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URBAN INNOVATIVE ACTIONS

The Urban Lab of Europe !

The CitiCAP project Journal N° 2

*Project led by the **City of Lahti***

URBAN MOBILITY

European Union
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Région Hauts-de-France

The CitiCAP project

The **CitiCAP** project will experiment a Personal Carbon Trading (PCT) scheme to promote sustainable and low-carbon urban mobility by promoting and rewarding behavioral changes.

The PCT scheme will be co-designed in the framework of the Sustainable Urban Mobility Plan and through a participatory and user-led process. i Different experimental PCT models will be compared, in which citizens will be able to monitor their emission and budget their carbon use via an open mobility data platform. The urban mobility data gathered though the platform will be relevant for public authorities, as well as to foster sustainable mobility services and business opportunities. In parallel, a package of incentives will be put in place to encourage the use of the PCT scheme, and carbon-neutral bicycle highway lanes investments will be carried out in order to support low-carbon choices of transport.

Partnership:

- City of Lahti
- Lahti Region Development LADEC Ltd- Business organisation
- Lappeenranta University of Technology LUT - Higher Education and Research Institute
- Lahti University of Applied Sciences LUAS - Higher Education and Research Institutes
- MOPRIM Ltd- SME
- Good Sign Ltd- SME
- Infotripla Ltd- SME
- Mattersoft Ltd- SME
- Future Dialog Ltd- SME

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1. Executive Summary

The second edition of the CitiCAP (citizens' cap and trade co-created) describes and analyses the progress of the project in the last six months, from October 2018 to March 2019. During this period the progress of the project is in line with what was planned.

The content of this second edition is based on my site visit to Lahti that took place in February 2019 and on regular online meetings with the team during the Journal's timeframe. Section one accounts progress to date and details the voting results that determines emissions allowances which is an essential part of the PCT scheme. It also provides an update on some of the scheme's core elements - the allocation of rewards and the amount in virtual euros awarded for each tonne of CO_2 saved as well as how local businesses are being brought into the scheme. An update is also given on progress made with the Sustainable Urban Mobility Plan (SUMP) and the construction of the cycle highway, with consultations on both shortly set to begin.

Section two outlines the main implementation-related challenges faced by the project. Although progress is very good overall, special attention is needed on one of the UIA implementation-related challenges, that is the monitoring and evaluation associated with the PCT. Finally, section three looks at the key learning points how the CitiCAP project has helped Lahti to hopefully become the European Green Capital.

The next journal will pay further attention to the advancements of the implementation process, notably the pilot and official launch of the PCT.

Project Summary

The goals of the CitiCAP project are to promote sustainable mobility, collect and make available digital data on mobility and develop new transport services for citizens. The CitiCAP project will experiment with a PCT scheme for mobility as part of the Lahti region's transport policy and build a main cycle route based on smart solutions (Lahti city center – Apilakatu street).

In practice, PCT means that citizens will benefit from reducing their own emissions from mobility. They could receive, for example, various benefits in the traffic environment, as well as incentives for service use. For instance, citizens whose mobility emissions remain below their personal quota levels could be offered cheaper public transport or bicycle maintenance services via an online marketplace. The aim is to also get employers involved in the CitiCAP project, as they can reward their employees for taking sustainable transport.

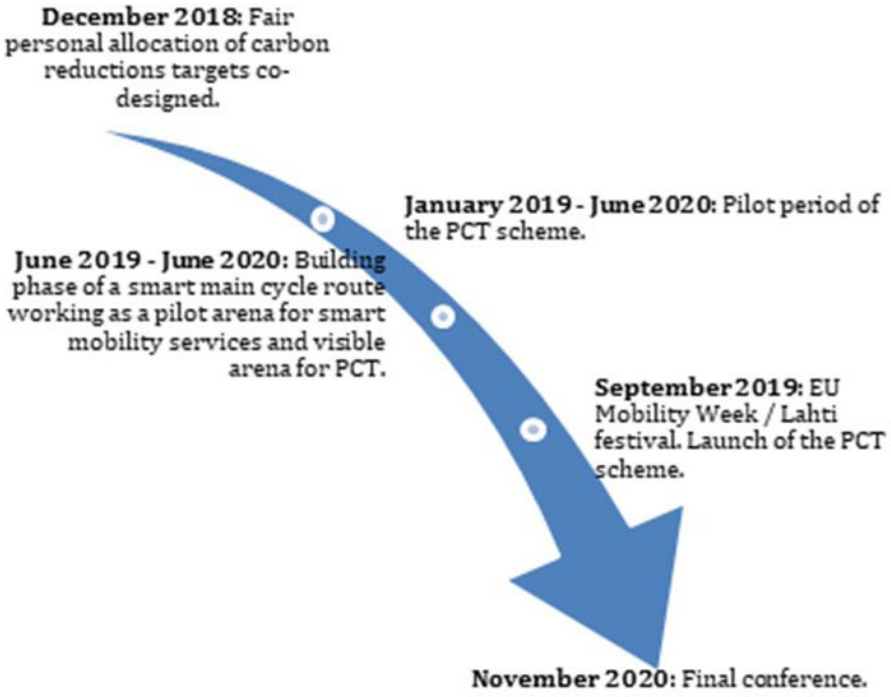
The project seeks to build a new model for the SUMP process by integrating the traffic and spatial master planning processes into the same co-designed entity. Strategic investments in cycling will be included to increase its impacts and will include a smart main cycle route, as indicated.

One of the basic requirements of CitiCAP is to collect comprehensive data on people's mobility

choices. A light and replicable mobility data platform will be created to implement PCT to serve as a planning tool for City mobility planners as well as an open access mobility data source for innovators.

Key Milestones

Since the last journal, the following key milestones of the project are foreseen. This journal provides an update of implementation in terms of progress against these expected goals. Encouragingly, significant progress has been made in some of the project's key milestones which the City can be rightly proud of.



2. Three introductory highlights

”Sustainable urban mobility is a key focus area of Lahti for the next years. Our aim is to find the most inspiring ways to attract more people to walk, cycle and use public transportation. Through CitiCAP we will build a completely new public incentive, the personal carbon trade, that may revolutionise the participation of citizens to climate change mitigation.”

Jyrki Myllyvirta, former Mayor of Lahti

Journal One identified three key areas that needed to be tackled in order to progress against the CitiCAP goals and milestones:

- How to change the mobility attitude and behaviour of citizens to promote the shift from private car to sustainable mobility?
- How medium-size cities may develop their mobility environment: increase the use of sustainable mobility modes, enhance the multimodality and decrease CO_2 emissions, while they cannot use all mass transport options that are available for larger cities?
- How the ITS approach can be integrated into the sustainable urban mobility planning and service provision?

The following section will focus on progress against these areas and the key achievements since Journal one.

2.1 Voting on PCT - the results

At the end of November, the CitiCAP project had invited all people in Lahti to develop the PCT system and allocation of allowances in the view to test next autumn allowances that should be shared among the participants. The main objective of the survey was to ensure the fair allocation of personal emission allowances and thus ensure an equitable allocation. As detailed in Journal One, the city has ambitions for a stretch CO_2 reduction target of 70% by 2030, compared to 1990 levels which will form the basis of the PCT allocation. The aim of the survey carried out by researchers from LUT was to determine which allocation method for emission allowances Lahti residents feel is fair and just. The survey received 304 responses.

About 30 students from Lahti University of Applied Sciences participated in collecting responses by interviewing Lahti residents. This resulted in 208 responses from pedestrians, cyclists and bus passengers. In addition, responses were received through the CitiCAP mailing list, the city’s website and the electronic survey shared on social media.

The emissions cap based on the target set for the City of Lahti, determines the amount of greenhouse gas emissions that the city is allowed to produce and the number of emission allowances that can be allocated between residents. The respondents had the opportunity to state whether they want everyone to have the same emission quota or if the quotas should be adjusted according to life situation.

The most popular allocation method was user-specific allocation, supported by 47.4% of the respondents (n=144). With a user-specific

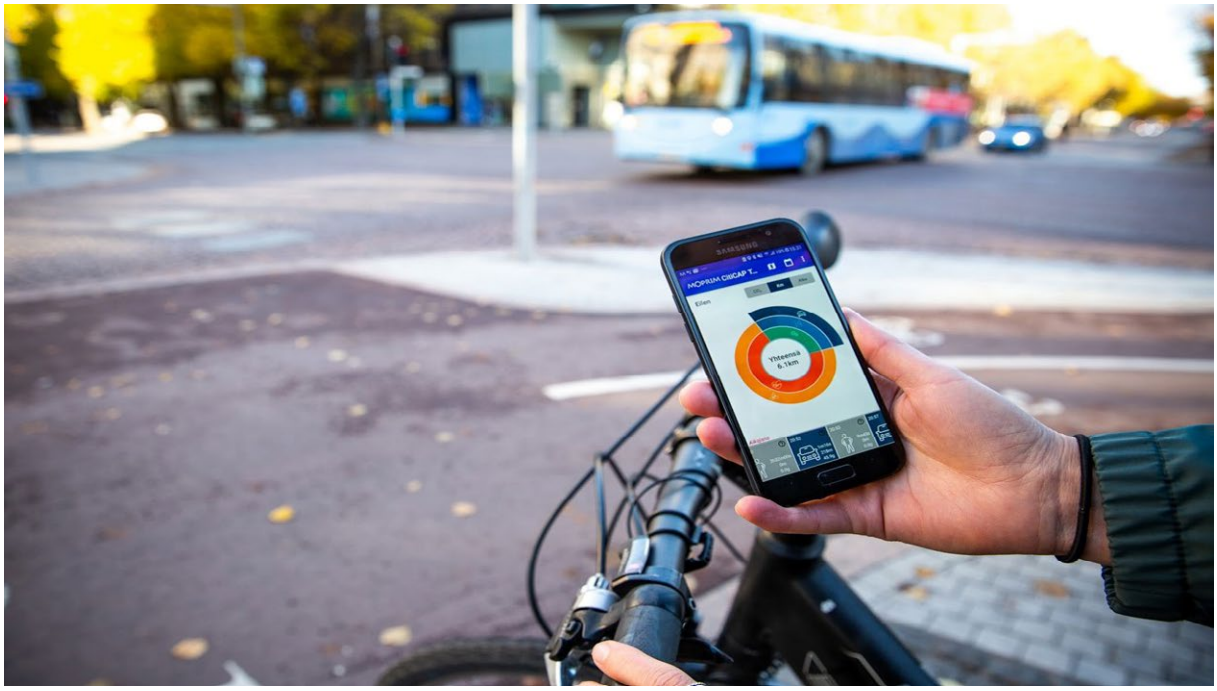
emission quota, the number of emission allowances per participant is determined by life situation. The emission allowances are allocated equally, but certain needs grant more allowances for the quota. Factors which may increase the emission quota include, for example, the number of children or living away from public transport routes. The next most widely supported option was the equal emission reduction target, which was selected by 33.6% of the respondents (n=102). With an equal reduction target, all participants aim to reduce their own emissions from mobility by the same percentage. The least popular was equal allocation where all users would receive an absolute emission quota of the same size. It was supported by 19.1% of the respondents (n=58).

"User-specific allocation was consistently the most popular across all respondent groups, but there were small differences between different allocation methods, for example, between respondent groups of different socioeconomic status, gender, age and ones living at different distances", says Junior Researcher Tuuli Ronkainen from LUT.

In addition to the survey, an allocation game in which the allocation of emission allowances was considered and tested at events. The responses received in the game will also be taken into account as qualitative data in deciding the allocation method.

The basis for the allocation of emission allowances is considered 'fair' is very important for the project's acceptability, as the aim is to encourage citizens to re-evaluate their own mobility from an environmental perspective and to reward residents for sustainable mobility choices.

Lahti has already launched the test version of a mobility application with which users can track their daily trips and the resulting emissions. The application automatically identifies the different forms of mobility. The app will later be incorporated into the actual carbon trading application, Kulkukauppa. This experiment with



Source: City of Lahti

a limited number of users (circa. 150) allows the CitiCAP project to gain unique data on travel chains and the carbon footprint of users' mobility. The data can be used to prepare the final application and the calculation rules for the CitiCAP carbon trading pilot. The data collected will also be used to test technical architecture and integrations as well as to experiment with analysis methods. The data collected through the application also provides valuable information on the mobility of residents that is needed to promote sustainable mobility in the city which can inform their planning going ahead. The challenge here will be to get accurate modal data with information being gathered until the end of March so that it can be analysed and inform the PCT.

The aim of the CitiCAP project is to find at least three other cities to replicate and implement the personal carbon trading model and system in their city. The application has already aroused interest in cities of different sizes both in Finland and abroad, and negotiations are already underway with the first cities that would like to join in. The personal carbon trading readiness of a follower city candidate will be assessed in a workshop organised together with Demos Helsinki, a Helsinki based think tank working on innovative urban development projects. In addition, Lahti will organise a workshop for the interested cities in the coming fall in order to present the development process and steps of the system and to demonstrate the use of the application.

2.2 Setting a price on carbon

As part of the PCT model, consideration is now being given to the allocation of rewards and the amount in virtual euros awarded for each tonne of CO_2 saved. It will be important that the price is easy to understand but sends a clear message and incentive to participants. Any price set should be above that of the EU Emissions Trading Scheme (EU ETS) which had a January 2019 price high of €24 per tonne. It will also be important that the price should set a clear political message to citizens but provides a clear incentive to citizens. The team has discussed proposing that €1 per kilogram could be a useful starting point and while on face value this figure could be seen as high, it is easily understandable. Also, as many journeys in Lahti tend to cover relatively short distances (less than 5 km travelled by car account for less than half of all journeys within the city) and that the mode shift CO_2 saving would be relatively modest, it is therefore considered to be quite a safe figure to go buy. The CitiCAP team has been assessing whether CO_2 earnings would expire over a period of time. It is recommended that earnings do not expire as this would provide an incentive to individuals who wish to use their earnings for specific purchases or discounts that may take time to accrue.

2.3 Engaging local business

Any price must be bought into by the local business community and that clear guidelines are set on the recommended price of a particular item, for example how many virtual euros a free cup of coffee is. This guidance will need to be done in collaboration with local businesses until September. It is also critically important that businesses see the added value of being part of the PCT marketplace. In addition to the city services, in total five local businesses have now signed up to the scheme and efforts remain ongoing to encourage more local business to join.

One thing that CitiCAP should be keen to avoid is 'greenwashing' - business joining the scheme despite their products or services having a negative impact on the environment. It is therefore recommended that the CitiCAP project develop a Green / Sustainability Charter where businesses wishing to join the PCT marketplace sign up to where they commitment to a set of environmental priorities or principles. The International Chamber of Commerce Business Charter for Sustainable Development or the UN Global Compact are two practical initiatives that could provide useful insights. Over the coming months, workshops will be held with local businesses to present the 'business case' for joining the PCT marketplace.

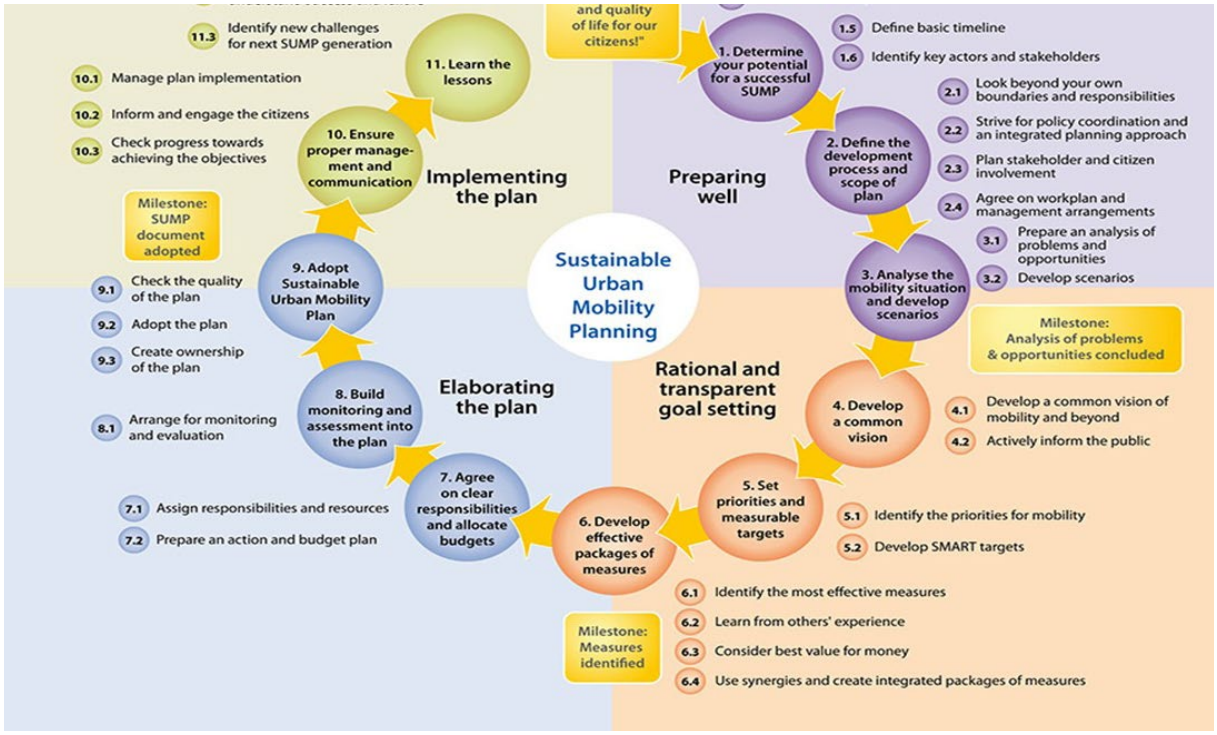
2.4 Developing the mobility environment - Sustainable Urban Mobility Plan

The need for more sustainable and integrative planning processes as a way of dealing with the complexity of urban mobility has been widely recognised. New approaches to urban mobility planning are emerging as local authorities seek to break out of past silo approaches and develop strategies that can stimulate a shift towards cleaner and more sustainable transport modes. The European Commission has actively promoted this concept for several years and has developed a set of guidelines on the recommended steps that a SUMP should follow (see graph below).

It is currently not mandatory to implement a SUMP in Finnish cities unlike in other Member States. This is the first time that Lahti will develop an SUMP which will be integrated alongside its strategic land-use Master Plan. The process started in 2017 and is set to conclude in 2020. The overarching aim of Lahti's first SUMP is to increase the share of sustainable transport to 55% by 2030. Lahti has clear objectives in terms of CO_2 reductions and is currently identifying priority measures for its SUMP that will also be extended beyond the city; to schools, companies and beyond. This follows the SUMP process with financing, monitoring and reporting as well as the schedule of works now being considered for implementation in 2020. This will provide for the analytic city-wide framework for cutting CO_2 emissions from the traffic sector, e.g. by 1) improving the bicycle infrastructure, 2) finding smarter and low-carbon solutions for public transportation and 3) increasing pedestrian-friendly spaces in Lahti's urban cores. The city is also currently considering how best to evaluate the effectiveness of these measures. This is an important step in the SUMP lifecycle in that efforts should be closely monitored on the basis of selected indicators.

Throughout the SUMP process, a range of stakeholders have been consulted. An evaluation of the draft SUMP will be held with stakeholders and citizens in April / May with the intention of integrating feedback into the traffic and spatial master planning process. The key challenge for Lahti going ahead will be to see how the SUMP could be integrated into the wider regional planning progress which currently does not have a SUMP in place.

The City of Lahti has also carried out a pilot of the Smart Mobility Plan for its employees. The pilot included public transport support, bike servicing campaigns, and the procurement of three electric bikes for the workplace, in addition to standard bikes. The pilot has led to a follow-up proposal covering all City employees. The City has supported smart mobility work in its workplaces. Some workplaces have begun to compile their



The SUMP planning cycle (Source: Eltis.org)

own Smart Mobility Plans or have launched smart mobility pilots, including those related to the use of electric bikes. The City itself organised an electric bicycle trial, through which residents could apply to borrow a bike for free, allowing them to test out the bikes.

2.5 Improving cycling conditions in Lahti

The SUMP program is currently considering measures on how to increase cycling and public transport and how to make driving more sustainable. The main street of the city, Aleksanterinkatu, was renovated a few years ago as a street with a focus on walking and having a two-way cycling lane for cyclists. The forthcoming smart cycling lane will on its part significantly improve the cycling conditions in eastern Lahti, because it will be a part of the main cycling route between the city centre and Renkomäki. The bicycle highway will be 2.5 km long and will enable smooth and safe cycling all year-round. The cycle path will be separated from both pedestrians and cars in order to create a clear hierarchy between different travel modes. The highway is part of a cycling network plan that has been drafted as part of the city's master planning work, consisting of about 40 km of main routes and district routes. The main routes will in the future provide fast lanes for cyclists heading from residential areas to the city centre. So far, citizens have been involved in the planning of the route through workshops.

The bike path will be experimenting with various smart solutions that improve the cycling experience. Furthermore, the aim will be to use recycled and / or recyclable materials in the construction of the highway. In total, around €1.6 million euros has been earmarked for this section of the UIA CitiCAP project with street plans starting to be consulted on in February and once approved, tendering can commence around March time so that construction can start in the first half of 2019. It is envisaged that the highway

The SUMP and the Master Plan of Lahti 2017-2020 are co-created with its citizens. (Source: Lahti)

Source: City of Lahti

will include a number of smart solutions from sensors that will be able to provide real time information on public transport data to enable a seamless intermodal journey experience and to 'encouraging' personalised messages on information tables. Adaptive LED lighting will also be used with a number of winter maintenance machines currently being tested to ensure that the highway will be safe to use throughout the year.

3. CitiCAP Challenges

A number of specific challenges have been identified that cut across all UIA projects. The table below provides a traffic light analysis of what these are and some observations as to how the project faires against them based on current and planned initiatives.

TABLE 1: MAPPING CitiCAP AGAINST THE ESTABLISHED UIA CHALLENGES

Challenge	Level	Observations
1. Leadership for implementation	Low	Local elections have taken place and new leadership and commitment to the project will help to ensure collaboration across a range of city departments going ahead.
2. Public procurement	Low	Minor procurement issues at this stage. Technical issues related to the PCT will be a far greater challenge.
3. Integrated cross-departmental working	Medium	Given the range of stakeholders involved and the need to engage a range of city departments, this remains challenging. Leadership for implementation is hoped to overcome this.
4. Adopting a participative approach	Low	High levels of participation evident across stakeholder groups. A core facet of the project.
5. Monitoring and evaluation	High	Integrated accounting of carbon emissions, monitoring mobility habits, personal data protection issues, accessibility and SUMP implementation is a challenge.
6. Financial Sustainability	Medium	The objective is to establish a joint venture to ensure long-term funding and upscaling. Progress has been made in identifying appropriate partners.
7. Communicating with target beneficiaries	Low	By adopting a participative approach, significant communication and buy-in with citizens is planned.
8. Upscaling	Medium	Fruitful ongoing discussions regarding scaling up, with a number of cities interested in following the Lahti model.

4. Take Away Points & Conclusions - The EU Green Capital

Progress to date has been positive in all key areas of the project, from the PCT and open mobility data platform to the ongoing development of the SUMP and smart bicycle highway. The next challenge will be to get people signed up to the PCT scheme. This is why engaging the local business community to be part of the marketplace is so critical. The more business involved in the scheme, the more likely that people will take part in the pilot scheme and vice versa. As such, it is essential those companies that have signed up communicate to others why they have joined the CitiCAP project and the business benefits that they see for themselves. As the final stages of project preparation come closer, the main focus will be to shift to implementation which will be the main focus of future journals.

Since the last Journal, the city has decided to apply to be the 2021 European Green Capital Award. The Award is a competition for cities with more than 100,000 residents, organised by the European Commission. The first phase of the competition will compare sustainable urban development with future objectives in 12 sub-areas. In the final round, the cities must present an operational and communication plan for the year of the event. The finalist cities will be announced in early April and the winner in May-June 2019.

The CitiCAP project will be crucial element of the application which should be seen as an internationally significant example of the successful promotion of innovative, sustainable mobility. As the first PCT ever in the mobility sector, it will be essential that this project is communicated beyond the city. As such, it is great to see that CitiCAP features so prominently in the Green Capital application.

Over the next six months CitiCAP will really start to take off as the pilot period of the PCT scheme will be officially launched during the EU Mobility Week / Lahti festival in September. The building phase of the smart main cycle route - working as a pilot arena for smart mobility services and visible arena for PCT - will also begin. The next edition of the journal will focus on this critical phase.

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

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

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