

CUDI 2015

REUNIÓN DE PRIMAVERA

21 AL 24 DE ABRIL

Puerto Vallarta, Jal.

Open Data Opportunities within the FIWARE Mexico's Node

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The context

Context of EU-MX ICT collaboration

2005 – Science and Technology Cooperation Agreement European Union - Mexico.

2007 – ICT - National Contact Point CONACYT, member of the network Ideal-IST.

Since 2007 there were FP6 and FP7 coordinated actions: WINDS-LA, Foresta, FIRST, Pro-Ideal-Plus, Americas

Running projects: LEADERSHIP and CONECTA 2020.

2013 – EU-MX meeting in ICT 2013 in Vlinius, invitation to participate in the Future Internet - PPP.

2014 – Workshop in the FI Assembly in Athens.

– ***Laboratorio Nacional de Internet del Futuro*** (CONACYT Grant)

2015 – Joint EU-MX specific call



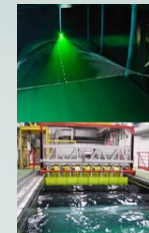
Main results on the cooperation

- FP6, FP7 projects (SENSATION, ASK-IT, OASIS, ALICE, ALICE2, EELA, EELA-2, GISELA, EPIKHGridSchool, CHAIN, CHAIN-REDS, ELCIRA and RISC).

Data



HPC & Data Storage (BIOS, CBBC)



Computing



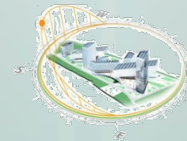
GRID (GISELA, RISC) CLOUD



Network



RedCLARA NRENS 6DEPLOY-2



Digital libraries
 Education
 Health
 Robotics
 Earth Sciences
 Ecology
 Engineering
 Shared Labs
 Astronomy
 Aerospace

Generic e-Infrastructure

User communities involvement

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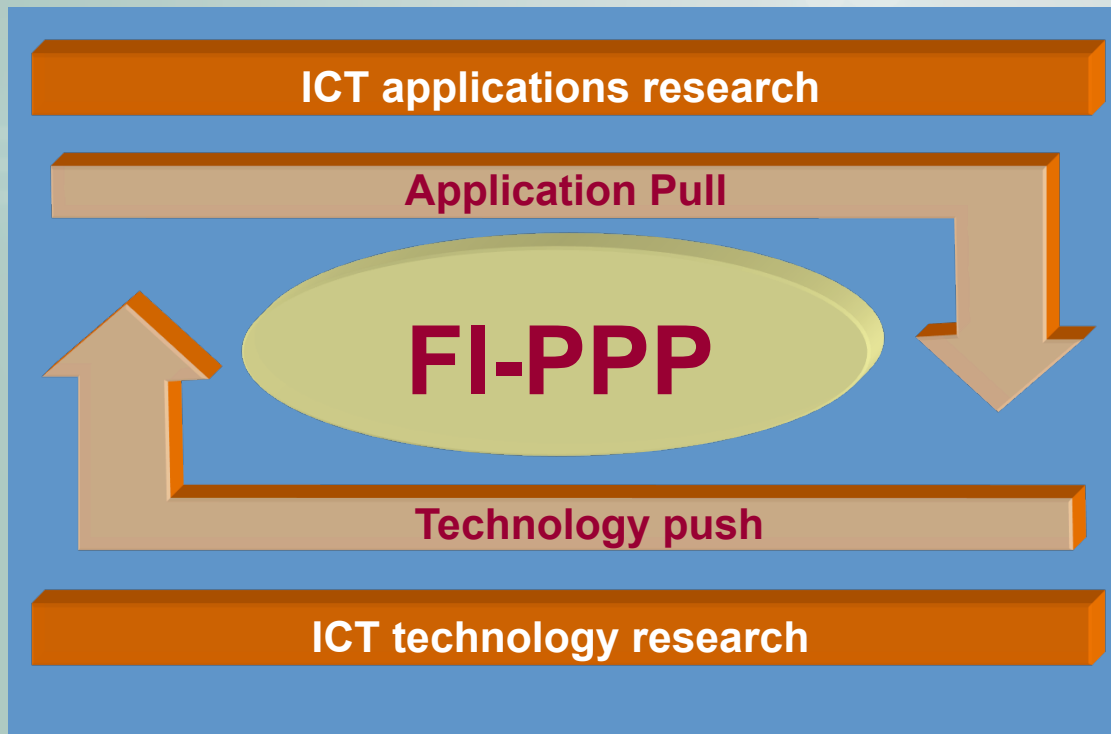


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What is  FIWARE ?

The Future Internet Public-Private Partnership Program (FI-PPP)

Goal: capture new opportunities derived from Future Internet technology trends by increasing the effectiveness of business processes and infrastructures to support application areas.



**Push – Pull logic
ensuring leadership
beyond RTD**



FI-PPP Programme Architecture

Call 1

Call 2

Call 3

CONCORD

INFINITY Capacity Building

FINEST

INSTANT MOBILITY

SMARTAGRIFOOD

FININITY

SAFETY

OUTSMART

FI-CONTENT

ENVIROFI

XII

Use case platforms

Platform usage

Use case scenarios

Platform components

TF Extension and Usage

USE CASES

2010

2011

2012

2013

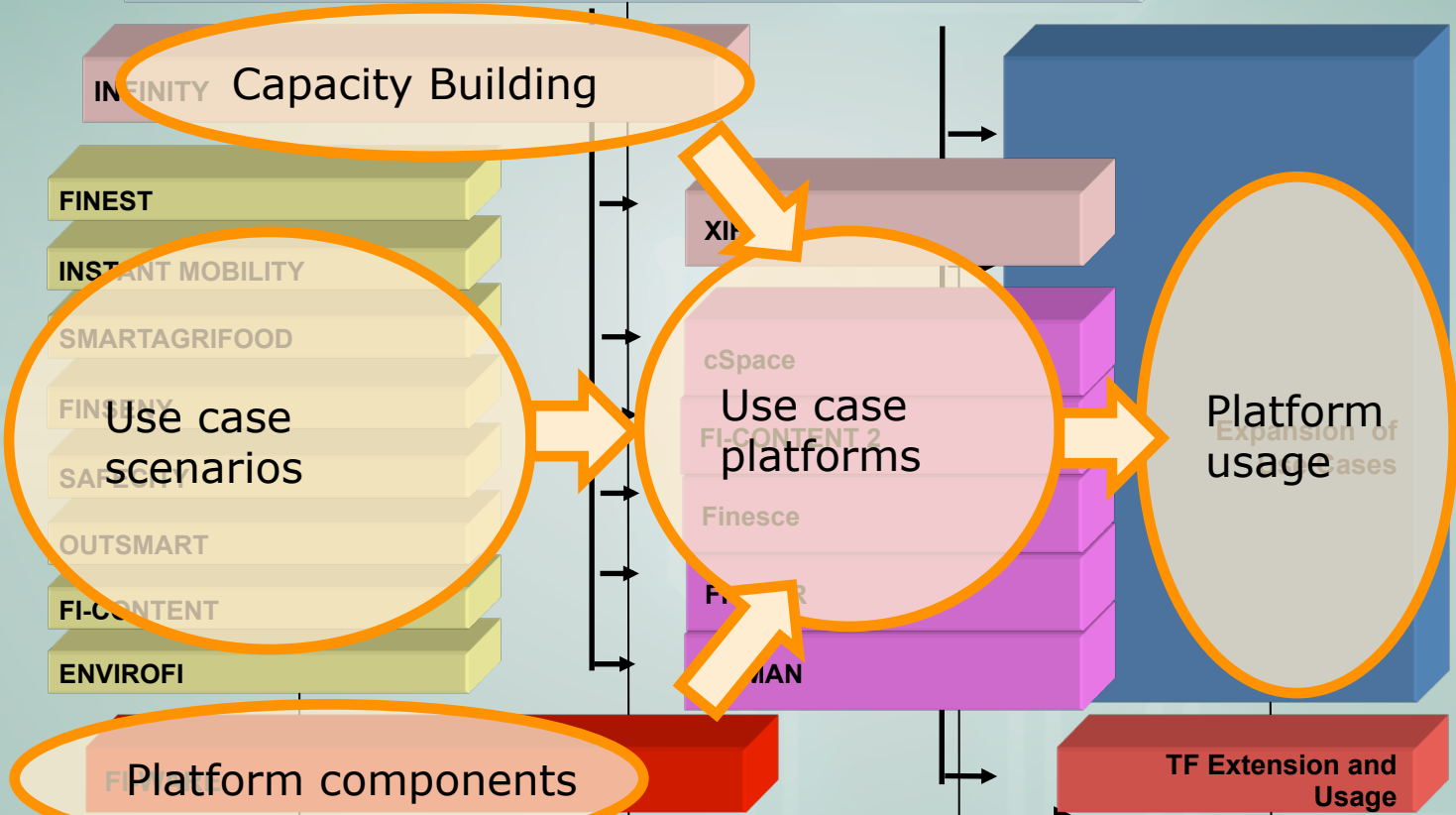
2014

2015

Phase 1

Phase 2

Phase 3





Future Internet PPP *life cycle*

Technology Focus

Innovation Focus

- FI-WARE technology foundation
- 8 Use-Cases from different domains
- Infrastructure repository XIPI

Development Phase 1

- 60 Generic Enablers
- >100 Specific Enablers

Large Scale Trials – Phase 2

- FI-Lab and Hackathons
- FI-Ops - test-beds proliferation through XIFI
- 5 Large Scale Trials in different domains

- 16 FI-Accelerators
- More than 1000 SMEs & web entrepreneurs develop apps & svs
- Sustainability
- Market Visibility

Market Take-up – Phase 3





Today

FI-PPP: Phase 2 trial sites

Working **experimentation sites** building upon Generic Enablers, complemented by use case specific capabilities;

Test applications

Validation

-  FIspace
-  FI-CONTENT 2
-  FINESCE
-  FI-STAR
-  FITMAN
-  XIFI



TARGET SERVICE AREAS



MANUFACTURING

- M2M Platform
- Apps repository
- Semantic tools
- Virtual Sensors (CDVA)

ENERGY

- Bigdata
- M2M Platform
- Things abstraction
- Semantic tools
- Virtual Sensors (CDVA)

LOGISTICS

- Bigdata
- M2M Platform
- Cloud solutions
- Apps repository
- Semantic tools

SMARTCITIES

- Bigdata
- M2M Platform
- Things abstraction
- Apps repository
- CEP
- Semantic tools
- Virtual Sensors (CDVA)

E-HEALTH & SAFETY

- Bigdata
- M2M Platform
- Semantic tools
- CEP
- Virtual Sensors (CDVA)

TOURISM & ENVIRONMENT

- Bigdata
- M2M Platform
- Things abstraction
- Apps repository
- CEP
- Semantic tools
- Virtual Sensors (CDVA)

CONTENTS

- Apps repository
- Semantic tools
- Video analysis

ICT in AGRIFOOD

- Bigdata
- M2M Platform
- Things abstraction
- Apps repository
- Semantic tools
- Virtual Sensors (CDVA)

FIWARE Strategy: 2015-2016

- Accelerate the technology
- Industrial Commitment
- Internationalisation – FIWARE going global
- Smart Cities and vertical sectors

Internationalisation

- Mexico

- FIWARE launch in October 2014
- EU-MX collaboration

- Brazil

- Two nodes being deployed
- FIWARE launch in November 2014



Latest news...

← → ↺ ↻ 🏠 📄 www.fiware.org/mundus/ ☆ 📍 ☰

- Define a long-term vision of FIWARE technologies and business models taking into account similar research and innovation schemes coming from other countries e.g. the US, Japan, Korea, Canada....

Here are some of our first steps to being global!



Many activities with Latin America

A FIWARE node has been set up in Mexico. An R&D center devoted to FIWARE is being set up in Chile. Initial conversations have happened with Argentina, Costa Rica, Panama, Nicaragua, and Colombia.



First agreement with Korea

An **agreement** has been signed on 5 March 2015 to promote FIWARE as a common platform for IoT between Europe and Korea.



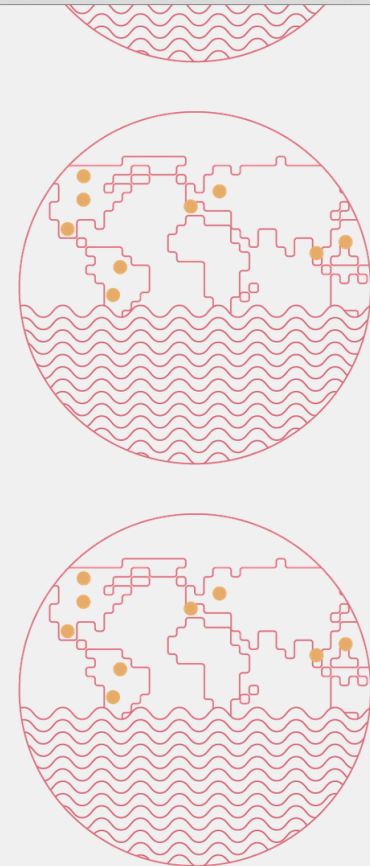
Interest in North America

Discussions are happening with USA in particular with US Ignite, and in Canada with a number of relevant organizations gathered by the University of Toronto, to investigate possible paths for cooperation and in particular for using FIWARE as one of the global platforms for Smart Cities worldwide.



Prospects in Africa

FIWARE nodes are planned be hosted at Sonatel in Senegal and at Mauritius Telecom by the end of 2015. Contacts are also happening with Ivory Coast.



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i.e. 1 Open Data INEGI

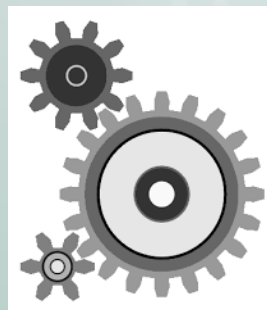
Objective

To provide the methodological and technological basis to incorporate Big Data in the process of statistical information generation.

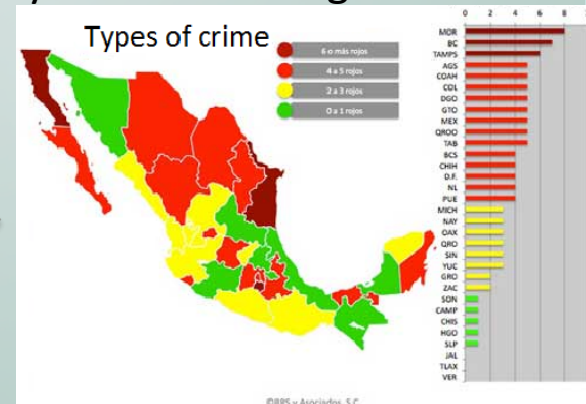
- Data coming from formal and informal sources available on the Web
- Statistical indicators will be obtained from this information.
- These indicators will complement the statistical data of the National Institute of Statistics, Geography and Informatics (INEGI) of Mexico.
- Some of the sources for the Big Data Analysis Process are user comments from social networks and blogs, and also information from static and dynamic Web Pages.



Formal and informal sources



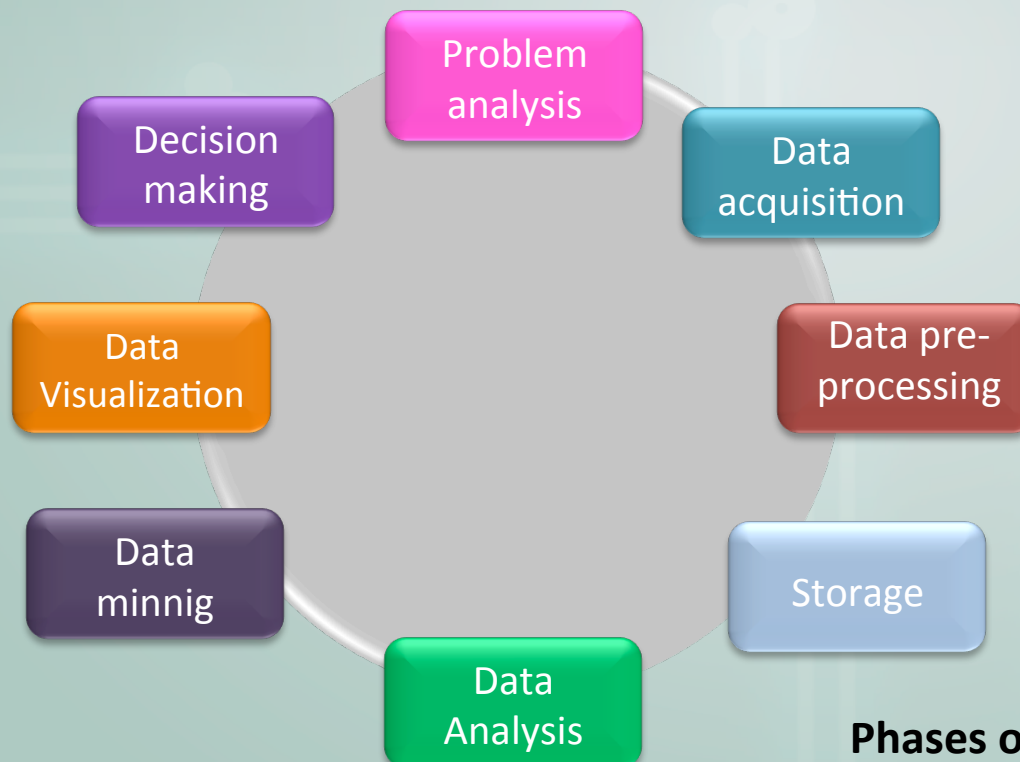
Process of statistical information generation



Statistical indicators

The project includes the following phases:

- Development of an extensible general framework to provide a guideline for the extraction, storage, processing, integration, analysis and visualization of data generated and shared on the Web.
- Development of a software platform that implements the general framework.
- Validation process of the general framework and software platform through a case study.



Phases of the general framework

Open Data from Mexico published on FIWARE under the W3C Linked Open Data standard.

The objective is to develop algorithms to publish Mexican federal offices data under the W3C Linked Open Data standard. The standard consist of five levels, each level determines the degree of data openness (higher lever more openness). The five levels are:

Level 1: Available on the web (whatever format) but with an open license, to be Open Data.

Level 2: Available as machine-readable structured data (e.g. excel instead of image scan of a table).

Level 3: as (2) plus non-proprietary format (e.g. CSV instead of excel).

Level 4: All the above plus, Use open standards from W3C (RDF and SPARQL) to identify things, so that people can point at your stuff.

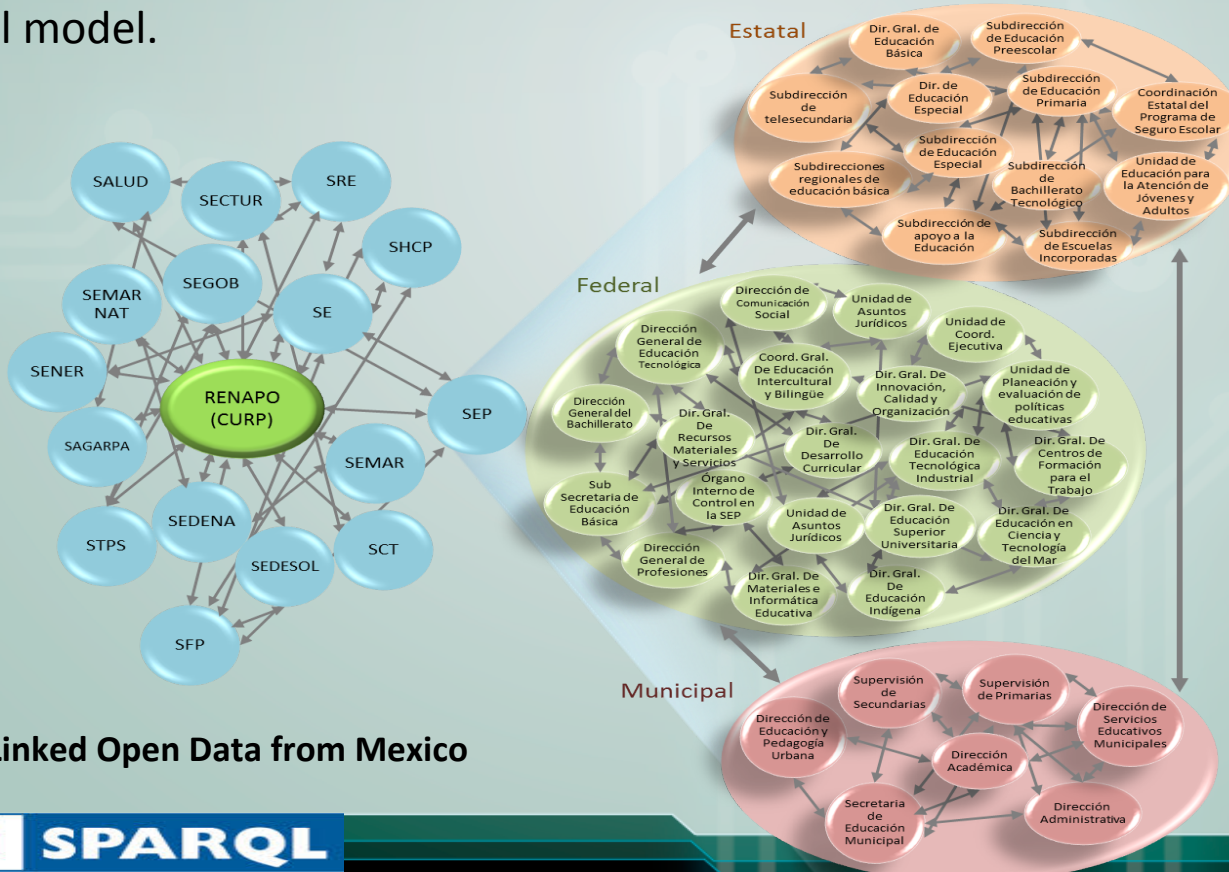
Level 5: All the above, plus: Link your data to other people's data to provide context.

<http://www.w3.org/DesignIssues/LinkedData.html>





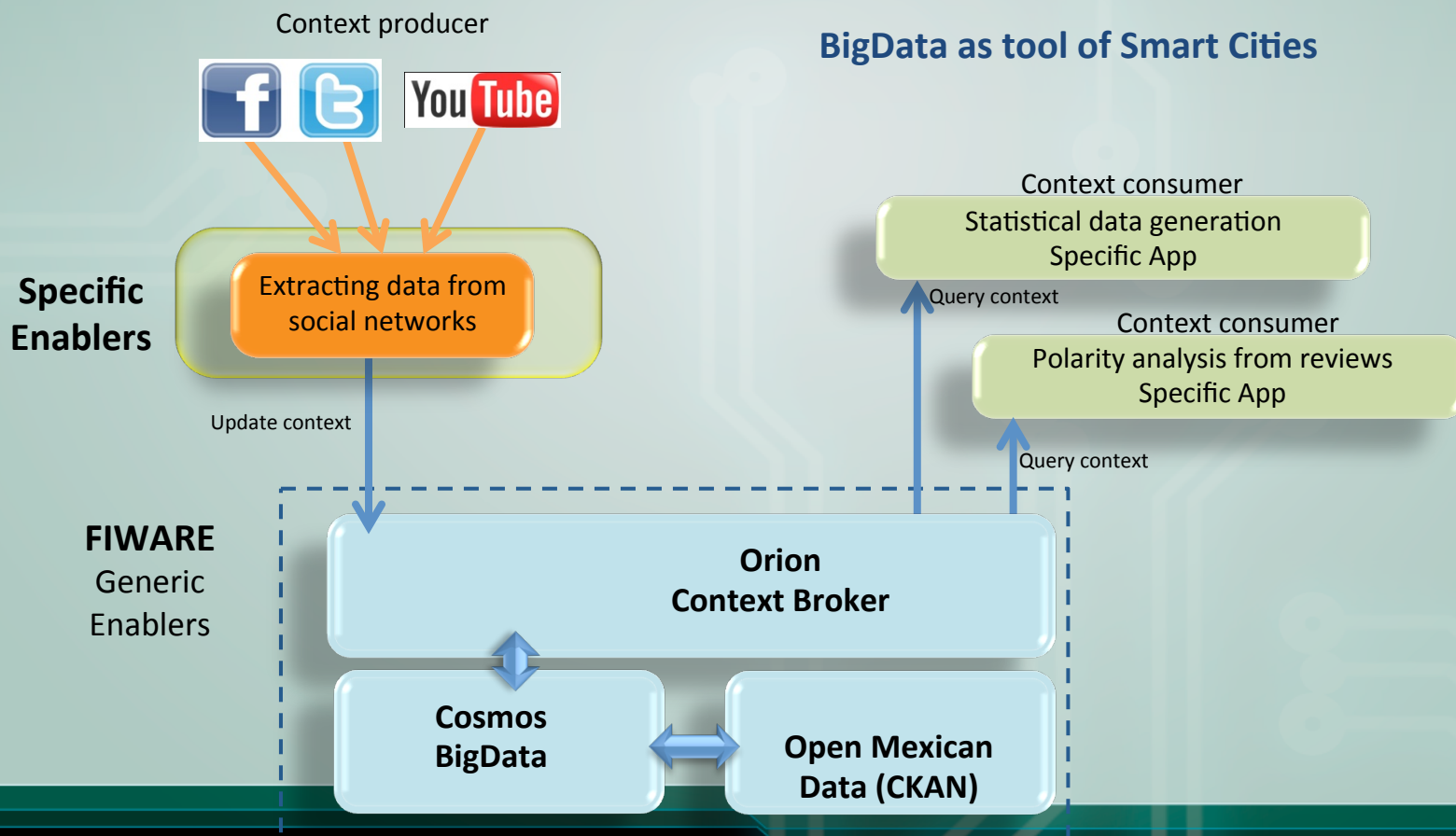
- Currently, Open Data from Mexico is published on a CKAN platform in the level 3.
- This project considers to reach the level 5, by using the open standards from W3C (RDF and SPARQL) and linking the data with other datasets to provide context.
- Need to add semantic information to datasets to make it explicit its meaning in an ontological model.



Linked Open Data from Mexico



The Open Data from Mexico will be published on the FIWARE platform. In this way, the data would be available in the FIWARE Cloud, and the data would be accessible for all users by using the generic enablers provided by FIWARE, such as Orion Context Broker. Currently, the specific Plan for Open Data considers opening all datasets of Mexican Federal Offices. We will also develop specific generic enablers using both of software components generated from INEGI project.



Thank you!

Open Data Opportunities
within the  FIWARE
Mexico's Node

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i.e. 2 Smart Cities

FIWARE running Smart Cities

- **Cities opening data via FIWARE**

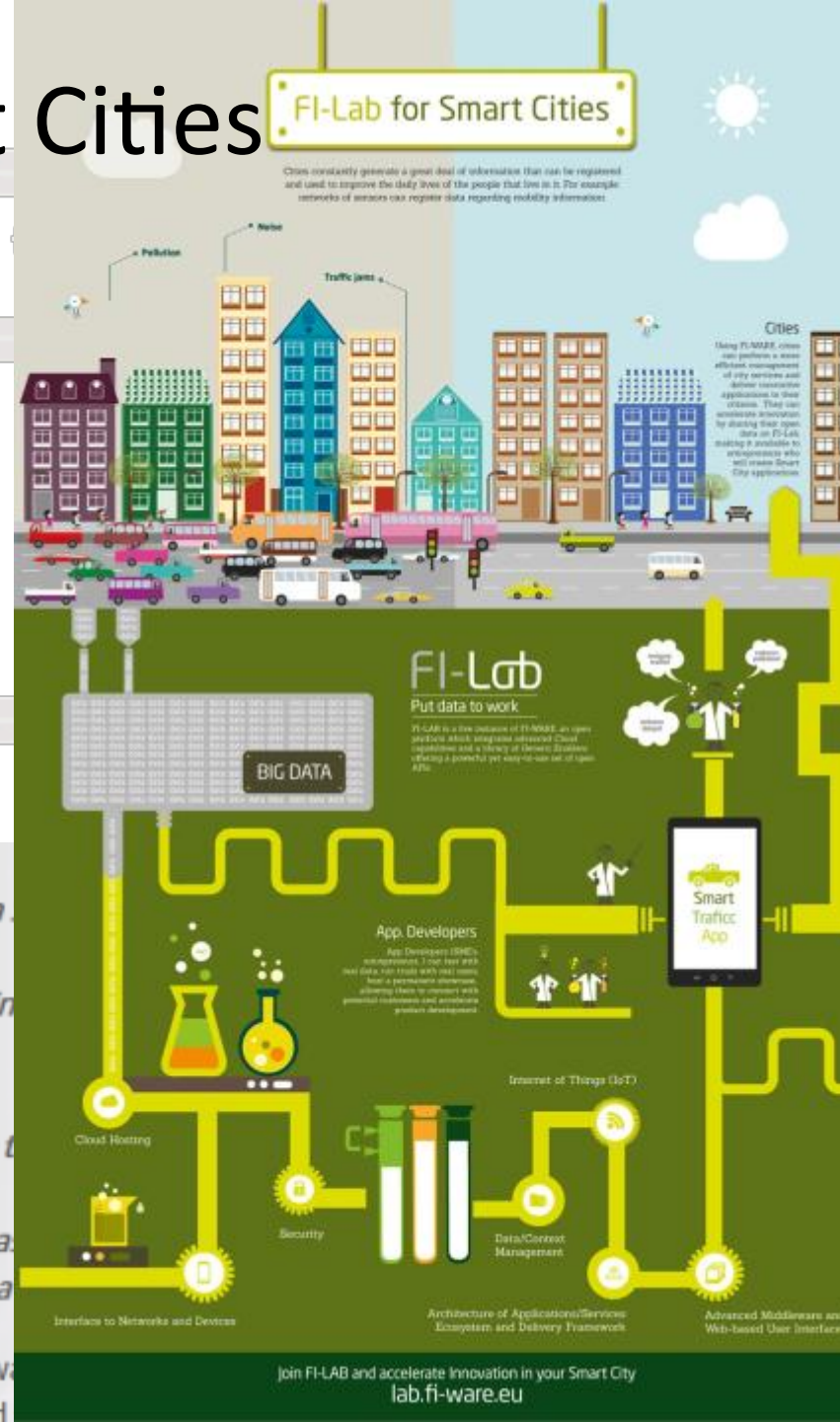
- Italy: Trento, Torino, Roma
- Spain: Valencia, Sevilla, Málaga, Santander, Logroño, Lleida, Vigo, Sabadell, ...
- Finland: Espoo, Helsinki
- Netherlands: Amsterdam
- Portugal: Lisbon, Agueda

- **Valencia using FIWARE solutions**

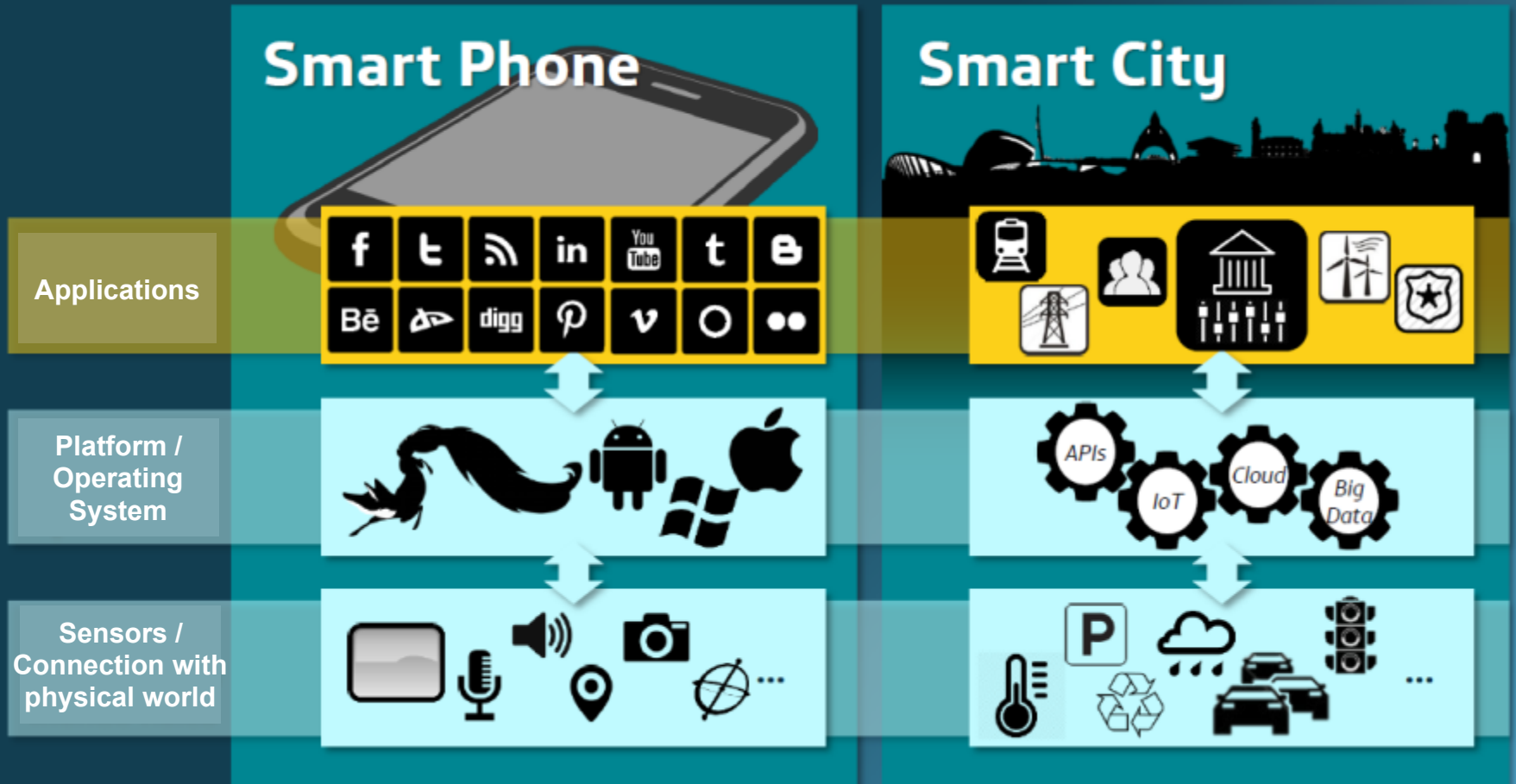
- **Smart City challenges**

- *Valencia City Council has announced that it has awarded the Valencia Smart City Platform tender to Telefónica*
- *Valencia will be the first Spanish city to centralise all of its municipal information through a smart city technological solution.*
- *Solution is based on the European FI-WARE standard*
- *The base of the software will consist of 350 sensors that will manage the services of the city*
- *Traffic, street lighting, gardens, local police, pollution, cleaning and waste and weather services will be constantly monitored and connected to a central system*

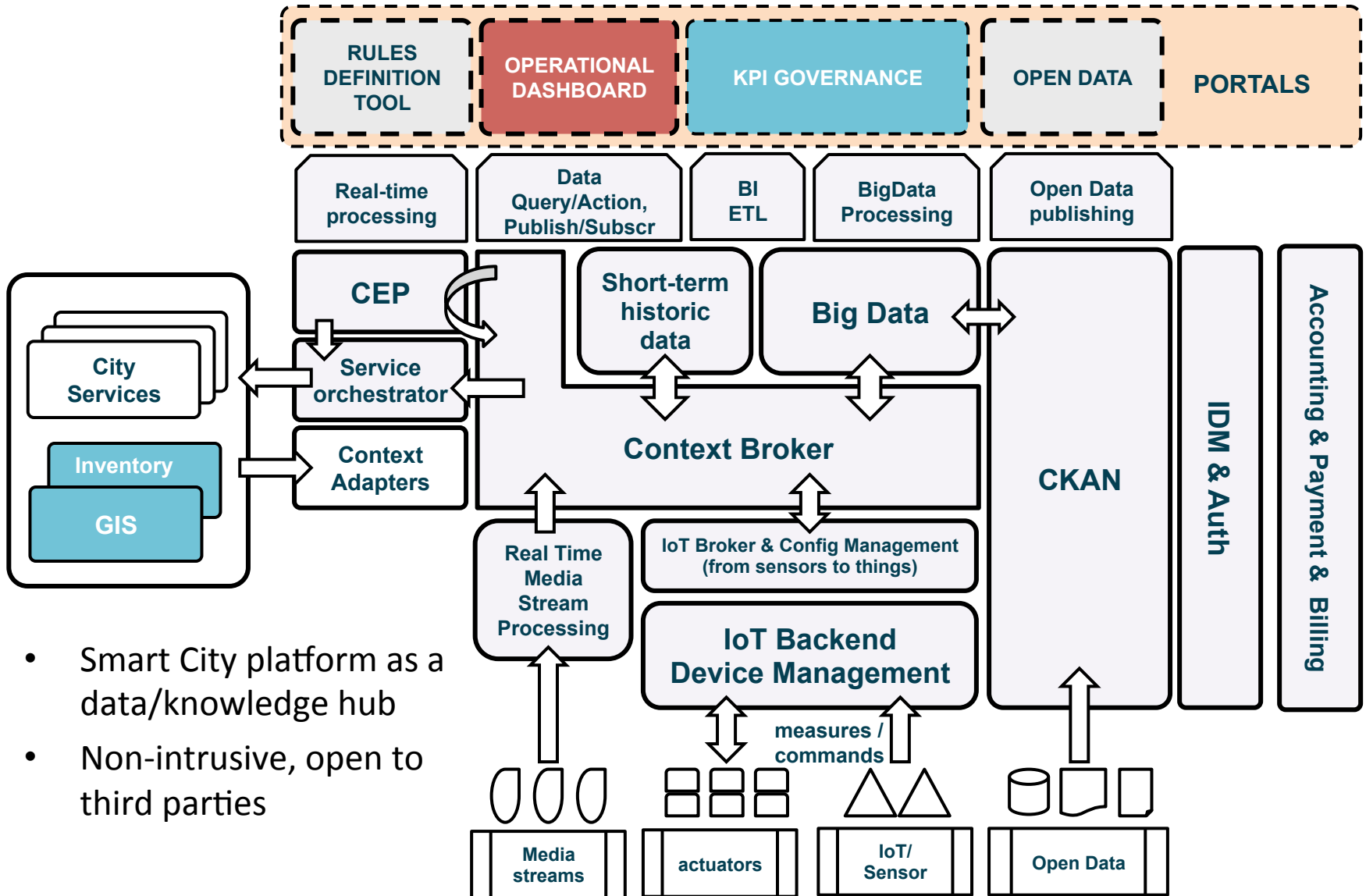
22 May 2014, Valencia: Valencia City Council has announced that it has awarded the Valencia Smart City Platform tender to Telefónica. Telefónica has designed



Smart City Platforms



FI-WARE Smart City platform



- Smart City platform as a data/knowledge hub
- Non-intrusive, open to third parties

Emerging ecosystem

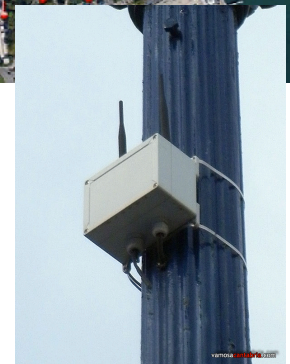
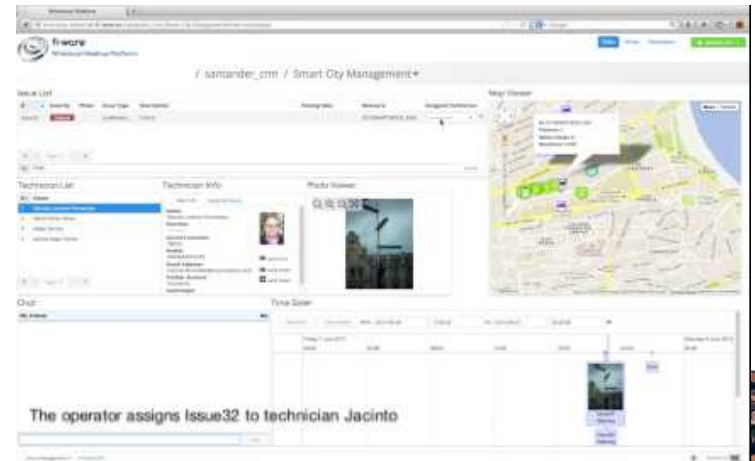
- Cities already connecting to FI-Lab
 - Italy: Trento, Torino, Roma
 - Spain: Valencia, Sevilla, Málaga, Santander, Logroño, Lleida, Vigo, Sabadell, ...
 - Finland: Espoo, Helsinki
 - Netherlands: Amsterdam
 - Portugal: Lisbon, Agueda
 - Discussion with cities in other countries ongoing
- FI-WARE Challenge on Smart Cities
 - Launched end of October 2013
 - 300+ teams (individuals, startups, SMEs) applied to the challenge
 - 20 teams run the final in Campus Party Brazil 2014
 - https://www.youtube.com/watch?v=49LBN_vDKw

FI-WARE
challenges you to develop
the best APP
for Smart Cities
and Smart Business



Smart Santander

- Real-time open data coming from large deployment of sensors (4500 IoT devices, 150 mobile sensor units, 2500 RFIDs) offered through standard FI-WARE APIs
- Open data sets captured from sensors since August 2013 uploaded on Big Data platform and ready for analysis
- Reference FI-WARE application examples available (e.g. Management of Parque de las Llamas public lighting)



Trento Smart

- More than 600 data sets: economy, territory, demography, welfare, mobility, weather... integrated in the Big Data GE
- Data from public transportation and other fleets, parkings, and other vertical systems integrated through Context Broker GE
- Apps about Smart Mobility and Citizen Centric Services
 - Development of end-to-end solutions (App and backend)
 - Focused on data aggregation

OPENdata TRENTINO beta
 Dataset Organizzazioni Categorie Apps Informazioni FAQ
 Dati Aperti del Trentino. Tutti i dati che cercavi del Sistema Trentino.

PARTECIPA
 Ci sono dati che vorresti fossero res...
 Hai un'idea che usi i dataset del catalogo? Sc...

Tags popolari
 società settori economici mercato del lavoro
 popolazione agricoltura servizi silvicoltura
 pesca sistema economico s... istruzione e formaz...

Viaggia Trento
 Viaggia Trento

ViviTrentino
 ViviTrentino è un'applicazione finalizzata a f...

Meteo Trentino Widget
 Questa applicazione di visualizzare l...

La mappa de Trento
 La Mappa del Tre... presente in un'un...

CONTEXT AWARE
Context Aware
 progetto della Provincia autonoma di Trento ch...

Viaggia Trento

Real time info
 PARKINGS MAP

Garage	Disponibilità	Distanza
Garage Torre Verde via Torre Verde, 40 - Trento	60	8,56 km
Garage Centro Europa via Vannetti, 16 - Trento	247 / 480	8,75 km
Parcheggio Ghiaie via Fersina via Fersina - Trento	350	9,04 km
Parcheggio CTE via Bomporto via Bomporto - Trento	5 / 250	9,10 km
Parcheggio Campo Coni via E. Maccani via Maccani - Trento	64	9,12 km
Parcheggio area ex SIT via Canestrini Lung'Adige Monte Grappa - Trento	176 / 300	9,12 km
Garage Parcheggio Duomo Piazza Ezio Mosna, 1/A - Trento	36 / 200	9,19 km
Parcheggio piazzale Sanseverino Piazzale Roberto da Sanseverino -	18 / 342	9,24 km

⇨ ⇨ ⇨ 300 MARKETED APPLICATIONS



food loop
Save it all!

Smartaxi
demand forecasting