Open APIs for Open Minds

Common Standards Boosting the Digital Transformation of Cities

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100+ cities 22 countries

- Common APIs → FIWARE NGSI
- Platform for Open Data/API publication
- Standard Data Models → CitySDK and more
- Driven by implementation approach



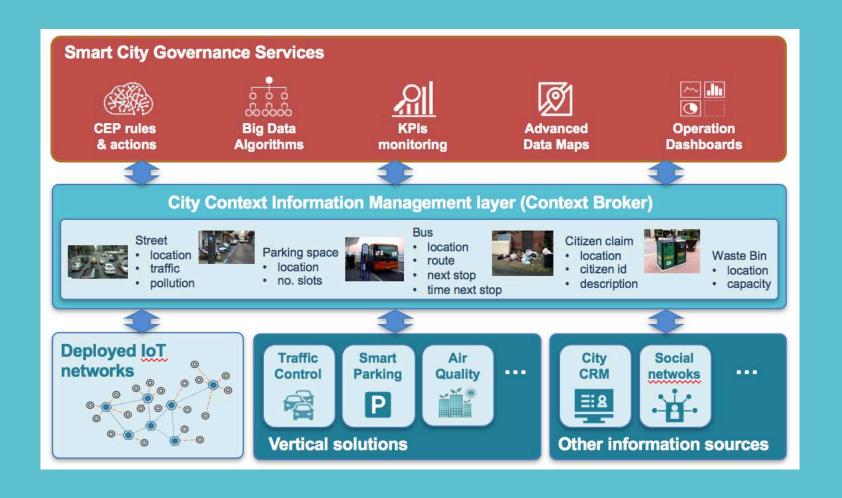
850+ coms 180 countries

- Smart City Maturity & Benchmark Model
- Smart City Business Requirements
- Smart City Reference Architecture
- City as a Platfom supporting the Data Economy





.... we could integrate information from different sources within a City in a common Context Information layer



Holistic vision

Interoperability between verticals

Extraction of more valuable insights



... this City Context Information layer were accessible through a Common Open API, using Common Information Models



larms

Events related to risk or warning conditions which require action taking.



Parks & Gardens

Data models intended to make an efficient, effective and sustainable management of green areas.



Environment

Enable to monitor air quality and other environmental conditions for a healthier living.



Point of Interest

Specific point locations that someone may find useful or interesting. For instance, weather stations, touristic landmarks, etc.



Civic Issue tracking

Data models for civic issue tracking interoperable with the de-facto standard Open311.



Street Lighting

Modeling street lights and all their controlling equipment towards energy-efficient and effective urban illuminance.



Device

IoT devices (sensors, actuators, wearables, etc.) with their characteristics and dynamic status.



Transportation

Transportation data models for smart mobility and efficient management of municipal services.



Indicators

Key performance indicators intended to measure the success of an organization or of a particular activity in which it engages.



Waste Management

Enable efficient, recycling friendly, municipal or industrial waste management using containers, litters, etc.



Parking

Real time and static parking data (on street and off street) interoperable with the EU standard DATEX II.



Weather

Weather observed, weather forecasted or warnings about potential extreme weather conditions.

- Portable Governance Solutions
- Vertical solutions more easy to plug or replace
- Sharing of best practices between cities made easier
- Smart Cities as a market where it will be more attractive to invest



... part of the City Context Information is available in "right-time" to third parties



 Open Innovation ecosystem on shared data

Smart Cities as an attractive market for entrepreneurs



... a data publication platform is enabled where any actor can share their data and get something in return



 The City as an enabler of the Data Economy

More data (from others), better insights



Smart Cities: the journey we dream cities can make



Efficient and Open

- Vertical solutions (some being IoT-enabled) bringing efficiency in silos
- Historic data as open data
- Information still in vertical silos, no global picture



Truly Smart

- Horizontal platform gathering "right-time" context info from different vertical services
- Common information models
- Smart City Governance Solutions



Unleashing Right-time Open Data

- right-time context info published to third parties
- authorization and access control (API management)
- open innovation ecosystem



Support to Data Economy

- city as a platform including also 3rd party data enabling innovative business models
- open and commercial data enabling multi-side markets

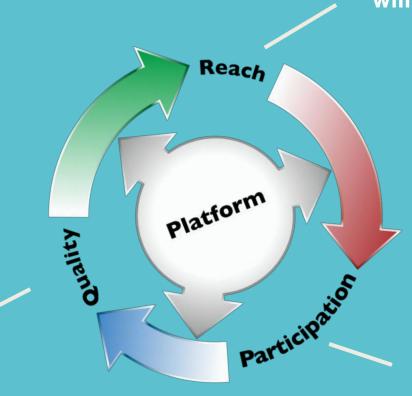






Creating the virtuous circle

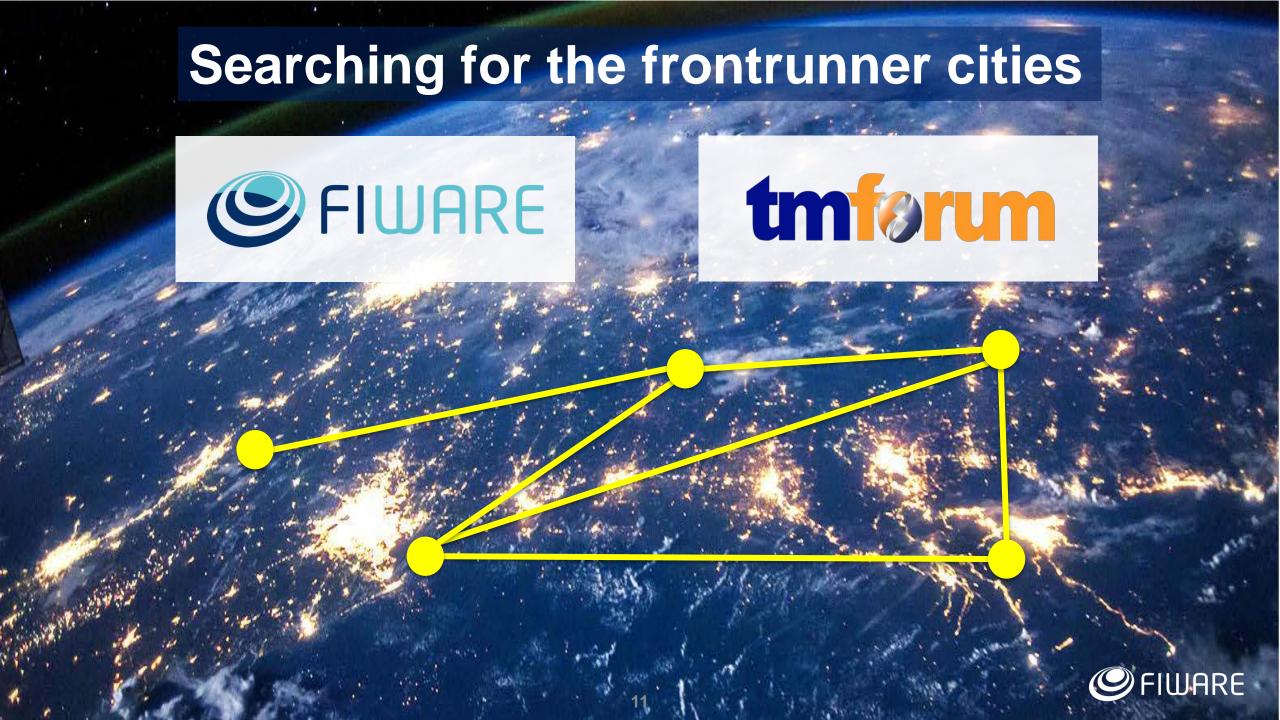
The more portable solutions are available, the more competition will exists, thus leading to higher-quality solutions



The higher quality Smart City solutions the more and more cities will join

The more cities endorse common mechanisms, the more solution providers will get attracted





Searching for the frontrunner cities



tmforum

SIDE EVENT-WORKSHOP: FRONTRUNNER SMART CITIES AND THE API ECONOMY

16 NOV - 14:30 - 16:30 ROOM 1.2. AREA CC 1

Objectives: TM Forum and FIWARE Open APIs provide the basis for a Smart City Reference Architecture, supporting the integration of vertical smart city solutions, the development of city governance systems, as well as the transformation of cities into engines of growth, enabling the development of innovative services by third parties and materialization of the Data Economy.

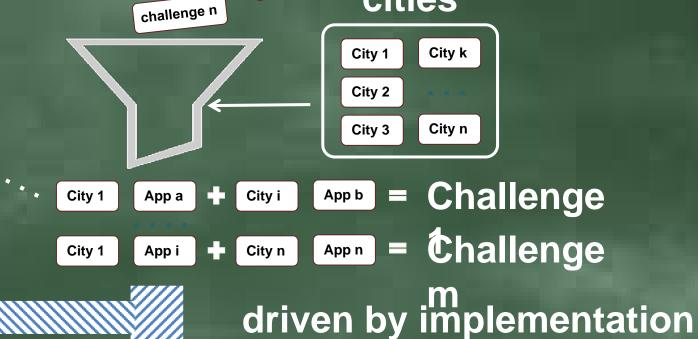
Now, TM Forum and FIWARE join forces to launch the "Frontrunner Smart Cities" initiative where cities introducing the proposed Reference Architecture will collaborate around common challenges, defining and curating the common information models which will foster portability and interoperability of smart city solutions.



It's time to execute!



common information models



front-runner

cities

Transference to Market

challenge 1

challenge 2

challenge k





Standardization bodies, recommendations













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Thank you!

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