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

January 2017
Guidelines and principles
Architecture
Standards
Tools

Pilots (base applications and services)

September 2017
Specification
Design
Deployment
Operation
Validation

Open call

June 2018
Ecosystem enrichment
Marketplace validation
Second wave of pilots
New services / applications
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).
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.

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

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 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.
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 these 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?

**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≥6)

**New cities** wanting to become part of Synchronicity

**Large Businesses** wanting to become part of Synchronicity

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

**Pilot Groups**
- Lead SME can apply alone or in a pilot group
- New Cities and Large Businesses can only apply in a Pilot Group
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**
  - Enabling and improving mobility as a service
- **Environment & Wellbeing**
  - Climate Change mitigation
  - Reducing noise and air pollution
- **Citizen Engagement**
  - Increasing citizen engagement in decision making
  - Increasing a greater level of diversity in political engagement
- **Open Theme**
  - Open challenge
## Scope by cities

### Core Pilot Cities

<table>
<thead>
<tr>
<th>Theme</th>
<th>Challenge</th>
<th>Antwerp</th>
<th>Carouge</th>
<th>Eindhoven</th>
<th>Helsinki</th>
<th>Manchester</th>
<th>Milan</th>
<th>Porto</th>
<th>Santander</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sustainable Mobility</strong></td>
<td>Enabling and improving MaaS</td>
<td>★★★★★</td>
<td>★★★★★</td>
<td>★★★★★</td>
<td>★★★★★</td>
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</table>
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.
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?
OPEN CALL APPLICATIONS

TECHNICAL REVIEWERS

CITY REVIEWERS

COMMERCIAL REVIEWERS

• Anonymisation
• Eligibility check (GO/NO GO)

OCEC DISCUSSION

Finalist List

List Projects from Highest Score to Lowest

SCORE ≥ 14/20 (GO/NO GO)

COLLECTION OF AVERAGE SCORE + FEEDBACK BY OCEC

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

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

Amendment Period

30 Sept 2018

1st week of Nov 2018

End Nov 2018

OCEC = Open Call Evaluation Committee
EPB = Ethics and Privacy Board
How to apply?

1. Go to Synchronicity Webpage.
2. Download and read all Open Call documents.
3. Attend clinics and webinars: Check dates here.
4. Ask questions! Check support options here.
5. Start preparing the online application form. Access the platform here.
6. Select a challenge and at least two additional pilot cities. Note that you need to select a minimum of two cities in total. If you are bringing two new cities, you only need to select one additional pilot city.

Cities from all over the world are welcome to apply in Pilot Group and SMEs. Only cities from EU and H2020 associated countries are eligible for funding.
How to apply?

7. **Make sure** that the city will adopt the necessary requirements to become a pilot city. Make sure that the challenge you are trying to tackle is common to the cities that you selected.

8. Complete the online application form.

9. 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.
• **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.


Spec. doc.: Reference Architecture for IoT Enabled Smart Cities (D2.10) [http://synchronicity-iot/about](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

<table>
<thead>
<tr>
<th>Interoperability Point</th>
<th>Description</th>
<th>Specification document</th>
<th>Related Standards [and Baselines]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Context Management API</strong></td>
<td>This API allows to access to real-time context information from the different cities.</td>
<td>Reference Architecture for IoT Enabled Smart Cities (D2.10)</td>
<td>ETSI NGSI-LD prelim API, OMA NGSI, ITU-T SG20*/FG-DPM*</td>
</tr>
<tr>
<td><strong>Shared data models</strong></td>
<td>Guidelines and catalogue of common data models in different verticals to enable interoperability for applications and systems among different cities</td>
<td>Guidelines for the definition of OASC Shared Data Models (D2.2)</td>
<td>[SynchroniCity Cities + partner data models]</td>
</tr>
<tr>
<td><strong>Marketplace API</strong></td>
<td>It exposes functionalities such as catalog management, ordering management, revenue management, SLA, license management etc.</td>
<td>Basic Data Marketplace Enablers (D2.4)</td>
<td>[TM Forum API]</td>
</tr>
<tr>
<td><strong>Security API</strong></td>
<td>API to register and authenticate user and applications in order to access to the SynchroniCity-enabled services.</td>
<td>Reference Architecture for IoT Enabled Smart Cities (D2.10)</td>
<td>OAUTH2</td>
</tr>
<tr>
<td><strong>Data Storage API</strong></td>
<td>This API allows to access to historical data and open data of the reference zones.</td>
<td>Reference Architecture for IoT Enabled Smart Cities (D2.10)</td>
<td>ETSI NGSI-LD, DCAT-AP [CKAN]</td>
</tr>
</tbody>
</table>
What’s next?
What next?

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

**Only read if you want to apply for the open call**

1-pager on how to read the documentation?

Open Call at a Glance

Open Call Guidelines

SynchroniCity Framework

Templates and Visuals

1st June
4 pm UK time
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
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</tr>
<tr>
<td><strong>OPEN THEME</strong></td>
<td>Open Challenge</td>
<td>⬤</td>
<td>⬤</td>
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Visit our website
synchronicity-iot.eu

Follow us on Twitter
@SyncCityIoT

Follow us on Facebook
@SynchroniCityIoT

General information
info@synchronicity-iot.eu

Open Call enquiries
helpdesk@synchronicity-iot.eu

Thanks!
**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.