MWC Barcelona 2016

Telefónica's view_ On IoT BigData Ecosystems

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Management of

{ IoT-Enabled, Real-time processable, BigData analysable }

Context Information

is

THE NEXT

BIG

THING

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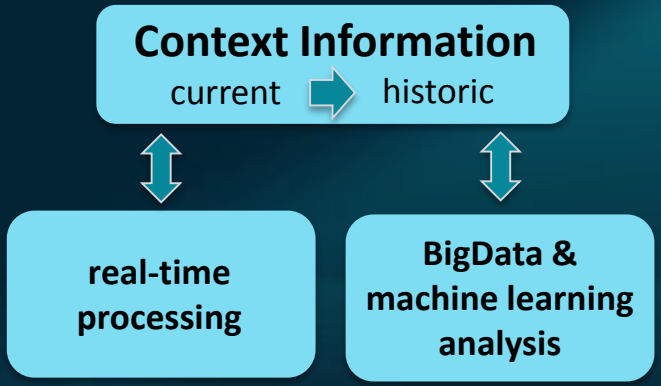
Understanding the nature of Smart Applications

Being “smart” requires first being “aware”



- A context management middleware and API is required for gathering, updating, querying or subscribing to context info
- The Internet of Things (IoT) is a key enabler: available context info has never been so big (→ BigData)
- However, context info comes from different sources, not just IoT: context info management should be abstract enough
- Multiple IoT standards will coexist: context info management has to be able to integrate with multiple IoT protocols
- A standard context info management API and harmonized data models are required for full portability and interoperability

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Smart Cities

City Services

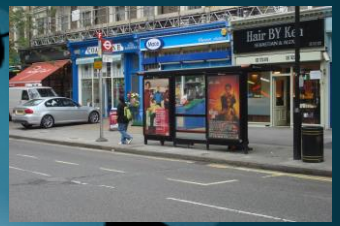
City Governance System

Third-party Apps

Context Information

Bus
- Location
- No. passengers
- Driver
- Licence plate

Citizen
- Name-Surname
- Birthday
- Preferences
- Location
- ToDo list



Shop
- Location
- Business name
- Franchise
- offerings

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Operator role and means for monetization

- Smart platform as a Service
- Management of connectivity with IoT devices
- Context data mediation in multi-side markets
- Monetization of own data

Coopetition is the only path to success

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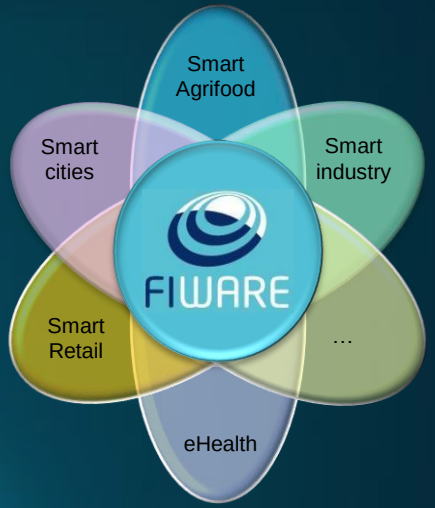
FIWARE: building the ecosystem

- Mission: Build a sustainable innovation ecosystem around open standards supporting development of smart applications in multiple sectors
- Pillars:
  - FIWARE : a generic, open standard platform which serve the needs of developers in multiple domains
  - FIWARE Lab : a sandbox experimentation environment where data providers and app providers can meet
  - FIWARE Accelerate : a program that funds developers and entrepreneurs, and ignites roll-out of the ecosystem
  - FIWARE Mundus : reach a global footprint, opening to regions that share the same vision and ambition
  - FIWARE iHubs : provide local support to the community



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Results of IoT BigData Ecosystem project (TEF's perspective)

API harmonization

- FIWARE NGSI API has demonstrated to be suitable for real-time access to context information, coping with different IoT protocols
- Recent integration of TMForum Business APIs with FIWARE Business Framework has helped to showcase monetization of context datasets

Data harmonization

- Several harmonized data models produced
- Harmonized data models not bound to specific IoT protocols
- Driven-by-implementation approach, guided by needs and feedback during implementation of use cases, vs designed by committee approach

Showcases

- 4 different showcases in two domains (smart cities and smart farming)
- Different platform providers, both large and small
- Integration of different IoT protocols and IoT devices

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Smart Cities showcase

- 4 cities providing data using harmonized data models (Sevilla, Oporto, Amberes, Santander)
- 3 different SMEs and companies playing the role of integrators and data providers
- Car Navigation application developed by Telefónica based on HERE maps platform

Cities

City of Antwerp

Porto. Câmara Municipal

santander Ayuntamiento

NO8DO Ayuntamiento de Sevilla

City partners

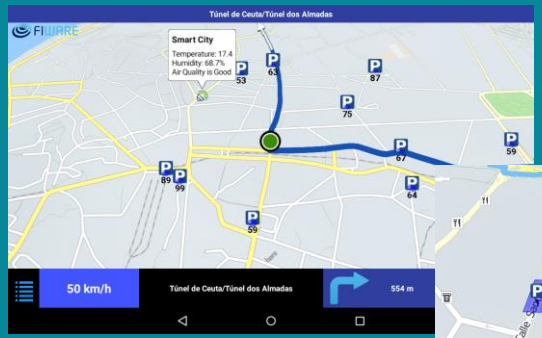
ROMBIT

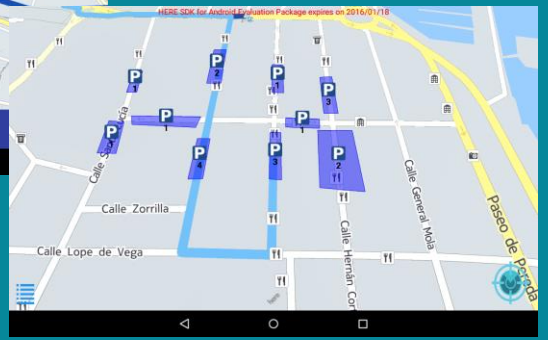
ubiwhere SUITING THE FUTURE

UC Universidad de Cantabria

Wellness Telecom

Application





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here

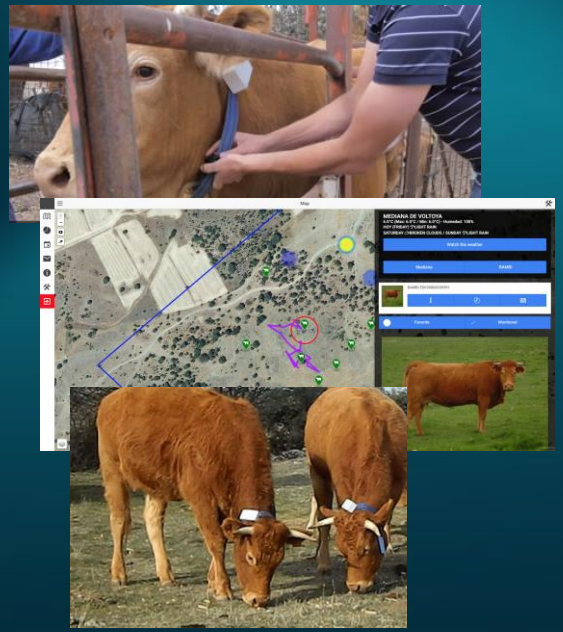
Smart Farming showcase

Smart Silo

Real time monitoring of large farms silos

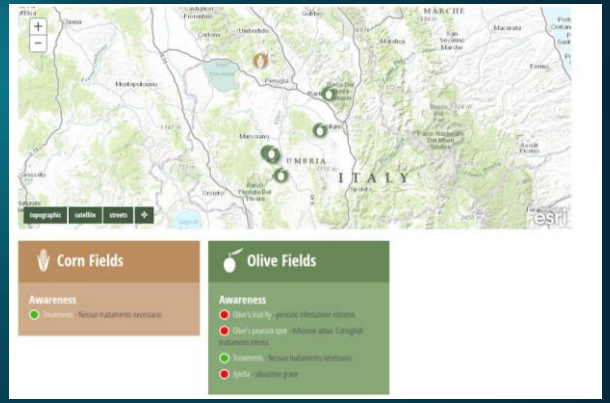
Stepla

Cattle management using IoT-enabled collars



Agricolus

Precision farming and disease predictions in crops



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