



## Truly Smart

- Breaking information silos through shared context data space with standard API
- Enabling Overall City-level Governance Solutions

## Common information models

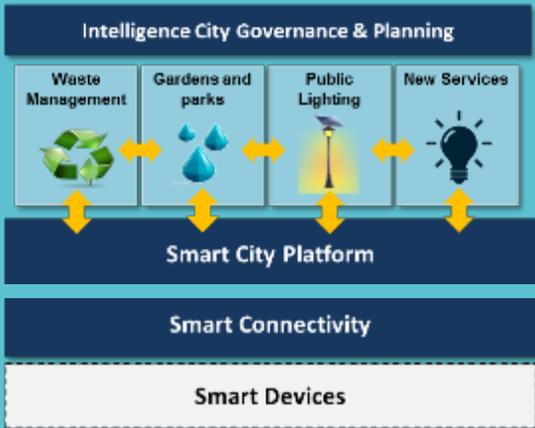
- No costs of adaptation to achieve full interoperability among systems in the city
- Enabling portability of systems across cities

## Unleashing Right-time Open Data

- Right-time context info published to third parties
- Authorization and access control (API management)
- Open innovation ecosystem

## Enabling the Data Economy

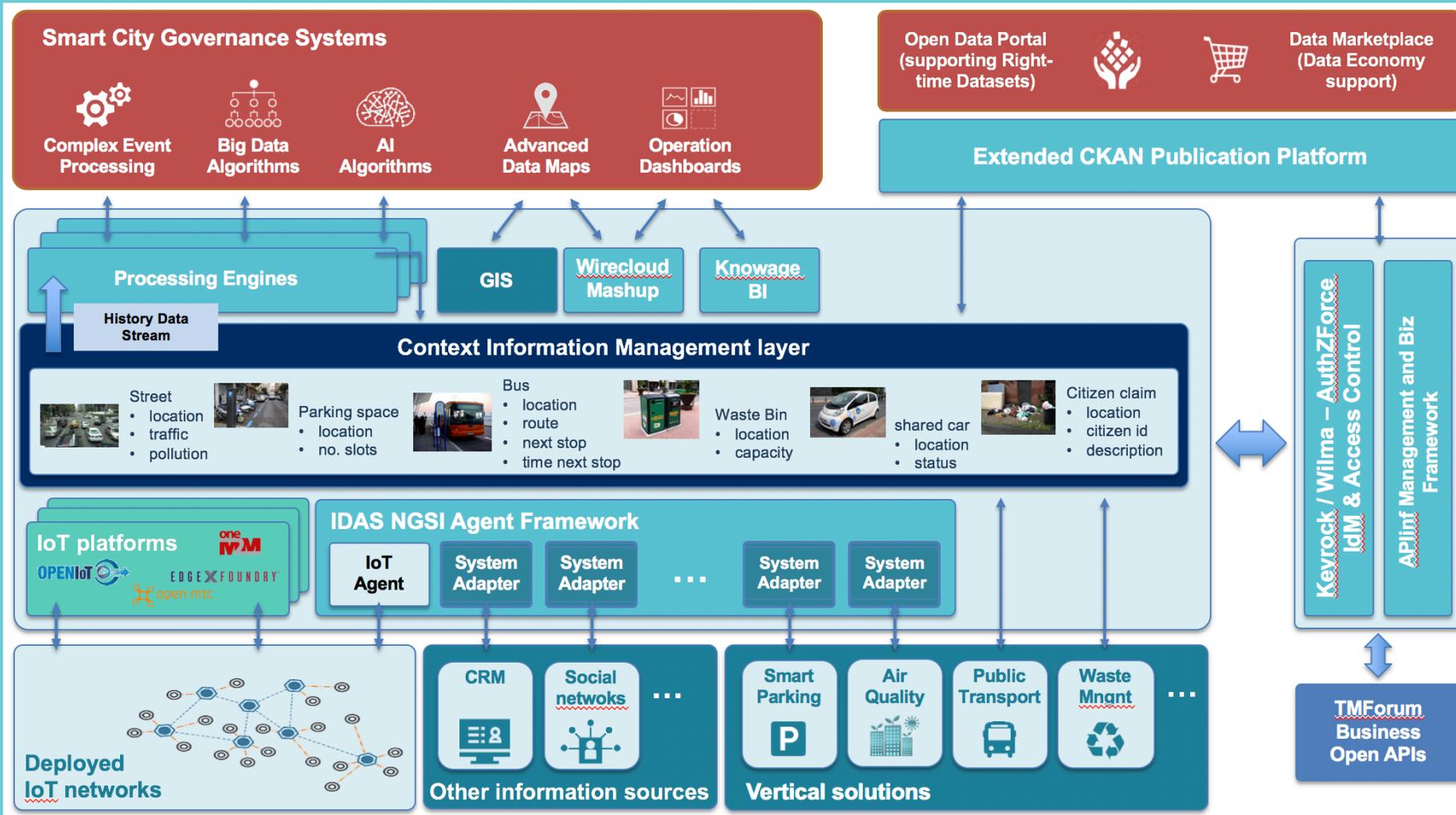
- City as a platform including also 3<sup>rd</sup> party data enabling innovative business models
- Open and commercial data enabling multi-side markets



<p><b>PARKS &amp; GARDENS</b> Data models intended to make an efficient, effective and sustainable management of green areas.</p> <p><a href="#">READ MORE</a></p>	<p><b>ENVIRONMENT</b> Enable to monitor air quality and other environmental conditions for a healthier living.</p> <p><a href="#">READ MORE</a></p>
<p><b>TRANSPORTATION</b> Transportation data models for smart mobility and efficient management of municipal services.</p> <p><a href="#">READ MORE</a></p>	<p><b>PARKING</b> Real time and static parking data (on street and off street) interoperable with the EU standard DATEX II.</p> <p><a href="#">READ MORE</a></p>
<p><b>POINT OF INTEREST</b> Specific point locations that someone may find useful or interesting. For instance, weather stations, touristic landmarks, etc.</p> <p><a href="#">READ MORE</a></p>	<p><b>WEATHER</b> Weather observed, weather forecasted or warnings about potential extreme weather conditions.</p> <p><a href="#">READ MORE</a></p>



# FIWARE: enabling the Smart City Reference Architecture



- Breaking silos of information
- Enabling publication of right-time datasets to 3rd parties
- Supporting the Economy of Data
- Multiple options leading to hybrid platform solutions
- Avoiding vendor lock-in

# Endorsement of FIWARE Context Broker technology



The GSMA has published a Reference Architecture for IoT Big Data Ecosystem which recommends to mobile operators

FIWARE NGSIv2 should be supported by implementers delivering the IoT Big Data ecosystem



The FIWARE Context Broker Technology has been selected as a new CEF (Connecting Europe Facility) Building Block

Enabling public and private sector solutions regarding publication of right-time data

The European Data portal will evolve to incorporate ability to publish right-time Open Data



ETSI created Jan 2017 a new Industry Specification Group on cross-sector Context Information Management (ISG CIM) for smart cities applications and beyond.

FIWARE NGSIv2 was the starting point for the CIM API to be specified: NGSI-LD

FIWARE Context Broker to support NGSI-LD in the future

# Endorsement of FIWARE Context Broker technology



Involving 117+ cities in 24+ countries.

All of them agree to foster adoption of common principles:

- Common API: FIWARE NGSIv2
- Compatible Open Data Publication platforms
- Collaboration in definition of data models



TM Forum is working with FIWARE to deliver the key building blocks for enabling and connecting Smart City ecosystems

TM Forum supports FIWARE NGSIv2 for real-time access to context information in cities

TM Forum and FIWARE collaborate towards development of data marketplace platform components



Identified as one of the most relevant Smart Cities Platform initiatives with a global footprint within the IES-City (IoT-Enabled Smart City) Framework



## **Reference Architecture – Open APIs**

### **Common Information Models**

**Paving the way towards transforming cities  
into platforms enabling the Data Economy**

DREAM BIG  
IT WORKS



<http://www.fiware.org>

# Thank you!

<http://fiware.org>

Follow @FIWARE on Twitter

Juanjo Hierro

FIWARE Foundation CTO

[juanjose.hierro@fiware.org](mailto:juanjose.hierro@fiware.org)

[www.slideshare.net/JuanjoHierro](http://www.slideshare.net/JuanjoHierro)

