

SynchroniCity opens up a global IoT market where cities and businesses develop share digital services to improve the lives of citizen and grow local economies.

SYNCHRONICITY

Open Call – Q&A

27th Aug 2018



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No732240

Co-funded by



Switzerland



South Korea



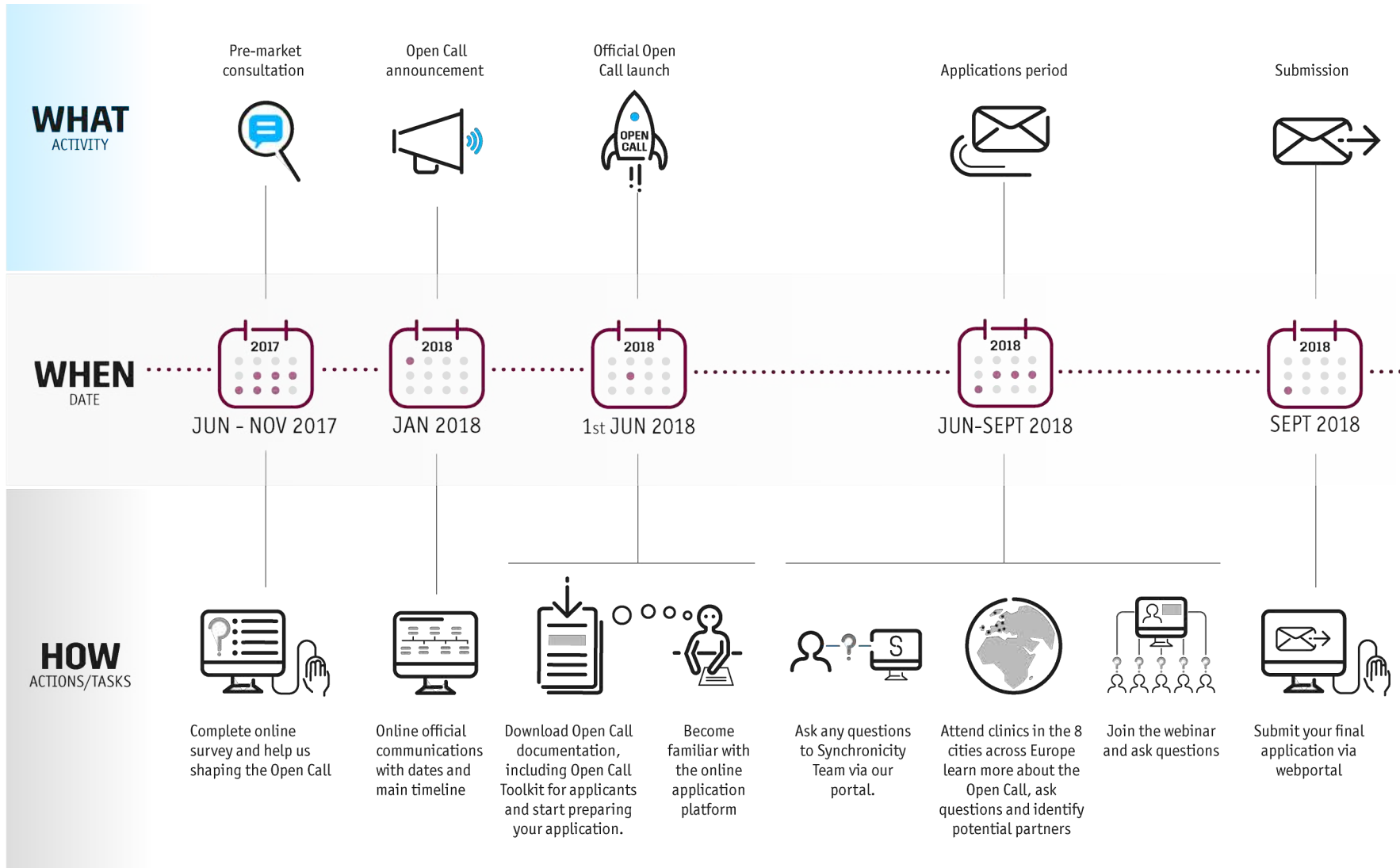
Mexico

Agenda

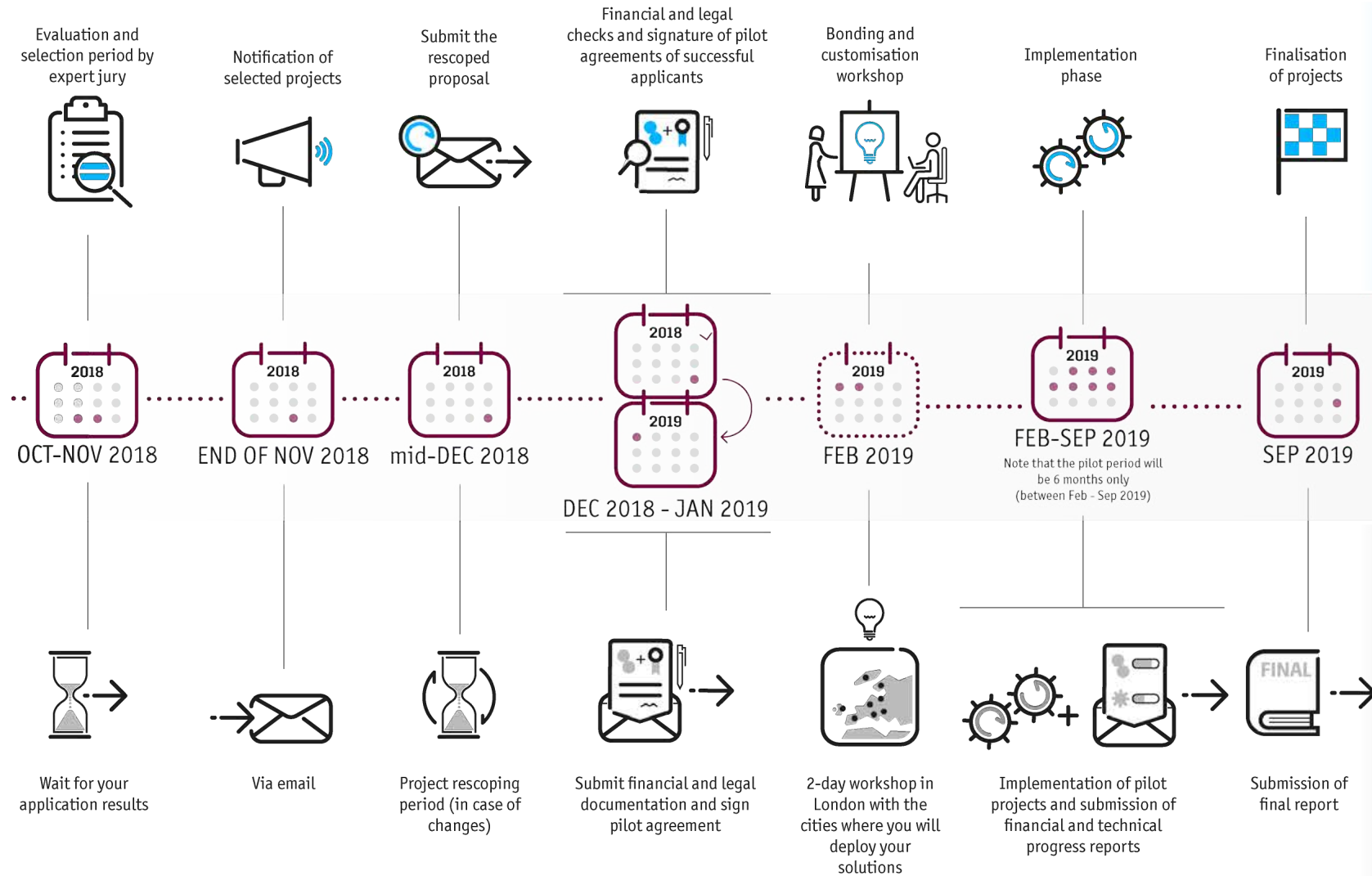
- Welcome - Francesca Spagnoli – *European Network of Living Labs*
- SynchroniCity Open Call Practicalities - Gemma Guilera – *Future Cities Catapult*
- Technical Implications for the Applications - Martino Maggio - *Engineering Ingegneria Informatica spa*
- **Q&A**
- Closing Remarks - Francesca Spagnoli - *European Network of Living Labs*

Open Call Practicalities

Timeline



Timeline



Evaluation

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?

- Get familiar with the questions that you will be asked in the platform
In ***Toolkit for Applicants → Templates for Applicants → Application Form Template***

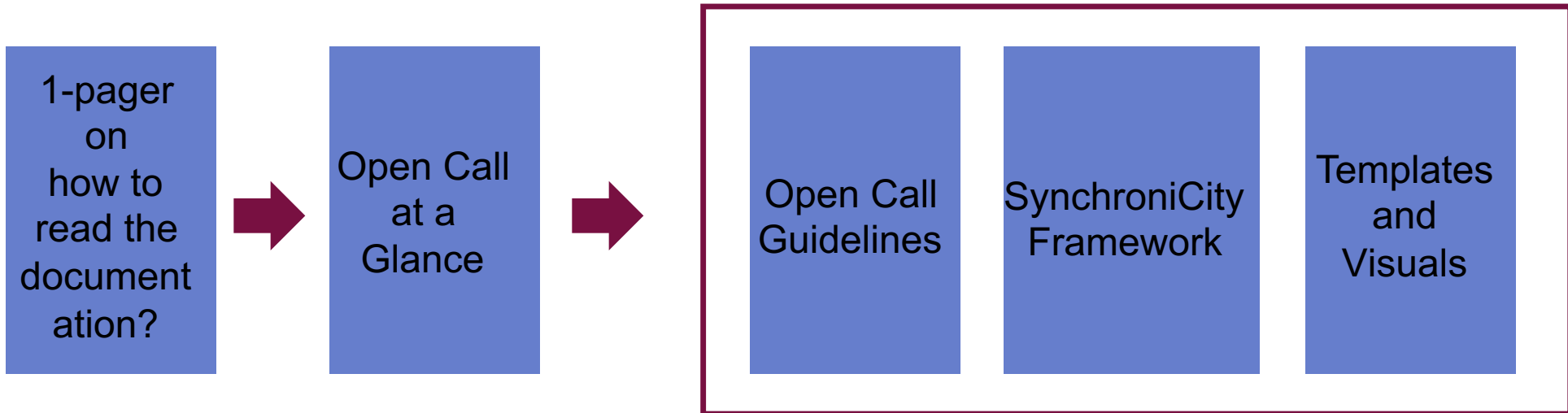
Impact (0-5 points)

Questions	Comments
How is your solution addressing the challenge you selected?	200 words Show you understand the challenge and demonstrate how your solution is appropriate to tackle this challenge.
What will the tangible output (s) of your project be?	200 words Show the specific outputs of your six-month pilot project. This is about the product or service that you will be deploying.
How will you measure the quality of your outputs?	200 words For each output describe how you are going to assess quality. Describe your methodology. It is

Application

The documentation

- 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

- Check available city data and assts on ***Synchronicity Website*** → ***Open Call*** → ***Technical Framework***

- Start your Application in the **Submittable platform** (link on the main Open Call site).

SYNCHRONICITY

SynchroniCity Open Call - Administrative Questionnaire

Ends on September 30, 2018

More ▾

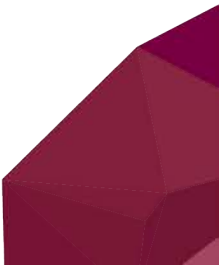
Apply

SynchroniCity Open Call - Technical Questionnaire

Ends on September 30, 2018

More ▾

Apply

- 
- Submit both Administrative and Technical Questionnaires at the same time.
 - Only press SUBMIT when you have fully completed your application.
 - If you haven't, your proposal will be saved automatically and you can retake your work later on.
 - Do not leave the submission for the last minute!
- 



Support

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.

WEBINARS

Webinars for those applicants that cannot physically attend some of the Launch Events and Clinics.

CLINICS

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

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.

FAQs

City Clinics – direct Q&A with cities

SYNCHRONICITY

HOME CITIES OPEN CALL ▾ NEWS EVENTS DOCS ABOUT 🔍

ANTWERP

5 July 2018 from 1 PM to 3 PM CET Register [here](#)

14 August 2018 from 1 PM to 3 PM CET Register [here](#)

13 September from 1 PM to 3 PM CET

CAROUGE

6 July 2018 from 9 AM to 12 PM CET

31 August 2018 from 9 AM to 12 PM CET Register [here](#)

14 September 2018 from 9 AM to 12 PM CET Register [here](#)

EINDHOVEN

4 July 2018 from 1 PM to 5 PM CET

8 August 2018 from 1 PM to 5 PM CET Register [here](#)

20 August 2018 from 1 PM to 5 PM CET Register [here](#)

HELSINKI

Connect with others – find partners

SYNCHRONICITY

HOME CITIES OPEN CALL ▾ NEWS EVENTS DOCS ABOUT 🔍

CONNECT

There are a few different ways that you can collaborate with others to create a Pilot Group and submit an application for the SynchroniCity Open Call.

SIGN UP NEW PILOT CITIES

Is your city interested in becoming a new open call pilot city? Sign up here so that SMEs and Pilot Groups can reach out to you.

[Sign up your city](#)

OFFER A SOLUTION OR SKILL

Have you got a solution, skill or expertise to offer to a Pilot Group? Create an advert detailing what you can offer to enable others to reach out to discuss a potential collaboration.

[Make an offer](#)

REQUEST A SOLUTION OR SKILL

Need additional skills to form your Pilot Group and create a proposal? Create an advert with details of what type of partners you are looking for.

[Make a request](#)

CONNECT WITH OTHERS

☐ Solutions or Skills offered ☐ Solutions or Skills required

☐ Antwerp ☐ Carouge ☐ Eindhoven ☐ Helsinki ☐ Manchester ☐ Milan ☐ Porto ☐ Santander

[Climate Change Adaptation](#)

[Enabling Mobility-as-a-Service \(MaaS\)](#)

[Encouraging non-motorised \(active\) Transport](#)

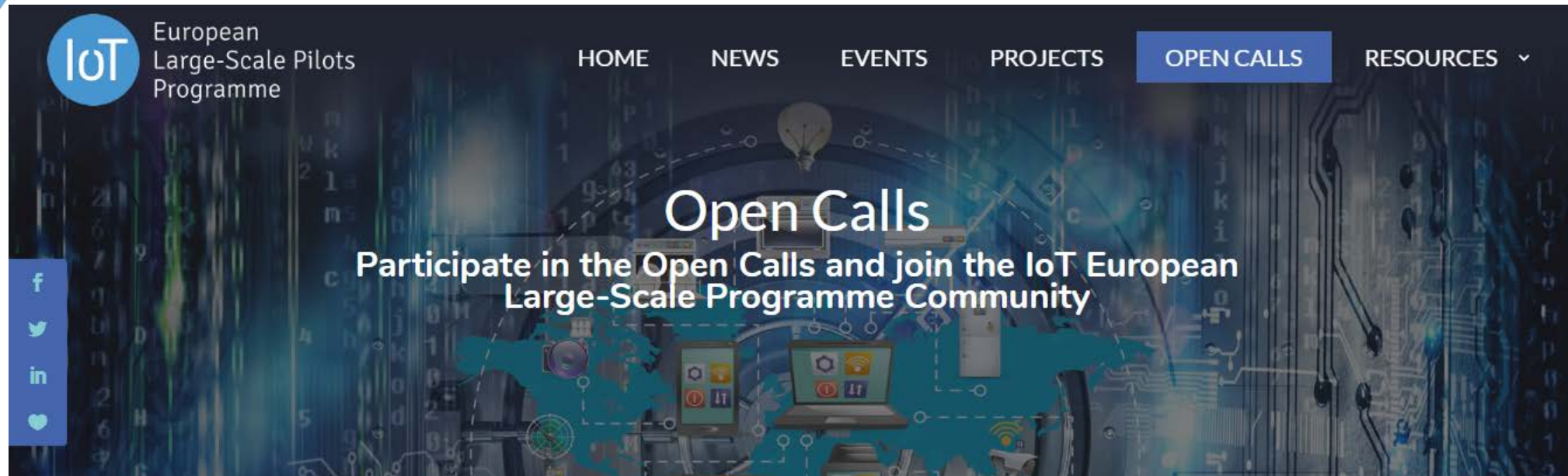
[Increasing a greater Level of Diversity in Political Engagement](#)

[Increasing Citizen Engagement in Decision Making](#)

[Open Challenge](#)

[Reducing Air and Noise Pollution](#)

European IoT Large-Scale Pilots website



Useful Resources

- [SME Engagement Handbook](#)

- Technology Readiness Level (TRL)
- Formation of consortia
- Data ownership and GDPR
- Measuring impact – KPIs
- Etc.

Technical Implications

Basic principles

You need to demonstrate your solution is **interoperable, replicable and reusable** across the cities and across sectors.

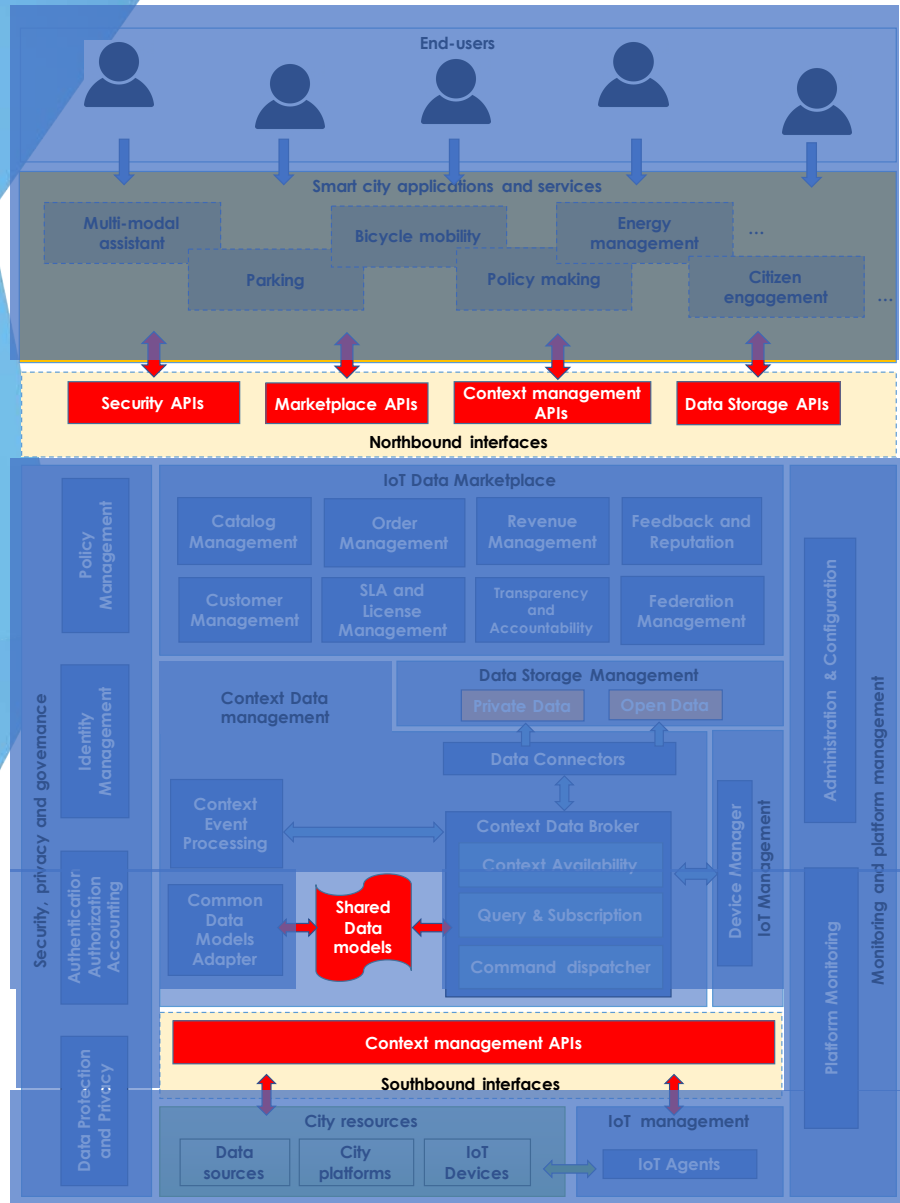
There are some mandatory requirements that your proposal needs to cover:

- Use of SynchroniCity data available on the Core Pilot Cities in which you want to pilot your solution through Synchronicity based common data models
- Use Synchronicity API to access data and security

In addition, you may:

- Use external/additional information that needs to be converted to SynchroniCity data models (NGSI)

Interoperability Points



- **Interoperability Points** represent the main interfaces that allow a cities and applications to interact with SynchroniCity platform
- Interoperability points are independent from the specific software components that realize them and can be implemented by cities in different steps to reach different levels of compliance
- **Interoperability Mechanisms** are the actual specifications of the interfaces at the Interoperability points: they are standard API and guidelines that have to be implemented by a city in order to be compliant with the SynchroniCity framework

Interoperability Mechanisms

	Description	Specification document (http://synchronicity-iot.eu/docs/)	Related Standards [and Baselines]
Context Management API	This API allow to access to real-time context information from the different cities.	https://synchronicityiot.docs.apiary.io/#reference/context-management-api 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)	[FIWARE + SynchroniCity RZ 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) https://synchronicityiot.docs.apiary.io/#reference/marketplace-api	[TM Forum API]
Security API	API to register and authenticate user and applications in order to access to the SynchroniCity-enabled services.	https://synchronicityiot.docs.apiary.io/#reference/security-api	OAUTH2
Data Storage API	This API allows to access to historical data and open data of the reference zones.	https://synchronicityiot.docs.apiary.io/#reference/data-storage-api-historical https://synchronicityiot.docs.apiary.io/#reference/data-storage-api-opendata	ETSI NGSI-LD, DCAT-AP [CKAN]

Website – Technical Framework

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EXPLORE OUR APIS

SynchroniCity API documentation

CLICK HERE

OPEN CALL FRAMEWORK

Guide for applicants

CLICK HERE

DATA, TOOLS & SERVICES IN CORE PILOT CITIES

SynchroniCity Current Implementations

CLICK HERE

ADDITIONAL DATA SOURCES IN CITIES

City Cards

CLICK HERE

Data available

Currently available through SynchroniCity
API and data model

Will be available (by September) through
SynchroniCity API and data model

Available through Data platform, but not in
NGSI/SynchroniCity data model

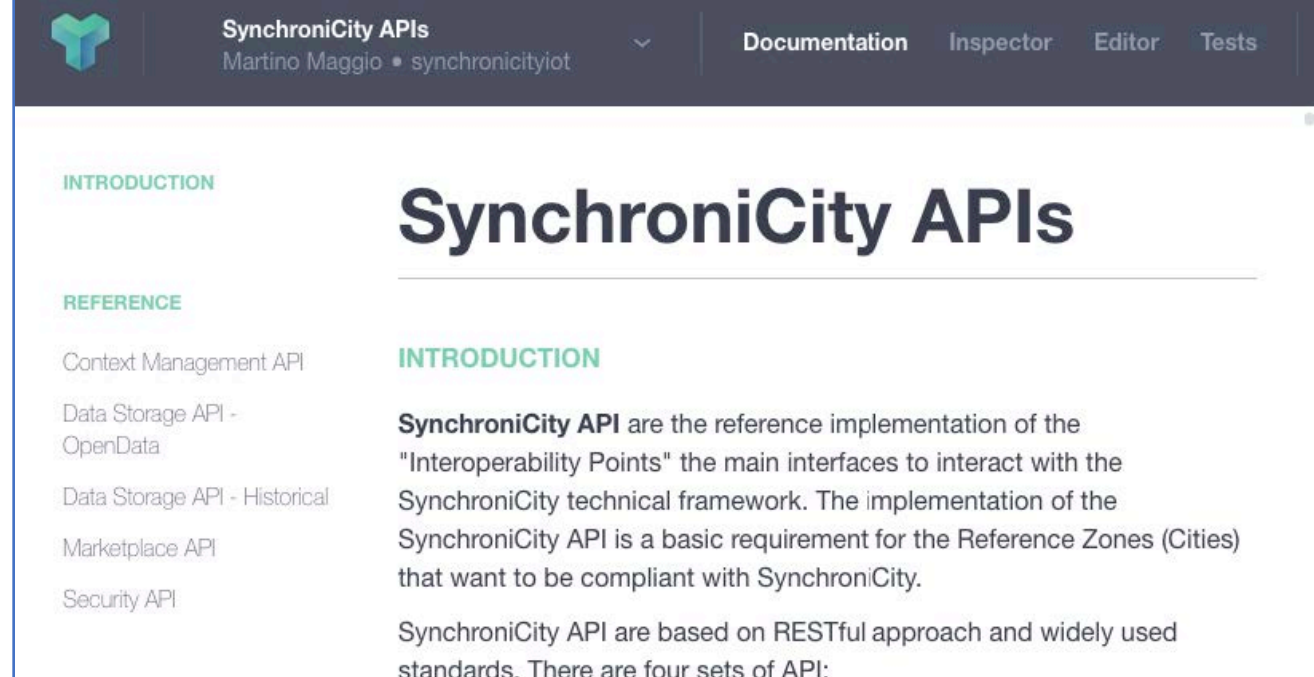
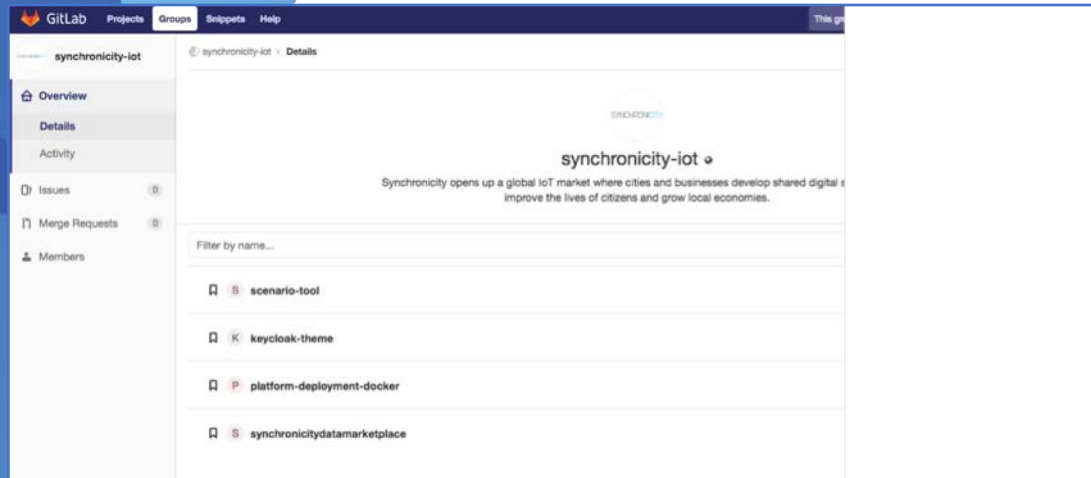
To be verified

CURRENT IMPLEMENTATIONS IN CORE PILOT CITIES

Data Type	Antwerp	Carouge	Eindhoven	Helsinki	Manchester	Milan	Santander	Porto
Noise Level								
Air Quality Data								
Public Transport Fleet Vehicles								
Municipality vehicles location and speed								
Cyclists								
Cyclists								
Points of interest (POIs) data								
City Event								
Traffic constraints								
ParkingSpot								
Parking (OffStreet)								
Parking (OnStreet)								
Bus stop								

Live updates on
**Website → Open
Call → Technical
Framework**

Project Resources



Q & A

SYNCHRONICITY

Visit our website
synchronicity-iot.eu

Follow us on Twitter
[@SyncCityIoT](https://twitter.com/SyncCityIoT)

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

Open Call enquiries
helpdesk@synchronicity-iot.eu

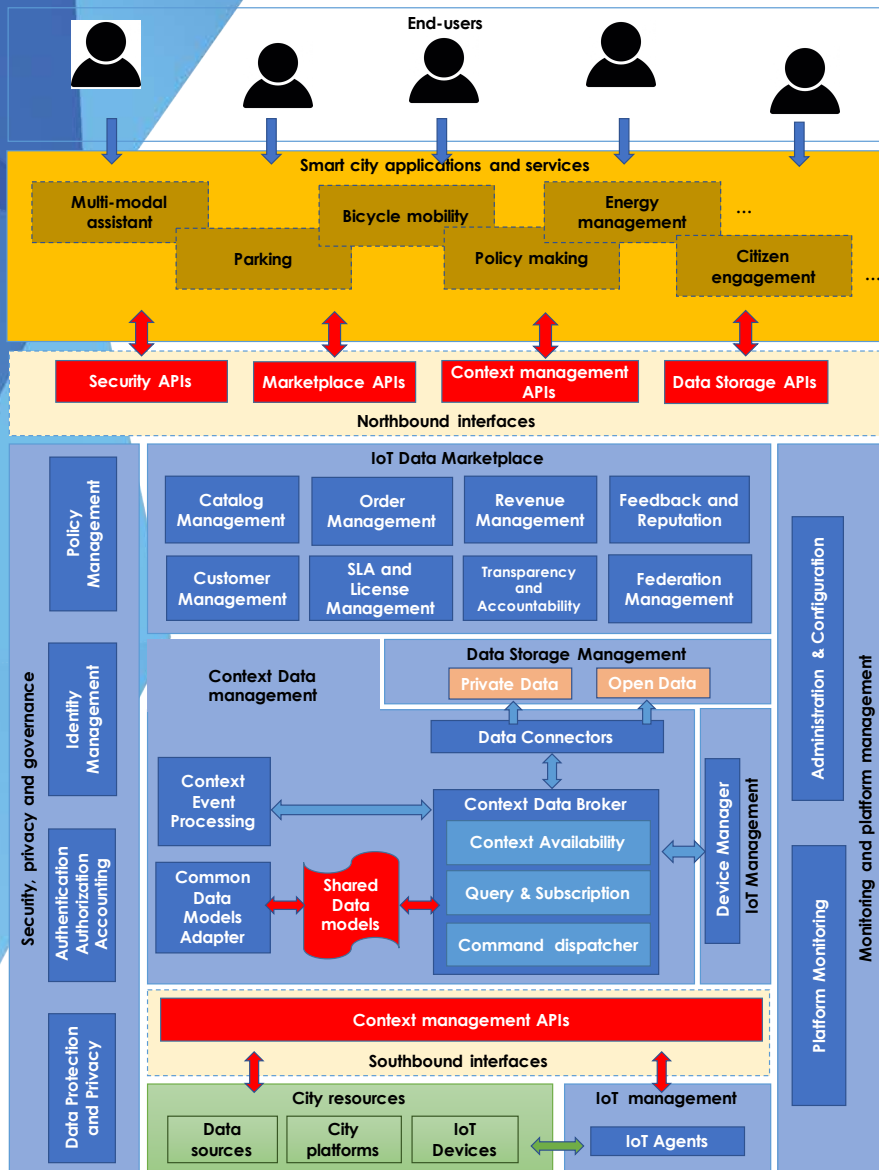
Thanks!

TECHNICAL

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)
4. Hosted cloud option

SynchroniCity Architecture



- **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.

EXTRAS

Partners



SYNCHRONICITY

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



OPEN CALL

1st JUNE 2018

FUND



CITIES

- Helsinki
- Manchester
- Eindhoven
- Antwerp
- Carouge
- Milan
- Santander
- Porto

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 [@SynchronicityIoT](https://www.facebook.com/SynchronicityIoT)
 [@SyncCityIoT](https://twitter.com/SyncCityIoT)



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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



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

Technology Readiness Level

TRL 1 – basic principles observed

TRL 2 – technology concept formulated

TRL 3 – experimental proof of concept

TRL 4 – technology validated in lab

TRL 5 – technology validated in relevant environment (industrially relevant environment in the case of key enabling technologies)

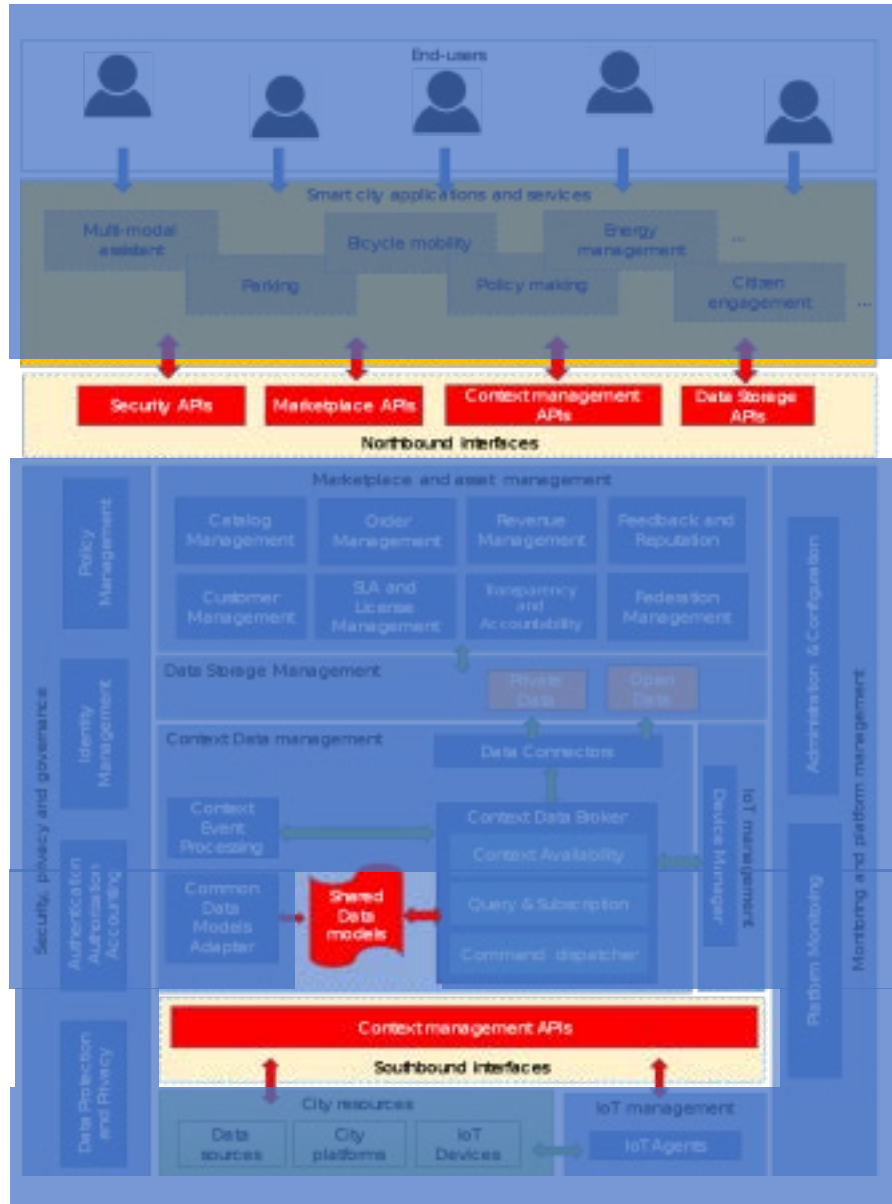
TRL 6 – technology demonstrated in relevant environment (industrially relevant environment in the case of key enabling technologies)

TRL 7 – system prototype demonstration in operational environment

TRL 8 – system complete and qualified

TRL 9 – actual system proven in operational environment (competitive manufacturing in the case of key enabling technologies; or in space)

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/framework>

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]