

# SYNCHRONICITY

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## IoT Large-Scale Pilot for Smart Cities & Communities



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

Co-funded by



Switzerland



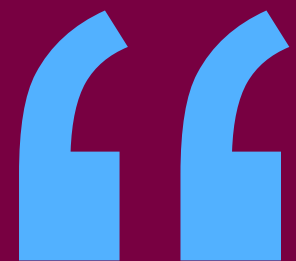
South Korea



Mexico

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**Deliver a market  
for IoT-enabled  
urban services  
for Europe and  
beyond**



**A robust model for  
standards-based  
innovation and  
procurement of  
IoT-enabled services  
across domains**

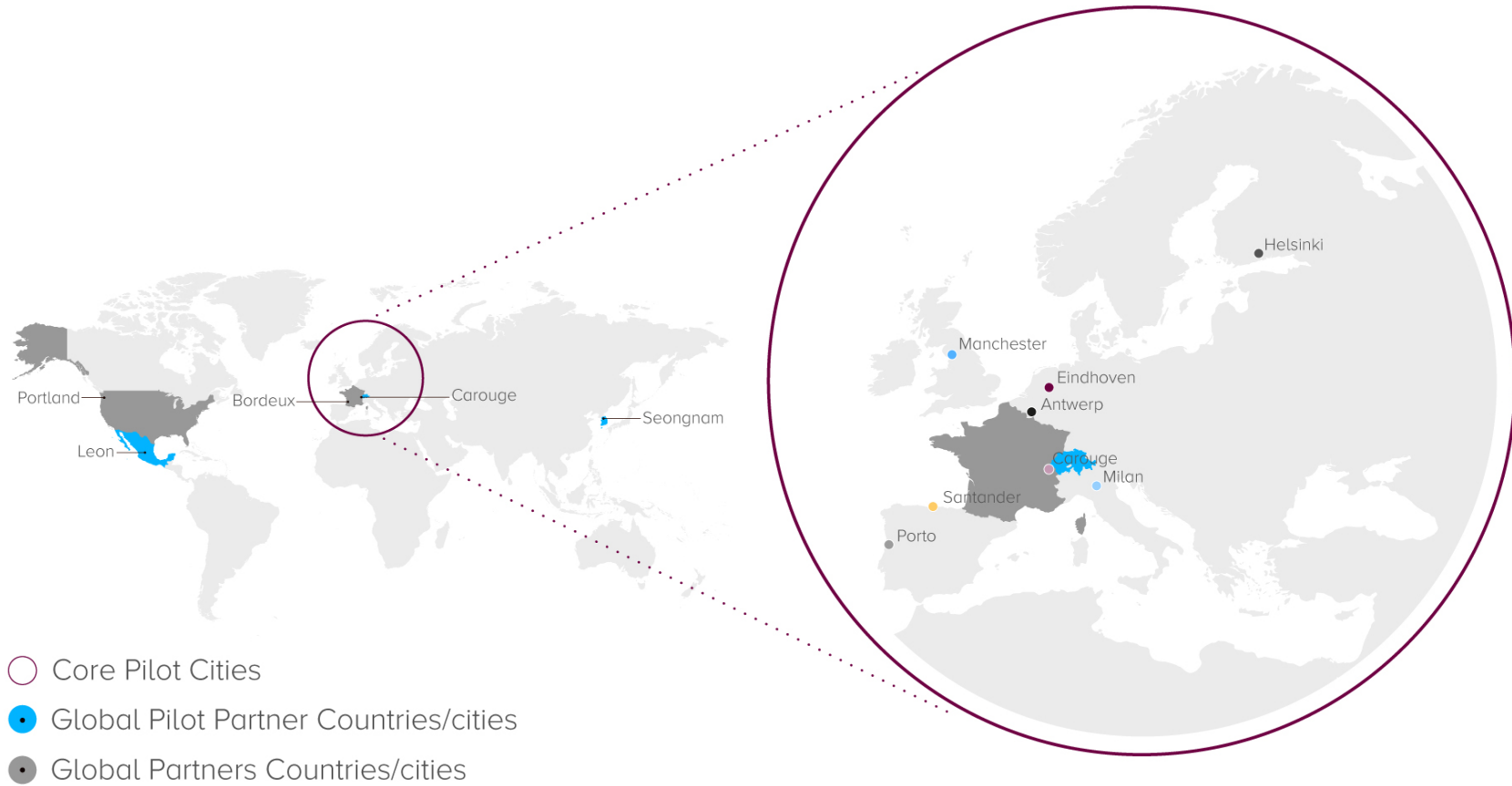
# Project Objectives

1. Establish technical foundations
2. Establish marketplace enablers
3. Create reference zones
4. Pilot services that serve citizen needs
5. Establish ecosystem
6. Establish citizen-oriented methods
7. Establish holistic quantification of value
8. Provide insights into new business models
9. Transform city policy-making and planning

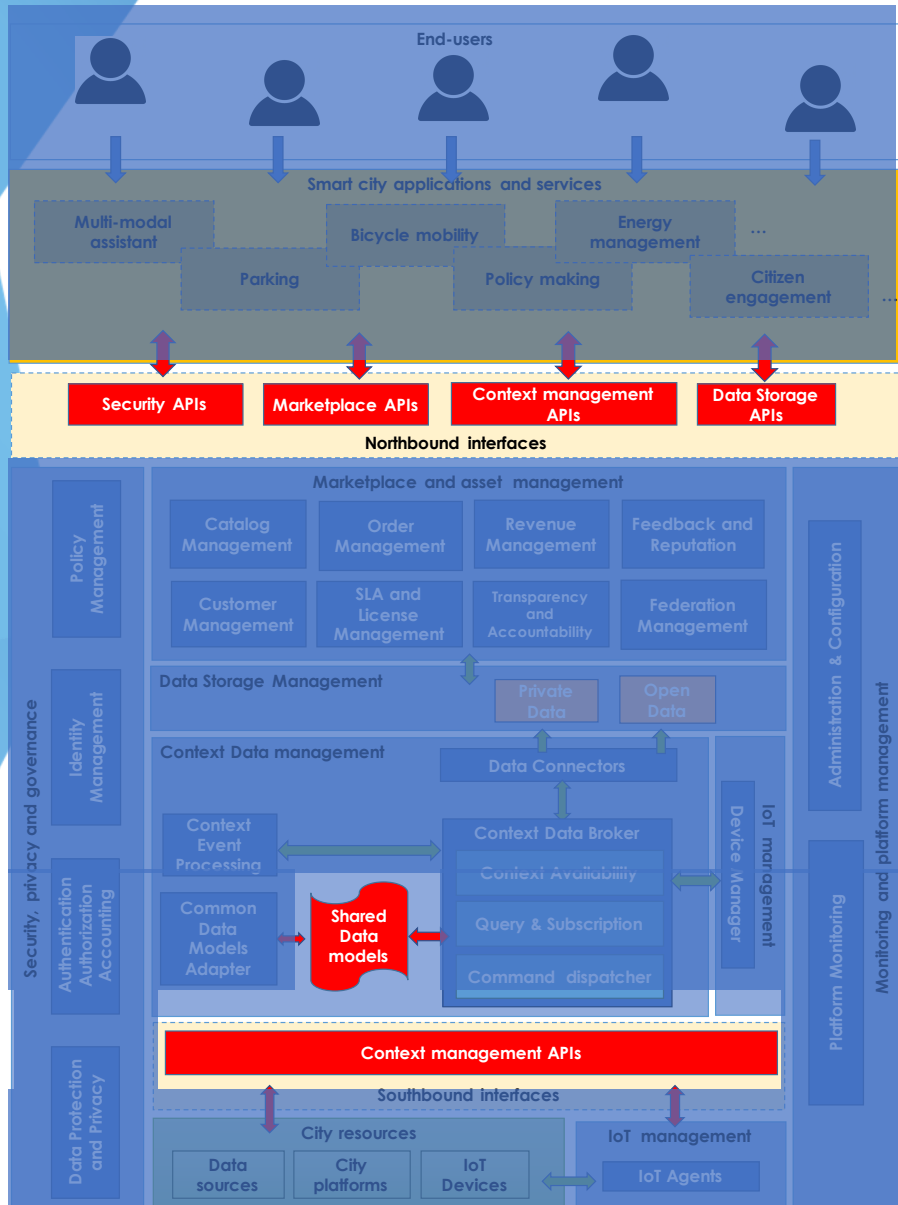
# Common Technical Ground

1. **OASC** neutral branding (based on standards and consensus specifications)
2. **OASC** Minimal Interoperability Mechanisms (MIMs)
  - Context Information Management
  - Common data models
  - Ecosystem Transaction Management (marketplaces)
3. **SynchroniCity** reference implementation (standards-based)
4. **SynchroniCity** cloud hosting (option)

# Our Core Pilot Cities



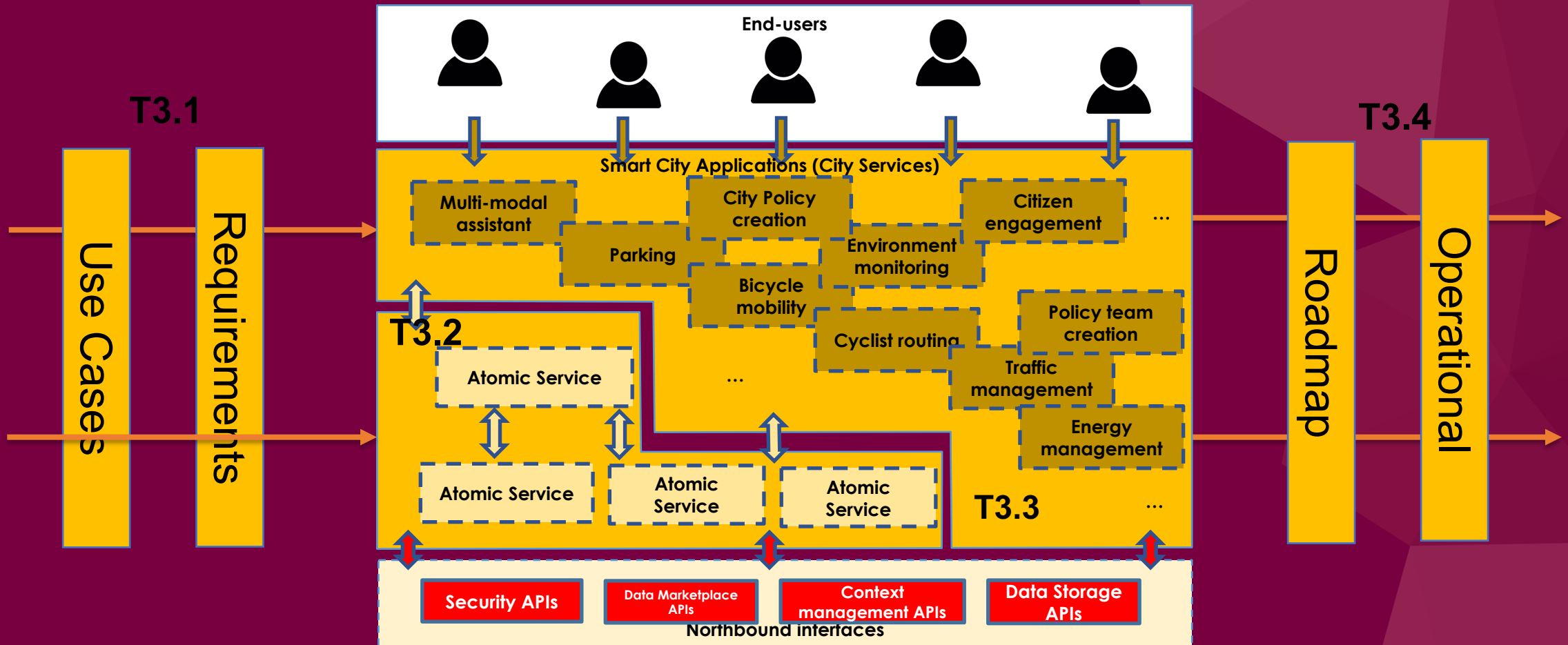
# Interoperability Points



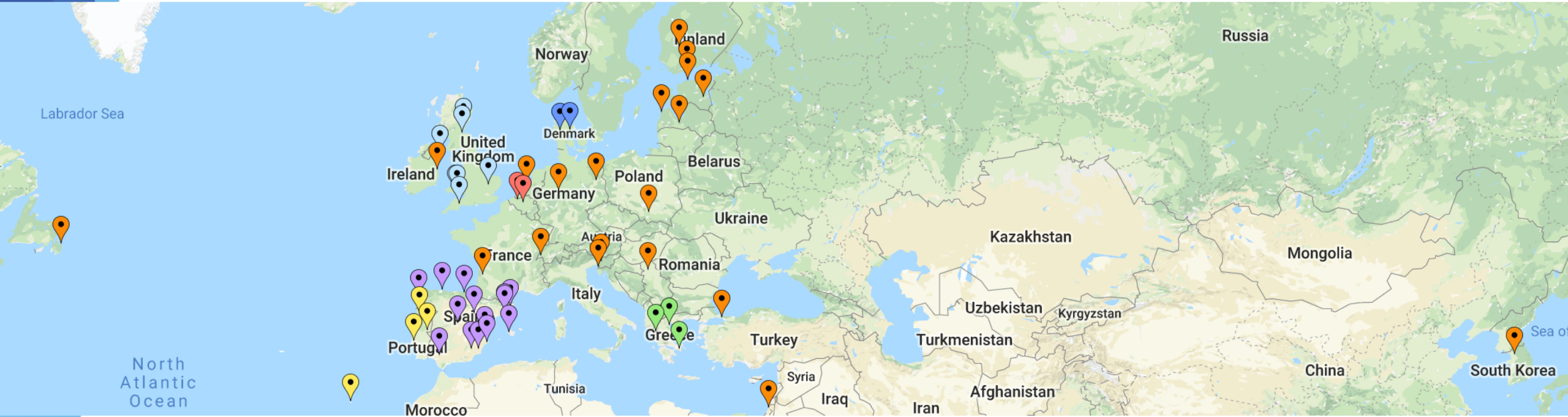
- **Interoperability Points** represent the main interfaces that allow a city (or any Reference Zone, RZ) and applications to interact with SynchroniCity platform
- Interoperability points are independent from the specific software components that realize them and can be implemented by cities in different steps to reach different levels of compliance
- The architecture has been designed following the OASC principles and the definitions of **Minimal Interoperability Mechanisms (MIMs)**. MIMs, 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



# Atomic and Application Services



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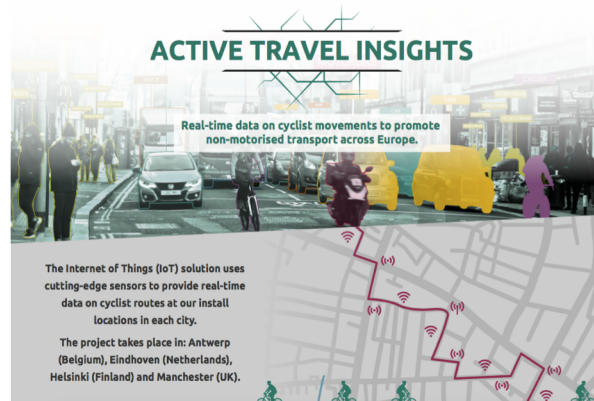
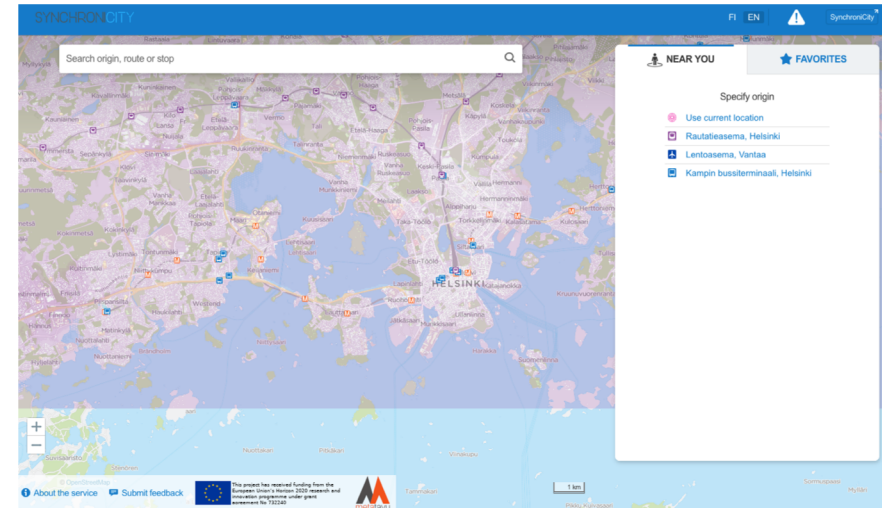
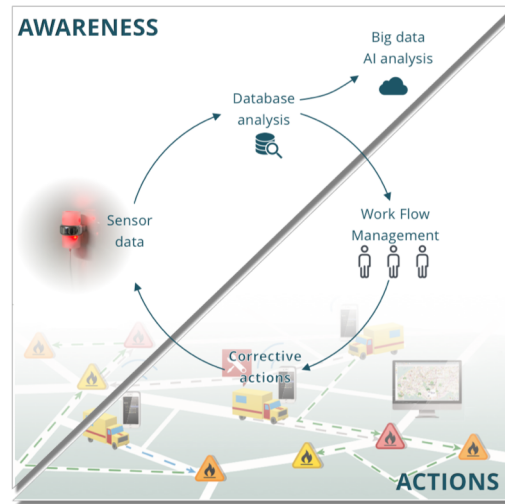
**New Cities from the Open Call**

# Pilotit Helsingissä

## Puhtaan ilman reittiopas konseptipilotti

### P&K yritykset

- AAQM kiinteistöhuolto+AI (Ilmanlaatu)
- CASD ilmanlaadun tietoisuus (ilmanlaatu, sää)
- ATI pyöräilyreitit (ilmanlaatu, liikenne)
- BlueAlpaca Chatbot (ilmanlaatu, tapahtumat)



# SynchroniCity for developers

- [Technical framework](#)
  - MINIMAL INTEROPERABILITY MECHANISMS (MIMS)
    1. Context Information Management (Context Broker [Helsinki/Aalto](#) - [FVH](#))
    2. [Data Models](#)
    3. [Marketplace Helsinki/Aalto](#)
  - [ATOMIC SERVICES](#)
    - Common functional blocks

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FORUM  
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**Kiitos!**

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