



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement N° 691895

REPLICATION STRATEGY

Project (SHAR-LLM)

acronym:

Project title: SHARING CITIES

DateofFebruary- April,
preparation:Startdateof4JanuaryDuration:36 + 24 monthsproject:2016

Version: 2 Prepared by: Bernadett Köteles-Degrendele, EUROCITIES

Reviewed by:

Nathalie Guri

Verified by:

Status:

 $Draft_v0.2$

Disclaimer

The information in this document is provided as is and no guarantee or warranty is given that the information is fit for any particular purpose. The user thereof uses the information at its sole risk and liability. The document reflects only the authors' views and the Community is not liable for any use that may be made of the information contained therein.

Plan for this document

Name	Action	Dates
EUROCITIES	Create	9 February- 15 March
UrbanDNA	Sent for input, review	16 March-20 March
EUROCITIES, City leads	Validation workshop	21-22 March
EUROCITIES	Update	23 March
City leads	Input and update	23 March- 31 March
EUROCITIES	Update v. 0.1	31 March
City leads update	Input and update	1 April- 22 April
EUROCITIES	Update, review v.0.2	25 April- 30 April

1. Sharing Cities Project

The Sharing Cities project is involving 35 partners across Europe with the aim to scale up smart city solutions from district to national, European and international level, generating investment and new business models. Development and management of digital infrastructure and citizen engagement are at the heart of this project, which aims to bring about a shift in current practice and governance models.

1.1 Concept and approach

The concept of Sharing Cities is based on the digital- and data driven transformation currently in progress and the need for new means of financing and funding in order to foster integrated solutions that are open, affordable and scalable across cities.

To this end, London, Lisbon and Milan as `lighthouse` cities, and Bordeaux, Burgas and Warsaw as `follower`/`fellow` cities, have come together with a clear commitment at both political and technical level.

Sharing Cities has established a world-class partnership including cross-cutting centres of expertise, city network experts, as well as best-of-breed niche businesses, big industry, research and design partners, all of whom are renowned for delivering excellence in their particular field.

Sharing Cities has a clear focus on testing better, common designs which will cause industry and cities to collaborate internationally but also build more trusting relationships between cities and civil society. There are three demonstration areas selected: Royal Borough of Greenwich in London, Porta Romana/Vettabbia in Milan, and the downtown area of Lisbon. Practical and tangible benefits form part of the expected outcome. SHARING CITIES project will deliver on "10 Audacious Goals":

1Aggregate demand and deploy smart city solutions

- 2 Deliver common and replicable innovative models
- 3 Attract external investment
- 4 Accelerate take-up of smart city solutions
- 5 Pilot energy efficient districts
- 6 Shift thinking irreversibly to local renewable energy sources
- 7 Promote new models of e-mobility
- 8 Successfully engage with citizens
- 9 Exploit 'city data' to maximum effect
- 10 Foster local level innovation, creation of new businesses and jobs

1.2 Objectives of the project

Sharing Cities has four strategic objectives:

Scale: To prove that properly designed (and more common) smart city solutions can be integrated in complex urban environments to exhibit their true potential and allow for the significant scale-up and consequent increase in social, economic and environmental value.

- Digital first: To explore and prove the extent to which a difference can be made through adopting a digital first and data-driven approach to the improvement and 'connecting up' of existing infrastructure, as well as the design and running of new city infrastructure. To drive the creation of a new set of next stage digital services which will help citizens make better choices around transport and energy efficiency, which when scaled up will enhance the city's ability to hit key targets for mobility, housing, energy efficiency and resilience, and economic development.
- Open up and accelerate the market: To understand, develop and trial business, investment and governance models, essential for the true aggregation and replication (through collaboration) of smart city solutions in cities of different sizes and maturities, in Europe and beyond. Through this, to accelerate the pace by which we make transformative improvements, and enhance sustainability.
- Share and collaborate for society: To respond to the increasing demand for participation; to enhance mechanisms for citizens' engagement; to improve local governments capacity for policy making and service delivery through collaboration and co-design; resulting in outcomes that are better for citizens, businesses and visitors.

Sharing Cities objectives will be addressed by digital and interconnected measures in each of the lighthouse cities pilot districts.

Key activities will be delivered on three levels:

People – deploy approaches and tools to develop a deep understanding of society, and the means by which they actively participate in making their districts better places.

Place – solutions in city infrastructure for low energy districts, electrification of mobility and integration of processed and infrastructure. Such measures include: building retrofit, sustainable energy management system, shared e-mobility and smart lampposts.

Platform – an urban sharing platform (USP) that manages data that are open and public.

2 Purpose of this document: The Replication strategy

The purpose of this document is to prepare the replication strategy in order to identify key points and questions and set common basis, understanding for all partners involved in the replication process. This document shall be a `living document` which EUROCITIES will update when necessary. These updates should meet the needs and correspond to the feedback and input received from partners, cities and also the evaluation WP leader (WP 8).

One of the first occasions where this draft was presented and discussed was the Replication training and workshop organised in Brussels on the 21-22 March, 2016. For replication the

commitment of SHARING CITIES is not less than that each `follower`/ `fellow` city (i.e. Bordeaux, Burgas and Warsaw) will be involved from the very beginning of the project solutions' design, validation and implementation processes.

This early engagement and cooperation ensures that `follower` cities will be well equipped and ready to replicate similar solutions in their own contexts. The ambition is not less than making each `follower` city to be treated and make them act as a `fellow` city. This document would also like to introduce the concept and name of `fellow` city. Solutions and challenges might vary from municipality to municipality and each local context has some specificity.

Nevertheless, starting to cooperate early is seen as a key factor to succeed and this document ensures a proper planning and follow-up on replication activities.

3 Purpose of the Replication Work Package

The purpose of WP5 Replication is to outline **the tools and methods** with which follower / fellow cities will co-design, validate and implement solutions developed at the demonstration areas of London, Lisbon and Milan.

In particular:

- Follower cities are included at very early stage in the definition and design of the lighthouse projects;
- Follower cities have a strong role in the project to allow for the replication of given lighthouse projects according to their local conditions;
- Follower cities receive adequate support from other consortium partners to be well equipped to translate the lighthouse solutions into their local context;
- By the end of the project the follower cities are ready to replicate the lighthouse projects/solutions in their city;
- Lighthouse and follower cities cooperate efficiently;
- Knowledge, experience and results from replication activities in the follower cities are shared with non-partner cities (national scale-up cities and other European cities).

The replication will be facilitated and meant to happen in several contexts and different partnerships amongst the cities:

- Between the three 'lighthouse' and the three 'follower'/ 'fellow' cities
- Between the three 'lighthouse' cities who will learn from one another
- Between the three 'lighthouse' / 'follower'/ 'fellow' cities who will learn from one another
- Between the six partner cities and cities outside the consortium.

Replication is mainly about how we will achieve exploitation of solutions by a wide range of national and EU scale-up cities.

At the same time, replication is not limited to the technical solutions developed in relation to the measures (e.g. e-mobility) but is also about a broader context and insight into what works and what does not work in each city. There is a need to analyse in depth each of the solutions and how, why those can work, and can be taken up in certain cities. The exercise therefore covers approaches applied for the technical smart city solutions but also and in particular those related to collaboration, engagement, legal, strategic and governance models.

The work package will gather relevant practices and solutions, different models to facilitate take-up and scale-up Sharing cities by other cities. Those other cities are primarily the ones who are in the consortium named as `follower` cities but also refers to cities outside of the consortium.

This work package is detailing the process by which follower cities are tightly connected into the Sharing Cities process and develop their replication strategies and competencies.

4 Participant Organisations

List of partners WP5

No	Name	Short name	Country
1	GREATER LONDON AUTHORITY	GLA	United Kingdom
2	Royal Borough of Greenwich	RBG	United Kingdom
8	CAMARA MUNICIPAL DE LISBOA	CML	Portugal
10	EMPRESA MUNICIPAL DE MOBILIDADE E ESTACIONAMENTO DE LISBOA E.M.S.A.	EMEL	Portugal
16	COMUNE DI MILANO	CDM	Italy
23	INSTYTUT ENERGETYKI	IEN	Poland
27	CITY OF BORDEAUX	BORDEAUX	France
28	CITY of BURGAS	BURGAS	Bulgaria
29	CITY of WARSAW	WARSAW	Poland
31	EUROCITIES	EUROCITIES	Belgium

4.1 Main delivery partners:

- Bordeaux, Burgas and Warsaw (i.e. `follower` cities) on the one hand;
- And London, Milan and Lisbon (i.e. `lighthouse` cities) on the other hand;
- Urban DNA under WP7.

4.2 Contact database and mailing lists

The contact database contains the persons and organisations relevant to this WP (Annex - WP5 Contact list). Related mailing lists will be available on the internal area of the website and will be updated when necessary and shared with the SHARING CITIES project's partners to keep all partners informed of eventual changes.

There are 2 types of databases and mailing lists:

- Internal list, with the core partners of the consortium (e.g. city leads involved in replication), managed by the WP5 lead;
- External list, which will be composed of stakeholders who have expressed an interest towards SHARING CITIES activities and will be kept informed of the results and events of the project. This list includes the EUROCITIES contact base, city members of both technical and political levels will be informed about the project. This list is essential for the scaling up of the project. It should include all members who expressed interest in joining the learning platform which is to be developed as a part of the website. This external list is further expanded with the local, regional or national contacts which are to be identified by the local partners during the course of the project.

5 Work Package relations

This work package is a support work package dedicated to all three followers, and scale up cities. However, the technical work packages (WP2, 3 and 4) will provide measure-specific technical support.

WP7 results will feed into WP5 replication activities from the business modelling and funding perspective; in particular by demonstrating financially viable and scalable propositions to the cities (D7.7 Opportunity matching – Scale-up cities) WP8 supports with the evaluation and monitoring aspect, in particular by developing for replication a toolbox of models and methods that will enable businesses and cities to develop and explore alternative 'Sharing Cities' scenarios.

6 Timeline

The tables below give an approximate timing, overview of the planned replication activities and deliverables in terms of general timeline of the project.

			Work Pa	ackage 5 p	rogramme pl	an timeline						
						Ye	ar 1					
Project month	1	2	3	4	5	6	7	8	9	10	11	12
Calendar month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Phases (milestones)												D5.1-D5
WP6 Communication												
D5.1. One replication strategy		preparation	1st draft							internal update		report
D5.2. One two-day replication training		preparation	21-22, Brussels									
D.5.3. One replication training manual			preparation	Draft version	or 2nd draft		internal up	date, data co	llection			
D.5.4. Three city baseline reports					preparation			Final version	1			
D.5.5.Work shadowing visits& Peer-learning												
visits					planning and	l preparatio	า	Visits on dif	ferent locati	ons		
D.5.9.Technical webinars		preparation		webinar	planning of	webinars						
D.5.6. Replication roadmaps					preparation							
WP1 Management	_											
Consortium meetings	Brussels						Burgas				Milan	

Table 1: WP 5 plan and timeline for year 2016

	Year 2-5 quick preview										
	M12			M20	M24		M40	M48			M60
Phases (milestones)											
WP5 Replication											
D.5.9.Technical webinars											
D.5.7. Mentoring visits											
D.5.8. Roadmap implementation report	preparation										
D.5.10 Scientific publications	preparation								follow-up activ	ities	
D.5.11. Technical handbooks	preparation										
D.5.12.Replication handbook	preparation										
D.5.13.National scale-up meetings	planning										
D.5.14.Replication activities in scale-up cities	preparation										
D.5.15.Webinars about EU Funding	webinar pla	nning									
D.5.16.Training on bid writing	planning										
D.5.17.Meeting with funders	planning										
Peer learning events and other replication											
events											
WP1 Management											
Consortium meetings											

Table 2: WP 5 plan and timeline, 2017- 2021

6.1 Milestones

The key milestones which have been identified in relation to the project are:

- Milestone 1:M12 Replication & roadmap documented
- Milestone 2: M24 Sharing Cities learning platform available with material

VAP5 Millestones							
Milestone number*	* Milestone title	Leadbeneficiary	Due date	Means of venification			
N628	Replication strategy and roadmap	31 - EUROCITIES	12	Replication&roadmap documented			
				SharingOties learning platformavailable with			
N629	CapacityBuilding	31 - EURCOTTES	24	material			
*Asof the Grant Ag	greement (p. 55)						

Table 3: Milestones for WP5

6.2 Tasks

The tasks and related deliverables are listed below:

Task 5.1: Replication strategy and roadmap

D5.1. One replication strategy (M3)

D5.2. One two-day replication training (M3)

D5.3. One replication training manual (M4)

D5.4. Three city baseline reports (M8)

D5.5. At least 3 work shadowing visits (M8-12)

D5.6. Three replication roadmaps (M12)

Task 5.2 Implementation of the replication roadmaps

D5.6.D5.7. Three mentoring visits in each follower city (Year 2 to 4)

D5.8. One roadmap implementation report per follower city per year (Year 2 to 4)

Task 5.3 Capacity building activities

D5.7.D5.9. Twenty technical webinars (M1 to 40)

D5.8.D5.10. Two scientific publications (M40 to 48)

D5.9.D5.11. Ten technical handbooks (M40 to 48)

D5.12. One practical replication handbook (M40 to 48)

Task 5.4 Replication activities in scale-up cities

5.13. D5.13 National scale-up meetings (Year 2 to 4)

D5.14. D5.14 Replication workshops (Year 2 to 4)

Task 5.5 Dialogue with funders

D5.15. D5.15 Webinars about EU funding programmes (Year 2 to 4)

D5.16. D5.16 Training about bid writing (Year 2 to 4)

D5.10.D5.17. D5.17 Meetings with funders and banks (Year 2 to 4)

D5.1: One replication strategy [3]

Replication strategy - relates to Task 5.1: Replication strategy and roadmap

D5.2: One two-day replication training [3]
1 x 2-day training relates to Task 5.1: Replication strategy and roadmap
D5.3: One replication training manual [4]
Manual for replication relates to Task 5.1: Replication strategy and roadmap
D5.4: Three city baseline reports [8]
Baseline reports relates to Task 5.1: Replication strategy and roadmap
D5.5: At least 3 work shadowing visits [8]
Months 8 and 12 relates to Task 5.1: Replication strategy and roadmap
D5.6: Three replication roadmaps [12]
Replication roadmaps
D5.7: Three mentoring visits in each follower city [24]

6.3 Dependencies between amongst different tasks:

Mentoring visits to support follower cities. Relates to Task 5.2 Implementation of the replication roadmaps

D5.8: One roadmap implementation report per follower city per year (Year 2 to 4) [24]

Months M24, M36, M48, M60 Relates to Task 5.2 Implementation of the replication roadmaps

D5.9: Twenty technical webinars [1]

Months 1 to 40 - relates to Task 5.3 Capacity building activities

D5.10: Two scientific publications [40]

Months M40 - M48 - relates to Task 5.3 Capacity building activities - relates to Task 5.3 Capacity building activities

D5.11: Ten technical handbooks [40]

Ten technical handbooks 5 EUROCITIES R PU M40 -M48 - relates to Task 5.3 Capacity building activities

D5.12: One practical replication handbook [40]

One practical replication handbook 5 EUROCITIES R PU M40 -M48 - relates to Task 5.3 Capacity building activities

D5.13: National scale-up meetings [24]

National scale-up meetings D5.13 National scale-up meetings (Year 2 to 4)

D5.14: Replication activities in scale-up cities [24]

Task 5.4 Replication activities in scale-up cities: D5.14. D5.14 Replication workshops (Year 2 to 4)

D5.15: Webinars about EU funding [24]

Task 5.5 Dialogue with funders D5.15. D5.15 Webinars about EU funding programmes (Year 2 to 4)

D5.16: Training about bid writing [24]

Task 5.5 Dialogue with funders D5.16. D5.16 Training about bid writing (Year 2 to 4)

D5.17: Meetings with funders [24]

Task 5.5 Dialogue with funders D5.10.D5.17. D5.17 Meetings with funders and banks (Year 2 to 4)

7 Deliverables

Deliverable Number	Deliverable Title	Lead beneficiary	Туре	Dissemination level	Due Date (months)
D 5.1	One replication Strategy	31 - EUROCITIES	Report	Public/ Internal	3
D 5.2	One two-day replication training	31 - EUROCITIES	Other	Public	3
D 5.3	One replication training manual	31 - EUROCITIES	Report	Public	4

D 5.4	Three city baseline Reports	31 - EUROCITIES	Report	Public	8
	Reports	LOROCITIES			
D 5.5	At least 3 work	31 -	Other	Public	8-12
	shadowing visits	EUROCITIES			
D 5.6	Three replication	31 -	Report	Public	12
	Roadmaps	EUROCITIES			
D 5.7	Three mentoring	31 -	Other	Public	24-48
	visits	EUROCITIES			
	in each follower city				
D 5.8	One roadmap	31 -	Report	Public	24-60
	implementation report	EUROCITIES			
	per follower city per				
	year (Year 2 to 4)				
D 5.9	Twenty technical	31 -	Websites,	Public	1-40
	Webinars	EUROCITIES	patents		
			filling,		
			etc.		
D 5.10	Two scientific	33 - Imperial	Report	Public	40-48
	Publications				
D 5.11	Ten technical	31 -	Report	Public	40-48
	Handbooks	EUROCITIES			
D 5.12	One practical	31 -	Report	Public	40-48
	replication	EUROCITIES			

	handbook				
D 5.13	National scale-up Meetings	31 - EUROCITIES	Report	Public	24-60
D 5.14	Replication activities in scale-up cities	31 - EUROCITIES	Demonstr ation	Public	24-60
D 5.15	Webinars about EU Funding	31 - EUROCITIES	Websites, patents filling, etc.	Public	24
D 5.16	Training about bid Writing	31 - EUROCITIES	Demonstr ation	Public	24
D 5.17	Meetings with funders	31 - EUROCITIES	Other	Public	24-60

8 Replication activities dimensions

The replication activities have at least four dimensions which need to be organized and those together are seen as guarantee to a successful replication:

- City team fit for purpose: One of the key challenges for cities is to create an environment for being able to deliver the work in a most efficient within their own local contexts. Therefore, it might be necessary to re-organize the work of the city team, establish cooperation with the stakeholders in order to support best the objectives of the project. This includes the establishment of the cross-departmental working groups and focus groups.
- 2. Knowledge- sharing visits: The cities cooperate and share their experience, knowledge through specific visits in order to get practical insight into the day-to day challenges which can consider different aspects of the work. The first step in this is to gather all cities for *replication training* and equip them with techniques and methodologies, and facilitate both self-learning

and long-term cooperation. It also covers the peer-learning visits and work-shadowing visits when `fellow` cities go and work together in the lighthouse city for a longer period. The other type of visits target *mentoring* whereas the lighthouse city supports the city in their own context.

- 3. Planning and documenting for share and re-use: The partner cities have set an ambition to deliver state of the art work and prepare, plan and document both the solutions developed and the challenges and other aspects such as "lessons learnt" as well. Under this framework partners will prepare *city baseline reports* as situation analysis, *replication roadmaps* and *implementation reports*, *handbooks* and even *scientific publications*. In close relation to this, *videos* will be also produced (under WP 6) demonstrating both the solutions developed and the process of working together.
- 4. Capacity-building, scaling-up and demand aggregation: In order to transfer knowledge and benefit from the cooperation also at technical levels, capacity building activities will be organised. Some of these are *webinars* which are covering topics selected based on the interest of the partners and have proven to be most relevant. As a part of the project website, an online *Learning/ Knowledge platform* will be created to store information and allow "newcomers" to join this platform if they are interested to take-up a similar solution. *Events* and specific *bilateral meetings* and *dialogue* with funders will also form the part of demand aggregation process.

9 Replication targets

The expectations are defined in both qualitative and quantitative terms.

S.M.A.R.T indicators are:

Specific Measurable Achievable Relevant Time-bound

The `10 Audacious Goals` and related measures are setting clear directions for SHARING CITIES. Some key objectives and related numbers are:

- To reach aggregating demand and achieve wide scale deployment of smart city solutions by engaging with 100 cities from which at least 50% will exploit the developed products. (More cities supply smart city solutions)
- 2) To deliver common, replicable, innovative solutions from which at least 10 solutions and 10 tools and frameworks can be taken-up. (*More choice in smart cities solutions and tools*)
- 3) To attract external investment and trigger 500€ million external exploitation investment (More *investment in smart city solutions*)
- 4) To accelerate uptake of smart city solutions and reduce implementation of cycle times (Faster *uptake of smart city solutions*)
- 5) To deliver role-models for energy-efficient districts and reduce bills by €600,000 pa (Demonstrate and create energy-efficiency champions)
- 6) To shift thinking irreversibly to decarbonized and local renewables, retrofit 10,000 homes and save 5.9 kWh/ year of energy (*Make real transition to renewables through SMART actions*)
- 7) To make a behavioural change in the choice of the people for new models of e-mobility and districts, more concretely 10% moving to e-vehicles (People *opt for using e-mobility*)
- 8) To make citizen participation real, prove that 50% of the 15,000 affected residents (citizens) of the buildings under renovation (Make *happen citizen participation*)
- 9) To exploit city data to demonstrate real user value and support decision-making (Make *city data matter*)
- 10) To strengthen local scale-up businesses in at least three cities and create at least 100 jobs in related sectors (Make *impact for local businesses and jobs*).

The abovementioned targets and indicators will be further developed in the cooperation with WP8 and also relationship will be created with the smart city indicators to be approved in the context of the CityKEYS project (<u>http://www.citykeys-project.eu/</u>). This will allow properly monitor, evaluate and benchmark the efforts made by the cities in the project, also on replication.

The solutions delivered in the `lighthouse city` demonstration areas, namely the core measures on each area to be developed are presented below:

leasure	Greenwich	Downtown	Porta Romano
Citizen Engagement	relevant measures with active citizen	urrent practices across cities, enhance, and en participation. Alignment of this sharing layer w t bond scheme to incentivise positive behavior	with the urban platform. Development of a
Building Retrofit	357 public homes, 5 buildings w/PV & RSHP	1 public housing block, 2 private homes, 1 public building, PV	300 private housing homes, 5 mixed owner blocks, PV
Sustainable Energy Management Serv.	Real-time demand response. Virtual energy plant. Smart heating mgmt.	Optimised building consumption, micro- generation, consumption/production map, adaptive street lighting, traffic monitoring	Real-time demand response and energy optimisation, and micro-geographical information and visualisation
Shared eMobility			
- 🚱 eV Car Sharing	8 autonomous shared eVs 20 eVs	62 eVehicles	62 eVs
eBike Sharing	10 eBikes for council staff 30 eBike Scheme / 4 stations	30 e-bikes and 2 dock stations	150 eBikes / 14 stations
- Bo EV Charging	20 public charge points (4 rapid)	29 public charge points (1 rapid); 6 private	60 charge points (20 rapid)
- 📕 Smart Parking	300parking places	30 Parking Bays	125 parking bays
- 🧽 eLogistics	Trial of 4 shared eVs	80 eLogistics vehicles	10 eLogistics vehicles
Smart Lamp Posts	400 lampposts	250tampposts	300
Urban Sharing Platform	Development of a common open stan	dard reference architecture and urban sharing cities "designed by three, mean for many"	

Figure 1: Core Measure Summary and Follower City Interest

The concrete developments and related targets will be selected in the context of WP3.

10 The Partner Cities

The key players in the replication process are the six partner cities and their experience, knowledge- exchange and engagement in sharing those will be essential for scaling-up the results. EUROCITIES obviously brings its network at service of this activity. Nevertheless, the ownership and success of the replication activities lies primarily with the partner cities.

During the kick-off it has become clear that the categorisation of the cities into the two groups is rather technical. The cities are eager to learn from each other and therefore the "follower cities are more so called fellow cities in the process. The activities and the work to be delivered is organised in a way that cities can exchange their practices during the course of the project.

- The lighthouse cities are London, Lisbon and Milan.
- The fellow cities are Burgas, Warsaw and Bordeaux.

11 How do we replicate

Different levels of replication levels have been identified for the cities to understand how a solution is designed and implemented, and take ownership of the process, tools and methods, and not only of the results.

The objective is that cities will be involved in the project definition and planning in lighthouse cities early on from the point of view of replication potentials.

Bordeaux, Burgas and Warsaw will work together with the `lighthouse` cities on solutions that have strong potential to be replicated in their own city.

Once developments took place, the lighthouse cities will bring their knowledge and "mentor" the cities in building their similar but own solutions.

There are therefore three different phases where replication is planned:

- The first one is at the earliest possible stage, at the very beginning of the development of a solution, at the solution **design** phase.
- The second one is when the solution is being developed is to be **validated** whether that could be applied in a different context, that is at the validation phase.
- The third one is when the solution has been already designed and validated. It means that the solution is going to be developed at that new environment, at the **implementation** phase.

12 What do we replicate

The key areas, measures where replication is going to happen are the concrete solutions. Nevertheless, the whole process, related practices, challenges and lessons learnt will be documented as those form an important part of what made those use cases successful.

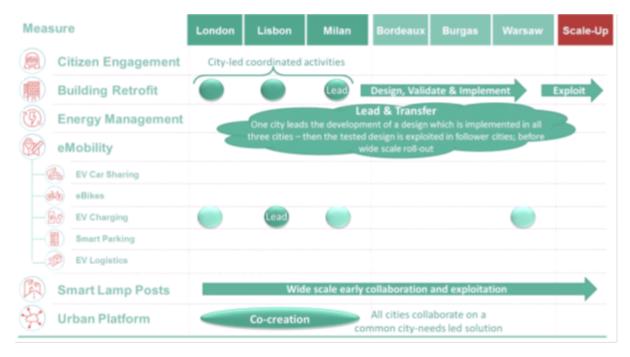


Figure 2: Potential collaboration models amongst the cities

The WP 3 details the concrete technical objectives to be achieved on each area.

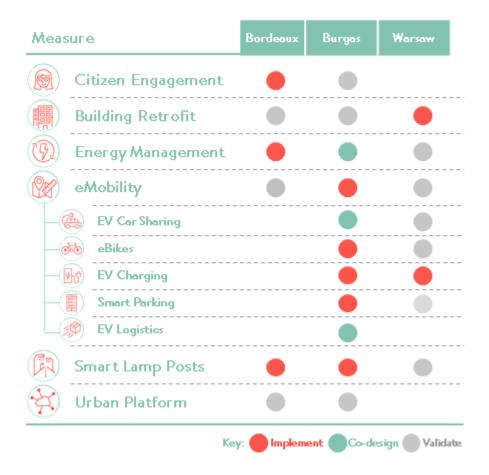


Figure 3: Engagement level in replication by the `fellow` cities

Each city will select areas, themes where they are planning to work together with at least one or two `lighthouse` cities. It is also possible that each `fellow` city will work with all three lighthouse cities.

Without being exclusive we can take few examples. For instance, on the area of building retrofit all three lighthouses bring in a strong approach and experience.

The WP 3 describes more in details the plans but to give some general overview about few technical themes:

Theme 1:

Building Retrofit & Local Renewable Energy Generation, Lead `lighthouse` city: Milan

Apply deep-retrofit measures to public and private residential properties affecting 15,000 citizens across the six cities and integrating the properties with low carbon energy sources (solar PV, water source heat pump) and electric vehicle charging, all wrapped together by a digital first digitally driven sustainable energy management systems wrapping it all together.

What concerns the three cities, they have taken different approaches and selected in which phase (co-design, validation, implementation) would be the most beneficial to cooperate.

· Bordeaux

Validate: The sharing cities design process complete in most part, follower city then validate that in their city, and at that stage take up and implement the design.

· Burgas

Validate: The sharing cities design process complete in most part, follower city then validate that in their city, and at that stage take up and implement the design.

· Warsaw

The City's Sustainable Energy Action Plan assumes those more than 400 000 sq. meters of social housing buildings will undergo complex retrofitting and installation of renewable energy where possible. That means over €38million of expenditures for the City budget, but also indicates visible changes in energy use - planned savings in 2020 are 15,143 MWh/year and CO2 emissions reduced by 15,783 Mg/year).

Implement: these measures is a clear priority in their city as detailed above and will join in and implement with the 'Sharing Cities' consortium. The consortium seeks to deliver common designs and aggregate demand to support and access potential funding sources.

Theme 2:

Sustainable Energy Management System, Lead `lighthouse` city: London

Implement virtual power plant interoperable with Urban Sharing Platform to integrate renewable energy supply, energy management, energy demand response and electric vehicle charging within a sustainable energy management system.

What concerns the three cities, they have taken different approaches and selected in which phase (co-design, validation, implementation) would be the most beneficial to cooperate.

· Bordeaux

Implement: the measures is a clear priority in their city as detailed above and will join in and implement with the 'Sharing Cities' consortium. The consortium seeks to deliver common designs and aggregate demand to support and access potential funding sources.

· Burgas

Co-Design: Actively take an interest in co-designing the solution with the consortium. The city to introduce experience / leading practice and actively seek to shape the design as the topic is a priority, the need exists and whet the design did fits then implementation will be a likely outcome.

Warsaw

Validate: The sharing cities design process complete in most part, follower city then validate that in their city, and at that stage take up and implement the design.

Theme3:

Shared e-mobility, Lead `lighthouse` city: Lisbon

A portfolio of inter-connected measures supports the shift to electric shared mobility solutions and to create energy efficient e-mobility districts.

eV Car Sharing

Deliver bold ambitions in districts consistent with growing city-wide ambitions for real scale reduction in traditional car ownership and use; learning from our different city contexts – user behaviour/ownership and commercial offers from suppliers: and to support EU-wide relevant

market take-up of EVs through sharing business models and the clean power for transport package.

e-bike Sharing

Build on existing human power bike sharing schemes with introduction of e-bikes, to support shift from cars and other modes to e-bikes for those longer journeys, senior citizens, mobility impaired; integrate with EV car sharing services and charging points and local renewable energy generation.

Shared e-logistics

Counter the growth in conventional (particularly diesel) freight delivery vans caused by growth in on-line commerce, local deliveries and small businesses through implementing electric logistics to prove the business cases for new ways of urban logistics, and package learning for EU cities replication.

eV Shared Charging

Install a network of EV charge points, and integrate infrastructure with the other place-based measure and the urban shared platform: building retrofit; solar PV; humble but smart lampposts; sustainable energy management system; to enable shift to e-mobility and achieve an advanced level of "digital first" and "infrastructure next" integration.

Smart parking

Implement smart parking technologies, including evaluation of sensor type implementation (potentially different sensor types and business models), testing and capture of operational experience to incentivise e-mobility

Each city has committed to:

· Bordeaux

Validate: Actively take an interest in validating the solution with the consortium. The city to introduce experience / leading practice and actively seek to shape the validation as the topic is a priority, the need exists and whet the design did fits then implementation will be a likely outcome.

· Burgas

Implement: the measures is a clear priority in their city as detailed above and will join in and implement with the 'Sharing Cities' consortium. The consortium seeks to deliver common designs and aggregate demand to support and access potential funding sources.

Warsaw

Validate: The sharing cities design process complete in most part, follower city then validate that in their city, and at that stage take up and implement the design.

Theme 4:

Smart Lampposts

A swift and secure means to 'bootstrap' smart cities, through early demonstration of integrated smart lighting with other smart service infrastructures (EV charge points; smart parking; traffic sensing; flow data; Wi-Fi etc.); enables data communication; proves clear value case; makes smart visible and meaningful for citizens.

Each city has committed to:

Bordeaux

Implement: the measures is a clear priority in their city as detailed above and will join in and implement with the 'Sharing Cities' consortium. The consortium seeks to deliver common designs and aggregate demand to support and access potential funding sources.

· Burgas

Implement: the measures is a clear priority in their city as detailed above and will join in and implement with the 'Sharing Cities' consortium. The consortium seeks to deliver common designs and aggregate demand to support and access potential funding sources.

· Warsaw

Validate: The sharing cities design process complete in most part, follower city then validate that in their city, and at that stage take up and implement the design.

Other elements to be considered when focusing on replication are:

Co-Creation: The urban sharing platform (USP) is anticipated to be co-created in a highly collaborative process to develop as common a design across the three cities as possible. This will aid future exploitation by other cities. And is logical given the digitisation is less location specific compared to for instance building retrofit

External Aggregation & Collaboration: Smart lampposts we anticipate will extend beyond the programme as a collaborative model from the outset, connecting to EIP activities

City-Specific Implementations & Compare: e-car sharing is seen to be significantly influenced by the investment and operational model, such that there may be a need to implement in a different fashion in different cities, and then compare

Lead City: for some measures we can exploit a particular city's experience such that they hold the 'design authority' role, and other cities follow.

Citizen engagement and other, 'soft' aspects of replication are seen having as much as significance to the project as the technological ones. The knowledge sharing therefore will be closely planned and monitored in order to document good practices and share knowledge. The level of city commitments for specific topics may change during duration of Sharing Cities, within the framework of the project procedures and parameters.

13 Key tasks and objectives

13.1 Replication strategy and roadmap (Task 5.1.)

Replication strategy

Provides a general overview on what replication is about and how replication will be organized during the entire project.

Role of partners

EUROCITIES has prepared the first draft of this strategy which provided input to the replication training/ workshop. It was to be validated by the city leads at the workshop and feed the content with further ideas. After the workshop EUROCITIES has shared the document with the cities for update and comments.

Replication training and workshop

Provided `lighthouse` and `follower` cities with tools (such as examples for assessments; roadmaps; architecture; success factors), and facilitate discussion amongst the cities. This approach can ensure that cities share their experience, develop the necessary skills for collaboration and also ready to cooperate together when meeting specific challenges (such managing innovation; working cross-functionally; managing change; asking the right questions; giving feedback). This training event was meant also to create a common understanding of the

Sharing Cities replication strategy and help to create a team spirit, ownership for certain tasks amongst the city partners.

Role of partners

The purpose of this training/ workshop was to agree on and share:

- Key principles, values for working together: ship, mentoring and learning, being critical friends etc.
- Put terminology to practice: what does sharing means for co-creation, validation and implementation?
- Key definitions/differences and reach common understanding on activities to be performed (e.g. peer-learning, work shadowing, mentoring)
- Develop skills, techniques and methods to ask the right questions: how to be a coach and a coached; mentor and mentee
- Enable cities to set up necessary structures by cities sharing experiences, good practices, list key success factors and challenges
- Knowledge sharing (e.g. TO DO, NOT TO DO) between cities in a multi- directional, i.e. amongst lighthouse, amongst and between lighthouse and cities.

Short training manual

The manual will contain all important learning points, so that cities can go back to it whenever they want during the project lifetime. This will also be an important knowledge repository, in case of staff or situation changes in the `lighthouse` or `fellow` cities. This will be available on the project website, together with the training presentations, handouts and practical exercises.

Role of partners

The manual will be prepared after the training by EUROCITIES. UrbanDNA will give input from a WP7 point of view. The website functionalities and learning platform will be also designed by EUROCITIES in a way that this training manual can become a part of it and partners will be able to contribute with ideas and materials.

Cross-departmental working group

Each `fellow` city is invited to establish the necessary organizational structure to meet the challenges of developing smart city solutions. If needed, cross-departmental working groups will be created in the cities. At the replication training it has become clear that some cities have already experience with setting up such groups and exchange of information on those existing practices is facilitated by EUROCITIES through webinars. The working groups based on the needs identified by the city can consist of city experts, covering different areas such as

ICT, buildings and mobility. Participants will be mainly city experts, civil servants from the city or their related organisation. These experts will be selected from the different areas (e.g. funding, investment, urban planning) based on the self-assessment of the city. The setting up of these working groups therefore closely relate to the early preparation of the city baseline report. Cities will be able to decide if they prefer to have a mix of participation from technical and political representatives in this group. Cities have already shared with each other their general approach to these working groups and experience during the replication training. If they wish to, `fellow` cities will also invite relevant external city stakeholders to participate in this group.

Role of partners

Each follower city is responsible to set up its own cross-departmental working group and/or focus group, according to its preference. Cities having had experience with setting up such a working group are invited to share their challenges, solutions and methods. EUROCITIES facilitates the knowledge exchange amongst the cities and actively looks for good practices, keeps record on those examples (e.g. webinars).

Focus groups

Each `follower`/ `fellow` city will be invited to organise focus groups at local level. It is nevertheless not an obligation. The focus groups with external stakeholders can support in a structured way the decisions of the `fellow` cities to decide upon their own replication strategy and activities (needs, projects, potential geographical areas of focus) as necessary.

Role of partners

Each `fellow` city is responsible to set up its own focus group and/or cross-departmental working group, according to its preference. Cities having had experience with setting up such a working group are invited to share their challenges, solutions and methods and methods. EUROCITIES facilitates the knowledge exchange amongst the cities and actively looks for good practices, keeps record on those examples (e.g. webinars).

City baseline report

The city baseline report is a core document and should be based on the self-assessment of the city. It has at least two core parts: 1) general context and a more specific, 2) technical measures related mapping (depending on the level of interest declared as to the given measure). At the replication workshop it has been agreed that cities are going to work both on the broader contextual level and share experience they have. In addition, they will be mapping in a matrix all measures they would plan to co-create, validate or implement in their own city. The cross-departmental working groups and focus groups will support this kind of inventory and desk research. The city baseline report will be a basis also for organizing the visits and selecting the specific cooperation areas amongst the cities.

Role of partners

Each follower city is responsible to draft its own city baseline report.

EUROCITIES has provided during the training few examples and facilitate decisions on what exactly should be in those reports. EUROCITIES will also provide more structure and templates; cooperate with specific cities in testing the templates. In addition, EUROCITIES will review these documents and provide guidance on how these reports can be made consistent.

Peer-learning and Work-shadowing visits- London, Lisbon, Milan

Each 'follower'/ 'fellow' city will actively participate in two days to a maximum one-week long peer-learning and eventually work shadowing visit(s) in a lighthouse city (M8-12). The work-shadowing approach facilitates the sharing of experience and knowledge between pairs of cities. The peer-learning visits will be organised to the 'lighthouse' cities and for the better learning process each fellow city can participate at the same time. If next to the peer-learning visits, specific one to one learning is needed between two cities then in cooperation with EUROCITIES, the lighthouse and the fellow cities will organise work-shadowing visits. The idea is that one or maximum two experts per fellow city will go for a two days to maximum one week to shadow the work of the 'lighthouse' on a specific area. It involves one or two people from one city to spend a short period of time (three to five days) with one or more people from another city.

The work-shadowing partners are city experts or decision makers having similar professional roles and responsibilities and similar level of expertise.

During the visit, the visitors accompany the hosts in their daily work (in our case the host work on designing the lighthouse projects and solutions), participate in relevant meetings and site visits and meet a number of relevant colleagues and stakeholders.

The possibility to observe, ask and discuss ideas on the spot allows the visitors to gain experience and fresh insights into specific professional roles and the methods and processes employed therein. Due to the intense time the participants spend together, the visitors can develop a deeper understanding of the methods and strategies used by the host.

On the other hand, the hosts have the chance to reflect on their day-to-day work and give rise to ideas on how to improve their strategies and methods thanks to the feedback and comments of the visitors.

EUROCITIES and several other consortium partners (like Burgas, Warsaw or Milan) have already tested this city-to-city learning method, which has proved to be very efficient and fruitful when a city wants to introduce new projects and procedures.

The first work shadowing visits for follower cities in lighthouse cities will take place in year 1 in order to help and support follower cities in the definition of their replication strategy.

Indeed, work shadowing visits will provide follower cities with a real understanding of the process and project design in lighthouse cities. This way, follower cities will be in a position to translate this knowledge later on into their own local context. These work shadowing visits (of 1 week each) will be planned by EUROCITIES, `lighthouse` cities and `follower`/`fellow` cities, depending on the interest of each `follower`/`fellow` city in the different measures implemented in the lighthouse cities. This means that these visits could be (ideally) bilateral or multilateral (for measures in which more than one follower city is interested).

Role of partners

Each `fellow` and `lighthouse` city is responsible to set dates and offer its capacity to organise these visits in cooperation with EUROCITIES. EUROCITIES will support the planning of these visits, facilitate good practice sharing and makes sure that these visits are also well documented (incl. providing assistance with templates, on request participate at these visits and also helping with the video recording).

Replication roadmap

Each follower city will produce a **replication roadmap** (M12), where identified projects and identified areas/districts from that follower city will be described in details. `Fellow` cities will use this roadmap as their guidance document throughout the project lifetime. However, follower cities will have the opportunity to update this roadmap when necessary, depending on the evolution of the lighthouse projects and depending on the evolution of their own smart city strategy (e.g. change of political mandate).

Role of partners

Each fellow city is responsible to draft its own roadmap and update as necessary. EUROCITIES will support the preparation of those roadmaps with templates and provide consistency checks.

13.2 Implementation of the replication roadmaps (Task 5.2.)

Citizen and city stakeholders' involvement

`Follower`/ `fellow cities will begin working with citizens and city stakeholders (utilities, NGOs, universities, schools, etc.). Each follower city will decide the best way to approach these target groups depending on its existing structures for citizens' engagement. The minimum target groups for this activity will be the citizens affected by the follower city project and the scientific and academic stakeholders of the city. Those local working groups will meet regularly (the frequency will be decided by the follower cities in Year 2) to discuss and monitor the implementation of the roadmap. These groups will provide follower cities with feedback on the follower city projects.

Role of partners

Each `fellow` city is responsible to map its own stakeholders. EUROCITIES will make sure that there is sufficient cooperation amongst the cities and collect relevant information; facilitate the share of good practices.

Implementation and funding stakeholders

[•]Fellow[•] cities will also begin working with implementation and funding stakeholders, meaning all stakeholders that have a potential key role for the implementation and the funding of the project. Stakeholders can include for example: technical companies, housing organisations, funding organisations, governmental and regional institutions, structural funds managing authority, etc. This will take the form of regular bilateral meetings between the follower city and those stakeholders.

Role of partners

Each `fellow` city is responsible to map its own funding stakeholders. EUROCITIES will make sure that there is sufficient cooperation amongst the cities and collect relevant information, facilitate the share of good practice and wherever necessary the contacts.

Mentoring visits- Bordeaux, Burgas, Warsaw

Follower cities will host mentoring visits in their city. Those visits will take the form of a lighthouse city (~2-3 city experts) visiting a follower city as a mentor, to help them work out how the chosen measure/solution could be adapted/implemented in their own context. Mentoring visits allow cities to receive support and find solutions to specific projects and issues. It involves people from one lighthouse city (the mentor) giving advice during the visit to the host follower city. Mentors have roles similar to those of their counterparts in the host city. Based on a detailed request from the follower city, the core city will prepare and spend 3-5 days to advise and give feedback to city officials involved in the area of focus (technical experts, decision makers and local stakeholders). During the visit, mentors and mentees explore together - through interactive discussion - new ideas, options and solutions suitable for the `follower`/`fellow city and assess transferability. Furthermore, they start drafting an action plan to be implemented by the `follower/`fellow` city. The main outcome of the visits will be action plans, defining the next steps the `follower'/`fellow` needs to take. The aim of the visits is to support short-term wins and improvements, which can accelerate the follower city replication roadmap. We foresee 1 mentoring visit per follower per year, in other words three mentoring visits between Year 2 and 5 of the project. The different steps of a mentoring visit are illustrated in the infographic overleaf. EUROCITIES and many of their members have successfully tested this method in the framework of several EU-funded projects in the field of citizen engagement, energy efficiency, ICT, etc.

Role of partners

Each `fellow` and `lighthouse` city is responsible to set dates and offer its capacity to organise these visits in cooperation with EUROCITIES. EUROCITIES will support the planning of these visits, facilitate good practice sharing and makes sure that these visits are also well documented (incl. providing assistance with templates, participating at these visits on request and also helping with the video recording).

Political meeting between lighthouse and follower cities

Between Year 2 to 5, EUROCITIES will also support `lighthouse` and `follower` cities to organise at least one meeting between lighthouse and follower cities at political level. This is crucial to ensure that there is strong political support in follower cities too, especially if there are new Mayors of Deputy Mayors taking their function during the project lifetime. Ideally, EUROCITIES would organise this meeting each year during the EUROCITIES Annual Conference (taking place each year in November) as this conference usually gathers between 70 to 100 mayors and deputy mayors. EUROCITIES would therefore make sure that political representatives of the lighthouse and follower cities attend this annual event too.

Role of partners

EUROCITIES is in charge of organising the event but each fellow and lighthouse city is responsible to set dates and offer its capacity to organize these events.

Implementation report

Each year between Year 2 and Year 5, `fellow` cities will present their replication projects and their status of implementation in an implementation report. EUROCITIES will gather the main results from these annual reports in order to inform the European Commission of the state of progress, potential barriers and challenges faced by follower cities in this replication exercise.

Role of partners

Each `fellow` city is responsible to prepare its own implementation report. EUROCITIES will support with advice, guidance and will make sure that a progress report prepared based on those individual reports.

13.3 Capacity-building activities (Task 5.3.)

Webinars

The replication activities will also cover the organisation of at least 20 technical webinars on a wide range of topics: technical themes such as lighting; building retrofit; using ICT for energy efficiency. In addition, innovative forms of procurement and EU funding related issues as well.

The topics for the webinars are defined in an open and participatory process; partners and cities can propose and check in a transparent site (shared Google sheet) all webinars to be organised at least from M3 till M40 of the project. Some of these webinars will be open to public, some to the constituencies of EUROCITIES and other potentially interested cities. Few webinars will be dedicated to the partner cities and consortium. In certain cases when it is more beneficial to all, synergies will be created with other projects and webinars can be coorganised. Technical webinars will be timed and organised based on the needs of the cities and with the involvement of the WP3, WP4 leads. This will allow creation of synergies also inside the project.

EUROCITIES has tested this form of capacity building for cities in several other initiatives such as the Green Digital Charter or the Covenant of Mayors. Cities have responded very well to this form of capacity building, which enables them to gain technical knowledge for free, without having to travel. These webinars will also be recorded and made available on the Sharing Cities website.

Role of partners

Each city is responsible to propose topics and attend the webinars. EUROCITIES will also propose topics and gather the different suggestions. EUROCITIES will also be in charge of setting the dates, organizing and recording those webinars and putting them on the website. To encourage better learning a scale-up, it might be that webinars will be jointly organised with other smart city projects and also with the involvement of other WPs (in particular WP3 and WP4). Themes are selected in cooperation, participative process and demand-based, suggested by EUROCITIES but also other partners and cities.

Videos

Video tutorials

Technical partners will produce video tutorials (see WP6) with the lighthouse cities.

These videos will highlight the six interventions that will take place within lighthouse and follower cities in partnership with businesses.

• These video tutorials will highlight the solution being developed and/or replicated, its impact, its costs and its benefits for the beneficiary city and/or for citizens.

The videos will be made available to cities support them with the implementation of their replication projects. These video tutorials will also be available on the SHARING CITIES website. The videos will be in English with subtitles into the five other languages if relevant.

Role of partners

Each hosting city (where the solutions are developed) is responsible to propose dates and concrete script for making the videos. EUROCITIES will provide the 'video recording' support; coordinate the preparation of these videos and review or/and write the scripts. Translations are the responsibility of the cities.

Infographics videos on the process of replications

A series of infographics videos will be developed to explain the process of replication in practice.

These infographics videos will show how lighthouse and follower cities have worked together and managed to transfer and replicate solutions from one city to the other.

Unlike tutorial videos that focus on the solutions developed, these video will focus on the process of replication. In total at least three of these videos will be produced.

The videos will be in English with subtitles into the five other languages if relevant.

Role of partners

Each hosting city (where the solutions are developed) is responsible to propose dates and concrete script for making the videos. EUROCITIES will provide the 'recording' support; coordinate the preparation of these videos and review or/and write the scripts. Translations are the responsibility of the cities.

Publications

While digital communication will be the priority channel for Sharing Cities, printed publications will also be prepared by technical partners.

Scientific publications

Two scientific publications where `lighthouse` cities will present their project outcomes and more specifically what technologies and solutions were developed together with private partners.

Role of partners

These scientific publications will be developed in cooperation with academic partners.

Technical handbooks

A series of **ten technical handbooks** that will focus on methodologies, transferability processes, data, standards, toolkits and policy-guidelines related to Sharing Cities activities.

Role of partners

These technical handbooks will be developed by in cooperation with academic and business partners.

Replication handbook

At the end of the project a report of all three replication approaches will be compiled in a **practical replication handbook**. This way, cities and stakeholders outside the project will be able to learn from the examples and activities of the three follower cities. These results will also be presented at events; both project events and EUROCITIES meetings (see WP 5).

Learning, Knowledge platform

All the capacity building materials (videos, webinars, handbooks, tutorials) will be part of the Sharing Cities learning platform on the SHARING CITIES website where interested cities (outside the consortium) will be able to register and get access to all these materials. Non-partner cities will have to register in this learning platform, so that our consortium can evaluate the impact of this learning platform (in the scope of WP evaluation).

Role of partners

The learning platform forms a core part of the project's website which is designed and managed by EUROCITIES. Partners contribute to the content of the learning platform.

13.4 Replication activities in and with scale-up cities (Task 5.4)

European scale-up activities:

Replication activities are focused in Bordeaux, Burgas and Warsaw. Nevertheless, SHARING CITIES will make sure that the knowledge produced in the project is shared, discussed and

made available to a wide range of European cities, i.e. scale-up cities. Peer learning events, replication workshops will be organised in the context of the project.

Role of partners

Each city is responsible to propose through its own network the work done in SHARING CITIES to other interested cities. Each of these meetings, contacts to be shared with EUROCITIES, who will also propose contacts to the cities for cooperation.

External events

The participation of `follower`/ `fellow` cities in a **number of selected external events** that will be considered important for the replication efforts (see WP6). The participation in these events (in their city/country or elsewhere in Europe) will enable follower cities to present their replication projects, and exchange with other European cities and key national and European institutions.

There are at least two categories of scale- up cities:

National scale-up cities:

The national scale-up refers to the countries where the six cities of Sharing Cities are located (i.e. Bulgaria, France, Italy, Poland, Portugal, and the United Kingdom). Partner cities already have links and relationships with many cities in their own country and can easily communicate with them without any language barriers. If cities from the same country (e.g. UK, France, and Italy) are also members or associated partners of EUROCITIES then, obviously through the network outreach to those cities will also be ensured.

Role of partners

Each city is responsible to propose through its own network the work done in SHARING CITIES to other interested cities, especially in their own countries. Each of these meetings, contacts to be shared with EUROCITIES, who will also propose contacts to the cities for cooperation.

Other scale-up cities in European countries

We will make use of the EUROCITIES network (140 large cities across 35 European countries) to reach out to.

These activities will include:

- Providing access to the Sharing Cities learning/ knowledge platform to scale-up cities, so that they can have access to all the knowledge produced by lighthouse and follower cities;
- Meetings between one of the city partners and its national counterparts in order to share and discuss project developments, materials and results with national scale-up cities. These meetings would ideally take place during existing meetings organized by national association of cities.
- Full-day and half-day workshops dedicated to replication in the framework of existing EUROCITIES Forums and Working Groups. The most appropriate EUROCITIES Forums are: EUROCITIES Environment (117 cities), Mobility (116 cities) and Knowledge Society (116 cities) Forums. We will also organise workshops dedicated to replication with the relevant EUROCITIES existing working groups such as the Energy Efficiency and Climate Change working group, the Smart Cities working group or the Smart City and Fleet Management working group. These forums and working groups usually meet twice or three times per year in different cities across Europe. EUROCITIES will suggest when possible organising these forum or working group meetings in one of the lighthouse or follower cities, so that these replication workshops can be followed by on-site visits during which scale-up cities will be able to visit projects being implemented in lighthouse and follower cities;

- EUROCITIES also leads the Green Digital Charter, an initiative that commits mayors to use digital technologies to create sustainability gains and energy efficiencies. Since 2008, the initiative has been managed by EUROCITIES, and provides cities with technical training sessions (about ICT and energy efficiency), workshops, roundtables, etc. Sharing Cities replication activities will also be shared during these events with Green Digital Charter signatory cities and the Covenant of Mayors where approximately. 6000 cities can disseminate the work done in Sharing Cities.
- Presentation of replication activities during EU-wide events such as EUSEW, Smart Cities Stakeholders Platform events, DG REGIO Open Days, Covenant of Mayors events, CIVITAS annual forums, European Mobility Week workshops, key Smart Cities events such as the annual ones organized in Barcelona and in Amsterdam);
- EUROCITIES will also organise **meetings with the European Commission** (at both technical and political levels) in order to present our replication activities and results to the relevant DGs such as DG ENERGY, DG MOVE, DG CONNECT, DG REGIO, etc.

Global 'Link' Cities:

We will also reach out to global link cities, i.e. cities outside Europe and interested in the Sharing Cities replication experience. In order to reach out to global link cities, our consortium will make use of existing global city networks such as C40 (London, Milan and Warsaw are members of C40) and ICLEI (Burgas, Bordeaux and Lisbon are members of ICLEI) to disseminate our replication work to cities outside Europe via these networks' websites, newsletters and events;

Make use of the EC-LINK EU-China initiative (in which EUROCITIES is responsible for city networking activities) which focuses on exchanging experience between European and Chinese cities in the field of energy efficiency and climate change. We will use this initiative to replication work to Chinese cities; Work with the leading cities which have already expressed interest in the Sharing Cities replication activities.

On the one hand our consortium will draw on their experience in the fields of ICT, infrastructure, energy efficiency and transport to identify relevant good practices and assess their transferability in Europe. On the other hand we will promote our project results to them via webinars and WebEx meetings as well as in physical meetings when city representatives visit Europe (and vice versa). `Lighthouse` and `follower`/`fellow` cities will also build on their existing relationship (MoU, twinning, other) with cities outside Europe.

For example, Bordeaux has twinning relationships with many global cities such as Casablanca in Morocco, Fukuoka in Japan, Lima in Peru, Los Angeles in the United States, Quebec in Canada or Saint Petersburg in Russia. Similarly, London has long-standing relationships with several global sister cities such as Beijing in China, Moscow in Russia, New York in the US or Tokyo in Japan. The same goes with Milan, which has strong partnerships with Beijing, Bangkok, Buenos Aires, Minsk and Montreal and with Warsaw (partnering e.g. with Berlin, Chicago and Seoul). All lighthouse and follower cities will use their twinning and partnerships to share our project results and replication work with their global sister cities.

Further potential city interest will be mapped and the website will be also actively used to promote the project.

Role of partners

Each city is responsible to propose through its own network the work done in SHARING CITIES to other interested cities, especially in their own countries. Each of these meetings, contacts to be shared with EUROCITIES, who will also propose contacts to the cities for cooperation. EUROCITIES makes sure that a contact base for cities is prepared and regularly updated.

Annex: WP5 Contact list

ORGANISATION	FIRST NAME	LAST NAME	City Alignment	EMAIL ADDRESS
GREATER LONDON AUTHORITY				
(GLA)	Paul	Hodgson	London	Paul.Hodgson@london.gov.uk
	Peter	North	London	Peter.North@london.gov.uk
	Jem	McKenna-Percy	London	Jem.McKenna-Percy@london.gov.uk
	Andrew	Collinge	Transversal	Andrew.Collinge@london.gov.uk
	Nerida	Devane	London	Nerida.Devane@london.gov.uk
	Sandeep	Duggal	London	sandeep.duggal@london.gov.uk
	Julie	Sexton	Transversal	Julie.Sexton@london.gov.uk
	Daniel	Barrett	London	Daniel.Barrett@london.gov.uk
ROYAL BOROUGH OF	Trevor	Dorling	Greenwich	Trevor.Dorling@royalgreenwich.gov.uk
GREENWICH (RBG)	Lola	Fernandez-Redondo	Greenwich	lola.fernandez-redondo@digitalgreenwich.com
CAMARA MUNICIPAL DE LISBOA				
(CML)	Nuno	Xavier	Lisbon	nuno.xavier@cm-lisboa.pt
	João	Caneiras	Lisbon	maria.joao.caneiras@cm-lisboa.pt
	Rui	Franco	Lisbon	rui.franco@cm-lisboa.pt
	Tiago	Cruz	Lisbon	tiago.cruz@cm-lisboa.pt
EMEL - EMPRESA PUBLICA				
MUNICIPAL DE ESTACIONAMENTO				
DE LISBOA	Nuno	Sardinha	Lisbon	n.sardinha@emel.pt
COMUNE DI MILANO (CdM)	Lucia	Scopelliti	Milan	lucia.scopelliti@comune.milano.it
	Piero	Pelizzaro	Milan	piero.pelizzaro@comune.milano.it
	Elisabetta	Caregnato	Milan	elisabetta.caregnato@fondazione.polimi.it
	Domenico	Coppola	Milan	Domenico.Coppola@comune.milano.it
	Demis	Lorenzi	Milan	demis.lorenzi@fondazione.polimi.it
VILLE DE BORDEAUX (Bordeaux)	Christophe	Colinet	Bordeaux	ccolinet@bordeaux-metropole.fr
	Olivier	Mauret	Bordeaux	omauret@bordeaux-metropole.fr
OBSHTINA BURGAS (Burgas)	Jana	Koleva	Burgas	j.koleva@burgas.bg
			Burgas	ivanovadaniela@hotmail.com
			Burgas	isburgas@abv.bg
	Ruska	Boyadzhieva	Burgas	r.boyadzhieva@burgas.bg
Miasto Stołeczne Warszawa (Warsaw)	Marcin	Wróblewski	Warsaw	mwroblewski@um.warszawa.pl
	Drogosz	Leszek	Warsaw	ldrogosz@um.warszawa.pl
	Joanna	Strzelecka	Warsaw	j.strzelecka@um.warszawa.pl
INSTYTUT ENERGETYKI (IEn)	Grzegorz	Krot		g.krot@ien.gda.pl
	Leszek	Bronk		l.bronk@ien.gda.pl
EUROCITIES	Bernadett	Degrendele	Transversal	bernadett.degrendele@eurocities.eu
	Nathalie	Guri	Transversal	Nathalie.Guri@eurocities.eu
	Edith	Recourt	Transversal	edith.recourt@eurocities.eu