

Prior Information in relation to the study and low value contract < €60 000

Services contract on 'Cities as living labs: increasing the impact of investment in the circular economy for sustainable cities'. This publication is made pursuant to Article 124 of the Rules for Applications of the Financial Regulation that provides for ex ante publication on the Institutions' websites of contracts with a value up to €60 000.

Context and objective of the Study

1. CONTEXT AND OBJECT OF THE NEGOTIATED PROCEDURE

The overall aim of the study is to get a better understanding of the impact of EU funding from Horizon 2020 and the 7th Framework Programme, and to have insights in how this impact can be increased. Therefore, the study focuses on the way R&I funding and innovative solutions are combined with demand-side instruments in “Living Labs” at city-level. The study takes a cross-thematic and challenge-driven innovation approach, analysing how cities move towards a circular economy.

For the period 2014-2020, the EU is investing almost € 180 billion in research and innovation, channelled through Horizon 2020, smart specialisation strategies in European Structural Investment Funds, and other funding instruments (e.g. EFSI). It is of utmost importance to understand how the impact and value added of these investments can be increased, in particular using a system innovation approach where public investment is integrated and combined with the mobilisation of several other policy instruments.

A systemic approach to innovation implies an explicit matching of supply and demand. The supply in terms of innovative solutions for the circular economy is combined with demand-side instruments for “Living Labs”. The concept of Living Labs has two dimensions. First, living labs mean the presence at local (city) level of early markets for innovative products and services, a market that will buy and try out new innovations despite the first-mover risk. This market can consist of advanced, risk-resilient consumers, innovative public procurement, or private procurement in open innovation dynamics. Second, from an EU perspective, living labs are also building on the cultural and social diversity in Europe. Different social, legal, and cultural settings offer opportunities to explore and test innovative solutions (e.g. technological solutions or new business models) in variable environments. The existence of Living Labs may attract also foreign firms and investors to test and roll-out their innovations.

This study embraces a challenge-driven approach to research and innovation, focusing on the societal challenge of a circular economy for sustainable cities. This implies a cross-sectorial and cross-disciplinary approach, where R&I from different sectors such as energy, health, climate, transport, construction, industry, are mobilised for common solutions. The R&I funding can come from different instruments, such as the 7th Framework Programme,

Horizon 2020, Structural Funds, national funding, regional or local/city funding instruments, as well as private funding sources.

A circular economy in cities is defined in a broad sense, covering one or several of the three following dimensions:

1) Sustainable use of resources, natural and cultural capital

Preserve and enhance natural capital and related cultural capital (i.e. cultural landscapes) by controlling finite stocks, balancing renewable resources, optimise resource yields and foster system efficiency in the resource management (including waste management, urban mining, up- and re-cycling, new business models)

2) Circular mobility

A city can move towards offering more choices of mobility and promoting vehicles which can be shared, electrified, autonomous, multi-modal and looped. This includes efforts to decrease congestion by fewer and better-used cars, service innovation and new business models in the so called sharing economy).

3) Resource efficient buildings and urban spaces

Urban planning of spaces and buildings to create high-quality spaces where people can live, work, and play, integrated with green infrastructure with durable, mixed-used buildings, designed in a flexible way and constructed with looped and non-toxic materials. These can be buildings that generate, rather than consume, power and food.

Given the extent of the study, it will have a geographical delimitation, cities (and the interaction between cities-regions). The study will provide both an overview and in-depth case studies of how innovative solutions are tested and developed in cities.

The empirical body of the study will be structured in two work strands:

1. Mapping of cities which have elaborated urban strategies including one or several elements of a circular economy.
2. In-depth case studies of 5 of these cities which have participated in EU R&I projects

2. NATURE OF THE PROCEDURE

The procurement concerns a negotiated procedure. In drawing up their tenders the candidates should particularly take into account the contract and its general conditions set out in Annex I.

3. TECHNICAL SPECIFICATIONS – SERVICES TO BE DELIVERED

1. Mapping of cities in Europe, and in other continents, which have elaborated urban strategies including dimensions for a circular economy

The contractor shall first elaborate a sample population. The cities included in this sample shall represent the following criteria:

- 1) Existence of an official urban strategy with objectives to achieve one or several of the three dimensions of a circular economy.
- 2) Represent different size in terms of population. The population categorisation of Eurostat shall be respected. The sample shall include cities which have between 100.000-250.000 inhabitants, cities which have 250.000-1 million inhabitants, cities between 1 million and 3 million inhabitants, and cities larger than 3 million inhabitants.
- 3) The geographical location of the cities in the sample should include cities in Central Europe, Western Europe, Eastern Europe, Southern Europe and Northern Europe. Cities located in countries outside Europe can be included in the sample, if they present innovations or urban strategies aiming at a circular economy.

The contractor shall explore all available case studies databases on urban innovation, including in cooperation with international stakeholder organisations and larger consortia of cities (e.g. the UN Habitat III, C40, Covenant of Mayors, ICLEI, Pact of Amsterdam, Bloomberg foundation “Mayors challenge”, Eurocities, other associations representing the cities in Europe, as well as ERA-NETs or Joint Programming Initiatives, e.g. JPI Urban Europe, the JRC Urban Data Platform dataset and Horizon 2020/FP7 databases at NUTS3 level. The contractor shall also use all available databases in OECD and the European Commission (including reports of Eurostat), data from the iCapital award and other relevant EU-wide city awards, ESPON database, etc.)¹

¹ Habitat III: <https://habitat3.org/>; C40: <http://www.c40.org/>; Covenant of Mayors: http://www.covenantofmayors.eu/index_en.html; ICLEI: <http://www.iclei.org/>; Pact of Amsterdam: <http://urbanagendaforthe.eu/pactofamsterdam/>; Bloomberg foundation “Mayors challenge”: <https://www.bloomberg.org/program/government-innovation/mayors-challenge/>; Eurocities: <http://www.eurocities.eu/>; JPI Urban Europe: <http://jpi-urbaneurope.eu/>; iCapital award: http://ec.europa.eu/research/innovation-union/index_en.cfm?section=icapital; ESPON database: <http://database.espon.eu/db2/>

Based on the above mentioned criteria and data sources, the contractor shall propose a list of up to 50 cities to the Commission services. The proposed sample population have to be approved by the Commission services.

The contractor shall then do a typology-based mapping of this population, describing if and how the cities mobilise and interact each of the four system innovation dimensions of policy instruments described below:

1) Innovative solutions

- *Technology-based solutions*: The role and extent to which new or existing technologies and research are identified and used as part of the more comprehensive solutions for the societal challenges of cities (e.g. environmental innovations, nature-based solutions, recycling, urban mining, ecosystem services, green mobility and infrastructure, built form, social challenges).
- *Research institutions, universities and innovative firms*: The extent and form of involvement of these actors in the design, implementation and monitoring of the urban strategy.
- *New business models and industrial symbiosis*: Private and corporate experimentation or implementation of new business models responding to market-based innovation opportunities from the move towards a circular economy in cities.

2) Living labs

- *Citizen's involvement and social innovation*: The form and level of engagement of citizens, consumers and civil society organisations in the transformation process, in particular for the research and innovation actions. It can also include citizens' science in urban space (e.g. cultural studies in neighbourhoods). Social innovation in cities are maturing, for instance in energy trade cooperatives.
- *Public procurement of innovation*: The use of public procurement for innovation addressing the societal challenges of a sustainable city through one or several elements of the circular economy. The procurement could cover sustainable existing products and services or functionalities for innovative solutions not yet in the market.
- *Open innovation and value chains* business models using private procurement or linking the city to and business enterprises in the region, to cities in other regions or countries or elsewhere in Europe or globally. Which is the relation between innovative solutions in cities and producers in new value chains? Particular attention

to cross-sector value chains where innovators and companies in different sectors provide transversal solutions.

- *Attractiveness*: The attractiveness of the city for innovative European or global firms aiming at financing or testing their innovations in the city, capitalising on the presence of more advanced consumers open to one or several dimensions of the circular economy in the city.

3) Enablers

- *Financing instruments*: The mobilisation of private funding and citizen crowd-funding, public funding sources (e.g. local budget, regional, structural funds, Horizon 2020 projects, national R&I budgets) and combinations of innovative public and private financing instruments. Particular emphasis on how the research or innovation actions are financed in the overall funding and how EC funding from Horizon 2020 or FP7 complement and add value to the funding from the ESIF Structural Funds.
- *Regulatory innovation*: The application or exploration of Innovation Deals (i.e. building on the EC pilot action for a circular economy), Green Deals (or other national regulatory tools), regulatory 'sandboxes', more stringent standards or regulations, or other forms of innovation-friendly regulations.
- *Big Data and digitalisation*: The form and strategy for the use of digital solutions and the access to public and private Big Data in the innovation, implementation and monitoring of the urban strategy for a circular economy in the city. Urban innovation is also facilitated by digital platforms and networks.
- *Enabling physical and digital infrastructure*: The investment and roll-out of new physical or digital infrastructure which facilitate or enable the roll-out of innovative solutions as well as governance and citizens' participation and dialogue.

4) Governance

- *Governance and monitoring of success* of the urban strategy and its innovation component: definitions and scope of the focus areas or societal challenges, actors actively involved in the decision making and implementation, existence of a roadmap or targets, the monitoring of progress, and the measurement of co-creation or co-design with citizens, innovators and public authorities.
- *Public Sector Innovation*: The extent to which the city has implemented reforms in their administration, for open government, use and sharing of open data, new forms of delivery of services, reforms in human resource management and risk sharing, etc.

- *Science diplomacy*: Whether the city participates in global initiatives for sustainable development goals (e.g. Habitat III) or in bilateral dialogue with innovation and transformation processes in other cities which also target elements of a circular economy for a sustainable city.

The typology of this mapping shall identify systemic synergies. It shall describe in detail how the cities mobilise and assess these four dimensions in view of moving towards a more circular economy. The contractor shall identify patterns of change and classify all cities in the sample population according to the extent and intensity of their use of the four dimensions of system innovation.

2. In-depth case studies of 5 of the cities inside work strand 1 which have benefitted from EU R&I funding from Horizon 2020 or the 7th Framework Programme

The second work strand of the study shall analyse the impact and value added of projects co-financed by the EU 7th Framework Programme or Horizon 2020 that supported innovative solutions for one or several dimensions of a circular economy in the city.

Based on the mapping of work strand 1 and in collaboration with the Commission services, the contractor shall identify five (5) European cities among those identified in work strand 1, which have benefitted (as coordinators or partners) from EU research and innovation projects in the area of one or several of the dimensions of the circular economy for more sustainable cities. The selection of EU projects and cities shall include a cross-disciplinary approach, e.g. projects from climate, health, industrial and the transport areas, or other areas, and, as far as possible, a geographical balance of cities across Europe.

The contractor shall:

- a) Describe the **outcomes and deliverables** of the EU R&I projects and track the current dynamics of the project consortia, including after the finalisation of the contractual period.
- b) Assess to which extent the projects have **contributed and added value to the overall urban transformation strategy** of the five cities. This includes an analysis of how the strategies and innovative solutions have evolved over time.
- c) Perform interviews in all the five city case studies with policy officers in the city-administration, and with other private and public actors in the city and the region, to evaluate the **benefits and barriers** of a full use of the EU funded R&I projects. It shall include an assessment of whether the innovation strands of the urban strategy would have been possible without the EU funded projects.

Based on the results of this analysis, the contractor shall identify good and bad practices of the market roll-out of innovative solutions. The role of living labs, enablers and governance models shall be assessed in-depth to identify barriers and enablers for market roll-out of the innovative solutions. What have been the factors of success or failure? Which were the biggest challenges in creating change? The objective is not to identify failures but to treat the cases as opportunities for learning and fine tune the strategy for change.

The contractor shall then make recommendations on how systemic innovation can turn societal challenges for sustainable cities into opportunities for jobs, growth and better quality of life for citizens. Specific recommendations shall be made on how to increase the impact of the EU R&I funding from Horizon 2020 and the 7th Framework Programme and how they can complement and add value to other funding resources at local, regional and national level (including the use of EU Structural Funds). The five case studies will therefore also analyse how the cities are involved in the relevant smart specialisation strategy of their region. These recommendations can also be an input to the reflection of the future EU R&I funding instruments and the way they could interact with framework conditions.

Selection criteria

A declaration of compliance with the selection criteria is requested (with a CV attached).

The candidate must have the necessary technical, professional, economic and financial capacity to execute the contract. A minimum of 5 years' academic work in the area of financial instruments for innovation is required, as documented by a publications list (to be provided with the proposal). The proposals will be evaluated on the basis of the relevance responding to the objective of the study, the quality of the methodology and the proposed work plan.

Estimated amount: Maximum: EUR 60 000

Estimated launching date: ***October 2016***

Economic operators interested in participating in this call for tenders may express their interest by writing RTD-PUBLIC-PROCUREMENT-A6@ec.europa.eu not later than 2 weeks after publication. An acknowledgement of receipt will be sent to interested bodies by the EC services in charge of the procedure.