‘Internet of Things’ wat komt er op ons af?

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van hall larenstein
university of applied sciences

Programma

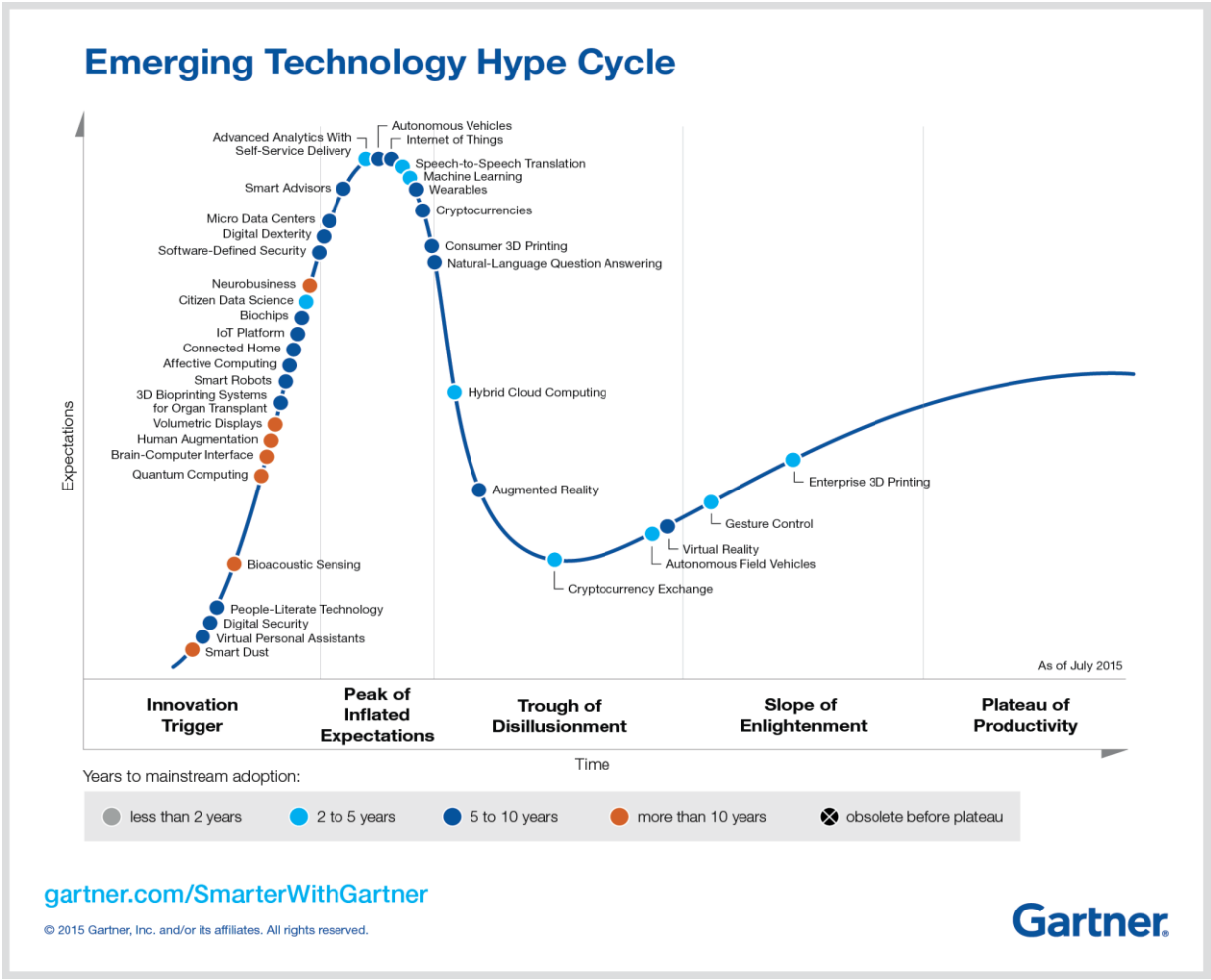
- Introductie IoT
- Vragen voor discussie
- Afsluiting

Introduction IoT

ICT developments

- Wireless
- Location awareness
- Sensor networks

- Internet of Things (connectivity, interoperability)
- BIG Data
- Social Media
- Remote access and control
- Security
- Lab on a chip
- Blockchain
- ..



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Wikipedia

- The **Internet of Things** is the internetworking of **physical devices**, vehicles, buildings and other **items—embedded with electronics, software, sensors, actuators, and network connectivity that enable these objects to collect and exchange data.**
- The IoT allows objects to be sensed and/or controlled remotely across existing network infrastructure, creating opportunities for more direct integration of the physical world into computer-based systems, and resulting in improved efficiency, accuracy and economic benefit.
- When IoT is augmented with sensors and actuators, the technology becomes an instance of the more general class of cyber-physical systems, which also encompasses technologies such as smart grids, smart homes, intelligent transportation and smart cities.
- **Each thing is uniquely identifiable through its embedded computing system but is able to interoperate within the existing Internet infrastructure**. Experts estimate that the IoT will consist of almost 50 billion objects by 2020.

Wikipedia

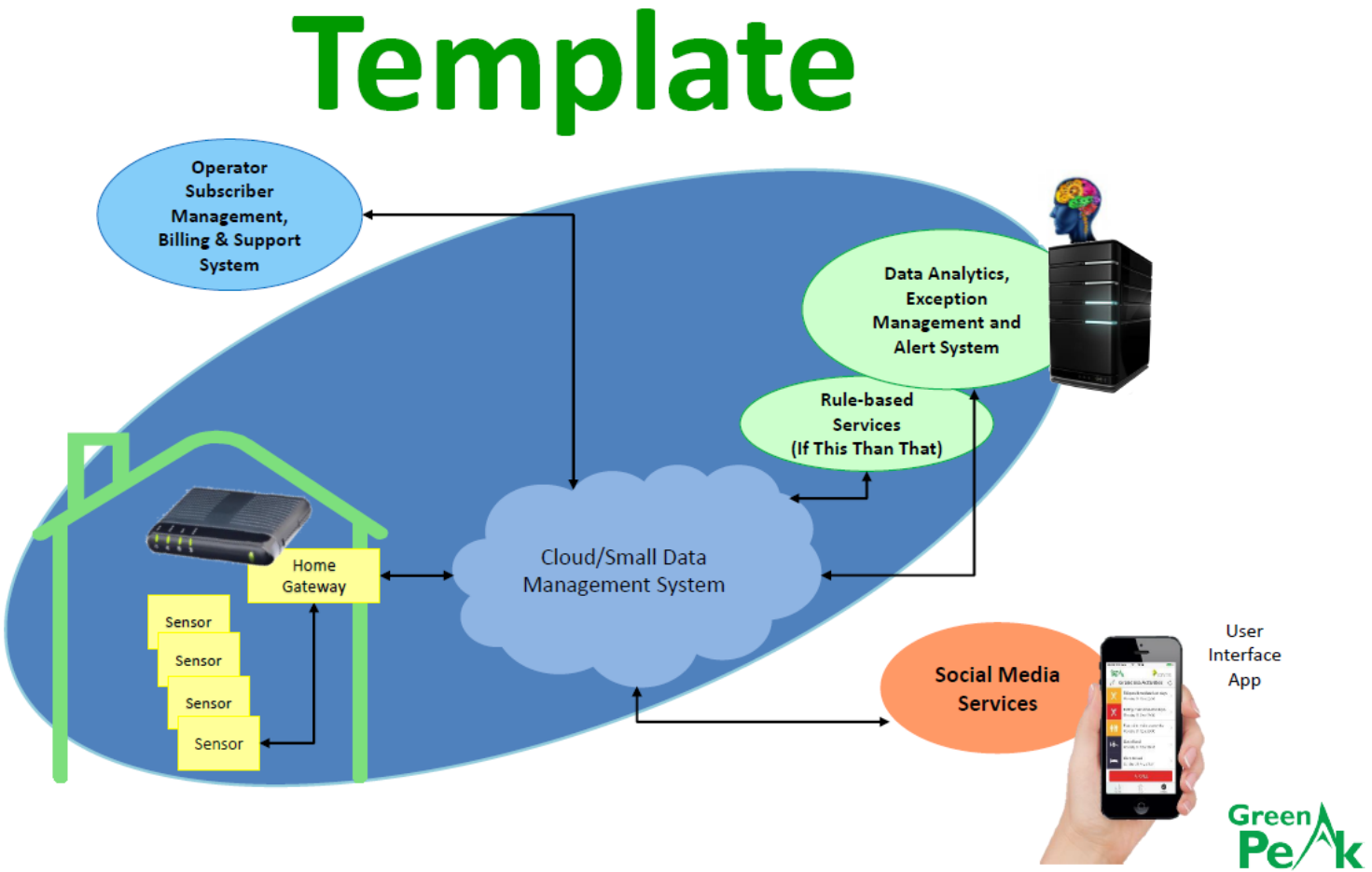
- Typically, IoT is expected to offer advanced connectivity of devices, systems, and services that goes beyond machine-to-machine (M2M) communications and covers a variety of protocols, domains, and applications. The interconnection of these embedded devices (including smart objects), is expected to usher in automation in nearly all fields, while also enabling advanced applications like a smart grid, and expanding to the areas such as smart cities.

- As well as the expansion of Internet-connected automation into a plethora of new application areas, IoT is also expected to generate large amounts of data from diverse locations, with the consequent necessity for quick aggregation of the data, and an increase in the need to index, store, and process such data more effectively. IoT is one of the platforms of today's Smart City, and Smart Energy Management Systems.

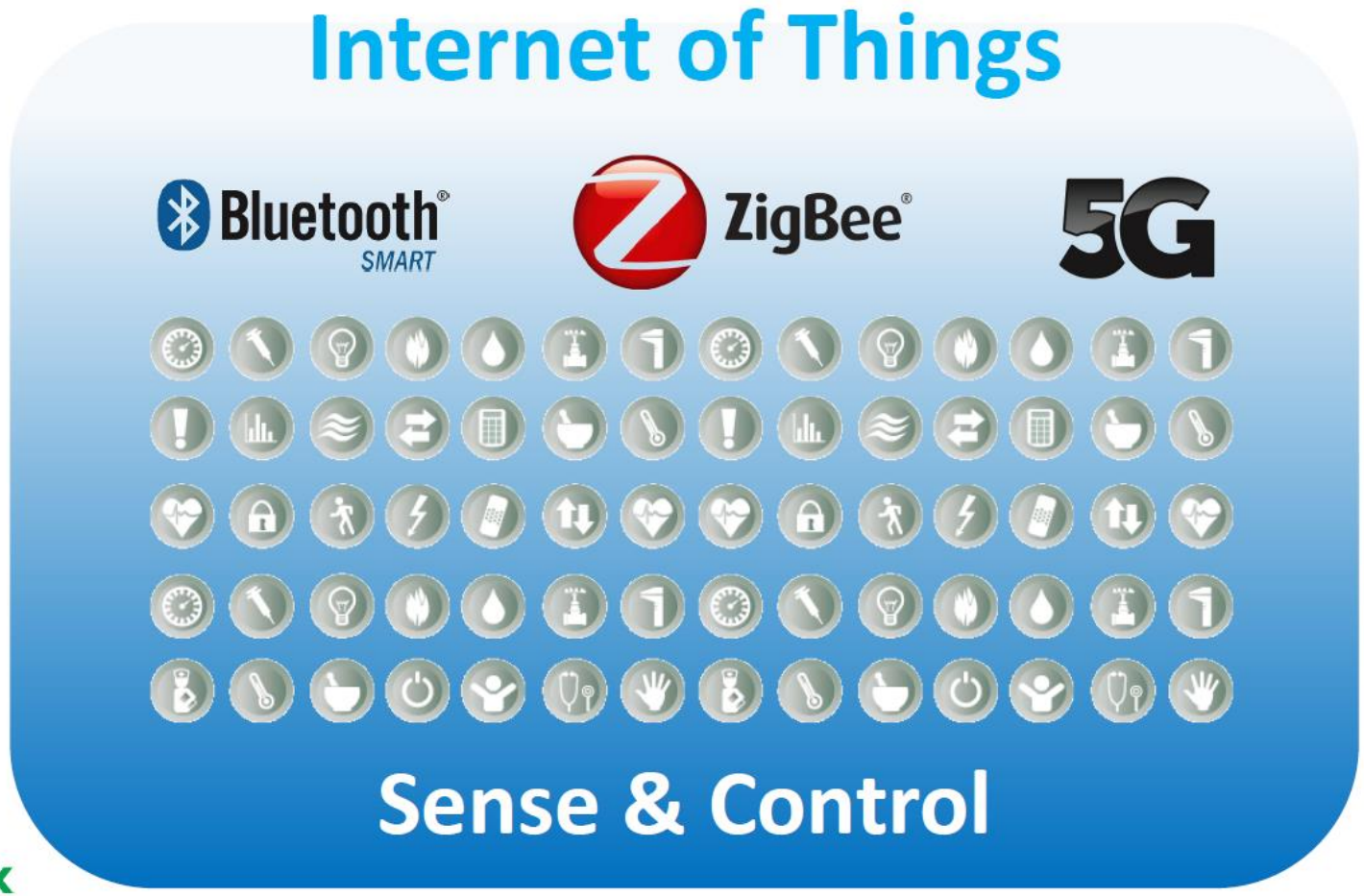
Wikipedia

- **"Things," in the IoT sense, can refer to a wide variety of devices such as heart monitoring implants, biochip transponders on farm animals, electric clams in coastal waters, automobiles with built-in sensors, DNA analysis devices for environmental/food/pathogen monitoring or field operation devices that assist firefighters in search and rescue operations.** Legal scholars suggest to look at "Things" as an "inextricable mixture of hardware, software, data and service". These devices collect useful data with the help of various existing technologies and then autonomously flow the data between other devices.
- Current market examples include home automation (also known as smart home devices) such as the control and automation of lighting, heating (like smart thermostat), ventilation, air conditioning (HVAC) systems, and appliances such as washer/dryers, robotic vacuums, air purifiers, ovens or refrigerators/freezers that use Wi-Fi for remote monitoring.

IoT (Cees Link)

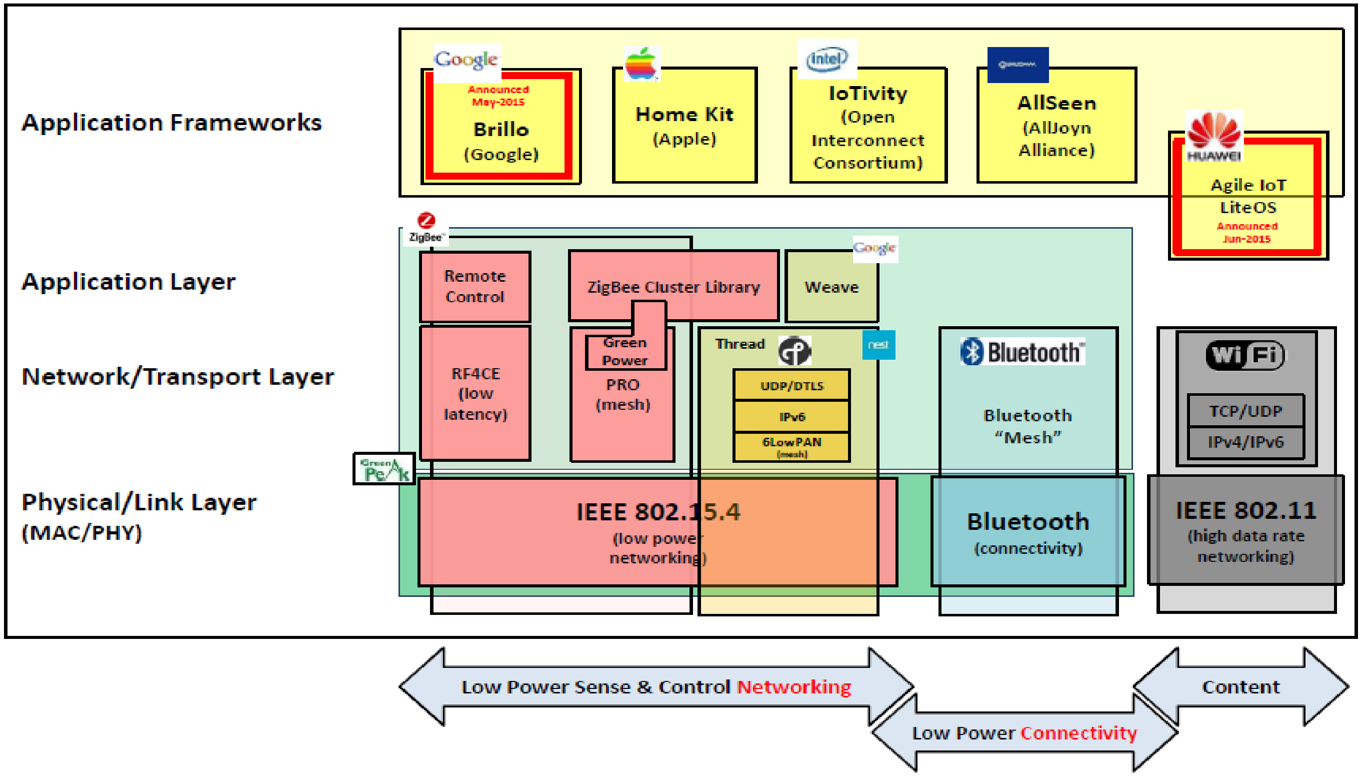


?? Techniek voor connectiviteit



Agro&Food ??

War



Green Peak

AIOTI

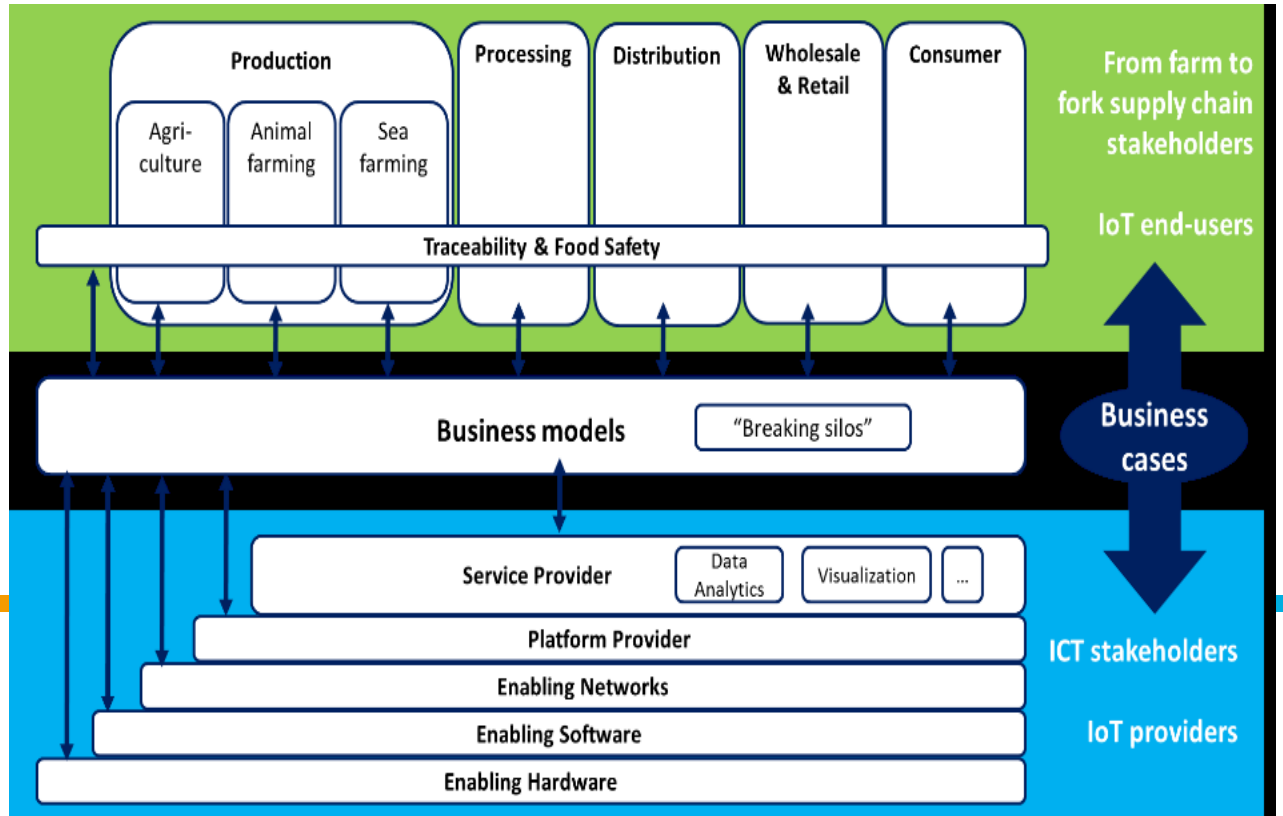
AIOTI
ALLIANCE FOR INTERNET OF THINGS INNOVATION

Information Package

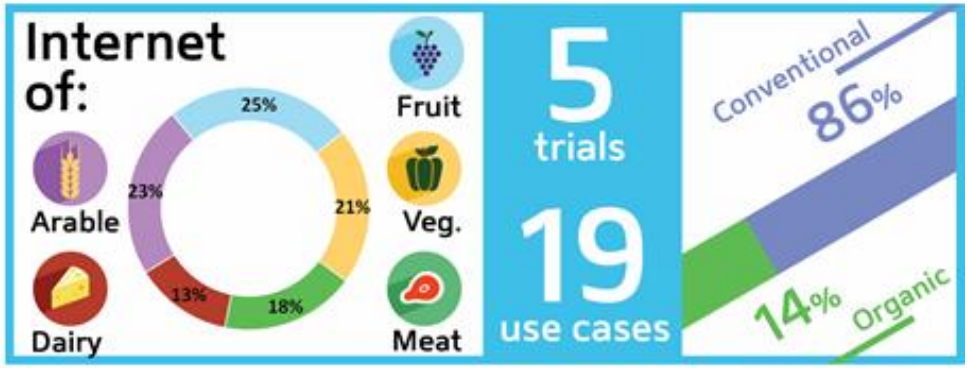
WG6: Smart Farming and Food Safety

Luis Pérez-Freire, GRADIANT

8 September 2015



IoF2020 – Large Scale Pilot



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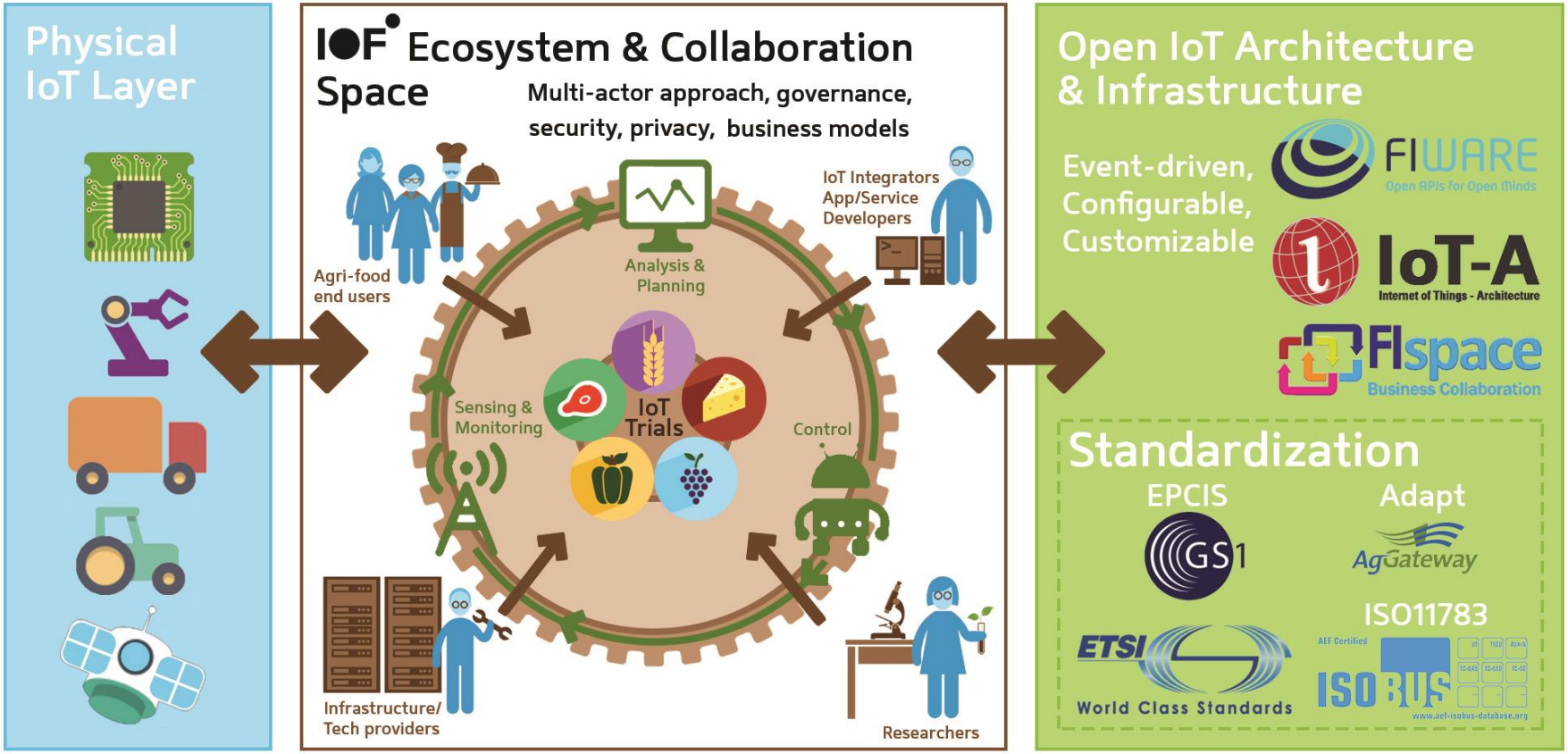
20
20
IOF
INTERNET OF FOOD & FARM

Overall concept for 4 year, 30M€ project



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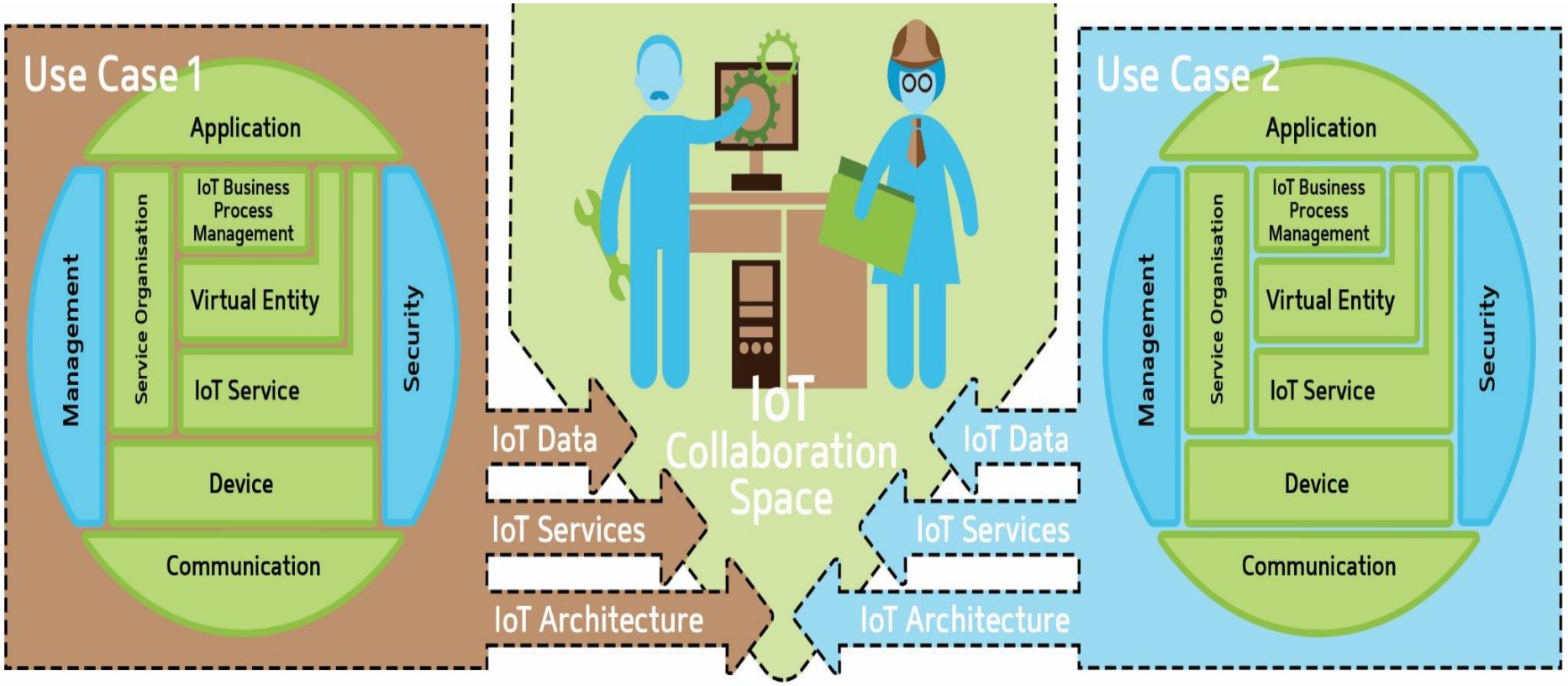
INTERNET OF FOOD & FARM 2020

SYNERGY between USE CASES



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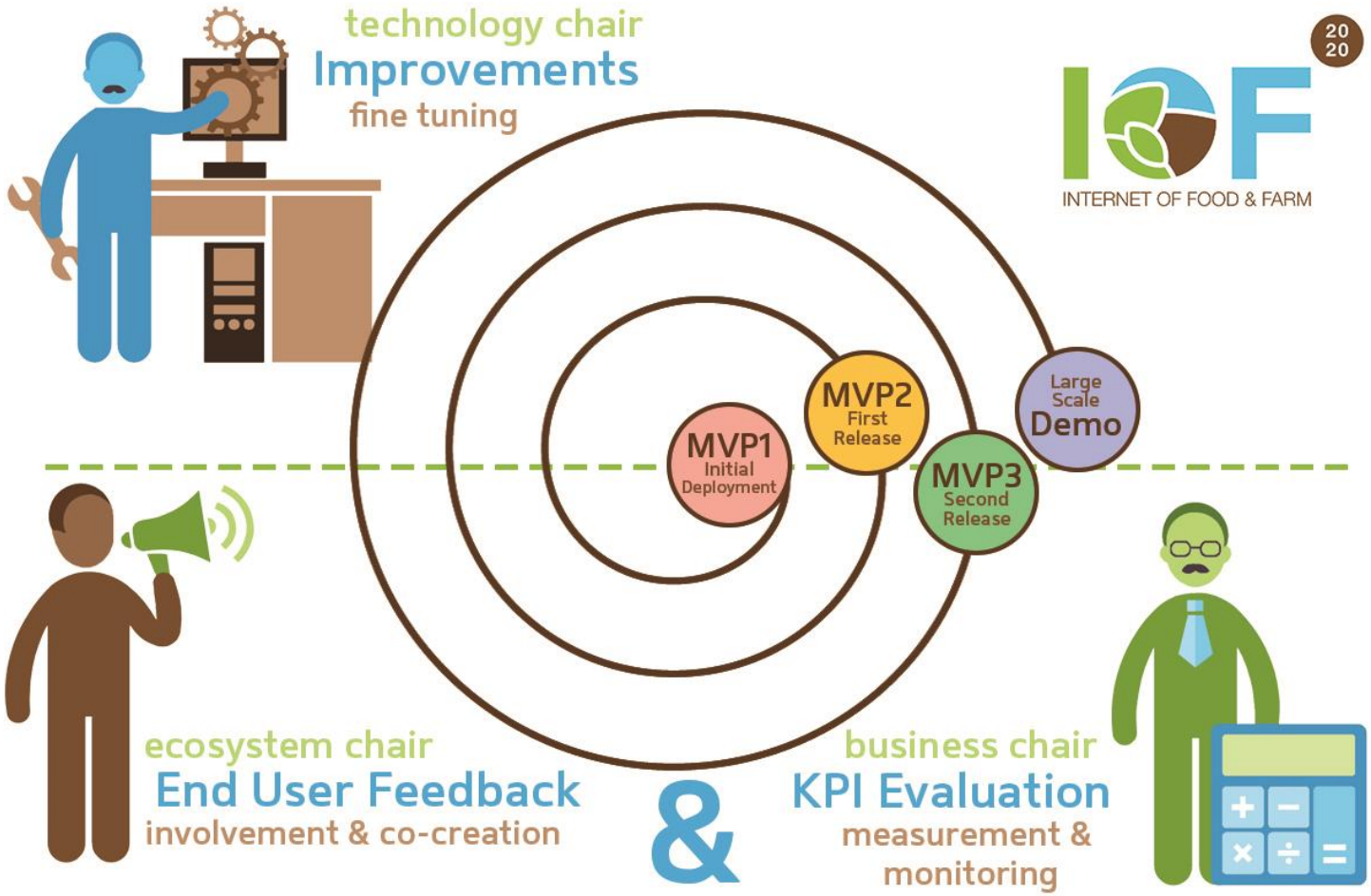
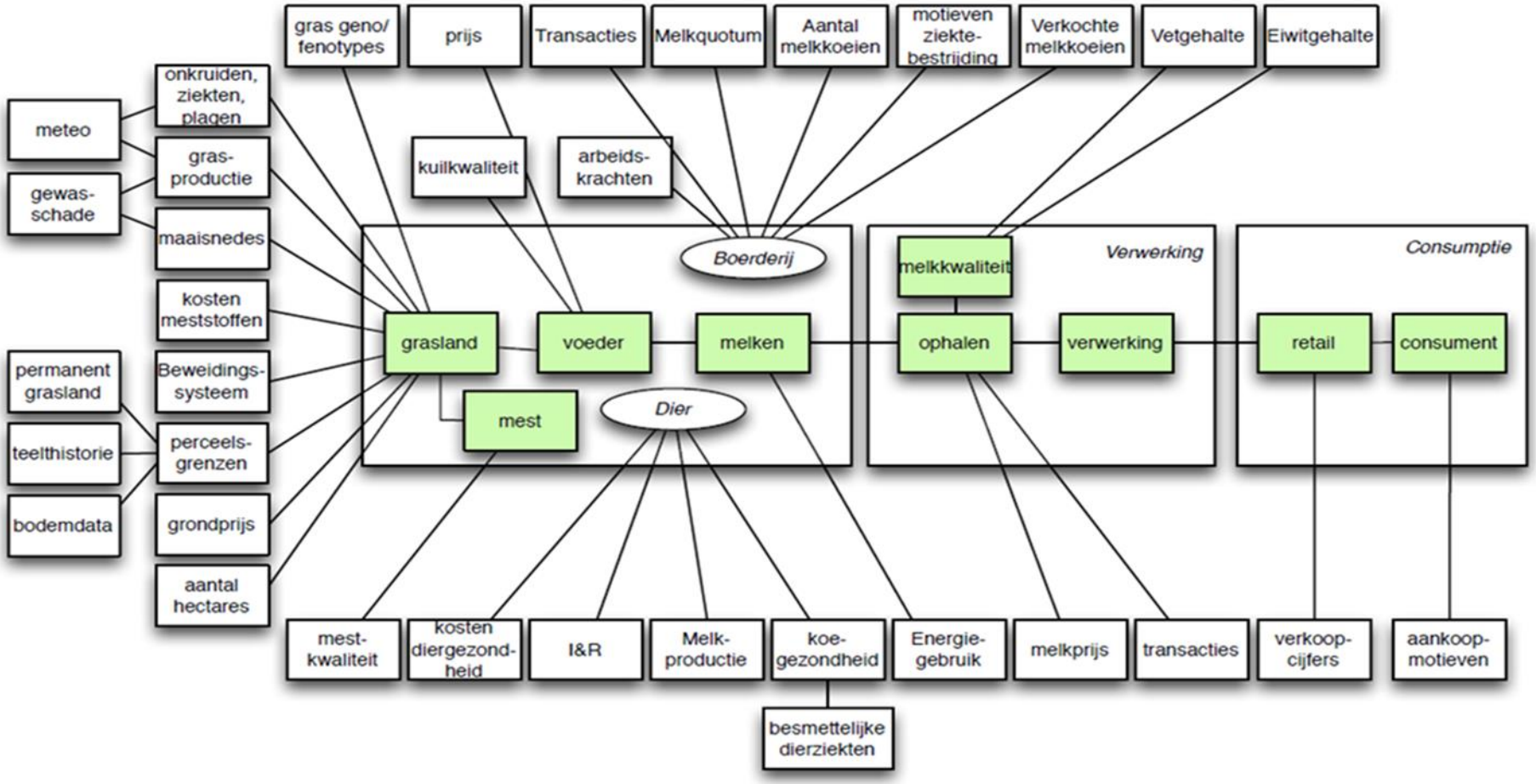
Overall methodology



Vragen

Vragen

- Wat zien we als ‘Things’ in de veehouderij?
- Gaan we een koe ook zien als een ding?



Vragen

- Wordt dit onderwerp (IoT)al behandeld in het curriculum?

- Ja:
  - hoe ziet dit er dan uit?

- Nee:
  - zou je het wel willen?
  - wat is er dan voor nodig om dit te doen
- Moet je onderscheid maken tussen HBO en MBO niveau?

Afsluiting