Examples of FIWARE Applications

- September, 2016
- Karen Najera
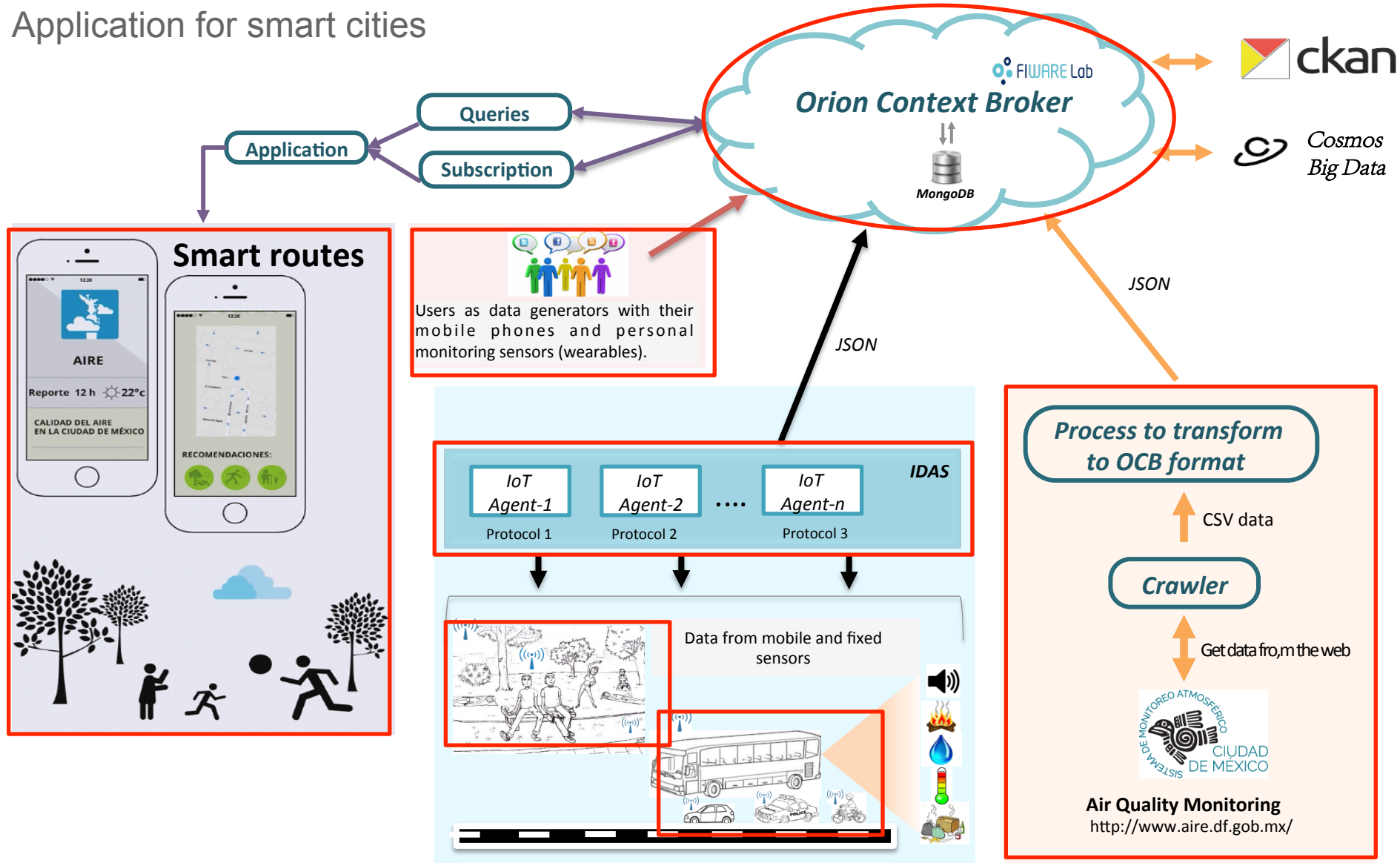
FIWARE Applications developed by INFOTEC

1. Green Route… application for smart cities

2. Wilma… a plant interacting with the world

3. Cloudino… An Internet of Things Platform

Green Route

Application for smart cities

InFOTEC **FIWARE**

Orion Context Broker

FIWARE Lab

MongoDB

ckan

Cosmos
Big Data

Queries

Application

Subscription

Smart routes

AIRE

Reporte 12 h ☀ -22°c

CALIDAD DEL AIRE
EN LA CIUDAD DE MÉXICO

RECOMENDACIONES:

Users as data generators with their mobile phones and personal monitoring sensors (wearables).

JSON

JSON

IDAS

| IoT Agent-1 | IoT Agent-2 | .... | IoT Agent-n |

Protocol 1   Protocol 2   Protocol 3

Data from mobile and fixed sensors

Process to transform to OCB format

CSV data

Crawler

Get data fro,m the web

Air Quality Monitoring
http://www.aire.df.gob.mx/

SISTEMA DE MONITOREO ATMOSFÉRICO
CIUDAD DE MÉXICO

Green Route

Smart mobility application

Collaboration

National laboratories

Future Internet

GeoIntelligence

Mobile unit

A mobile sensor unit is being developed by integrants of our embedded systems laboratory

Scientific contribution

Hugo Estrada, Karen Nájera, Blanca Vázquez, Alicia Martínez, Juan Carlos Téllez y Juan José Hierro. *Applying Tropos modeling for Smart mobility applications based on the FIWARE platform*. Ninth International i* Workshop, Beijing, China. September, 2016, vol. 1157.
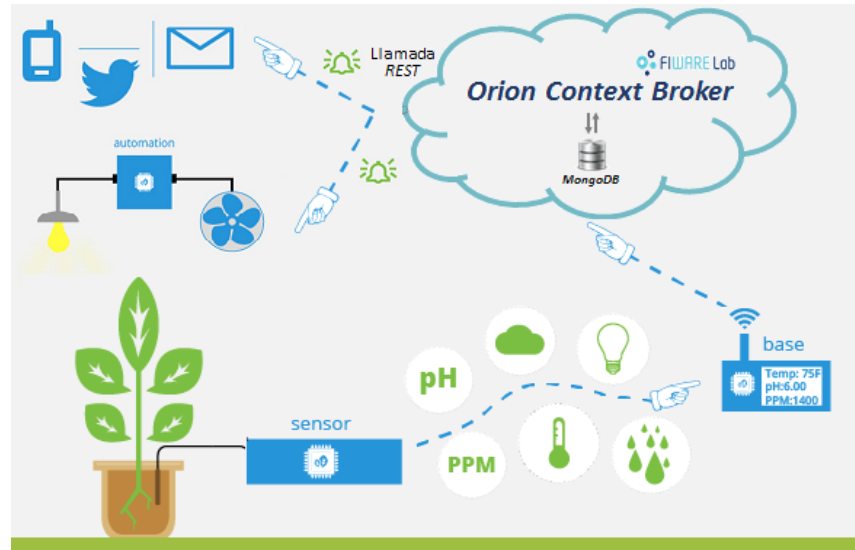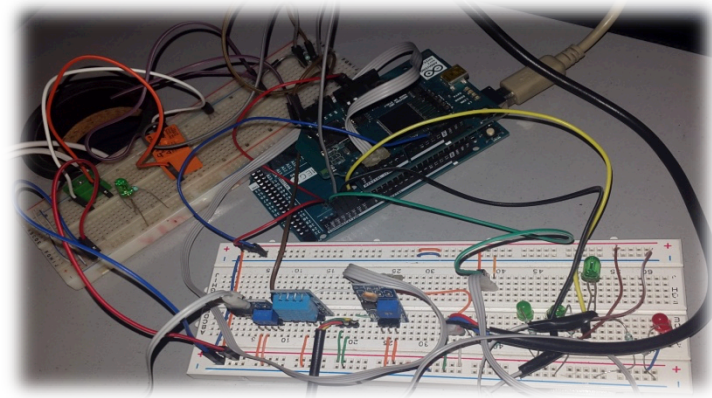
Wilma the plant

Interacting with the world

Wilma is a brazilwood plant connected to the FIWARE Cloud to communicate its status through several sensors.
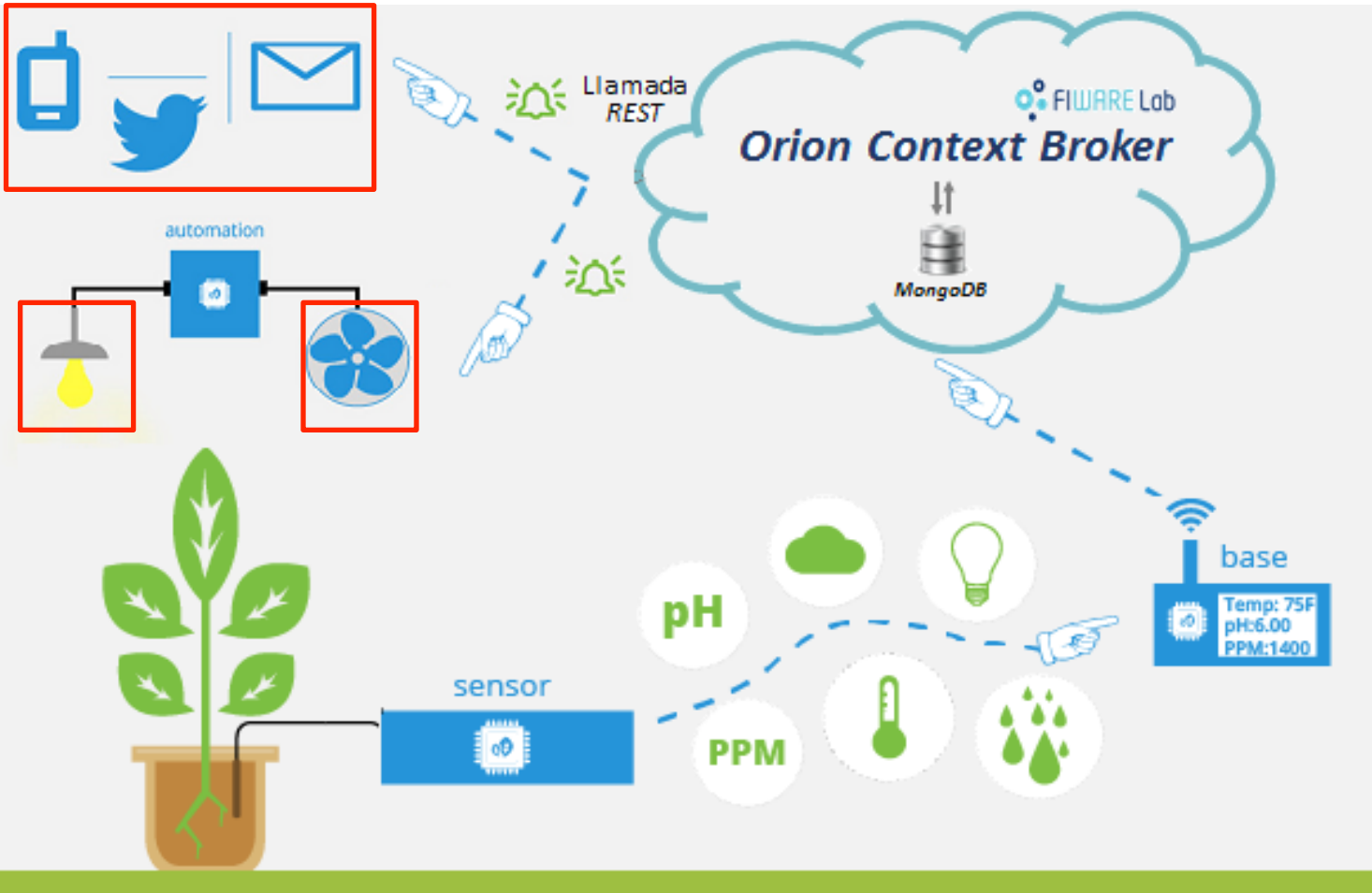

Ground humidity, presence, luminosity and temperature

Wilma the plant

Interacting with the world

Wilma is a
FIWARE Cl
through sev
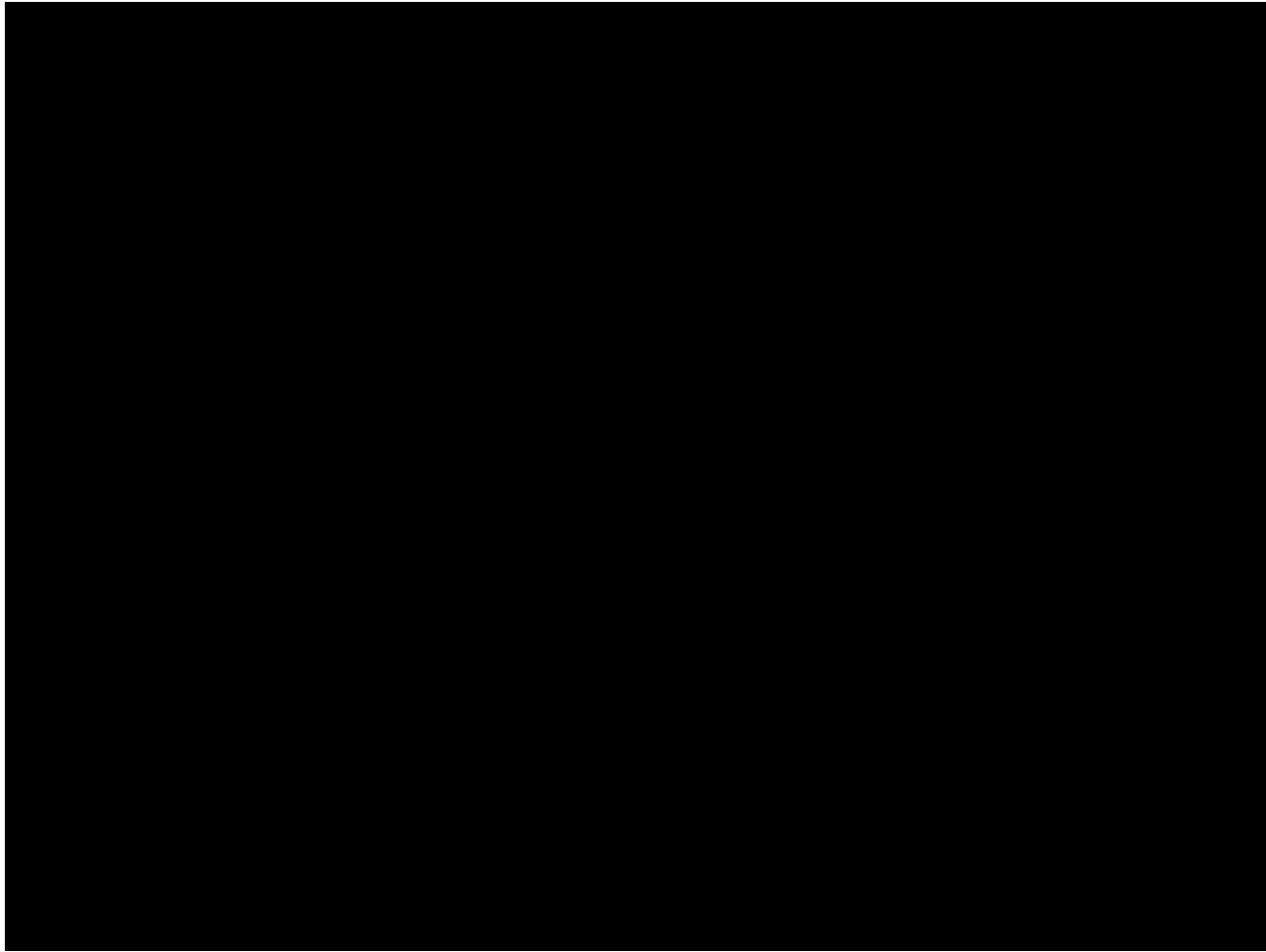

Ground
luminosity and temperature

Wilma the plant
Interacting with the world

Cloudino

An Internet of Things platform

INFOTEC   FIWARE

Cloudino is an IoT platform that allows connecting different microcontroller platforms (Atmel AVR, PIC, Intel Edison, etc.) to the cloud in a simple and transparent way.

Open Source and Open Hardware

Arduino API

It provides an API that gets integrated directly with the APIs available in FIWARE.

WiFi Cloud Connector

- It is a **WiFi device** that connects microcontrollers to the Internet.
- It has an **independent processor** working in parallel dedicated only to the network layer including the IoT protocols.
- It allows **reprogramming the microcontroller** via WiFi.

Cloud Service

Cloud services for managing IoT devices from the web.

Cloudino

an Internet of Things Platform

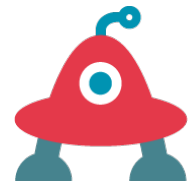**It encapsulates the complexity of FIWARE, providing:**

Cloud Service

Cloudino Connector

Microcontroller (Arduino)
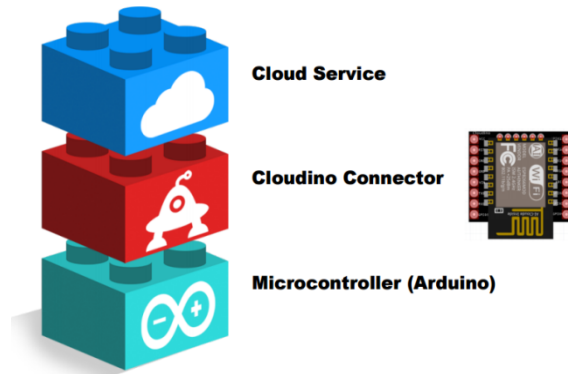
- Direct Connection to Orion Context Broker

- Connection via MQTT IoT-Agent (IDAS)

- Connection via Cloudino.io cloud service

The first Hardware Generic Enabler that integrates IoT devices to the FIWARE platform.

http://cloudino.io/

Join us!

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