planned development of social entrepreneurship in the country for a period of four years. In February 2018, an Application Analysis of the situation in the field of social economy in Slovenia was prepared, containing also guidelines for the preparation of the long-term Strategy for the Development of the Social Economy in Slovenia 2019-2029 and the program of short-term measures with the Action Plan 2019-2020<sup>20</sup>. The link to the sharing economy concept can be indirectly read from the definition of social entrepreneurship in the Act, according to which social entrepreneurship operates permanently for the wider community's benefit. The Strategy for the

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<sup>18</sup> SLOPAK. 2015. Sprejet okvirni program za prehod v zeleno gospodarstvo. Available at: <https://www.slopak.si/slopak/aktualno/novica?aid=92#>

<sup>19</sup> Wcycle Institute. 2018. Model of Urban Circular Economy for Municipality of Maribor, Slovenia, Available at: <https://www.newbusinessmodels.info/dl/cityasab/Kos04.10.18.pdf>

<sup>20</sup> Ministry of Economic Development and Technology. Social Entrepreneurship. Available at: [http://www.mgrt.gov.si/si/delovna\\_podrocja/socialno\\_podjetnistvo/](http://www.mgrt.gov.si/si/delovna_podrocja/socialno_podjetnistvo/)

Development of Social Entrepreneurship 2013-2016 among others lists reduction of poverty and unemployment, especially among the vulnerable societal groups, as a potential that can be released as result of social entrepreneurship<sup>21</sup>.

Furthermore, the Maribor region has the largest number of registered social enterprises in Slovenia, with 20.5% out of 245 social enterprises operating in Maribor<sup>22</sup>. Several initiatives recognised in the area within this case study are registered social companies (i.e. BikeLab) or social companies take the role of leading Urban Circular Collaborative Economy initiatives (i.e. Centre for alternative and autonomous production – CAAP, PUPPILAM)<sup>23</sup> – see the section below.

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<sup>21</sup> Slovene Enterprise Fund. Enterprise Support Environment. Available at: <https://podjetniskisklad.si/sl/o-nas/podporno-okolje-za-podjetnistvo/drzavni-strateski-dokumenti>

<sup>22</sup> Republic of Slovenia. Ministry of Economic Development and Technology. 2018. Applied Analysis on the state of circular economy in Slovenia in 2018. Available at: [http://www.mgrt.gov.si/fileadmin/user\\_upload/Analiza\\_stanja\\_na\\_podrocju\\_socialne\\_ekonomije\\_v\\_Sloveniji.pdf](http://www.mgrt.gov.si/fileadmin/user_upload/Analiza_stanja_na_podrocju_socialne_ekonomije_v_Sloveniji.pdf)

<sup>23</sup> Ministry of Economic Development and technology. Social Entrepreneurship. Available at: [http://www.mgrt.gov.si/delovna\\_podrocja/socialno\\_podjetnistvo/evidenca\\_so\\_p/](http://www.mgrt.gov.si/delovna_podrocja/socialno_podjetnistvo/evidenca_so_p/)

### **3 Presence and usage of Urban Circular Collaborative Economy initiatives**

This Chapter summarises the result of the stocktaking of Urban Circular Collaborative Economy initiatives in the area. It gives an overview of the initiatives present in the territory according to their type and category. The full stocktaking of the initiatives identified in the territory is available in Annex.

#### **3.1 Main stakeholders in the Urban Circular Collaborative Economy arena**

The initiatives spread over Maribor are supported by both public and private associations, as well as by profit (private companies) and non-profit associations (NGOs, Universities, etc.). However, public institutions remain dominant actors overall in the territory. Local authorities, in particular the Municipality of Maribor are active in the development of several initiatives, although those are mostly EU-funded projects. Non-profit associations (like CAAP – Centre of Alternative and Autonomous Production, Development of social projects and promotion of active life association AKTIVIRAJ SE, etc.) are managing several initiatives in the city as well. The fact that many initiatives are being supported by the local non-profit associations might explain why many of the Urban Circular Collaborative Economy initiatives in Maribor do not generate big economic impacts (earnings, job posts, etc.).

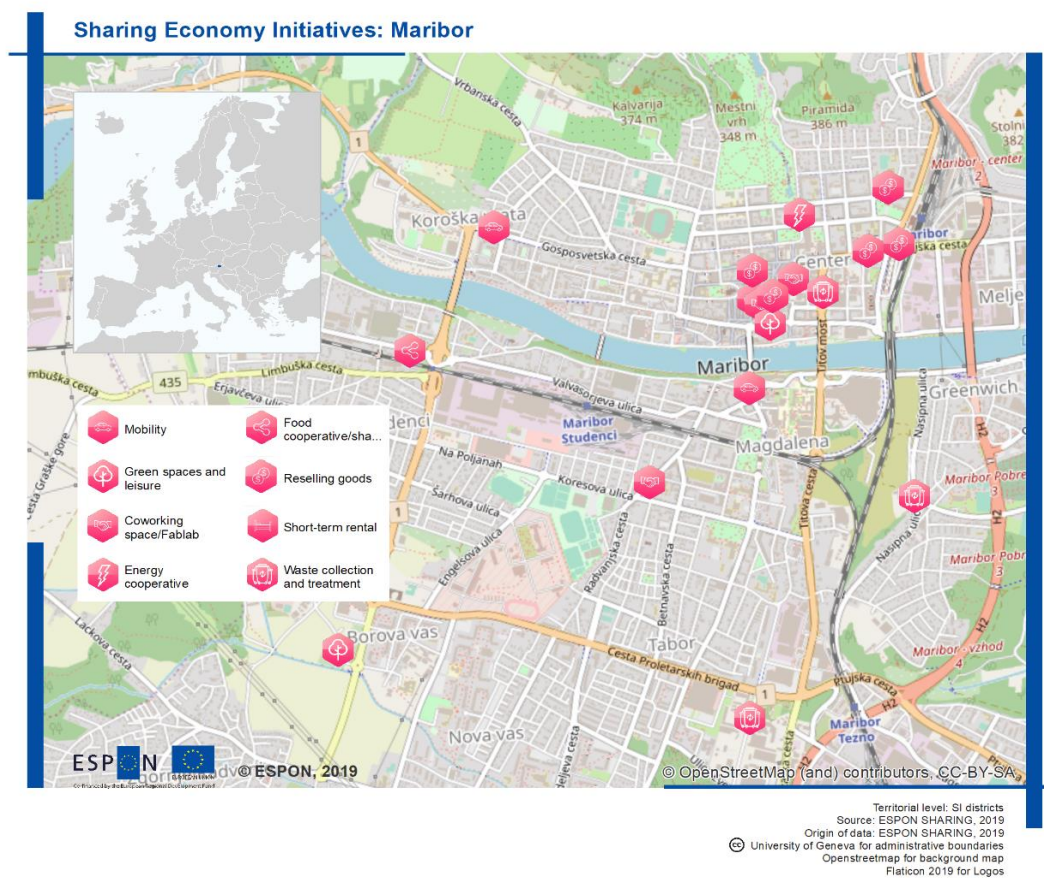
The main stakeholders active in the field of the circular and collaborative economy are listed below:

- Local authorities involved in developing UCCE initiatives (Municipality of Maribor (Urban Soil 4 Food, Greencycle, Urban Eco Garden, MBajk), Styrian Chamber of Commerce);
- NGOs/local associations (Association Social Economy Slovenia (Create Responsible), Slovenian National Building and Civil Engineering Institute (Urban Soil 4 Food, Cinderella, Celcycle), Institute for Innovation and Entrepreneurship (Urban Soil 4 Food), E-institute for comprehensive development solutions (Urban Soil 4 Food), AKTIVIRAJ SE (Ropotarnica, Smetka and Urban Soil 4 Food), University Sports Association of Maribor (MBajk), CAAP – Center of Alternative and Autonomous Production (Tkalka));
- Companies (Deltaplan (Urban Soil 4 Food), Snaga (Urban Soil 4 Food, Winpol project), Wcycle Institute Maribor (Urban SOIL 4 Food), Avant2Go, Nigrad (Cinderela), Maribor Water Supply Company (CWC-City Water Circles));
- University (University of Maribor).

#### **3.2 Presence of Urban Circular Collaborative Economy initiatives**

The research has identified 42 initiatives present in the territory of Maribor. Despite the small territory, the initiatives present in the territory of Maribor cover all six domains of Urban Circular Collaborative Economy initiatives (see Annex 1). The map below shows the distribution of different categories of Urban Circular Collaborative Economy initiatives in the city of Maribor.

Figure 2 Urban Circular Collaborative Economy initiatives and territorial focus of location in the city of Maribor



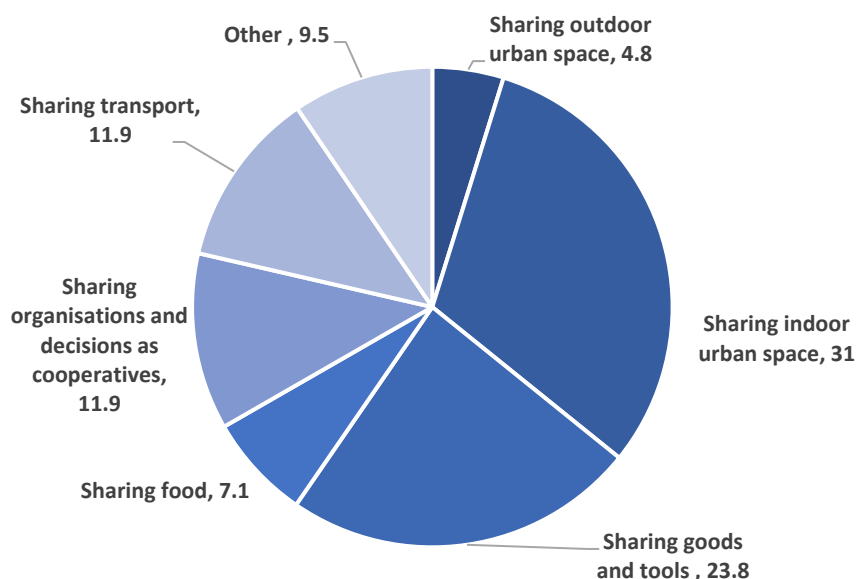
Source: öIR

Majority of the initiatives recorded falls under the domain of “Sharing indoor urban space” (31%), under which the prevailing category was “Short-term rental”. However, it must be noted that majority of “short-term rental” initiatives were foreign online platforms (Airbnb, Flipkey, Intervac, Homeaway, Homeexchange, Hosuetrip). The second most representative domain was “Sharing goods and tools” (10 out of total of 42 initiatives: 23.8%), where all initiatives were identified under the category of “Reselling goods”. The third most represented group of initiatives (15.4%) fell under the domain “Sharing organisations and decisions as cooperatives” and “Sharing transport”. Both domains received are represented with the same share of 11.9%. Under “Sharing organisations and decisions as cooperatives” majority of initiatives belong specifically under the category of “Waste collection treatment”. Within this category Maribor is partnering in the international project City Water Circles (CWC) under which a pilot action is undertaken to demonstrate how rainwater and purified wastewater can be used in producing recycled construction material<sup>24</sup>. Under the domain of “Sharing transport” majority of the identified initiatives belong to the category of “Bike sharing”. 7.1% of initiatives were

<sup>24</sup> Interreg Central EU. City Water Circles. Available here: <https://www.interreg-central.eu/Content.Node/CWC-LEAFLET-EN.pdf>

identified under the “Food sharing” domain, with majority of them being categorised as “Food cooperative/food distribution”. The least representative domain of Urban Circular Collaborative Economy initiatives in Maribor is “Sharing outdoor urban space”, which is represented by the community garden<sup>25</sup> Urban Eco Garden and parking reuse space initiative FLOW2. The rest of the initiatives fell under the category of “Other”, under which examples of EU-funded projects in the field were mentioned, as well as online labour market platform for the relevant jobs in the field. See the figure 3 below.

**Figure 3: Presence of UCCE initiatives in the territory per domain (%)**

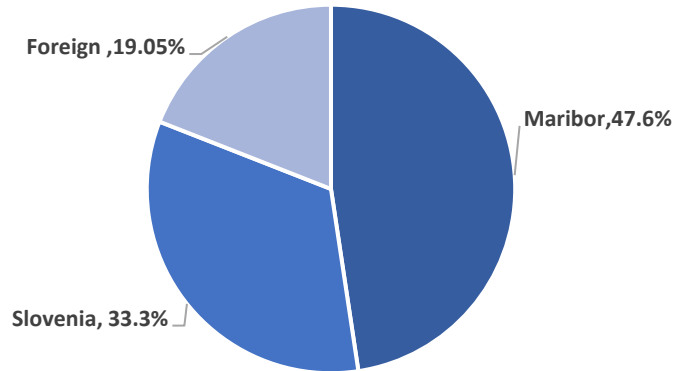


Source: VVA

The stocktaking exercise has shown that almost half (47,6%) of the initiatives originate from the city of Maribor or its nearby area. 33.3% of the present initiatives are from other cities of Slovenia, most of them being based in the capital Ljubljana (16.6%). 19% of the initiatives are foreign based, among which all of them are “Short-term rental” initiatives (Airbnb, Flipkey, Home Away, Intervac, Home Exchange, Housetrip). See figure 4. Similar pattern has been revealed by the responses of the respondents taking part in the study’s survey. More than half of the Urban Circular Collaborative Economy initiatives that are present in the territory of Maribor also originate in Maribor (61.5%), whereas 23.1% of the initiatives originate from other cities in Slovenia, most frequently mentioned was Ljubljana. 1.4% of the participant initiatives to the survey claimed to have been of a foreign origin. For detailed results see Annex 6 figure 2.

<sup>25</sup> One part of the UrbanSoil4Food is an established community garden, however in the stocktaking exercise the whole project was counted under the category of Energy cooperative and domain of “Sharing organisations and decisions as cooperatives”.

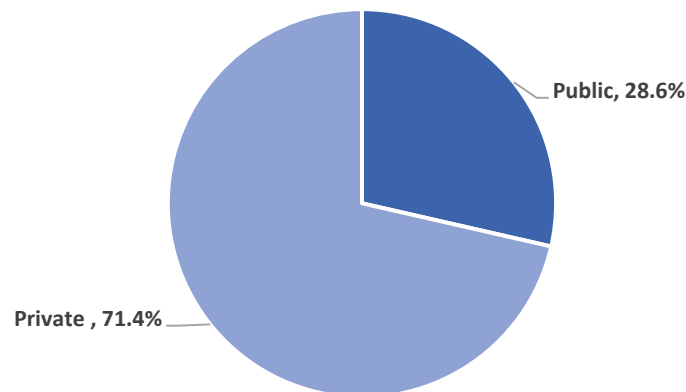
**Figure 4: Origin of UCCE initiatives present in the territory (%)**



Source: VVA

The majority of initiatives are private (71.4%), however there has been a rapid development of public initiatives in the field, as shown by the establishment of the Wcycle Institute, which is in charge of implementing circular economy projects in the services sector. A lot of the identified successful public initiatives are EU-funded projects (Urban Soil4Food, Cinderella, Greencycle, City Water Circles). The presence of the initiatives in the territory of Maribor can thus change in the future, since the longevity of these projects depends on future sources of financing. See figure 5.

**Figure 5: Source of funding of UCCE initiatives in Maribor (%)**



Source: VVA

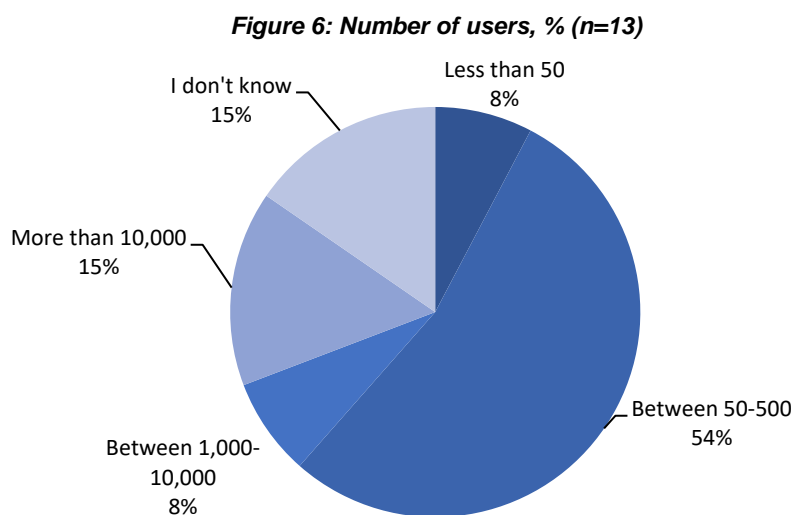
### 3.3 Usage of the initiatives

The analysis on the usage of the initiatives present in Maribor has revealed that typically the users tend to be inhabitants of the city or they come from the nearby area. There is also no major discrepancy in the use of the initiatives by gender. The gender structure is distributed into 50% female and 50% male.

Additionally, no age group tends to be excluded from the use. The age typically spreads between mid-20 to 60 years. The initiatives from the “Food sharing” domain and the “Sharing outdoor urban space”, in particular community gardens, tend to generally be used more by the older population (between 40-60 years). Most of the consulted initiatives reported 1/3 of the users being aged less than 40 and 2/3 of users typically being aged 40 or more. This is not surprising considering that Maribor city has higher share of the older population compared to other parts of Slovenia. Moreover, these are also the circular initiatives with emphasised social motivation. For example, Robin Food, as a food cooperative initiative is not just targeting food waste reduction, but also tries to address the economic needs of more vulnerable groups, because the city of Maribor has on average lower income level compared to the central parts of the country and higher share of unemployed people.

On the other hand, initiatives from “Sharing transport” and “Sharing indoor urban space” are typically used more by younger population (less than 40 years old). Initiatives from these two domains are all online-based platforms (Prevoz.org, Airbnb, Cimri.si. etc.) and thus more accessible to the younger population due to their advanced digital skills.

For some initiatives, especially EU-funded projects, the final users are not individuals but public companies/institutions (Cinderella, Urban Soil4 Food, City Water Circles). Overall, the Urban Circular Collaborative Economy initiatives present in Maribor tend to be small-sized initiatives in terms of number of users. Survey results accompanying the study show that more than half (54%) of Urban Circular Collaborative Economy initiatives in Maribor report to have between 50 and 500 users. 15% of the initiatives have more than 10,000 users. 8% of the initiatives reported to have less than 50 users, as well as between 1000 and 10,000 users. See figure below.



Source: Study's survey

### 3.4 Compliance with SDG indicators

The City of Maribor adopted several strategic papers that show the city's compliance with the global sustainable development goals (SDGs) set in the United Nations Agenda 2030 from year 2015. The



city's Strategy for the transition to circular economy emphasizes that the City of Maribor will "achieve strategic goals by measures of sustainable production and consumption, which includes both the reduction of waste and sustainable public procurement". Importantly, in 2013 the Smart City Maribor initiative was launched to foster sustainable development in the city by developing pilot innovative projects in the fields of services, technology and products<sup>26</sup>. Maribor's Urban Circular Collaborative Economy initiatives contribute to reaching several SDGs. The initiatives covering public services sector contribute (e.g. waste collection/treatments), to SDG No. 11: Sustainable cities and communities, SDG No, 12: Responsible consumption and Production, SDG No.7: Affordable and Clean Energy and lastly to SDG No. 8: Decent work and Economic Growth. Selected initiative in the field of Food sharing contributes to all above mentioned SDGs, as well as to SDG No.2: Zero Hunger. Indirectly Urban Circular Collaborative Economy initiatives address also the SDG No. 3: Good Health and Well-being.

Municipality of Maribor prepared in 2015 also a separate Sustainable urban strategy, which presented a complete analysis of the city's challenges (demographic, economic and environmental) and opportunities and based on the performed analysis formulated the objectives to focus on in the new development perspective. The objectives include: 1) Improving the competitiveness of SMEs, 2) preserving and protecting the environment and promoting the efficient use of resources, 3) promoting social inclusion and combating poverty and any kind of discrimination, and 4) investments in education, skills and lifelong learning<sup>27</sup>. The initiatives under the sponsorship of the Municipality of Maribor develop in accordance with the Strategy for the transition to circular economy (some of the initiatives are set in the Strategy's Action Plan) and are thus automatically compliant with the SDGs.

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<sup>26</sup> Smart City Maribor. Available at: <https://www.smartcitymaribor.si/en/>

<sup>27</sup> Sustainable Urban Strategy of the Municipality of Maribor (TUS-MOM). Available at: <http://www.maribor.si/dokument.aspx?id=28079>



## 4 Assessment of impacts

This Chapter provides an overview of the impacts of the Urban Circular Collaborative Economy in the main impact assessment areas: economic, environmental, social and political/governance. It uses the example of a couple of initiatives selected in the territory in order to draw correlations between the development of initiatives, territorial characteristics and the policy framework in place.

### 4.1 General trends

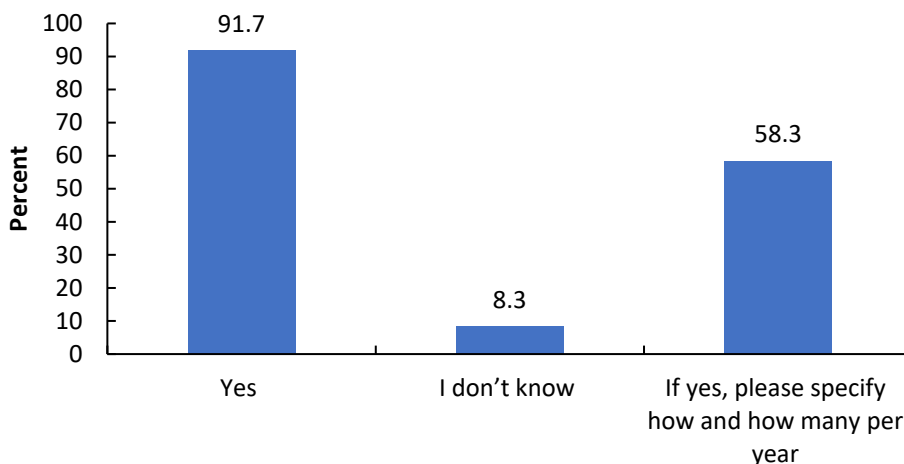
For the purposes of this study, three initiatives from two domains have been selected for detailed analysis. The domains are “**Food sharing**” and “**Sharing organisations and decisions as cooperatives**”. Under “Food sharing” one initiative is categorised as Food cooperative/redistribution, whereas the other two initiatives are categorised as waste collection/treatments as for “Sharing organisations and decisions as cooperatives” domain. These three initiatives from the two domains have been selected, because all three initiatives have been created based on the principle of the “cooperative network” and are representative of the Maribor’s strategical direction towards circular economy. The difference between the two domains of the initiatives is that “Sharing organisations and decisions as cooperatives” initiatives are publicly funded initiatives (both initiatives are EU-funded projects), whereas initiative from “Food sharing” domain is a privately-owned initiative.

Based on the literature review and stakeholder’s consultation, including survey results, the expected impacts of the chosen Urban Circular Collaborative Economy categories of this case study have been identified. This case study will analyse environmental impacts (resource use reduction, lower greenhouse gas emissions, etc.), economic impacts (generated earning, earning lost, number of job posts created, market value of services/products, etc.) and social impacts (increased interaction between the users of the initiatives, greater access to the quality services, savings, number of long-term unemployed people employed by the initiative, etc.)

The research on the expected impacts to arise from the selected initiatives from two domains in the territory of Maribor has revealed that so far not many environmental, economic and social impacts have been generated as the initiatives are still rather new or are not yet in the operational phase. Regarding **environmental impacts**, results of the study’s survey show that all respondents to the survey (100%) believe that their Urban Circular Collaborative Economy initiatives present in Maribor contribute to raising awareness of environmental matters among the users. From the selected initiatives, only the food sharing initiative Robin Food Maribor has provided tangible results. Waste collection/treatment projects predict positive environmental impacts, but since both projects are not yet operational, the impacts at this stage rely only on predictions.

Regarding **economic impacts**, results of the study’s survey show that large majority (91.7%) of Urban Circular Collaborative Economy initiatives present in Maribor contribute to the creation of local jobs. See figure 7.

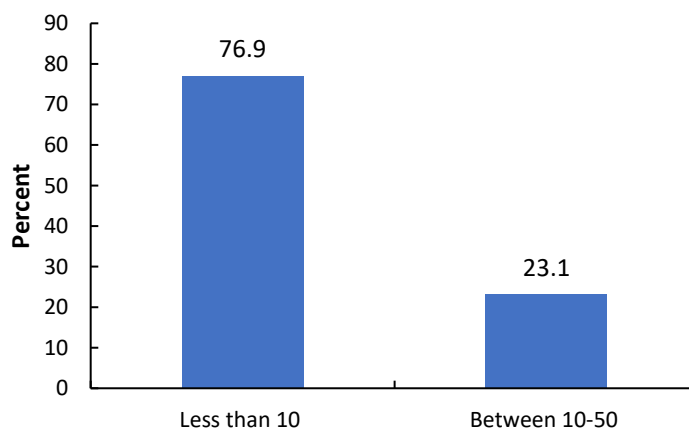
**Figure 7 Creation of local jobs, % (n=13)**



Source: Study's survey

However, even if the initiatives do contribute to the job creation, they do not generate high number of job posts. Food sharing initiatives employ on average around three people. Waste collection/treatment projects employ more people, between 25 and 30 people, however these jobs are not necessarily full-time jobs, since employees come from companies in the project's consortium or is their employment limited to the duration of the project. Alongside full-time employees, many initiatives are also supported by volunteers. According to the survey results, more than half (58.3%) of the Urban Circular Collaborative Economy initiatives in Maribor rely on less than 10 volunteers in the provision of their services. Results of the survey confirm similar pattern identified in the number of jobs posts generated. Almost two thirds (76.9%) of the Urban Circular Collaborative Economy initiatives in Maribor employ less than 10 people. 23.1% of the Urban Circular Collaborative Economy initiatives that participated in the survey reported to employ between 10 and 50 people. See figure 8 below. The selected initiatives/projects do not report on the generated earnings and those earnings that have been earned are relatively small, around EUR 100.000.

**Figure 8 Number of people employed by the initiative, % (n=13)**



Source: Study's survey

Similarly, not many results have been concretised on the social impacts, although survey results show that majority of survey respondents (58.3%) believe that Urban Circular Collaborative Economy initiatives in Maribor increase social ties among the users. From the selected initiatives, the only impact on social cohesion has been identified with recently established urban garden as part of the waste collection/treatment project UrbanSoil4Food, where gardeners/users meet daily and thus create social ties<sup>28</sup>. The initiatives do not create job posts for previous unemployed people, therefore no impacts as possible inclusion of vulnerable population groups, i.e. unemployed people has been identified.

## **4.2 Selection of initiatives**

### **4.2.1 Selected initiatives**

The table below summarizes the three initiatives selected for the study.

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<sup>28</sup> Based on the interview with the representative of Urban Soil 4 Food conducted on 22/07/2019.

Table 1: Initiatives selected for the case study

Name of initiative	Domain	Category	Business, organisational or value creation model												
			Economic potential						Social potential						Env. potential
			Sector	Underlying asset	Transaction relationship	Transaction mode	Type of market player	Data	Hiring of workers involved	Origin	Ownership of the initiative	Financing – source	Financing – destination	Contribution to the circular economy	
Urban Soil 4 Food	Sharing outdoor space / Sharing organisations and decisions as cooperatives	Community garden/ waste collection/treatment	Food and waste	Space / Waste	B2C	Sharing	Some dominants	Personal data use	For service and coordination	Local	Public	Public money (EU & local municipality)	Re-investment in local assets	Type of circular business model	
Cinderella	Sharing organisations and decisions as cooperatives	Waste collection / treatment	Food and waste	Waste	B2B	Selling		non-personal; data use	For service and coordination	Local	Private/public partnership	Public money (EU&local municipality)	Re-investment in local assets	Type of circular business model	
Robin Food Maribor	Food sharing	Food cooperative/redistribution	Food and waste	Food	B2C	Selling	Multiple	non-personal; data use	For service and coordination	Local	Private	Activity	Re-investment in local assets	Type of circular business model	

## 4.2.2 Assessment of impacts per initiative

The following section describes the impacts of Urban Circular Collaborative Economy initiatives per domain. The analysis revealed that at this stage it is difficult to quantify the exact impacts of the selected initiatives. There are expected environmental impacts for all initiatives, however since two out of three selected initiatives are either at the early operational stage or not even operational, it is difficult to quantify them yet. All initiatives generate very little earnings (rarely above EUR 100,000 revenues per year), as well as a small number of jobs. Food sharing initiatives (Robin food) employs on average three people. Waste collection/treatment projects (Cinderella and UrbanSoil4Food) employ more people (between 25 and 30), however these are not necessarily full-time jobs, since employees come from other companies in the project's consortium or is their employment limited to the duration of the project. Similarly, it is difficult to quantify results on social impacts of the selected initiatives. Greater social impacts however are expected to be produced in the "Food sharing" domain, since final users of the Waste collection/treatment projects (Cinderella and UrbanSoil4Food) are expected to be public service institutions that are able to facilitate the application of the project.

### 4.2.2.1.1 Sharing organisations and decisions as cooperatives

Under the domain "Sharing organisations and decisions as cooperatives" the following initiatives have been selected: UrbanSoil4 Food and Cinderella.

The expected environmental impacts of this domain relate to suburbanisation, possible increase of environmental awareness, and potential impact on biodiversity from new green spaces. Economically, the initiatives will be assessed based on the impact on local revenues (earning generated through the activity, earning lost in competing activity), impact on local jobs (number and type of jobs produced by the initiative, number and type of jobs in the initiative in competing services), and impact on prices (average price per square meter of collaborative space such as garden bed). Expected social impacts to be generated are overall savings of users per month or year (impact on poverty), impacts on social cohesion (neighbours who got to know each other better due to project), impact on the quality of life in cities and potential impacts on the hierarchy of the organisations (less hierarchical organisations).

### 4.2.2.1.2 Description

**UrbanSoil4Food** is an urban innovative EU-funded programme carried out by the Municipality of Maribor and other seven partner companies and organisations. The project aims to use the city's biological and mineral waste in order to produce quality soil using a pilot plant system. Produced soil from the pilot plant will be then distributed/used for three main purposes: 1. Four urban gardens (7.400m<sup>2</sup> of urban gardens), 2. Roadworks and 3. Green city circle (parks).

The project entails various innovative approaches, thus the reason for being selected for this study. The innovative pilot plant system for soil production is a technical experiment that will be tested for the first time in a city environment. Secondly, the project closes the loops on material that city produces by transforming it in its own business model of utility management. Lastly, the management of the city is expected to be affected as well, especially through changed cooperation between the utility's companies.

Since May 2019 the Urban Garden of the city has been opened, thus the effect of the project can at this stage be assessed by examining only the impacts generated by the Urban Garden. It must be noted that Urban Soil 4 Food is not just a project of creating an urban garden in the city. It is in its essence an innovative and technologically demanding project that is aimed to ultimately change the city's culture of using materials and change the behaviour of citizens in using the materials in order to prevent producing more waste than necessary in the city<sup>29</sup>.

**Cinderella** is also an EU-funded project, which plans to develop a new Circular Economy Business Model (CEBM) for the use of secondary raw materials (SRM) in urban areas, connecting different industries, the construction sector and municipal services, decision makers and the general public. The project will develop a one-stop-shop service called CinderOSS, a "One-Stop-Shop", which will be articulated in the development of an on-line ICT platform for tracking and modelling the urban waste-to-product flows, on-line marketing and sharing knowledge and information along the value chain, 2. production and marketing of (SRM) based construction products and 3. building with SRM based construction products supported by building information modelling (BIM). Different streams of waste will be exploited in the project, i.e. construction and demolition waste, industrial wastes, heavy fraction from municipal solid waste and sewage sludge, mostly of them currently landfilled and/or incinerated<sup>30</sup>. Their suitability for use for building materials will be demonstrated through pilot projects tested in Slovenia, Croatia and Spain while the ICT platform will be demonstrated in Slovenia, Croatia, Spain, Poland, Italy and The Netherlands.

Project's consortium is composed of 13 partners from seven countries<sup>31</sup>. Partners from Slovenia include the Slovenian National Building and Civil Engineering Institute and Nigrad, the utility company from Maribor, which is one of the seven founding companies of the Wcycle Institute in Maribor. The project started in June 2018 and is planned to last four years. Currently the project is in the phase of the methodology development. In June 2019 the plan is to conduct the first pilot project: extraction of phosphorus. Phosphorus is a critical raw material from the black water entering the wastewater system, which after the treatment ends as sewage sludge. The pilot will be tested in Maribor using the black water from Maribor's public toilets. Then by the end of 2020 the construction demonstration using the secondary-raw materials (SRM) will be done. SRM will be used for road construction, construction of small facilities (in Slovenia, Croatia and Spain) and revitalisation of a degraded area with SRM based construction products. After the completion of the project, the plan is to include the new business models in the public construction activities in the city of Maribor and wider Slovenia.

#### 4.2.2.1.3 Impacts

UrbanSoil4Food and Cinderella have so far produced the following impacts:

- **Environmental:** Cinderella project predicts savings of 400,000 tons of primary/natural products, which are expected to lead to 20% lower environmental impact in terms of reduction

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<sup>29</sup> Interview with Igor Kos, Wcycle Institute. Green Week Brussels, May 2018. Available at: <https://www.youtube.com/watch?v=SPszOhLiEvc>

<sup>30</sup> Not in Maribor.

<sup>31</sup> Slovenia, Italy, Serbia, Spain, Poland, Netherlands, Croatia.

of natural resources use. The pre- feasibility analysis of the proposed business model indicates an increase of recycling by 30% of Construction and Demolition Waste (CDW), 13% of industrial waste, 100% of heavy fraction and 25% of sewage sludge

- **Economic:** UrbanSoil4Food will start generating earnings after 30.11.2020, when the EU-financing of the project will get exhausted and the new source of financing will be needed. Until then the use of gardening huts is free of charge, but later the municipality of Maribor will start charging for the use of the gardening huts on their Urban Garden. The price of the gardening hut will adapt to the market conditions. Currently, the market price for 50 square meters of private gardening space costs 40-60 EUR per year. Similar price plans to be charged after 30.11.2020. In terms of job posts, both projects (Cinderella and UrbanSOil4Food), offer jobs to 25-30 people, however these job posts are time-limited to the duration of the project. Not all job posts are full-time. Currently, nine volunteers are actively working in maintaining the Urban Soil4Food gardening huts. In case of project's upscaling in the future, opening of new job posts is predicted. Between two and three jobs posts are predicted to open by the SNAGA company, two new job posts are envisaged for work on the pilot plant and one job post is planned for a gardening post in the greenhouse.<sup>32</sup> For the implementation of Cinderella two people have been hired specifically to work on a project. After the completion of the Cinderella project, a new development centre will probably have to be created to offer its services. For that, new job posts are foreseen.

**Social:** Results on the social impacts apply only to UrbanSoil4Food, because users of Cinderella project are foreseen to be public institutions. For UrbanSoil4food there is no indication yet on food savings of the users of UrbanSoil4Food gardening huts, since the project started to operate only in May 2019. Nevertheless, the focus of the UrbanSoil4Food urban garden is not on reducing poverty, since all users/gardeners (despite pensioners) are actively employed citizens. Gardeners of the community garden of the UrbanSoil4Food meet daily, therefore the impacts are predicted to arise in the form of increased interactions between the users.

#### 4.2.2.1.4 Correlations

Both projects, UrbanSoil4Food and Cinderella, are in line with Maribor's Strategy for the Transition to circular economy. The main idea of the Strategy is finding innovative models of managing city's resources. Both initiatives are examples of innovative approaches of dealing with the city's waste and thus contribute to the development of the circular economy model in the city. Both initiatives are also EU-funded projects and are operational as result of successfully acquired EU-funds.

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<sup>32</sup> Based on the interview with the representative of the Municipality of Maribor conducted on 22/07/2019.

#### 4.2.2.2 Sharing Food

Under the domain "Sharing Food" the following initiative has been selected: Robin Food Maribor. The initiative falls under the category of Food cooperative/distribution.

The expected environmental impacts of "Sharing Food" domain relate to resource use (plastic, water, soil), impact on waste creation (amount and type of waste saved by the initiative or amount of food kept useable by the initiative and amount of food sold without plastic packaging). Economically, the initiative will be assessed based on the impact on local revenues (earning generated through the activity or earning lost in competing activity), impact on local job opportunities (number and type of jobs produced by the initiative, number and type of jobs in the initiative in competing services) and impact on prices (market value" of food distributed by retailers). Expected social impacts to be generated are overall savings of users per month or year (impact on poverty), impact on social cohesion (neighbours who got to know each other better due to initiative, users not having access to good quality food without the initiative, number of long-term unemployed people employed by the initiative) and impact on health poverty (health effects of consuming better food).

##### 4.2.2.2.1 Description

**Robin Food Maribor** is the first Slovene sustainable trade store dealing with food surpluses. It was opened in Maribor in 2017. Robin Food Maribor is offering an alternative option in the management of food waste in Maribor. It is a physical trading system of disposing of food surpluses. Robin Food purchases food products just before their expiration date and sells them at a lower price in its discount store in Maribor. Since the opening of the first store in 2017, Robin Food Maribor has managed to "save" 1000 tons, or 1 million food products, from being wasted. The Robin Food Maribor team wants to go further and offer modern technological solutions in the food management. For that purpose, the same team started in 2019 the new project Solutions4Food, which is currently in the development phase of requiring necessary funding. Solutions4Food aims to develop educational platform on food waste and mobile application, which would be based on the donations model, where "donors", including food stores, restaurants and individuals, could offer their food surpluses to interested parties. By directly linking the parties, the application aims to increase efficiency and minimise costs further by shortening the supply chain.

Target consumers of the Robin Food Maribor sustainable food store are consumers who can save money each month on account of Robin Food. It is estimated that an individual consumer can save up to EUR 100 per month due to Robin Food store. That is precisely why the first store was opened in Maribor, since statistically there are more unemployed and socially deprived people in Maribor and wider Podravje region than in other parts of the country. The same sustainable food store has been opened in Ljubljana, but got closed soon, because the concept did not gain ground as it did in Maribor, partially also due to the different socio-economic characteristic of the city.

##### 4.2.2.2.2 Impacts

Robin Food Maribor has so far produced the following impacts:



- **Environmental:** Since the creation of the food cooperative Robin Food Maribor in 2017, 1000 tonnes of food waste or 1 million products have been saved from being wasted.
- **Economic:** Robin Food Maribor is not generating any profits. The revenues amount to EUR 165.000 year. For profit to be earned, the enlargement of business operations is necessary. Robin Food Maribor employs three full-time employees (two operations managers and one business development manager) and is supported by 3 volunteers. “Market value” of food distributed is estimated at EUR 200.000 EUR. Market value of food distributed by retailers is estimated at EUR 1 million.
- **Social:** Robin Food Maribor estimates savings from shopping in Robin Food Maribor store to amount around at EUR 100 per person monthly. The users/buyers are divided 50% female vs. 50% male. It is estimated that 1/3 of users are below 40 years old and 2/3 of users above 40. Buyers come from the territory (Maribor and nearby towns). Users in both initiatives have access to good quality food.

#### 4.2.2.2.3 Correlations

Robin Food Maribor is an example of cooperative economy networks as the initiatives bring together the network of food retailers/farmers in the area in order to sell the product further. Compared to the UrbanSoil4Food and Cinderella as waste collection projects, both Robin Food Maribor is privately-owned initiative, created without the support of any other public institution or EU funding. The initiative is based on the principle of the cooperative network as it is collaborating with the network of wholesalers in the area and is thus successfully contributing to the development of the circular economy in the city. The initiative is small in its size of operation, but it is recognised in the area. The recognition of Robin Food Maribor even exceeds the territory of Maribor.

### 4.3 SWOT analysis

The table below represents the SWOT analysis of the Urban Circular Collaborative Economy present in Maribor. The analysis is based on the literature review as well as on the targeted consultation with the relevant stakeholders (representatives of Urban Circular Collaborative Economy initiatives, policy makers, experts, etc).

Table 2: SWOT of the Urban Circular Collaborative Economy in the territory

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Adoption of the Strategy for the transition to circular economy by the Municipality of Maribor</li> <li>• Creation of the Wcycle Institute;</li> <li>• A traditionally strong sense of solidarity among residents and attachment to nature preservation;</li> <li>• scientific workforce and expertise</li> </ul>	<ul style="list-style-type: none"> <li>• Low awareness and engagement among the city’s population;</li> <li>• Exclusion of circular economy from the current national financial framework and subsequent reliance on outside financial sources (EU funds);</li> </ul>

<ul style="list-style-type: none"> <li>• Knowledge sharing due to recently won EU-funded projects (Cinderella, UrbanSoil4Food, etc.)</li> <li>• Local ownership of the Urban Circular Collaborative Economy initiatives</li> <li>• Core group of local policy officers driving the policy agenda of circular and collaborative economy in the city (Projects Office of the Municipality of Maribor)</li> </ul>	<ul style="list-style-type: none"> <li>• Development and implementation of most initiatives by volunteers (low level of job creation);</li> <li>• Low inclusion of the private sector in the field;</li> <li>• Lack of cooperation among the relevant organisations in the field;</li> <li>• Staff shortage;</li> <li>• Underdeveloped mechanisms for statistical and analytical monitoring of circular and collaborative economy initiatives;</li> <li>• Unprofitability of initiatives</li> <li>• Project's sustainability (Presence of short-term projects instead of long-lasting initiatives)</li> </ul>
<b>Opportunities</b>	<b>Threats</b>
<ul style="list-style-type: none"> <li>• Increased awareness of the local policymakers about the benefits of UCCE Initiatives</li> <li>• Increased awareness of the local population</li> <li>• University city (levering the knowledge of graduates);</li> <li>• Strategy for the transition into circular economy;</li> <li>• Size of the city (manageable size of the population);</li> <li>• Good geostrategic position of the city;</li> <li>• Certain fields represent opportunity for further development: <ul style="list-style-type: none"> <li>▪ Mobility (Slovenia is the country with one of the highest shares of car ownership per person)</li> <li>▪ Elderly-care services (rapid aging of the population)</li> <li>▪ Absence of co-working spaces</li> </ul> </li> <li>• 9% of the degraded city's areas with the potential to be transformed and re-used</li> <li>• Ambitious plans for the future – opening of the "Green Office"</li> </ul>	<ul style="list-style-type: none"> <li>• Negative demographic trends of the city (emigration of young and educated population)</li> <li>• Lower socio-economic indicators of Podravje region (compared to the central Slovenia);</li> <li>• Local Elections – frequent changes to the project's structure</li> <li>• Administrative barriers (this is however a commonly recognised national problem and it is not specific for Maribor)</li> <li>• Lack of city-based assessment (no public and transparent data);</li> <li>• Cultural factors</li> </ul>

## 5 Conclusions and recommendations

This Chapter summarises the conclusions of the case study. It also gives recommendations for local policy makers in order to develop initiatives with highest positive impacts.

### 5.1 Conclusions

Compared to the previous years of almost no activity in the field, the territory made a remarkable progress and the city of Maribor now acts as a forerunner in the field in Slovenia and with some unique international projects the city is gaining recognition also outside the country. High number of initiatives and projects developed recently on the territory indicate the progress, resulting also from the increased awareness of the local public policymakers. Self-confidence and progress come mainly from successfully acquired EU funding for specific projects in the field (UrbanSoil4Food, Cinderella). Importantly, the obtained projects also showed to the authorities and the general public that cooperation between different stakeholders is essential for the acquisition of financial sources, as well as for the successful implementation of the projects. This realization encouraged the city of Maribor to take on an innovative approach in its transition to the circular economy. The innovation is shown through the establishment of the Wcycle institute.

The study identified 42 initiatives on the territory (inner city and wider area of the city). Initiatives were identified in all six domains according to the UCCE typology followed in this study. Majority of initiatives come from “Sharing indoor urban space” and “Sharing goods and tools” domains. More than half of the identified initiatives originate from Maribor and its nearby area. The “short-term rental” category in the accommodation sector is the only category where foreign origin of initiatives is prevailing.

Majority of the initiatives are small and since most of them have become operational only recently, not many impacts have been quantified. Public companies currently lead the process of city’s transition to the circular economy in the services sector. There are some privately-run initiatives, but they are small and often run on a voluntary basis, thus generating very little or no job posts as well as very little earnings. Many of the selected initiatives are EU-funded projects and they do on average employ higher number of people compared to privately-run initiatives. However, these jobs are not necessarily full-time jobs, since employees come from companies in the project’s consortium or is their employment limited to the duration of the project. The services sector is the sector most commonly covered by the initiatives. The local population is increasingly being aware of the presence of the initiatives, but it is rarely becoming involved in operational or promotional activities. Collaboration between different stakeholders is still limited. Results on the possible environmental impacts are also limited. All initiatives though assume only positive environmental impacts. Similarly, no concrete results have been found on the potential social impacts yet.

The analysis has shown that the initiatives under the support of the municipality of Maribor and the Wcycle Institute, such as UrbanSoil4Food and Cinderella, are aligned with the city’s objective of fostering “cooperative economy networks”. These initiatives are based on the collaborative approach between different stakeholders. And even if they are not yet fully operational or just started to be operational, they are the ones that have the potential to generate greater environmental and economic

impacts due to greater institutional and financial support given to them. From the analysis it can be seen that initiatives such as waste collection/treatments include various stakeholders and generate greater earnings as well as job posts and the city should continue fostering similar type of initiative also in the future. Additionally, the experience gained after projects such as UrbanSoil4Food or Cinderella will serve as a good reference point for future collaborations. However, these initiatives are EU-funded projects, and their duration is limited as well as their funding source. In the future, the main task for the city's institutions is therefore to secure enough financial sources for these projects to remain operational and profitable.

On the other hand, private initiatives that have been analysed show smaller quantifiable impacts, especially in terms of generated earnings and job posts. These initiatives would need additional support in order to scale up, especially in terms of funding opportunities. Future "collaborative economy networks" should therefore increase the involvement of the local private sector. Currently, many privately-run initiatives are run based on the individual proactiveness, often based on voluntary basis and with limited financial sources. Inclusion of private players could expand the network of participants, which could result in greater economic impacts, and greater awareness of the local participation.

Overall, the city of Maribor is following the policies it developed at the municipal level. UrbanSoil4Food project was presented within the action plan in the city's Strategy for the transition into circular economy and the project is now successfully starting to be implemented. However, since many of the projects are just recently started to be operational, there is a general lack of numerical impacts (economic, environmental and social). More time is needed to obtain any numerical results. As it was highlighted during the study's workshop, one of the major obstacles is lack of networking and institutional support. Network would be beneficial also for the exchange of information on practices, failures, common problems, etc. In the future more effort will be put on the promotion and networking and consequently increase education and general (public) awareness not just about the existing initiatives, but also about the benefits represented by the collaborative and circular economies. Nevertheless, it can be concluded that Maribor is now in a development and testing phase. The goal to create "cooperative economy networks" is on the way to be reached. The governance and the general direction of local authorities for the relevant field has been established, whereas the actual implementation of the initiatives and projects remains to be seen. The collaboration between different stakeholder types is crucial and will most probably have to be extended to include the private sector actors, in order to generate greater economic, environmental and social impacts.

## 5.2 Recommendations

To address the challenges identified in the SWOT analysis, it is recommended for the city of Maribor to do the following:

### Better knowledge

- Awareness of the initiatives in the area is low among the local population. The initiatives or specialised projects tend to be known among the narrow circle of people present in the field. Effort in the promotional and marketing activities should intensify. **Promotion of the initiatives**

**and projects could lead to greater usage and subsequent greater environmental, economic and social impacts.** Promotion of the activities include organising more workshops, use of traditional media (newspaper, magazine etc.,) as well as social media. A promotional strategy to include educational institutions (primary schools, high school and university of Maribor) should be developed. Maribor is a University city and could leverage the potential of the future graduates better. University of Maribor could thus be considered also as one of the potential partners to be included in the “cooperative economy networks”. The University’s Faculty of Mechanical Engineering for example has its own laboratory where the students transform plastics into sports clothing. Such activities are in line with the city’s objective of finding new ways for the management of the resources in a technically innovative manner. University of Maribor could potentially serve as a **good partner in relevant Horizon 2020 projects**, since H2020 Framework Programme is the biggest EU research and Innovation Programme operating with EUR 80 billion of available funds (2014-2020). The contribution of the University of Maribor has already been recognised by the Municipality of Maribor. The city of Maribor is already actively cooperating with the University of Maribor and has also signed an agreement to participate in the Smart City Maribor initiative. The city of Maribor is also currently negotiating with the University of Maribor for potential future partnership in H2020 or HEUrope. This collaboration should be further promoted. The technologically advanced activities with potential to generate great value added clearly exist in the city but are not known due to the lack of collaboration between the most relevant institutions. Collaboration for a greater knowledge transfer would strengthen the cooperative economy network in the city and wider Podravje region.

- The cooperation between individual Urban Circular Collaborative Economy initiatives should further be promoted; this would allow for a sharing of the best practices between entrepreneurs and better understanding of their possible challenges.
- In addition, Maribor, also Slovenia, would benefit greatly from one central platform that would connect all the players in the field of circular/collaborative economy. The lack of central information generator (one central platform or database) prevents the consistent and more coordinated development of the field. Often, the market players do not know about the existence of each other, despite the small territory.
- As it was emphasized by the participants of the workshop as part of study (see Box 1 in Chapter 3.1), establishing the so called “**Green Office**” in the Municipality could be beneficial as the Office could serve as a central information point and could be in charge of networking activities in the field.

#### **Better regulation**

- Regulation and governance structure in the field was overall assessed as satisfactory by the interviewees and as such did not emerge as a priority area for taking further action. What remains as an issue is the legislative and administrative burden that is put on small structures during various institutional processes. **Reduction of legislative burden on small structures**

can be achieved through simplification of the regulatory framework and contraction of legal acts and statutory acts.

- Reduction of administrative procedures could enable faster development of the circular and collaborative economy initiatives in the city. Many initiatives report on lengthy administrative procedures, such as registration or winding up of business, transfer of ownership, obtaining permits, paying taxes and contributions, including excise duties. **Setting up an administrative support guidance**, either in the form of physical office hours, phone line or online guidance package, could help smaller structures to cope better with the administrative requirements. If such services already exist, then they should be promoted more extensively.

### Better funding

- The initiatives that do represent the most innovative potential are not initiatives as such but are EU-funded projects. Currently, the state's budget and the EU budget on financial circular economy related initiatives are not consolidated, because the state's budget foresees financial resource for circular economy only in the next financial framework. Local authorities are therefore dependent on the successful tendering for EU projects for the acquisition of relevant financial support. This represents a challenge, because EU-funded projects are typically time-limited, and the future.
- Until the state's budget and EU budgets on financing circular economy initiatives get consolidated, the municipality should try to **extend the network of relevant institutions to the local private sector** and make **greater use of the Public Procurement Act**. The Public Procurement Act can be used for facilitating the absorption of public finances for the purpose of transitioning to the circular economy. Greater inclusion of private profit-oriented players will be necessary if the city wants to transform itself into circular economy business models and start generating earnings. Inclusion of local economy could lead to greater economic impacts generated as well as increased awareness of the local population. The Municipality of Maribor can leverage the Public Procurement Act to foster the development of the initiatives and projects and thus set a trend. It is a good opportunity to circulate city's materials and finances as well as diversify the financial sources for the initiative's implementation and reduce the dependence on solely EU funds
- Certain categories of Urban Circular Collaborative Economy initiatives, such as Shared outdoor space (e.g. community gardens) in addition to funding also need sufficient green space area. The city already identified the degraded land areas in the city and further development of an action plan/strategy for the transition of these areas is advisable.

# Annexes

## Annex 1: Typologies/domains of Urban Circular Collaborative Economy initiatives

Domain	Category	Business, organisational or value creation model												Usage		
		Economic potential						Social potential								
		Sector	Underlying asset	Transaction relationship	Transaction mode	Type of market player	Data	Hiring of workers involved	Origin	Ownership of the initiative	Financing – source	Financing – destination	Contribution to the circular economy	Size of the activity	Alternative usage	Users' characteristics
Sharing outdoor urban space	Community gardens	Food and waste	Space	P2P	Sharing	Multiple	Personal/non-personal; data use	For service and coordination	Local	Private/public/partnership	Activity/private investment/public money	Re-investment in local assets/outside the country	Type of circular economy business model	Data to be collected	Agriculture	Data to be collected
	Parking space reuse	Transport	Space	P2P/B2C	Renting	Multiple	''	Only for coordination	Both	''	''	''	''	''	Rental parking space	''
Sharing indoor urban space	Short-term rental	Accommodation	Space	P2P (rarely B2C)	Renting	Some dominants	''	For service and coordination	Outside	''	''	''	''	''	Hotel	''
	Coworking space/Fablab	Accommodation	Space	P2P (rarely B2C)	Renting	Multiple	''	For service and coordination	Local	''	''	''	''	''	Office rental	''
	Leisure space sharing	Accommodation	Space	P2P/B2C/public sector	Sharing	Multiple	''	Only for coordination	Local	''	''	''	''	''	Cultural activities/recreative space rental	''
Sharing goods and tools	Renting goods	Retail	Goods	P2P	Renting	Multiple	''	Only for coordination	Outside	''	''	''	''	''	Rental companies	''
	Reselling goods	Retail	Goods	P2P	Selling	Some dominants	''	For service and coordination	Outside	''	''	''	''	''	Retailers	''
	Swapping goods	Retail	Goods	P2P	Swapping	Multiple	''	Only for coordination	Local	''	''	''	''	''	No	''
	Repair cafés	Retail	Goods	P2P	Sharing	Multiple	''	For service and coordination	Local	''	''	''	''	''	No	''
Sharing food	Food & meal sharing	Food and waste	Food	P2P/B2C	Sharing	Multiple	''	For service and	Both	''	''	''	''	''	Restaurants	''

								coordination									
	<b>Food cooperative/food redistribution</b>	Food and waste	Food	P2P	Sharing/Selling	Multiple	✓	For service and coordination	Local	✓	✓	✓	✓	✓	✓	Retailers	✓
<b>Sharing organisations and decisions as cooperatives</b>	<b>Energy</b>	Energy/utilities	Energy	P2P	Sharing	Multiple	✓	For maintenance of asset and coordination	Local	✓	✓	✓	✓	✓	✓	Energy providers	✓
	<b>Waste collection/treatment</b>	Food and waste	Waste	B2C	Sharing	Multiple	✓	For service and coordination	Local	✓	✓	✓	✓	✓	✓	Waste treatment/management organisations	✓
<b>Sharing transport</b>	<b>Bike sharing</b>	Transport	Bike	B2C/public sector	Renting	Some dominants	✓	For maintenance of asset and coordination	Outside		✓	✓	✓	✓	✓	Rental bike	✓
	<b>Car sharing</b>	Transport	Car	P2P/B2C	Renting	Some dominants	✓	Only for coordination (if P2P)/For maintenance of asset and coordination (if B2C)	Outside	✓	✓	✓	✓	✓	✓	Rental cars	✓
	<b>Ride sharing</b>	Transport	Car	P2P	Sharing	Some dominants	✓	For service and coordination	Outside	✓	✓	✓	✓	✓	✓	Public transport	✓
	<b>Rides-on-demand</b>	Transport	Car	B2C (rarely P2P)	Renting	Some dominants	✓	For service and coordination	Outside	✓	✓	✓	✓	✓	✓	Taxi	✓



## Annex 2: List of local sources

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### Annex 3: List of interviews

<b>Name</b>	<b>Organisation</b>	<b>Organisation type</b>	<b>Date of the interview</b>
Brina Lazar	Municipality of Maribor	Municipality/UCCE Initiative	22/07/2019
Simona Trčak Zdolšek	Urban Eco Garden	UCCE Initiative	25/07/2019
Marko Mitrovič	Robin Food Maribor/Solutions4Food	UCCE Initiative	29/07/2019
Prof. dr. Janja Hojnik	University of Maribor	Researcher/expert	30/07/2019
Igor Kos	Wcycle Institute	Expert	01/08/2019
Alenka Mauko	Slovenian National Building and Civil Engineering Institute	UCCE Initiative	08/08/2019

## Annex 4: The 2019 SDG Index for European Cities: ranking and scores

TABLE 1 THE 2019 SDG INDEX FOR EUROPEAN CITIES: RANKING AND SCORES						
RANK	CITY	SCORE		RANK	CITY	SCORE
1	Oslo	74.8		26	Bratislava	60.2
2	Stockholm	74.2		27	Prague	60.1
3	Helsinki	71.3		28	Madrid	59.7
4	Copenhagen	68.7		29	Tallinn	59.5
5	Zurich	67.5		30	Barcelona	59.1
6	Lyon	64.9		31	Warsaw	57.8
7	Paris	64.7		32	Zagreb	57.1
8	Munich	64.2		33	Vilnius	56.8
9	The Hague	63.7		34	Milan	56.8
10	Eindhoven	63.5		35	Turin	56.4
11	Amsterdam	63.5		36	Riga	56.3
12	Rotterdam	63.4		37	Budapest	55.4
13	Luxembourg	63.0		38	Sofia	55.2
14	Hamburg	63.0		39	Lisbon	55.1
15	Bordeaux	62.6		40	Rome	55.0
16	Vienna	62.5		41	Bucharest	54.4
17	Ljubljana	62.5		42	Valletta	53.8
18	Berlin	62.1		43	Nicosia	53.7
19	London	62.0		44	Porto	53.5
20	Nuremberg	61.9		45	Athens	48.6
21	Antwerp	61.7				
22	Dublin	61.6				
23	Marseille	61.4				
24	Frankfurt	61.2				
25	Brussels	60.4				

## Annex 5: City Scores for each SDGs

CITY	COUNTRY	MISSING VALUES (%)	REGION
Amsterdam	Netherlands	16.07	Western Europe
Antwerp	Belgium	8.93	Western Europe
Athens	Greece	33.93	Southern Europe
Barcelona	Spain	14.29	Southern Europe
Berlin	Germany	8.93	Central and Eastern Europe
Bordeaux	France	12.50	Western Europe
Bratislava	Slovakia	17.86	Central and Eastern Europe
Brussels	Belgium	10.71	Western Europe
Bucharest	Romania	19.64	Central and Eastern Europe
Budapest	Hungary	12.50	Central and Eastern Europe
Copenhagen	Denmark	16.07	Northern Europe
Dublin	Ireland	33.93	Western Europe
Eindhoven	Netherlands	23.21	Western Europe
Frankfurt	Germany	14.29	Central and Eastern Europe
Hamburg	Germany	7.14	Central and Eastern Europe
Helsinki	Finland	12.50	Northern Europe
Lisbon	Portugal	17.86	Southern Europe
Ljubljana	Slovenia	19.64	Central and Eastern Europe
London	United Kingdom	25.00	Western Europe
Luxembourg	Luxembourg	28.57	Western Europe
Lyon	France	19.64	Western Europe
Madrid	Spain	10.71	Southern Europe
Marseille	France	12.50	Western Europe
Milan	Italy	26.79	Southern Europe
Munich	Germany	8.93	Central and Eastern Europe
Nicosia	Cyprus	32.14	Southern Europe
Nuremberg	Germany	17.86	Central and Eastern Europe
Oslo	Norway	30.36	Northern Europe
Paris	France	14.29	Western Europe
Porto	Portugal	28.57	Southern Europe
Prague	Czech Republic	12.50	Central and Eastern Europe
Riga	Latvia	23.21	Central and Eastern Europe
Rome	Italy	12.50	Southern Europe
Rotterdam	Netherlands	17.86	Western Europe
Sofia	Bulgaria	19.64	Central and Eastern Europe
Stockholm	Sweden	10.71	Northern Europe
Tallinn	Estonia	19.64	Central and Eastern Europe
The Hague	Netherlands	23.21	Western Europe
Turin	Italy	10.71	Southern Europe
Valletta	Malta	30.36	Southern Europe

CITY	COUNTRY	MISSING VALUES (%)	REGION
Vienna	Austria	10.71	Central and Eastern Europe
Vilnius	Lithuania	19.64	Central and Eastern Europe
Warsaw	Poland	16.07	Central and Eastern Europe
Zagreb	Croatia	26.79	Central and Eastern Europe
Zurich	Switzerland	30.36	Western Europe

## Annex 6: Survey results

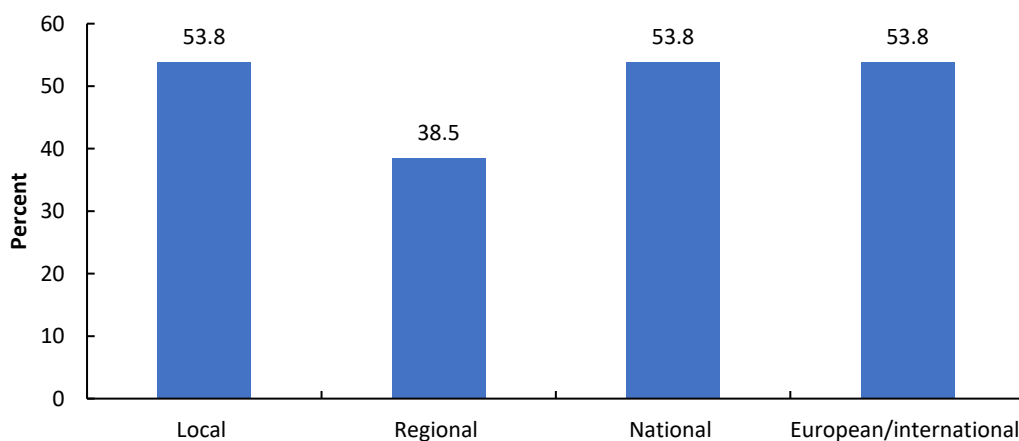
ESPONSHARING - survey of initiatives

The survey received in total 13 complete answers.

### At which scope do you operate?

Urban Circular Collaborative Economy initiatives in Maribor are active in the large shares at the local level (53.8%), at the European/international level (53.85) and at the national level (53.8%). 38.5% of the Urban Circular Collaborative Economy initiatives operate also at the regional level.

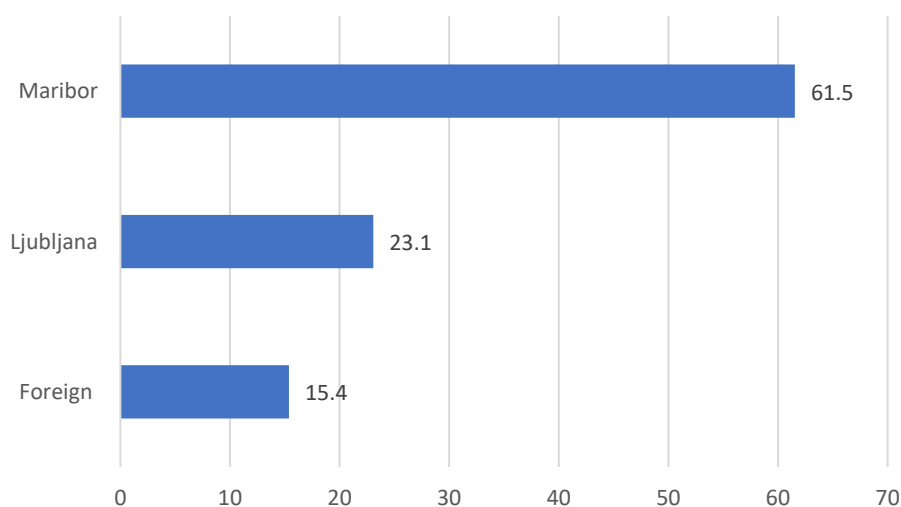
**Figure 9: Scope of operation, %**



### City of origin of Urban Circular Collaborative Economy initiative present in Maribor

More than half of the Urban Circular Collaborative Economy initiatives that are present in the territory of Maribor also originate in Maribor (61.5%). 23.1% of the initiatives originate from Ljubljana, and 15.4% of the initiatives present in the territory of Maribor is of foreign origin.

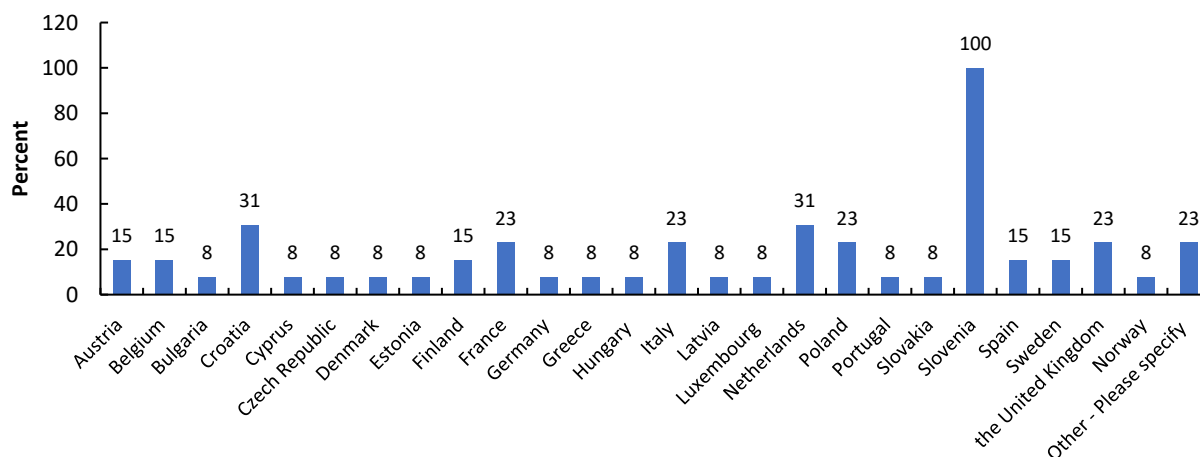
**Figure 10: City of origin, %**



### In which country(ies) do you operate?<sup>33</sup>

Besides Slovenia, Urban Circular Collaborative Economy initiatives in Maribor operate also in other countries. See the figure below.

Figure 11: Countries of operation, %

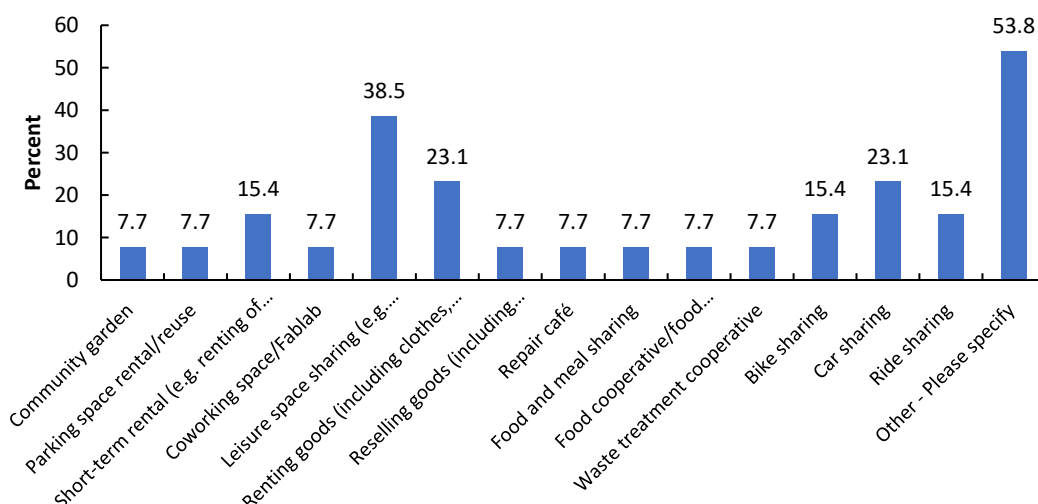


### What does describe your activity best?<sup>34</sup>

Majority of Urban Circular Collaborative Economy initiatives in Maribor reported to belong to the category of “Other” (53.8%), under which mentioned categories were environmental projects and research projects/platforms.

The second most representative category of Urban Circular Collaborative Economy initiatives in Maribor is “Leisure space sharing” (38,5%), followed by “Renting goods” (23.1%) and “Car sharing” (23.1%). 15.4% of the Urban Circular Collaborative Economy initiatives was categorized as “Short-term rental” and “Bike sharing” each. The rest of the categories of Urban Circular Collaborative Economy initiatives were represented with the share of 7.7%. See figure below.

Figure 12: What does describe your activity, %



<sup>33</sup> Multiple answers possible.

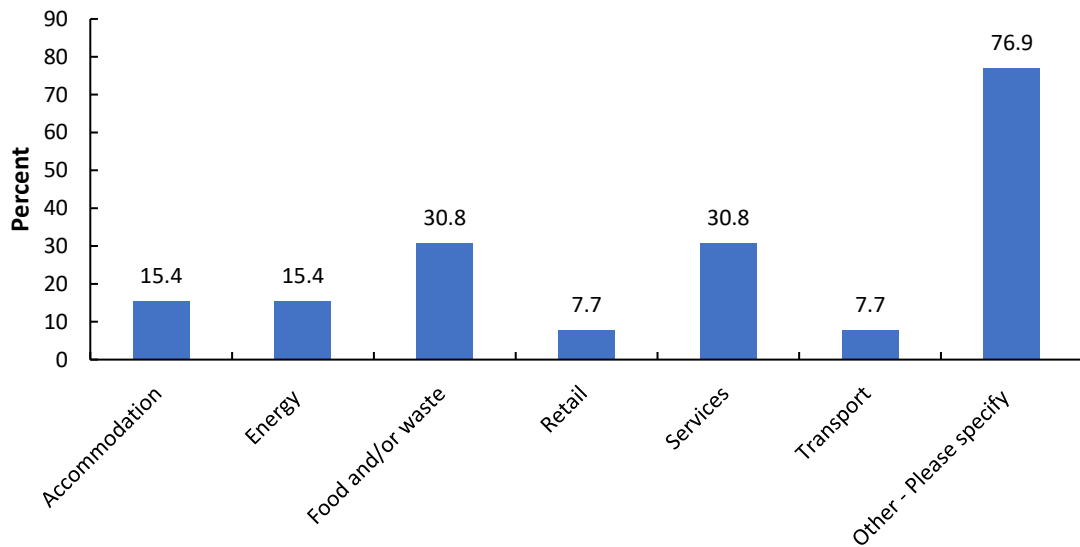
<sup>34</sup> Multiple answers possible.



**In which sector does your organisation operate (multiple answers possible)?<sup>35</sup>**

Majority of Urban Circular Collaborative Economy initiatives in Maribor reported to operate in the sector identified as “Other” (76.9%), under which mentioned sectors were research, consultancy, education and tourism. Food and/or waste sector and Services sector are the second most representative sector in which Urban Circular Collaborative Economy initiatives operate. Each sector received 30.8% of responses. Energy and Accommodation sector both received 15.4% of response. The smallest share of Urban Circular Collaborative Economy initiatives in Maribor operate in the sectors of Energy and Transport. Both sectors received 7.7% of responses.

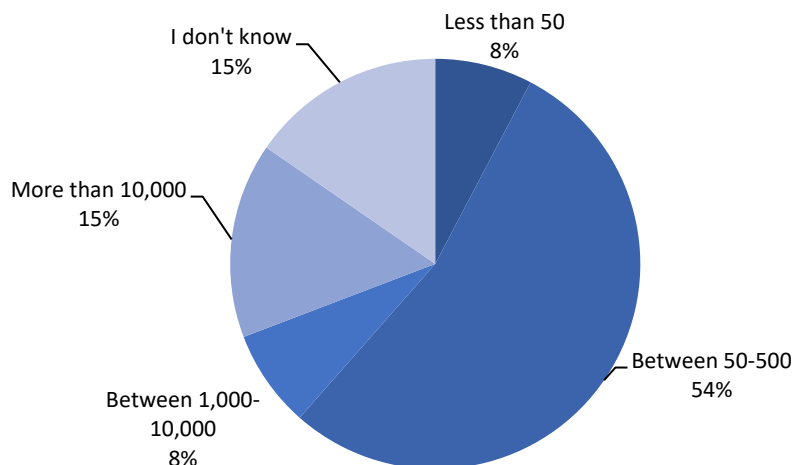
**Figure 13: Sector of operation, %**



**Number of users**

More than half (54%) of Urban Circular Collaborative Economy initiatives in Maribor report to have between 50 and 500 users. 15% of the initiatives have more than 10,000 users. 8% of the initiatives reported to have less than 50 users, as well as between 1000 and 10,000 users.

**Figure 14: Number of users, %**

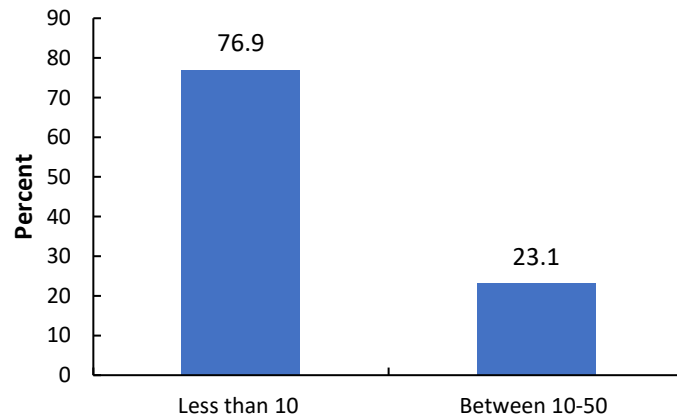


<sup>35</sup> Multiple answers possible.

**Number of people employed by your initiative (persons managing the initiative or contributing to it as a core team member)**

Almost two thirds (76.9%) of the Urban Circular Collaborative Economy initiatives in Maribor employ less than 10 people. 23.1% of the Urban Circular Collaborative Economy initiatives that participated in the survey reported to employ between 10 and 50 people.

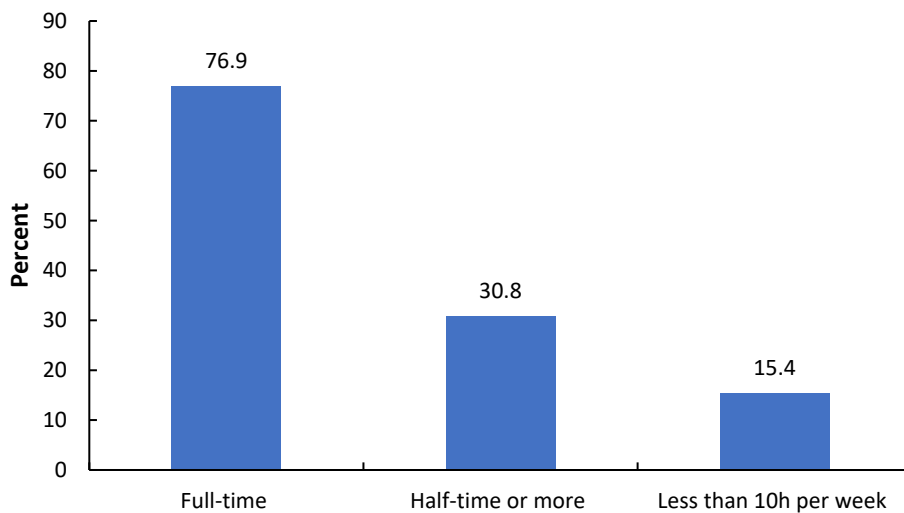
**Figure 15: Number of people employed by the initiative, %**



**Level of involvement of employees**

Almost two thirds (76.9%) of Urban Circular Collaborative Economy initiatives in Maribor offer full-time job positions for their employees. 30.8% of Urban Circular Collaborative Economy initiatives employ employees for half-time, and 15.4% of Urban Circular Collaborative Economy initiatives employ people for less than 10 working hours per week.

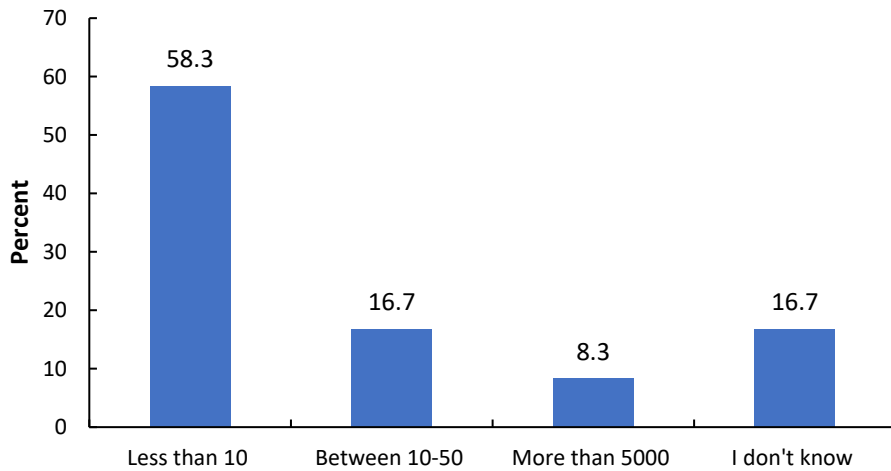
**Figure 16: Level of involvement of employees, %**



**Number of people providing services through your initiative (volunteers)**

More than half (58.3%) of the Urban Circular Collaborative Economy initiatives in Maribor rely on less than 10 volunteers in the provision of their services. 16.7% of Urban Circular Collaborative Economy initiatives include between 10 and 50 volunteers, and 8.3% of the Urban Circular Collaborative Economy initiatives relies on more than 5000 volunteers.

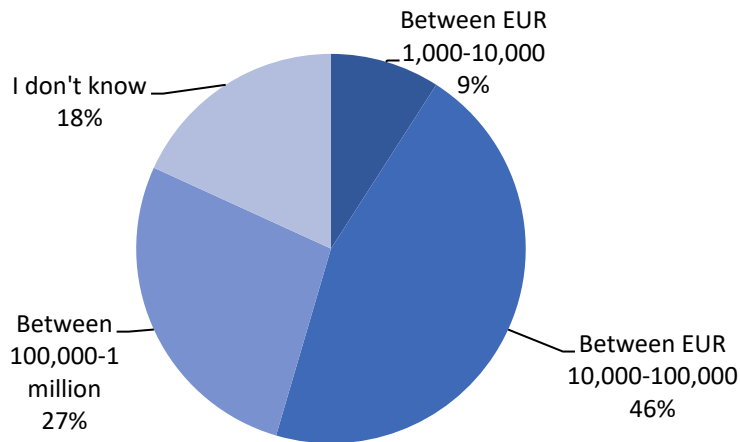
**Figure 17: Number of volunteers, %**



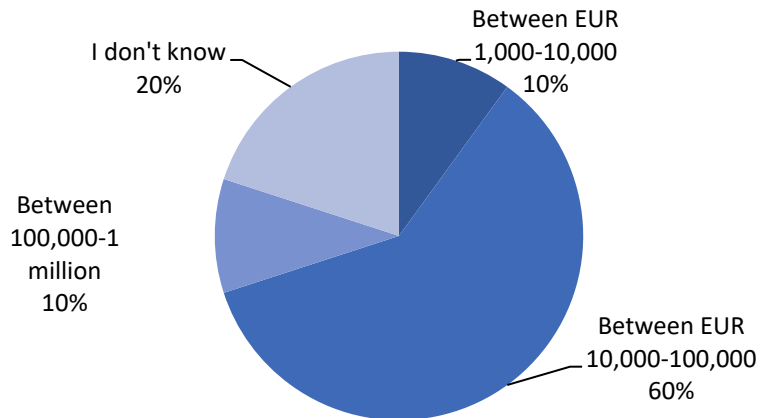
**Average price of the goods created/sold?**

Almost half of Urban Circular Collaborative Economy initiatives in Maribor reported to earn between EUR 10,000 and EUR 100,000 in the year of 2018. The pattern did not change since 2016. Majority of initiatives reported to earn between EUR 10,000 and EUR 100,000 in the operating years of 2016 and 2017. However, in the years before, 2016 and 2017, the share of Urban Circular Collaborative Economy initiative that reported to earn between EUR 10,000 and EUR 100,000 was higher than in 2018 (60%).

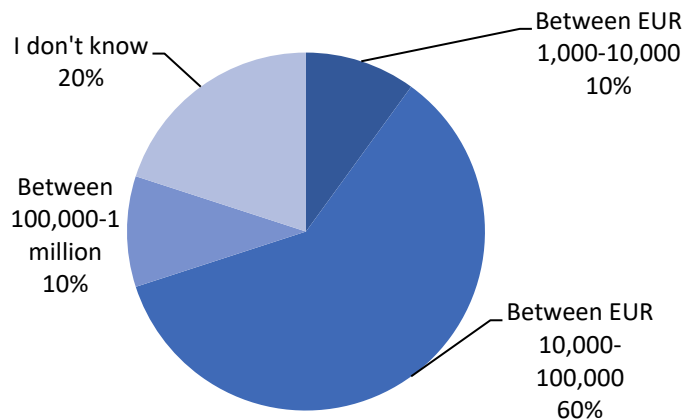
**Figure 18: Revenues of UCCE initiatives, year 2018, %**



**Figure 19: Revenues of UCCE initiatives, year 2017, %**



**Figure 20: Revenues of UCCE initiatives, year 2016, %**



**Impact on consumption/production of raw materials: Does your initiative has an effect the consumption/ production of raw materials? Please explain.**

No answers have been reported.

**Impact on resource use: Does your initiative has an effect on the use of material resources? Please explain.**

No answers have been reported.

**Impact on waste management/creation: Does your initiative has an effect on the creation/management of waste? Please explain.**

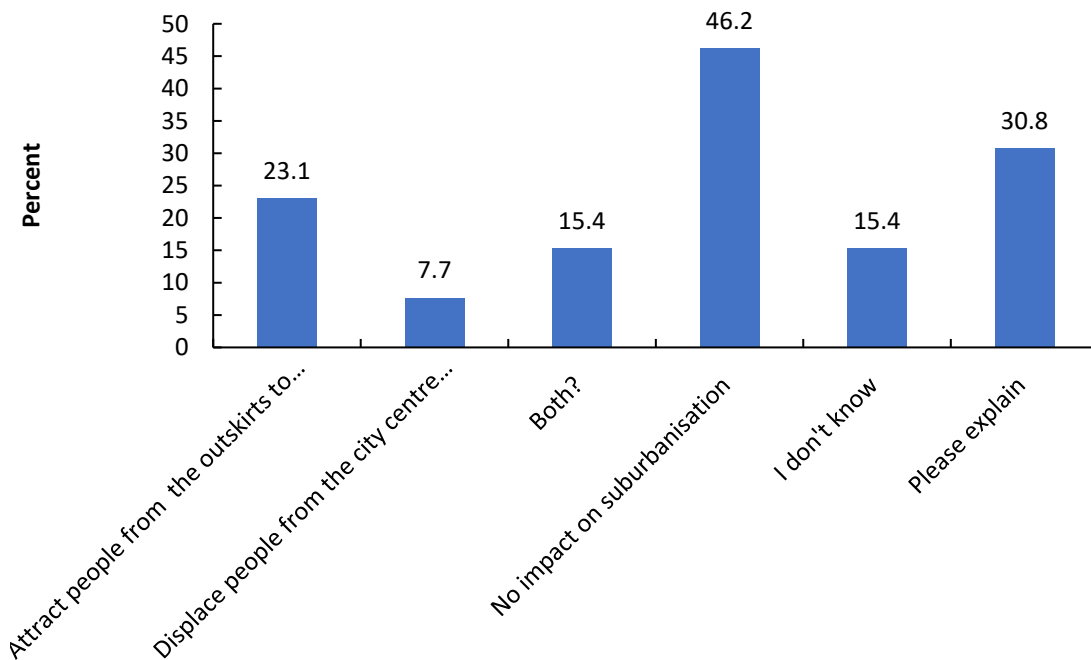
No answers have been reported.

**Impact on suburbanisation: does your initiative contribute to attracting people from the outskirts to the city centre?**

Majority of the Urban Circular Collaborative Economy initiatives (46.2%) believe that their initiatives have no impact on suburbanisation. On the other hand, 23.1% of survey respondents claimed that U

Urban Circular Collaborative Economy initiatives attract people from the outskirts to live in the city centre.

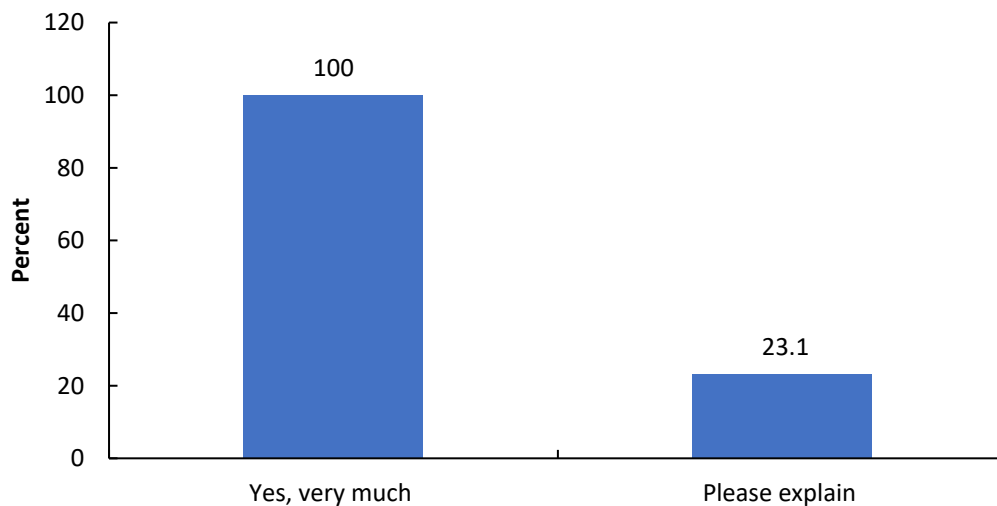
**Figure 21: Impact on suburbanisation, %**



**Impact on awareness of environmental matters: Do you think your users are more aware of environmental matters after participating in your initiative?**

All respondents to the survey (100%) believe that their Urban Circular Collaborative Economy initiatives contribute to raising awareness of environmental matters among the users.

**Figure 22: Impact on awareness of environmental matters, %**



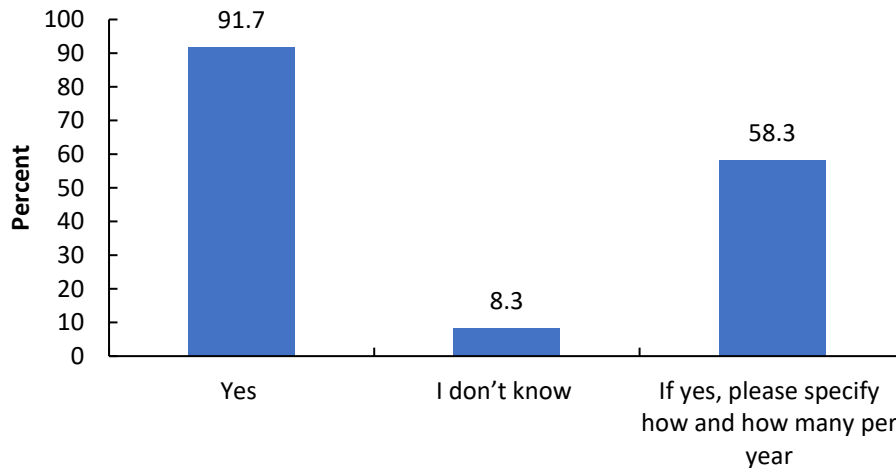
**Impact on local revenues: Does your initiative contribute to generating revenues in local market?**

No answers have been reported

### Does your initiative contribute to the creation of local jobs?

Large majority (91.7%) of Urban Circular Collaborative Economy initiatives present in Maribor contribute to the creation of local jobs. On the other hand, 8.3% of the survey respondents claimed that their initiatives do not contribute to the creation of local jobs.

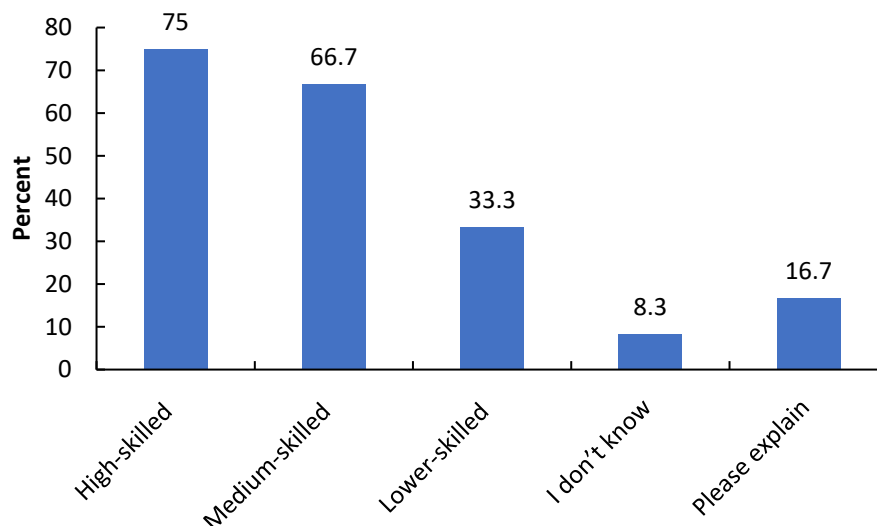
Figure 23: Creation of local jobs, %



### What types of jobs are created by your initiative?

75% of the Urban Circular Collaborative Economy initiatives in Maribor believe that Urban Circular Collaborative Economy initiatives create high-skilled jobs, 66% of respondents claim Urban Circular Collaborative Economy initiatives contribute creating middle-skilled jobs and 33.3% of survey participants claim that Urban Circular Collaborative Economy initiatives create low-skilled jobs.

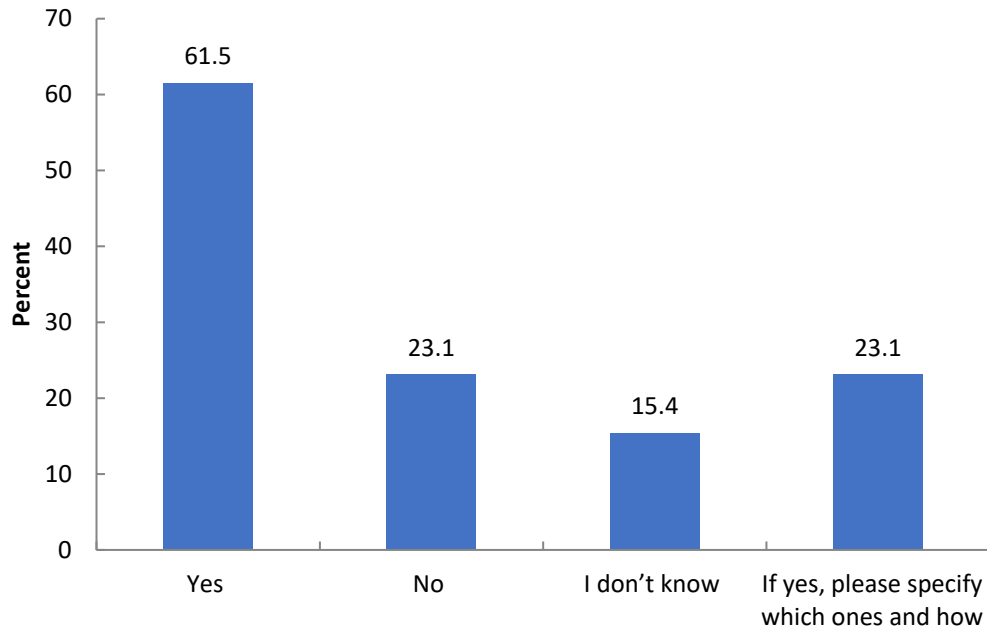
Figure 24: Types of jobs created by UCCE initiatives, %



### Does your initiative allow users/providers to learn new skills?

Majority of survey respondents (61.5%) believe that Urban Circular Collaborative Economy initiatives in Maribor help users learning new skills.

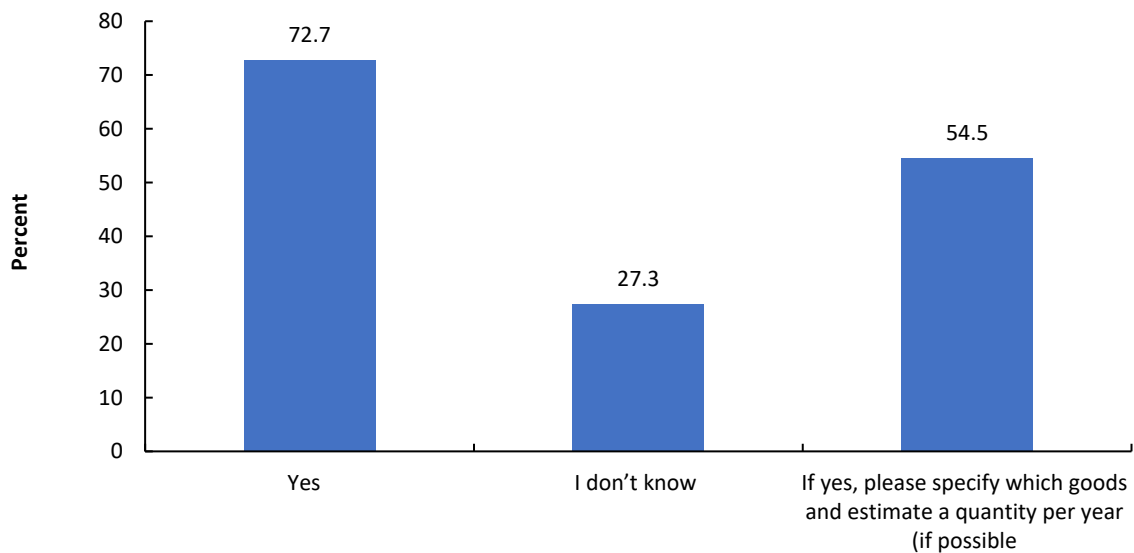
Figure 25: Impact on learning new skills, %



**Does your initiative allow people to have access to goods/services they would not have access to otherwise?**

Majority of survey respondents believes that Urban Circular Collaborative Economy initiatives allow access to goods/services that users would not have otherwise (72.7%).

**Figure 26: Access to new goods/services %**

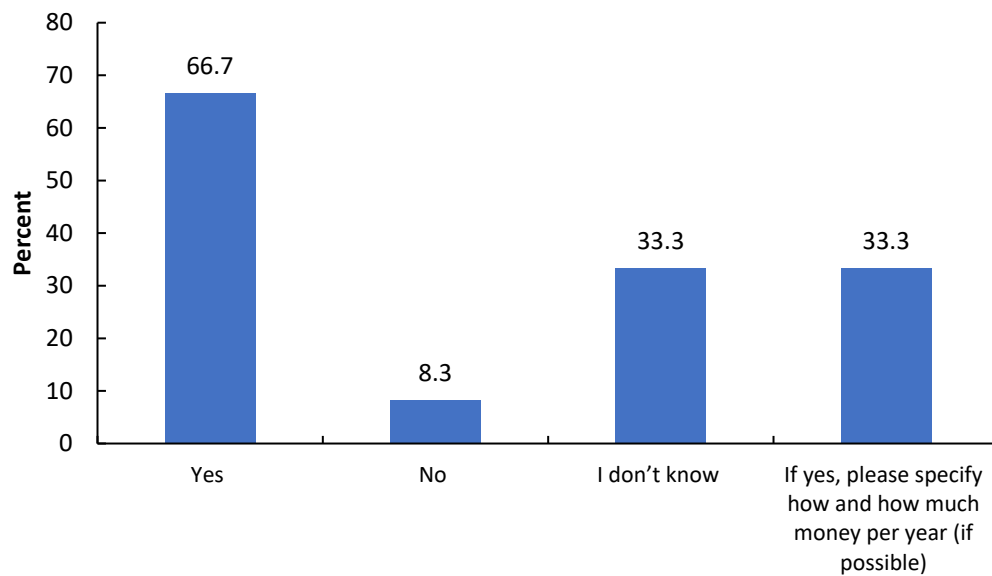


**Does your initiative allow users to save money compared with what they would have bought in traditional markets?**

66.7% of the survey respondents assess that Urban Circular Collaborative Economy initiatives in Maribor contribute to the generation of savings of the users of the Urban Circular Collaborative

Economy initiatives. Only 8.3% of the survey respondents claim that Urban Circular Collaborative Economy initiatives do not help generating savings of the users.

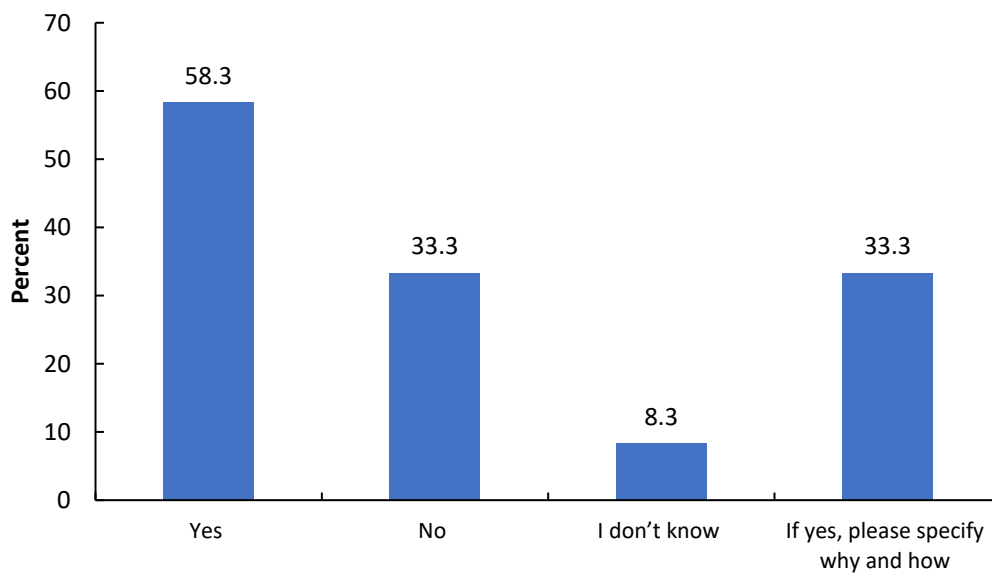
**Figure 27: Impact on savings, %**



**Impact on social cohesion: Does your initiative allow neighbours/citizens to get to know each other better?**

Majority of survey respondents (58.3%) believe that Urban Circular Collaborative Economy initiatives in Maribor increase social ties among the users.

**Figure 28: Impact on social cohesion, %**

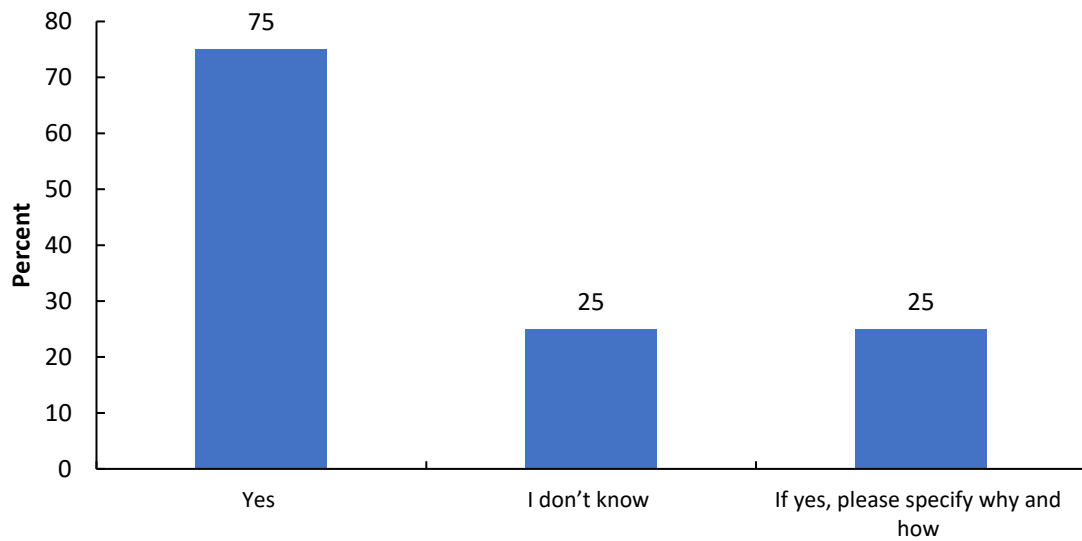


**Impact on quality of life of citizens: Do you consider that your initiative increased the quality of life in your area?**



Almost two thirds (75%) of the survey respondents believe that Urban Circular Collaborative Economy initiatives in Maribor contribute to the quality of life by increasing it. 25% of the respondents did not have opinion on the question.

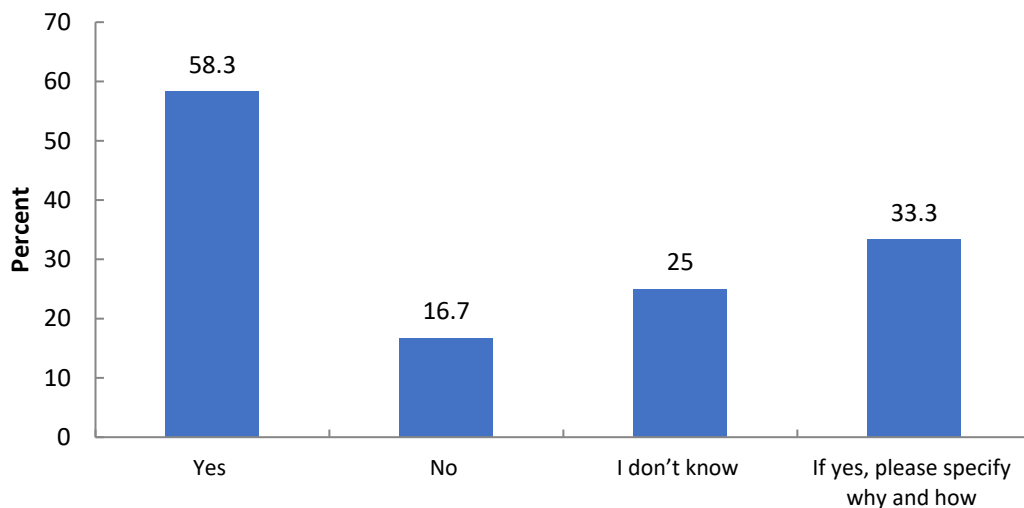
**Figure 29: Impact on quality of life of citizens, %**



**Impact on health: Does your initiative has an impact on the health of citizens?**

Majority of survey respondents (58.3%) believe that Urban Circular Collaborative Economy initiatives in Maribor have a positive impact on the health of the citizens.

**Figure 30: Impact on health, %**



**Impact on safety: Does your initiative has an impact on the safety of its users?**

Half of the survey respondents (50%) believe that Urban Circular Collaborative Economy initiatives in Maribor do not have an impact on safety. 33.3 % of respondents on the other hand believe that Urban Circular Collaborative Economy initiatives contribute to the safety of its users.

**Figure 31: Impact on safety, %**

