

SYNCHRONICITY

Open Call Launching Event

Porto, 19 June 2018



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Co-funded by



Switzerland



South Korea



Mexico

Porto.

Outline

- Project overview
- Foundations
- Pilots
- Open Call
 - Essential Guidelines
 - Evaluation and Application Process
 - Technical Framework
 - What's next?
- Porto's challenges

At a glance

Delivering an IoT enabled Digital Single Market for Europe and Beyond

Duration: January 2017 to December 2019 (36 months)

Budget: 20 M€ cost | 15 M€ EU funding | 3 M€ for the Open Call

Consortium: 39 partners | 13 countries | 3 continents

To deliver quality of life in tomorrow's cities & communities, while being efficient, secure and sustainable, we must use digital technologies in new ways. For this reason, we created SynchroniCity.





SynchroniCity is an ambitious initiative to deliver a **digital single market** for IoT-enabled **urban services**.

It opens up a **global IoT market** where cities and businesses develop **shared digital services** to **improve the lives of citizens** and **grow local economies**.

Cities

8 core cities

Partner cities in

- Brazil
- France (Bordeaux)
- Mexico (Léon)
- South Korea (Seongnam)
- USA (Portland)



Partners



LSPs Programme

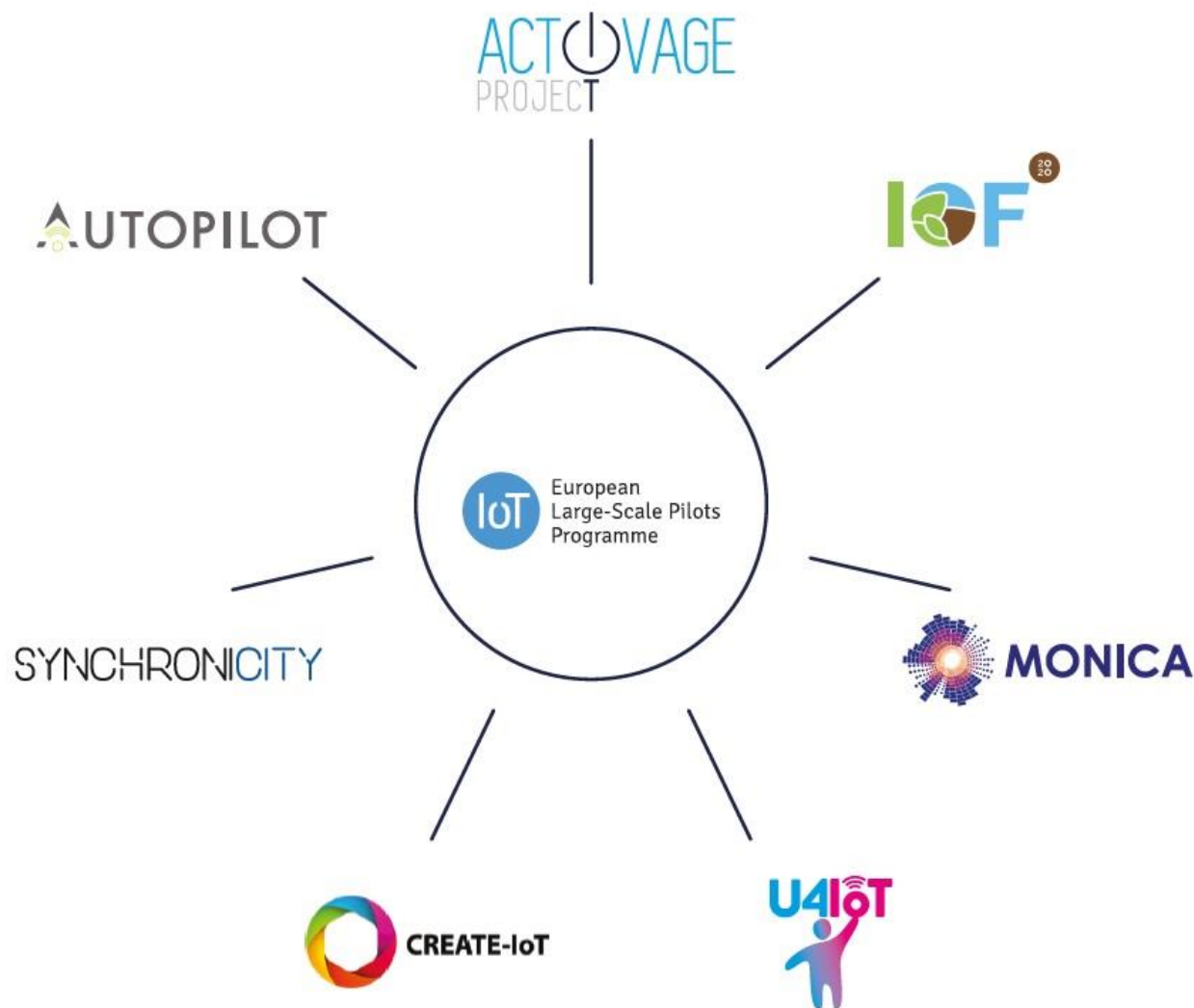
129 M€ cost | 104 M€ EU funding

5 domain-specific LSPs

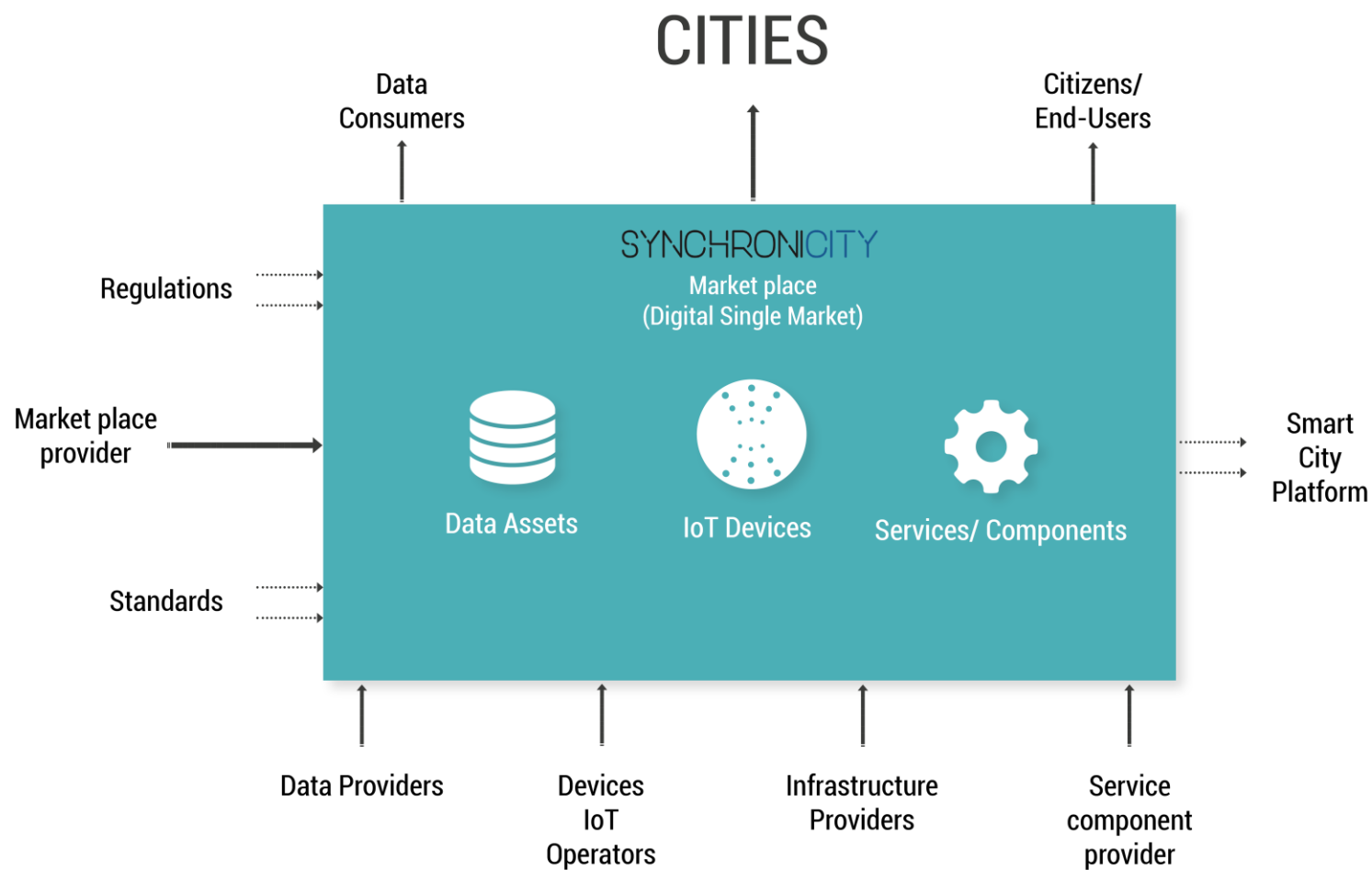
- Smart Cities
- Automotive
- Assisted living
- Agro
- Wearables

2 coordination and support actions

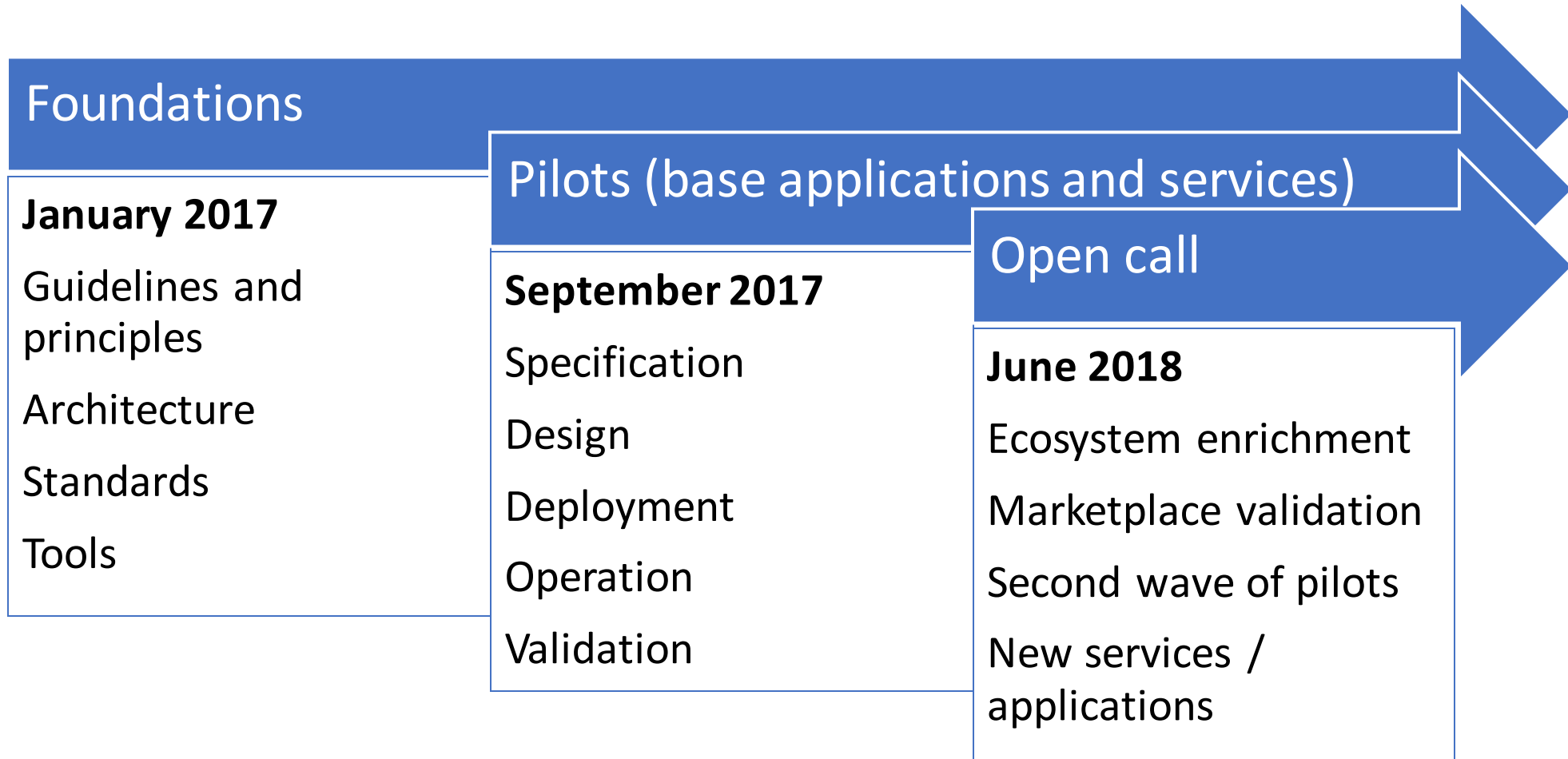
- Collaboration
- End-user engagement



DSM for cities



Work structure / timeline



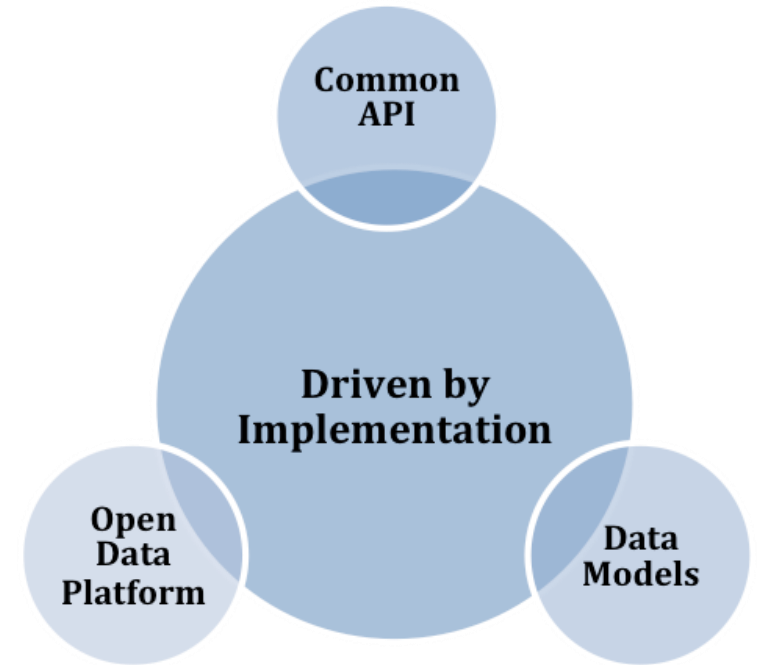
Foundations

OASC principles

A common standard API for **context information management** (gathering, processing, analysis of data) bringing information about what is going on in the city (FIWARE **NGSI**, ETSI **NGSI-LD**).

A set of common standards **data publication** platforms have to comply with, enabling the harvesting of data coming from multiple federated platforms as well as the publication of real-time open data (**CKAN**).

A common set of **data models** enabling actual interoperability of applications (**FIWARE** and other open data models).



The background is an abstract composition of various shades of blue, ranging from light sky blue to deep navy blue. These colors are arranged in a series of overlapping, angular, and polygonal shapes that create a sense of depth and movement, reminiscent of a low-poly or origami-inspired design.

Pilots

Aims

Demonstrate the **benefits of a digital single market**.

Serve as **lighthouse initiatives** to inspire others.

Large-scale in terms of impact, number of users, geography and ecosystem.

Support **replication** of services across reference zones (service portability).

Leverage **existing infrastructure, platforms and systems**.

Relevance of application in terms of impact on **city quality of life**.

IoT-enabled services that directly address **citizen needs**.

Address common city challenges (**convergence** of IoT applications), while accommodating city differences.

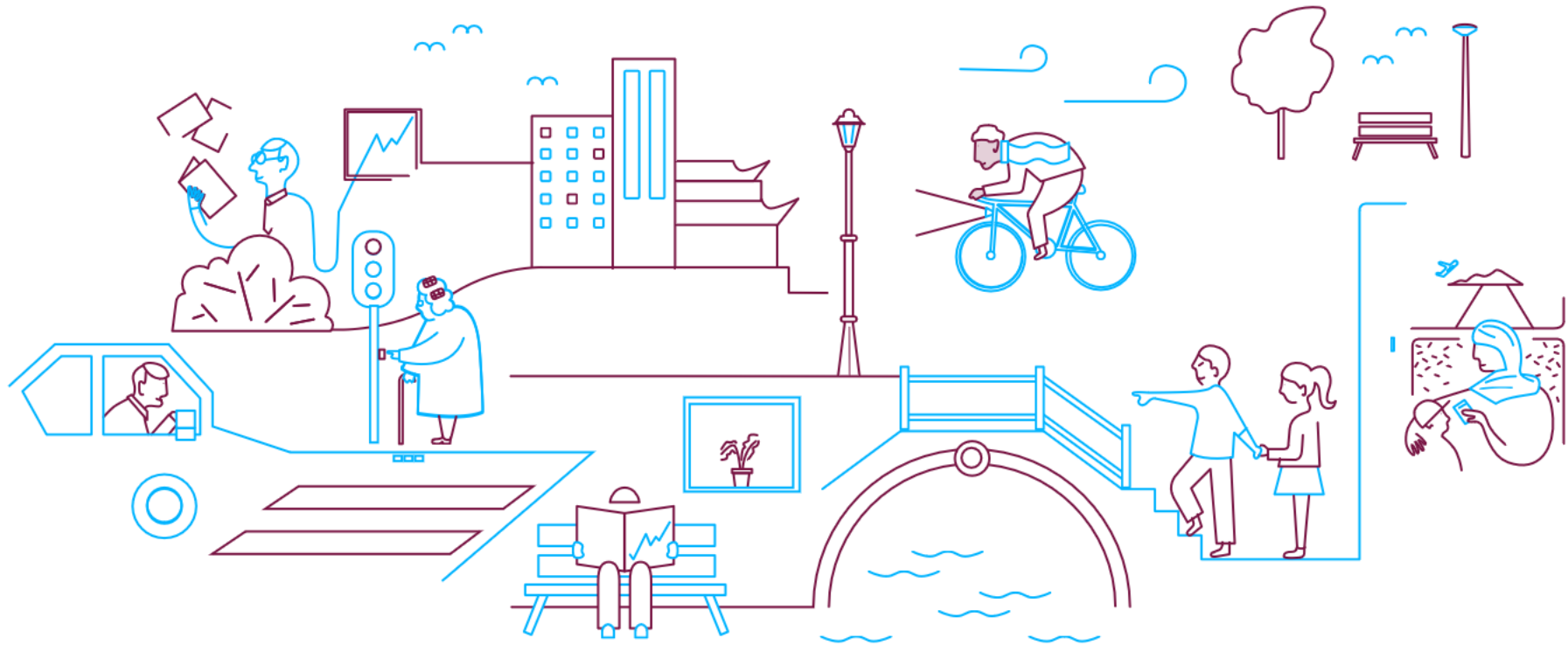
Active use of **marketplace**.

Areas

Human-centric traffic management

Multimodal transportation

Community policy suite



How to join SynchroniCity



BECOME A NEW PILOT CITY

Cities from all over the world that want to apply for the SynchroniCity Open Call.

*Only cities from EU and H2020 associated countries are eligible for funding.



BECOME A DISSEMINATOR

Cities from all over the world that want to disseminate information about SynchroniCity.

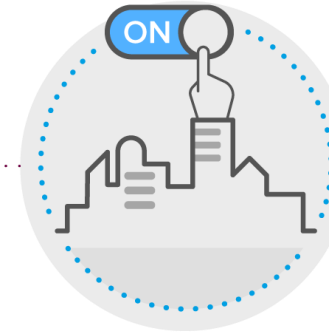
If you want to become a Disseminator, follow SynchroniCity on social media and register to the newsletter.



NEW CITIES

BECOME AN ENABLER FOR YOUR CITY'S ECOSYSTEM

Cities from all over the world that want to guarantee that their SMEs are part of the SynchroniCity Open Call and marketplace.



BECOME AN OBSERVER

Cities from all over the world that are not yet ready to join via the open call but want to follow closely the SynchroniCity movement



BECOME AN ADOPTER

Cities from all over the world can become SynchroniCity compatible and become part of the global network.

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Open Call

Objectives

- Validate the SynchroniCity vision and technical framework as a model for **large-scale standards-based innovation and procurement** of IoT-enabled services for cities and communities.
- Demonstrate that the Synchronicity framework enables the **interoperability, replicability, reusability and scalability** of human-centered IoT solutions across cities, proving sustainable business models and thus reducing the risk for investment on this solutions at large scale.
- Attract new players of the city ecosystem to become part of the SynchroniCity digital single market ensuring its **expansion and sustainability**.
- Inform and influence European and global standard developing organisations to **shape and adopt new smart city standards**.

Essential Guidelines

Who is it for?



Lead SMEs can
apply alone or in a
pilot group

SMEs

- **Lead SME:** IoT applications or full-stack solutions
- **Not Lead SME:** complementary to Lead SME, either IoT enabled or expert knowledge on the application
- Solutions that have already been demonstrated in a relevant environment (**TRL $\geq$ 6**)



New cities wanting to
become part of
Synchronicity

New Cities and
Large Businesses
can only apply in a
Pilot Group



Large Businesses wanting
to become part of
Synchronicity

Pilot Groups

Lead SME + SME and/or City and/or Large Business

Main characteristics?



€3 M
Open Call



Selection of
10-25 city
solutions



Piloting in at **least 2**
cities simultaneously
(but preferably more)



Up to 6 month
demonstration
period



ELIGIBILITY CRITERIA

- Application submitted on time (Deadline: 30 Sep 2018, 17:00 CEST)
- Application led by an SME
- The status of SME applicants must be conformant with the EU definition of Small and Medium Enterprises.
- The SME proposal is providing an IoT enabled application or a full stack solution (infrastructure + middleware + application)
- Completeness of the proposals (i.e. fields as well as page limit)
- The language of the applications (i.e. English)
- Letter of support of new cities to the respective Pilot Group
- The solution proposed must be piloted in at least 2 cities (preferably more)
- Non-affiliation with SynchroniCity consortium partners that may lead to a conflict of interest (i.e. Declaration of honour to be signed only if selected)
- Compliance with SynchroniCity Ethics & Privacy guidelines
- Within the scope of the call
- The inclusion of eligible activities for funding

Scope

THEMES

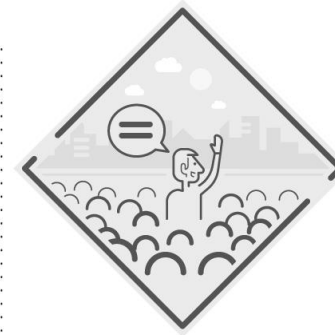
SUSTAINABLE MOBILITY



ENVIRONMENT & WELLBEING



CITIZEN ENGAGEMENT



OPEN THEME



CHALLENGES



Enabling and improving mobility as a service



Climate Change mitigation



Increasing citizen engagement in decision making



Open challenge



Encouraging more non-motorised transport



Reducing noise and air pollution



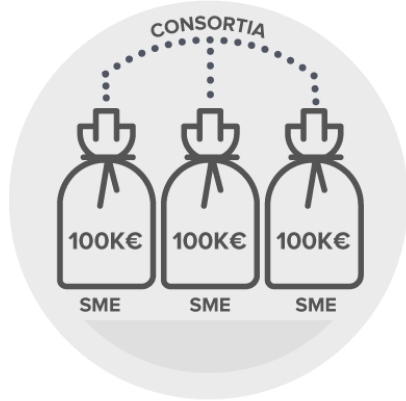
Increasing a greater level of diversity in political engagement

Scope by cities

Core Pilot Cities

		Antwerp	Carouge	Eindhoven	Helsinki	Manchester	Milan	Porto	Santander
Theme	Challenge								
SUSTAINABLE MOBILITY	Enabling and improving MaaS	◆		◆	◆	◆	◆	◆	◆
	Encouraging more non-motorised transport	◆	◆	◆	◆	◆	◆		◆
CITIZEN ENGAGEMENT	Increasing citizen engagement in decision making		◆	◆	◆	◆	◆	◆	◆
	Increasing a greater level of diversity in political engagement		◆	◆	◆	◆		◆	◆
ENVIRONMENT & WELLBEING	Climate change mitigation	◆	◆	◆	◆	◆	◆	◆	
	Reducing noise and air pollution	◆	◆	◆	◆	◆	◆	◆	◆
OPEN THEME	Open Challenge	◆	◆	◆	◆	◆	◆	◆	◆

Funding



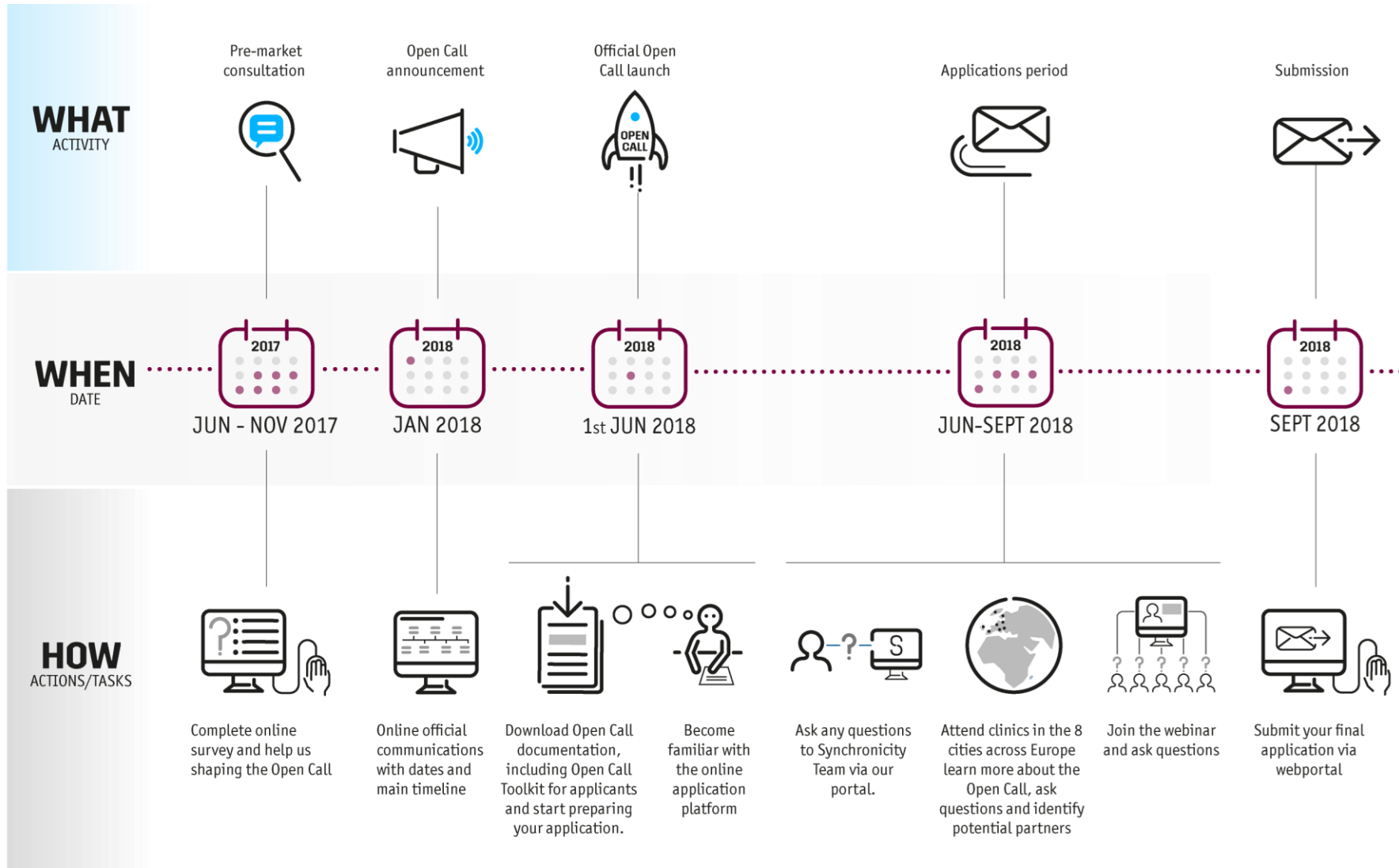
Each application can be funded with:

- up to €100,000 if an SME applies alone
- up to €200,000 for a Pilot Group of 2 organisations
- up to €300,000 for a Pilot Group of 3 organisations or more

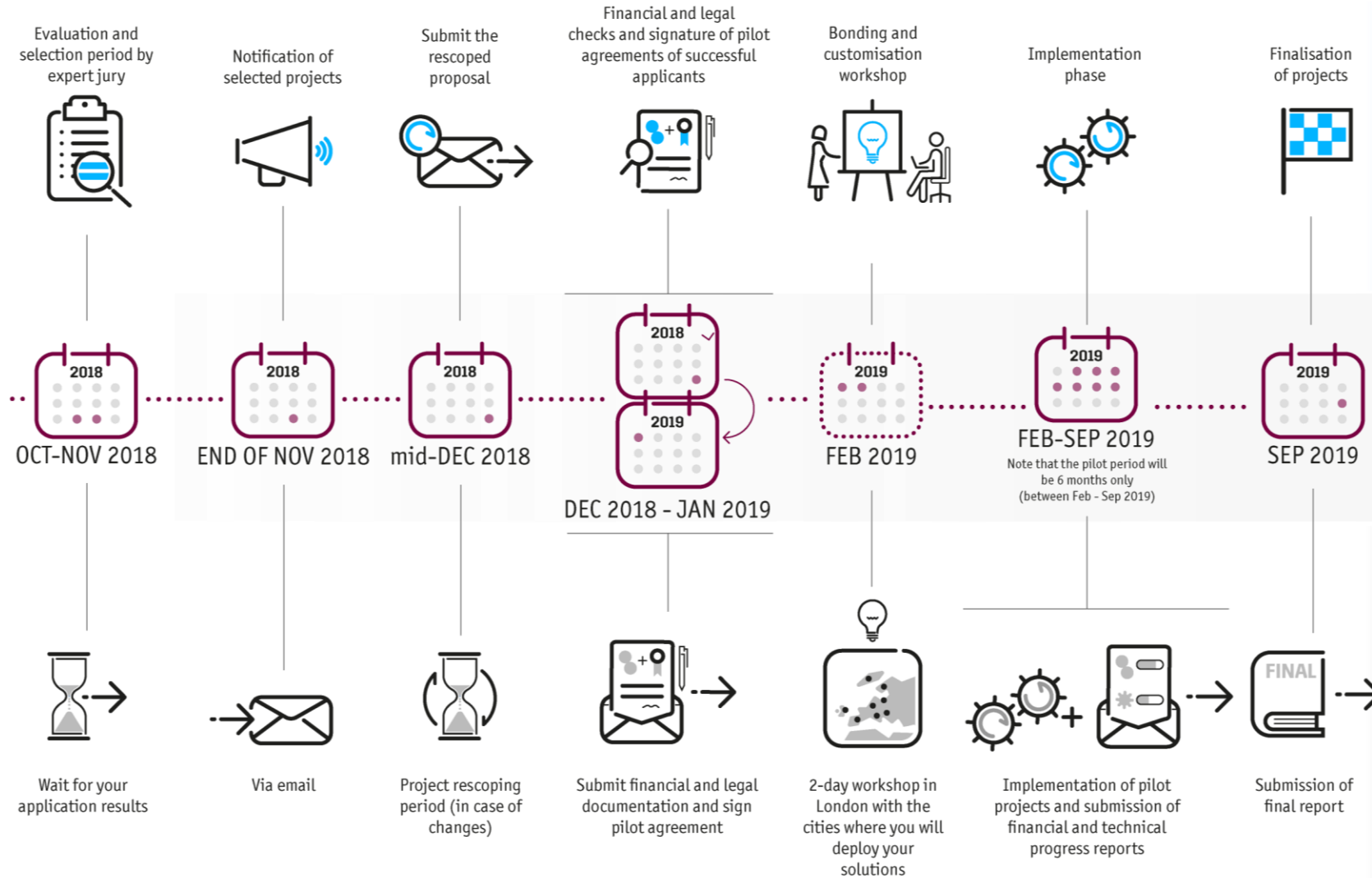
SMEs, cities and large businesses that are not from EU or H2020 associated countries are welcome to participate in the open call but are not eligible for funding.

- Co-fund 80% of the total individual budget. The remaining 20% must be provided by the applicants either as in-kind support or by bringing in funding to the project.
- Cities and large businesses eligible for funding can claim a maximum of €60,000 of the total allocated budget for fundable activities.

Timeline



Timeline



Evaluation and Application Process

How am I going to be evaluated?

Excellence (0-5 points)

- What is the vision, ambition and value proposition of your solution? Is your project proposition clear in meeting the objectives of the call?

Impact (0-5 points)

- Does your project address a challenge recognised or prioritised by the cities? **KPIs?** Who will benefit from the implementation of your solution or service and how? How will your solution impact the life of citizens and communities?

Feasibility (0-5 points) ! (Technical, Team, Budget & Workplan)

- Can you demonstrate that the project is feasible within the budget? If it is not, can you demonstrate that you have the additional necessary resources to make it feasible? Is the budget clearly described?

Sustainability (0-5 points) !

- How credible is your methodology in proving the scalability of product/service? How can you **demonstrate the interoperability, replicability and reusability of your solution?** What's your exploitation/commercialisation plan for this solution? How clear is your revenue model and monetisation strategy? Will your solution support the goal of creating more jobs across Europe?

30 Sept 2018

OPEN CALL
APPLICATIONS

- Anonymisation
- Eligibility check (**GO/NO GO**)

TECHNICAL
REVIEWERS

GO/NO GO

CITY
REVIEWERS

+

COMMERCIAL
REVIEWERS

Impact (0-5)
Excellence (0-5)
Feasibility(0-5)
Sustainability (0-5)

OCEC
DISCUSSION

Finalist List

List Projects from
Highest Score to
Lowest

SCORE $\geq 14/20$
(**GO/NO GO**)

COLLECTION OF
AVERAGE SCORE
+ FEEDBACK BY
OCEC

Considerations:

- Geographical balance
- Themes&Challenges
- Pilot Cities views
- If equal score: feasibility and sustainability prevails

WINNING
PROJECTS LIST

ETHICS &
PRIVACY
CHECKS BY EPB

ETHICS &
PRIVACY
CHECKS 2
(**GO/NO GO**)

OUTCOME
COMMUNICATION

1st week of Nov 2018

Amendment Period

End Nov 2018

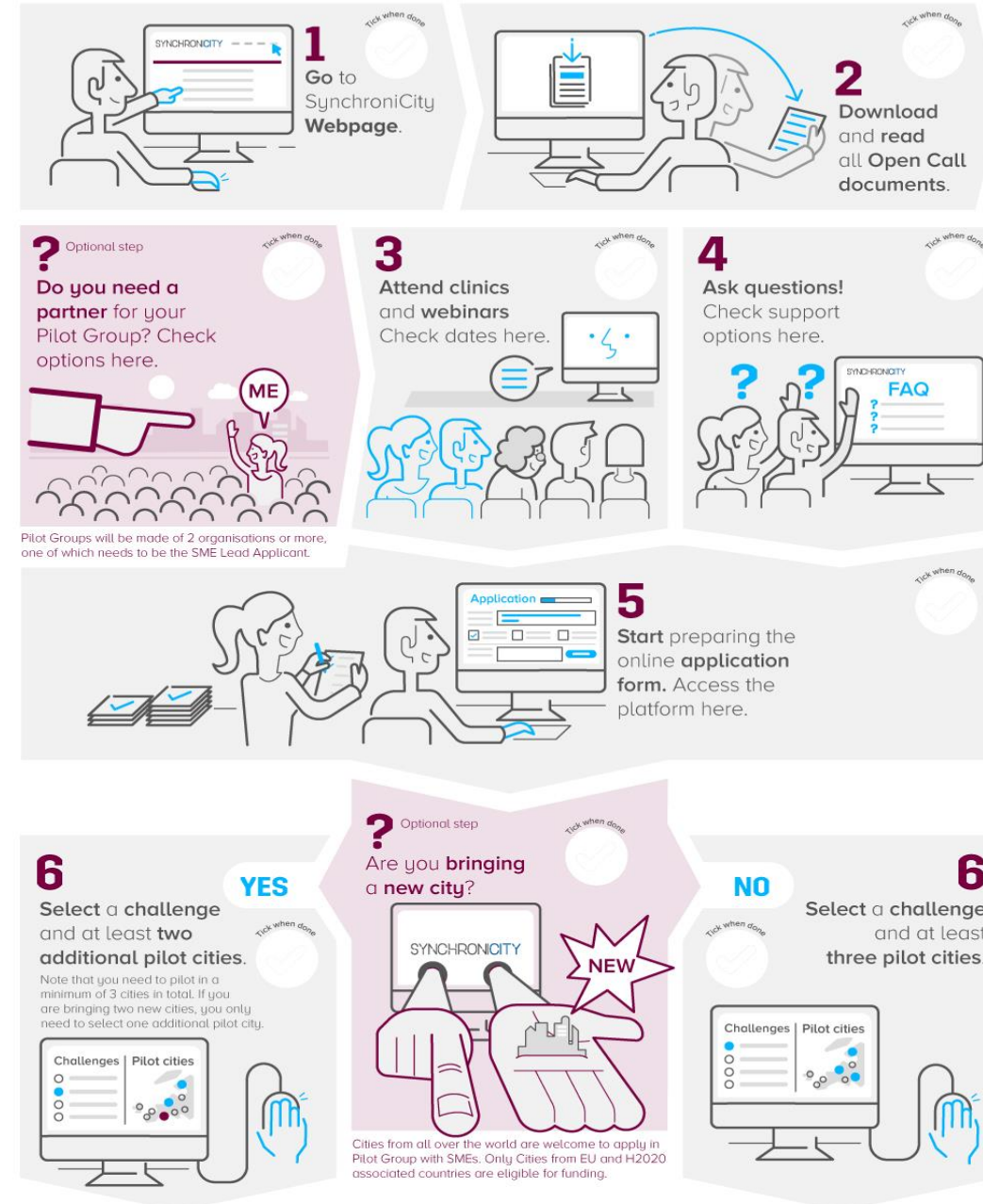
OCEC = Open Call Evaluation Committee

EPB = Ethics and Privacy Board

How to apply?

SYNCHRONICITY

Application process for SMEs and Pilot Groups



How to apply?

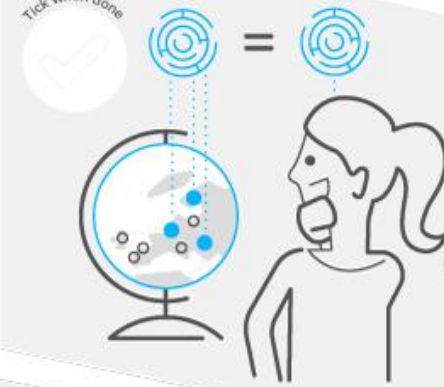
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Make sure that the city will adopt the necessary requirements to become a pilot city.



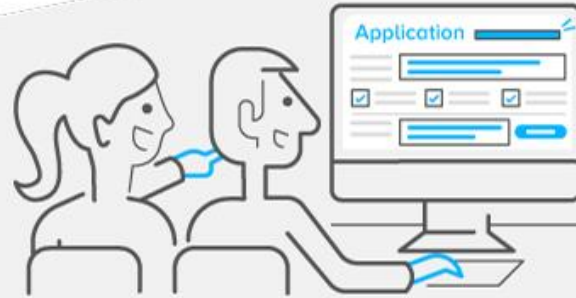
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Make sure that the challenge you are trying to tackle is common to the cities that you selected.



8

Complete the online application form.



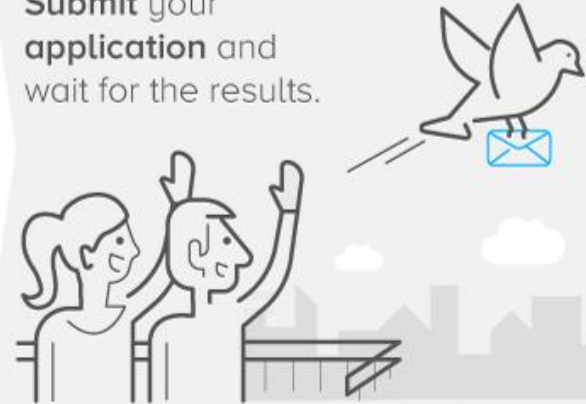
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Provide budget, workplan, resource plan, Ethical statement and GDPR readiness questionnaire. Templates are available here.



10

Submit your application and wait for the results.

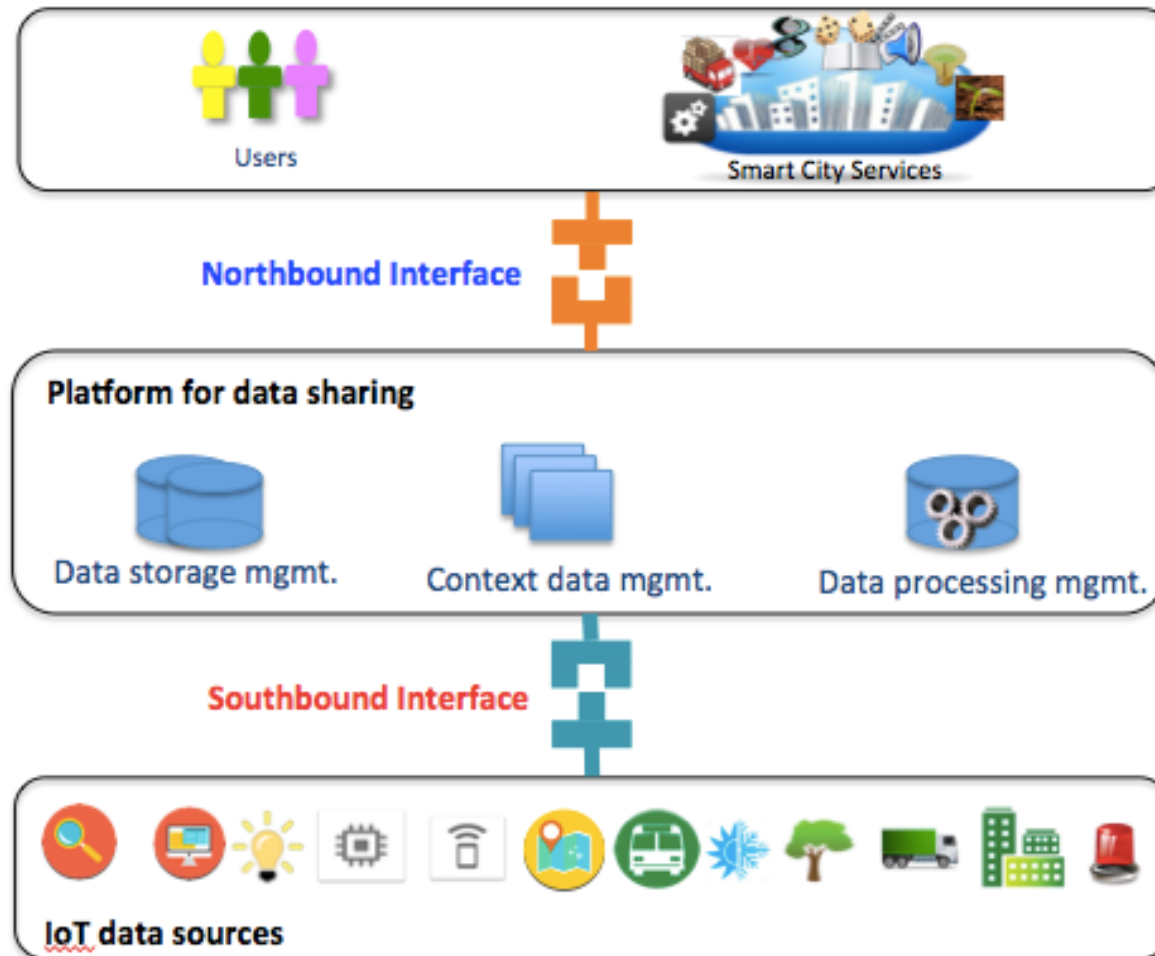


Technical Framework

Common Technical Ground

1. Neutral branding (OASC – based on standards and consensus specifications)
2. Minimal Interoperability Mechanisms (MIMs)
 - Open APIs
 - Common data models
 - Objective: interoperability, replicability, reuse
3. Reference implementation (standards-based)

Architecture

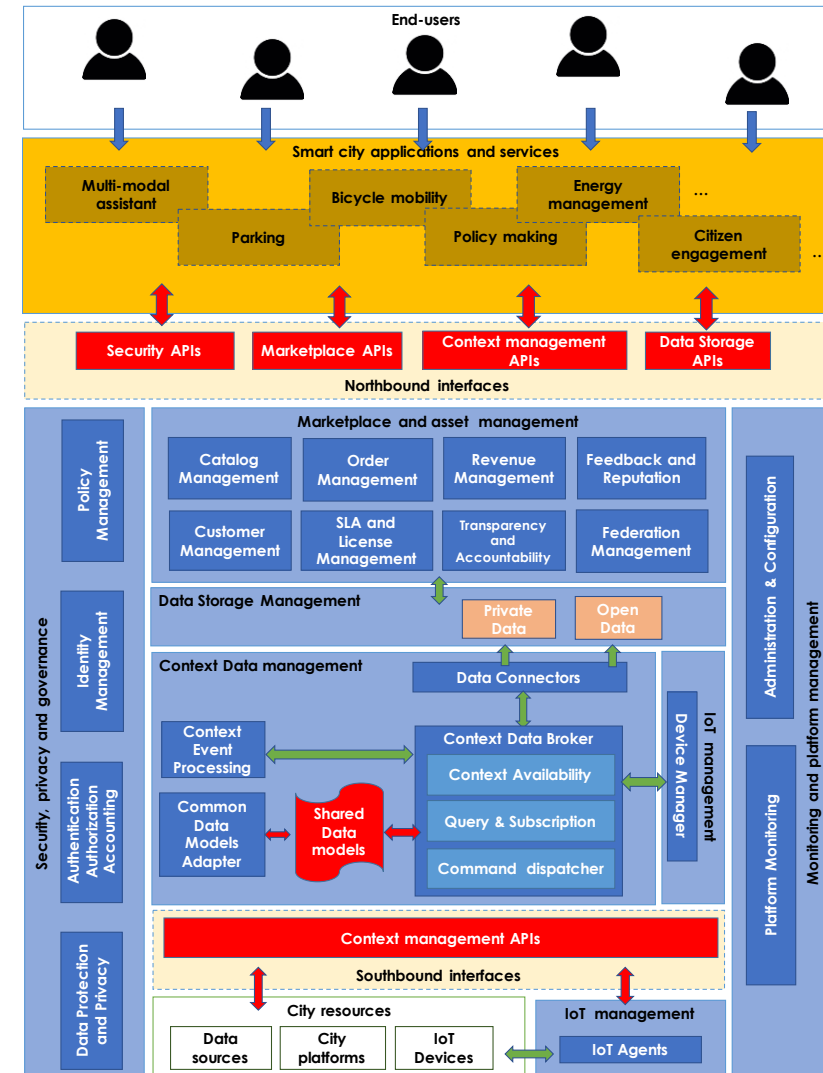


R Architecture

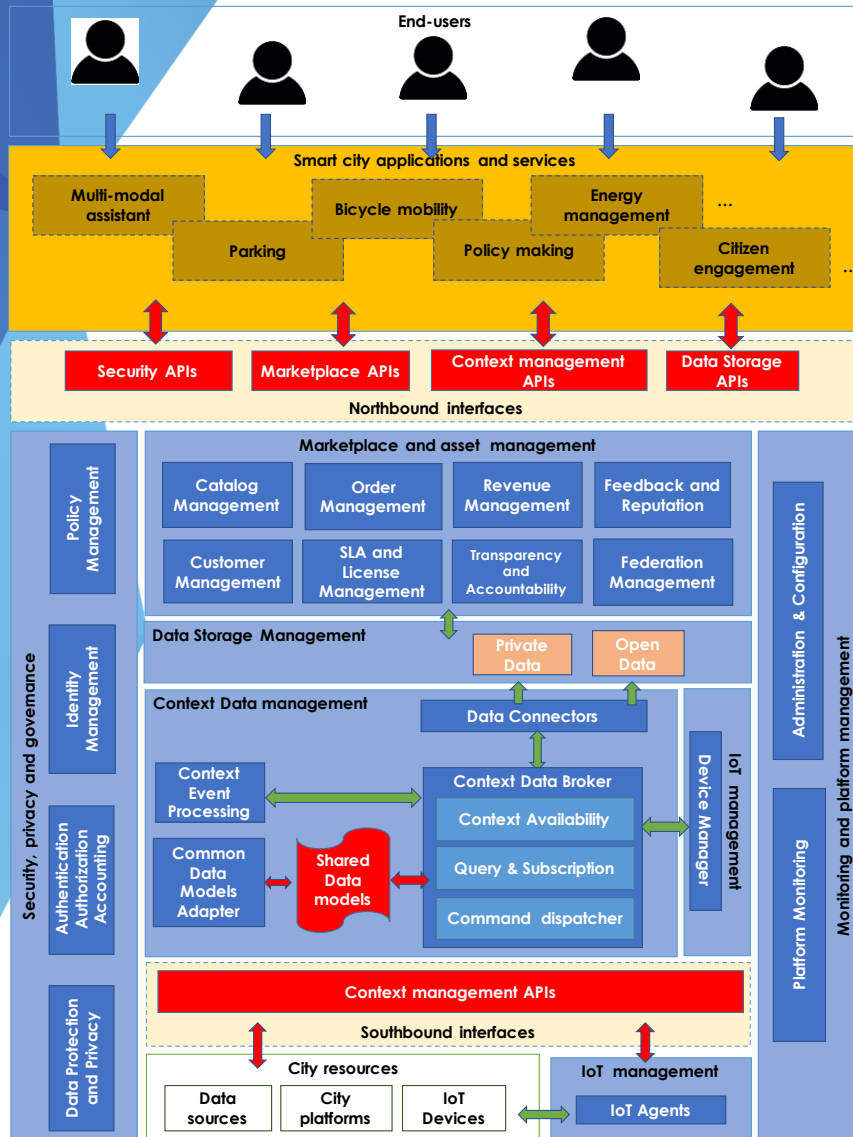
Not aiming at imposing a new platform for cities, but instead is proposing a more flexible approach where only **key interoperability points (KIPs)**, based on **standard interfaces**, are identified for cities to adopt whilst maintaining their personality.

KIPs

- represent the **main interfaces** that allow a city and applications to **interact with the SynchroniCity platform**;
- are **independent from the specific software components** that realize them.



SynchroniCity Framework



- **IoT Management:** to interact with the devices that use different standards or protocols making them compatible and available to the SynchroniCity platform.
- **Context Data Management:** to manage the context information coming from IoT devices and other public and private data sources.
- **Data Storage Management:** to provide functionalities related to the data storage and data quality interacting with heterogeneous sources.
- **Marketplace:** to implement a hub to enable digital data exchange for urban data and IoT capabilities providing features in order to manage asset catalogues, orders, revenue management.
- **Security:** to provide crucial security properties such as confidentiality, authentication, authorization, integrity, non-repudiation, access control, etc.
- **Monitoring and Platform management:** to provide functionalities to manage platform configuration and to monitor activities of the platform services.

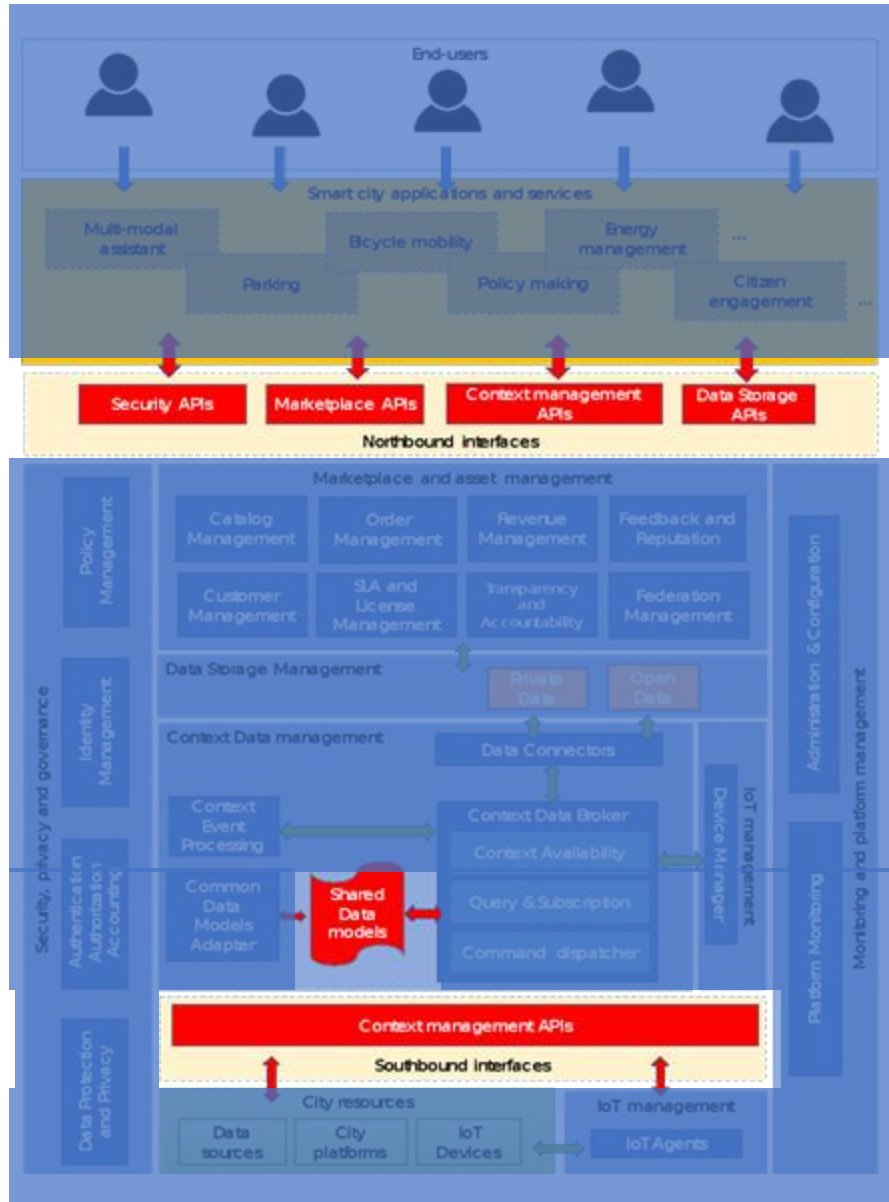
Baseline: SynchroniCity Cities/Reference Zones, OASC, FIWARE, EIP-SCC, NIST IES-CF.

Related standards: ITU-T SG20*/FG-DPM* (*drafts), ISO TC268.

Spec. doc.: Reference Architecture for IoT Enabled Smart Cities (D2.10)

<http://synchronicity-iot/about>

The Cities & the Technical Framework



Interoperability Points represent the main interfaces that allow a city and IoT solutions to interact with SynchroniCity platform

Cities are currently adopting the minimum interoperability points and mechanisms of the SynchroniCity framework.

You will need to regularly check the website for live updates

<https://synchronicity-iot.eu/open-call/pilot-cities>

Interoperability Mechanisms

Interoperability Point	Description	Specification document (synchronicity-iot.eu/about)	Related Standards [and Baselines]
Context Management API	This API allow to access to real-time context information from the different cities.	Reference Architecture for IoT Enabled Smart Cities (D2.10)	ETSI NGSI-LD prelim API, OMA NGSI, ITU-T SG20*/FG-DPM*
Shared data models	Guidelines and catalogue of common data models in different verticals to enable interoperability for applications and systems among different cities	Guidelines for the definition of OASC Shared Data Models (D2.2) Catalogue of OASC Shared Data Models for Smart City domains (D2.3)	[SynchroniCity Cities + partner data models]
Marketplace API	It exposes functionalities such as catalog management, ordering management, revenue management, SLA, license management etc.	Basic Data Marketplace Enablers (D2.4) Guidelines for the integration of IoT devices in OASC compliant platforms (D2.6)	[TM Forum API]
Security API	API to register and authenticate user and applications in order to access to the SynchroniCity-enabled services.	Reference Architecture for IoT Enabled Smart Cities (D2.10)	OAuth2
Data Storage API	This API allows to access to historical data and open data of the reference zones.	Reference Architecture for IoT Enabled Smart Cities (D2.10)	ETSI NGSI-LD, DCAT-AP [CKAN]

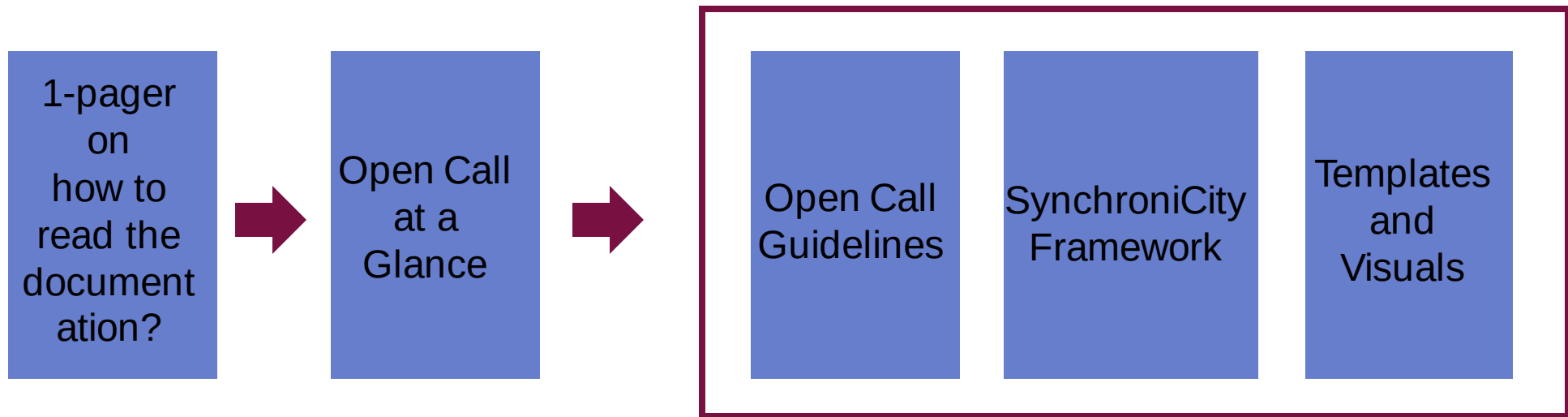


What's next?

What next?

- Download the ***Open Call Toolkit for Applicants*** package
 - For SME and Large Business Applicants
 - For New City Applicants

1st June
4 pm UK time



Only read if you want to apply for the open call

Support during application

OPEN FORUM

Ask questions or review answers to previous questions. This repository will be the quickest way to find answers.

HELPDESK

helpdesk@synchronicity-iot.eu
For private questions.

CLINICS

Launch Event and Clinic where applicants will receive support in person during the open call application period.

WEBINARS

There will be two webinars for those applicants that cannot physically attend some of the Launch Events and Clinics.

CONNECT

Section on the website to facilitate the encounter of other SMEs and partners which want to participate in the open call. It is though the responsibility of each applicant to find the right partner if they wish to form a Pilot Group.

Support during application

Documents: <https://synchronicity-iot.eu/open-call>

Support: <https://synchronicity-iot.eu/support/>

- FAQs: <https://synchronicity-iot.eu/support/faq/>
- Webinars: <https://synchronicity-iot.eu/support/webinars/>
 - Next edition: 19 July 2018
- Clinics: <https://synchronicity-iot.eu/support/clinics/>
 - 1st edition: 3 July 2018 (TBC) @ Porto

Open call deadline **September 30, 2018**

Porto's challenges

Porto.

		Antwerp	Carouge	Eindhoven	Helsinki	Manchester	Milan	Porto	Santander
Theme	Challenge								
SUSTAINABLE MOBILITY	Enabling and improving MaaS	◆		◆	◆	◆	◆	◆	◆
	Encouraging more non-motorised transport	◆	◆	◆	◆	◆	◆		◆
CITIZEN ENGAGEMENT	Increasing citizen engagement in decision making		◆	◆	◆	◆	◆	◆	◆
	Increasing a greater level of diversity in political engagement		◆	◆	◆	◆		◆	◆
ENVIRONMENT & WELLBEING	Climate change mitigation	◆	◆	◆	◆	◆	◆	◆	
	Reducing noise and air pollution	◆	◆	◆	◆	◆	◆	◆	◆
OPEN THEME	Open Challenge	◆	◆	◆	◆	◆	◆	◆	◆

SYNCHRONICITY

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synchronicity-iot.eu

Follow us on Twitter
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Follow us on Facebook
[@SynchroniCityiot](https://www.facebook.com/SynchroniCityiot)

General information
info@synchronicity-iot.eu

Open Call enquiries
helpdesk@synchronicity-iot.eu

Thanks!



EXAMPLES

CASE 1 – SME applies individually

Principle:

- i. Fund is **80%** of the total cost of the project, with an **overall cap of € 100,000**
- ii. SMEs will need to report and justify their whole costs on the project, regardless the grant that they will receive.

Examples:

1. Total cost of the project: € 50,000
Total grant: € 40,000 ($= 50,000 * 0.8$)
2. Total cost of the project: € 100,000
Total grant: € 80,000 ($= 100,000 * 0.8$)
3. Total cost of the project: € 150,000
Total grant: € 100,000. The 80% principle cannot be applied, as it would be higher than the € 100,000 overall cap, i.e. $150,000 * 0.8 = € 120,000 > € 100,000$

CASE 2 – SME + LB or Ci apply as a Pilot Group of 2

Principles:

- i. For LB and Ci fund is **80%** of its total individual cost of the project, with an **individual cap of € 60,000**
- ii. For SME fund is **80%** of its total individual cost of the project, **no cap**
- iii. There is an **overall cap on the total grant of € 200,000**
- iv. SMEs, LBs and Cities will need to report and justify their whole individual costs on the project, regardless the grant that they will receive.

Example:

Total cost for the LB/Ci for the project: € 100,000.

Total cost for the SME for the project: € 150,000.

Total cost of the project € 250,000.

- Grant for the LB/Ci: € 60,000, individual cap applies ($100,000 * 0.8 = 80,000 > 60,000$). Please note that the difference between € 60k and € 80k will need to be provided as an in-kind or cash by the LB/Ci.
- Grant for the SME: € 120,000 ($= 150,000 * 0.8$). Please note that here no cap applies, as in CASE 1, where an SME applies for fund individually.
- Total grant: € 180,000

IPR and Data

Who keeps the IPR?

IP will remain yours or of your Pilot Group

Synchronicity will not retain any equity

However, SynchroniCity consortium will be licensed the right to use (internally) any IPR you produce as part of the project, for three years after the project finishes.

Additionally, SynchroniCity or the European Commission may ask you to present your work as part of our public relations and networking events, in order to showcase the benefits of the SynchroniCity project.

Who own the data produced?

The type of data that you may make use of could be open data and close data, with either open access or restricted access. Each city has its own data policy and preferences on how data should be treated in their region.

It will be the responsibility of the applicants to ensure they understand the conditions on data in each city they plan to pilot, as well as associated licences and costs, in order to provide a sound proposal that takes this diversity into account.

The data produced during the pilot phase will be shared according to the contractual *Sharing Agreements* between the SME or Pilot Group and the relevant open call pilot cities.