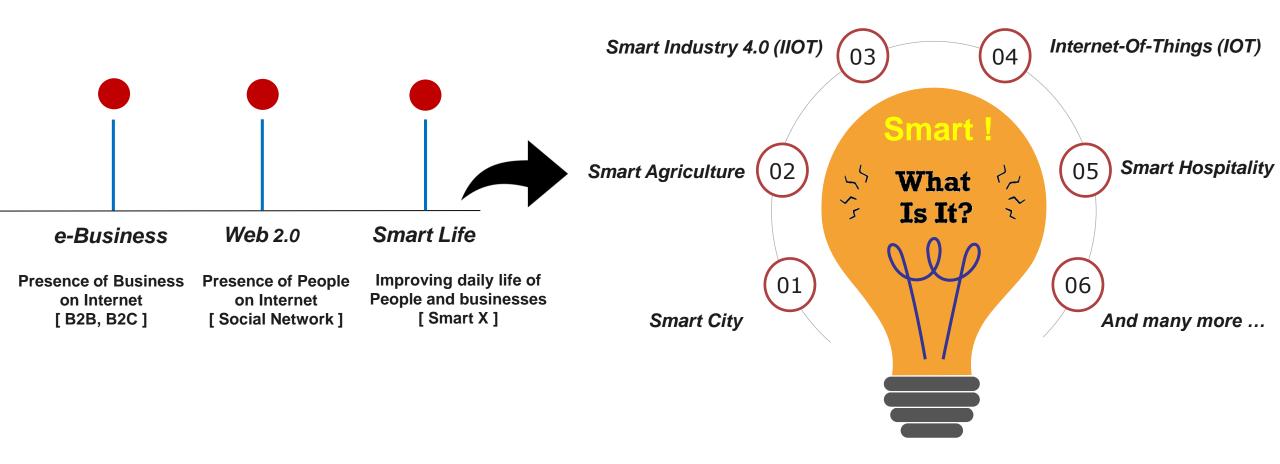


Agenda

- Smart Solutions A New Revolution
- Smart Solutions Development Key Challenges
- FIWARE An Approach
- Example Case Studies
- Summary



Smart Solutions – A New Revolution



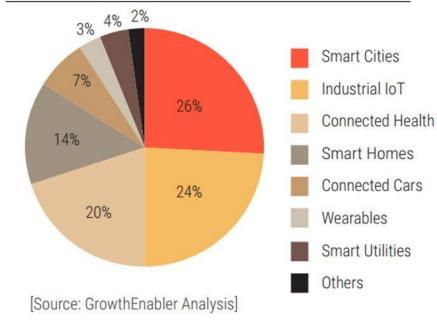


Smart Solutions – Market Size



[Sources: GrowthEnabler Analysis/MarketsandMarkets]

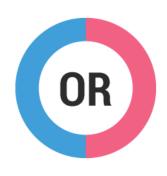
Global IoT Market Share by Sub-Sector





Smart Solutions – Which Platform to Choose?

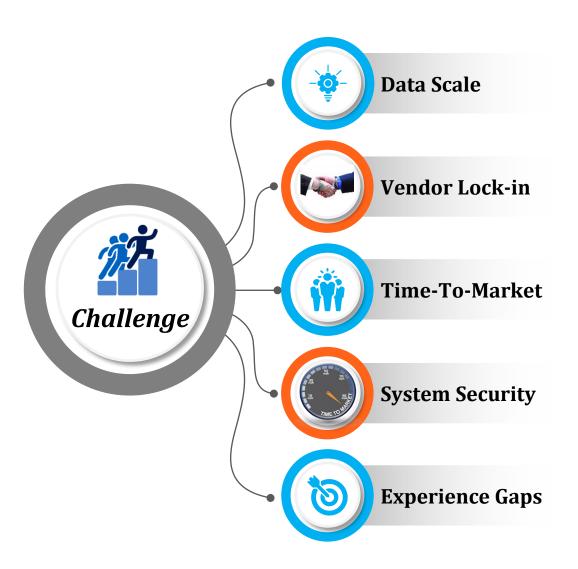








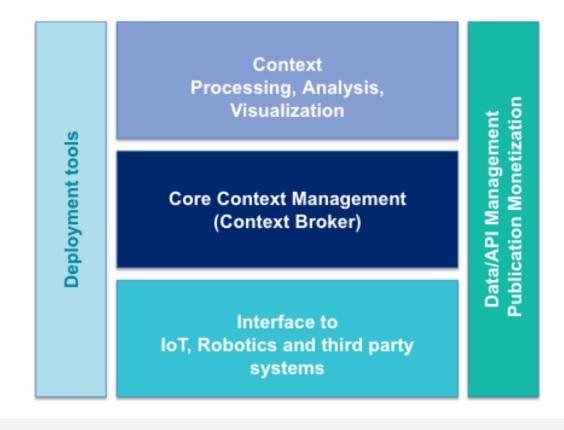
Smart Solutions – Key Challenges



- Connected devices create enormous amount of data; 600 Zettabyte per year by 2020
- · Challenge of collecting data from many sources, storing, processing and presenting
- Lack of standard interfaces to store and extract the smart context
- Most of the existing solutions use proprietary interfaces
- Very difficult to create a smart application for one city and re-use it for rest of the cities
- Maintain your competitive advantage, generate more sales
- · Fragmented technology landscape
- · Need of re-usable and standard components / frameworks
- Strict authentication, careful access management, granular network policies
- · Many smart solutions today do not incorporate even basic security measures
- No clear roles for security: Due to involvement of multiple vendors in end to end system
- Very few players have experience with large-scale, geographically distributed IOT deployments

FIWARE – Introduction

FIWARE or "<u>Future Internet-ware</u>" is an open source middleware platform designed to facilitates the creation of smart solutions such as smart-cities, smart-agriculture, smart industries





FIWARE's Offer



Generic Enablers

- Full stack of generic reusable components
- Simple yet powerfulStandard APIs
- Open Source and Royalty Free



FIWARE Lab

- A working instance of the FIWARE platform made available for free experimentation
- based applications with real data and users



FIWARE Ops

- Suite of tools that ease the deployment, setup and operation of FIWARE instances
- Help expand the infra associated to a given FIWARE instance



Academy

 Offers training courses, lessons and many other contents regarding
FIWARE technology

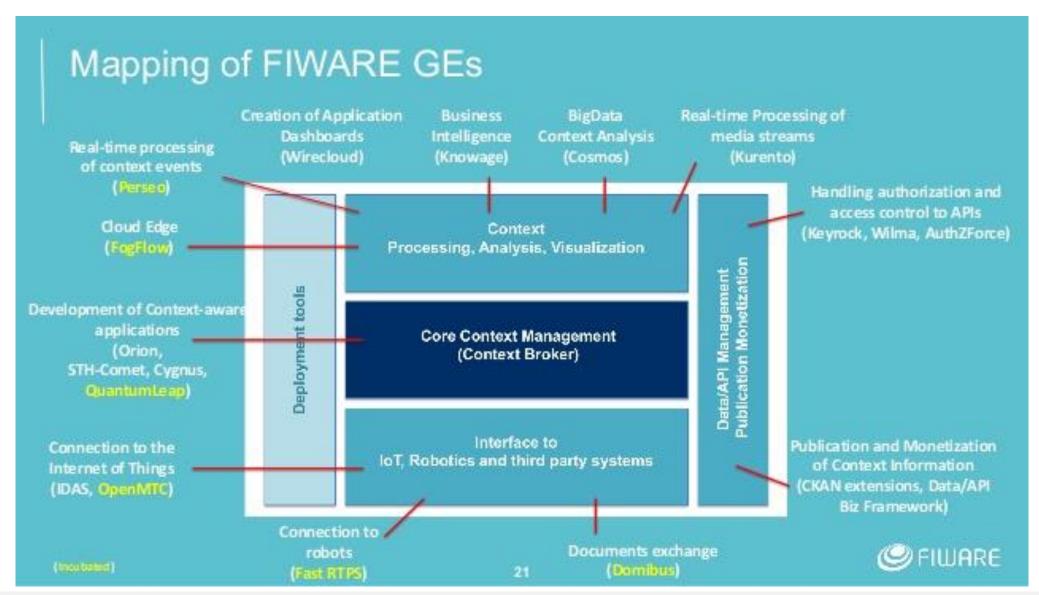


Funding & Mentoring

- Accelerator program to support programs to help entrepreneurs to develop innovative ideas
- Mobilized 100 Million euros of which 80 Million given away to SMEs



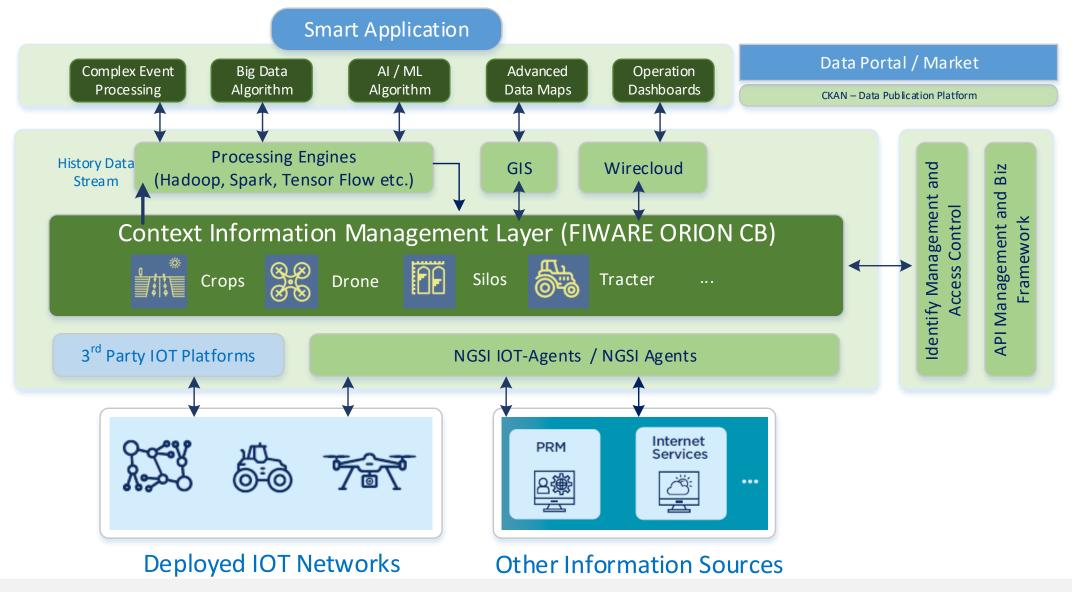
FIWARE – Architecture



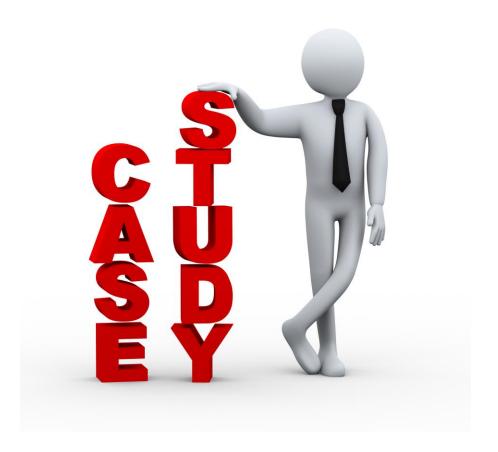


Source: Fiware.org

FIWARE – Architecture









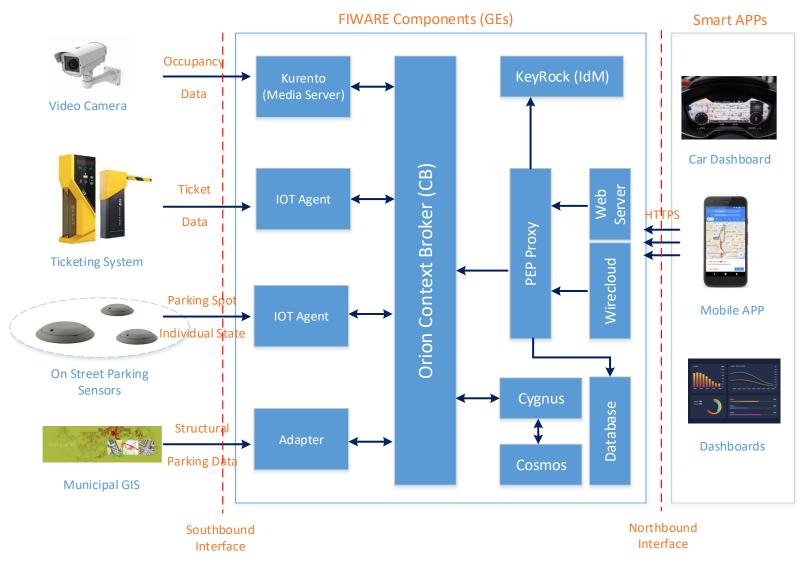
Case Study – 1 Smart Parking Solution

Problem Statement:

- Create a smart parking solution guiding the drivers to a free parking slot nearest to their destination
- Solution should be intendent of who is populating the parking information and how
- Smart applications should be portable from one city to another

Solution:

- Use FIWARE based cloud to push context information coming from varied sources to Orion context broker
- Automatically store the information with Cygnus in Cosmos
- Use standard north bound interface to extract, process, analyse and publish data to various end points e.g. Mobile App, Car dashboard etc.
- Use FIWARE lab as sandbox environment for quick prototyping

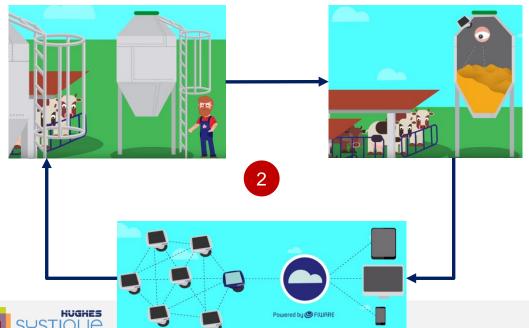


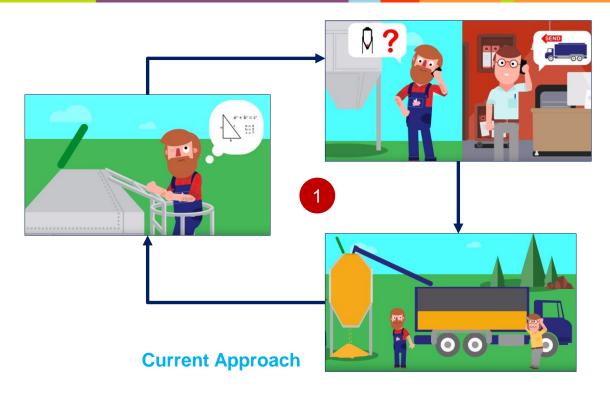
Case Study – 2 Smart Silos Management

Problem Statement:

- Silos require manually monitoring of the animal feed
 - Painful and Risky process which is repeated again and again
- Suppliers have to deal with urgent orders and issues caused by in-accurate estimates of the feed supply
 - Time consuming task







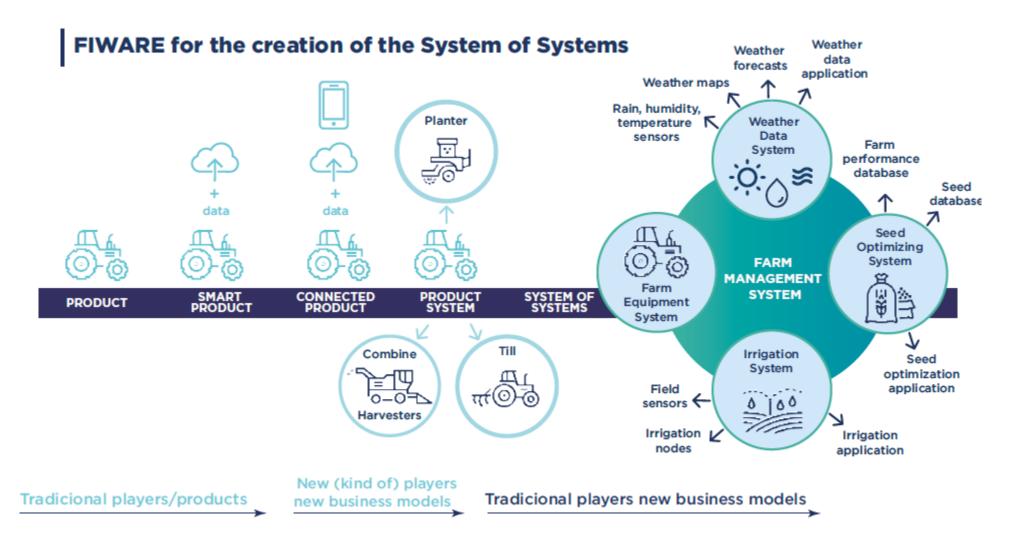
Solution:

- FIWARE based smart approach (INSYLO) where a smart device is attached to Silos to automatically monitor:
 - Weight, Volume, Temperature, Humidity etc.
 - Data is automatically pushed to FIWARE powered cloud
- Smart application works on the context information, analyses it and interconnects all the involved parties
 - Access data anytime, anywhere, any device
 - No risks of Silos inspection
- Instant notifications, alarms are sent and dashboards are plotted end to end operational view

www.hsc.com

Source: INSYLO: https://www.youtube.com/watch?v=AzOw2Oq0YG0

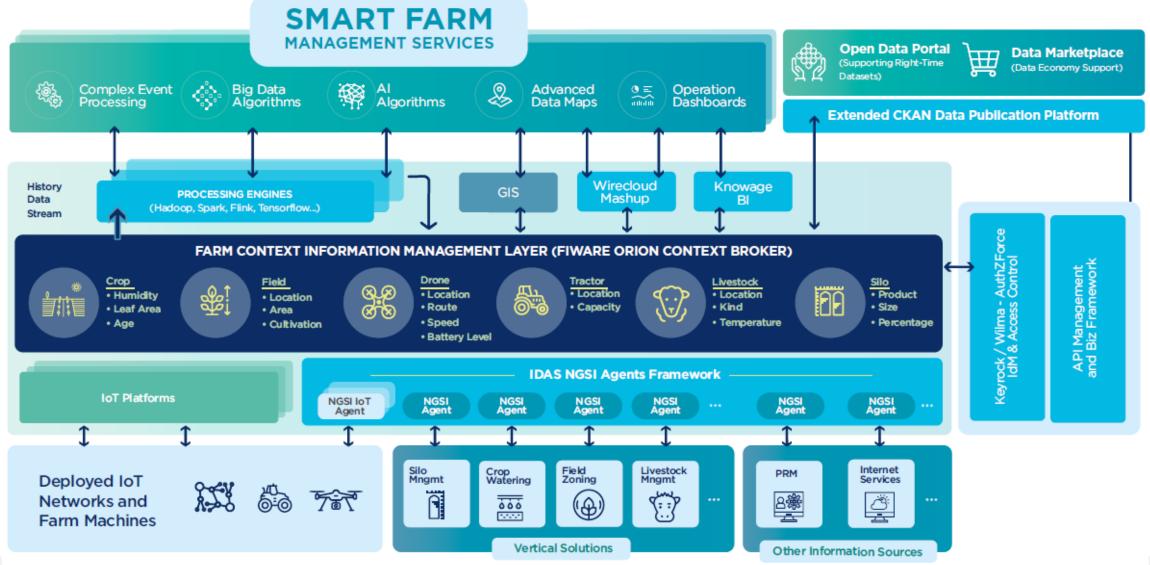
Case Study – 3 Smart Farming Solution





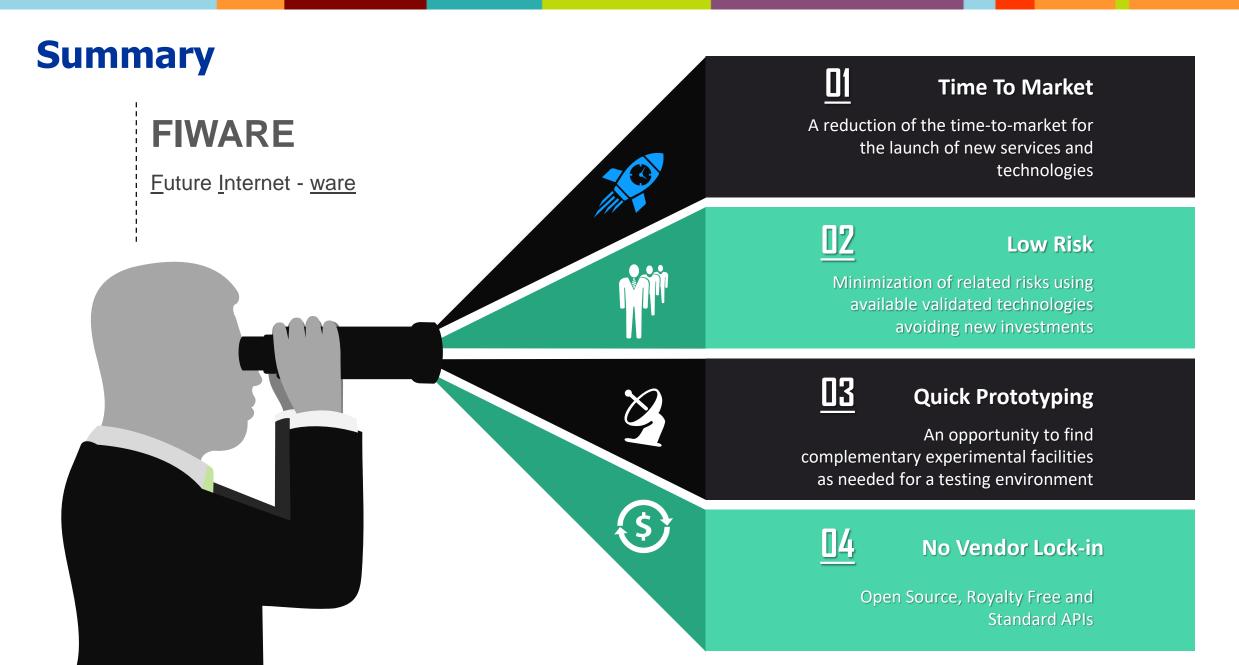
Source: Fiware.org

Case Study – 3 Smart Farming Solution





Source: Fiware.org





Contact: Deepak Sehrawat deepak.sehrawat@hsc.com

Phone: +91-9818228349



