# Hobnet – IoT6 joint presentation
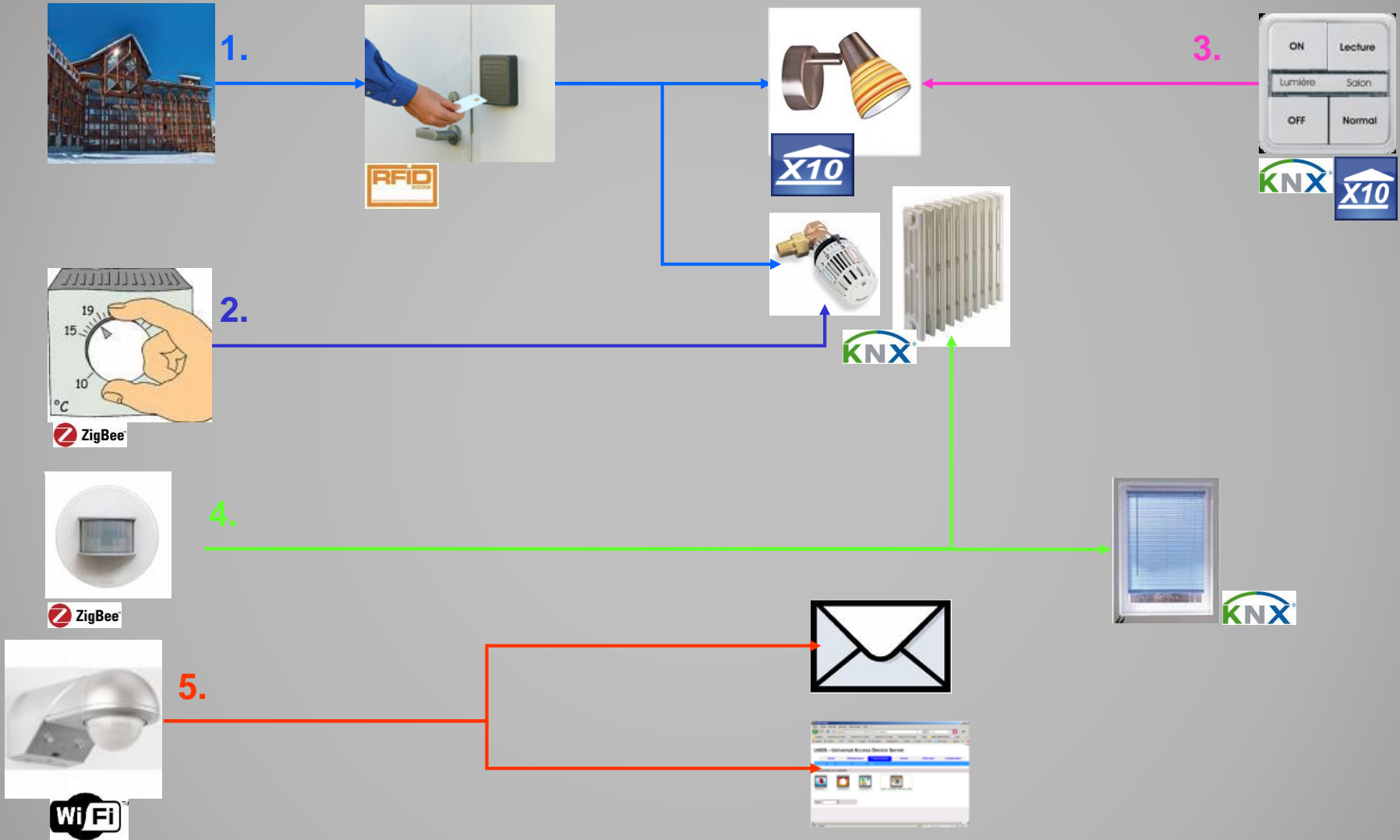# Venice – 18.6.2012
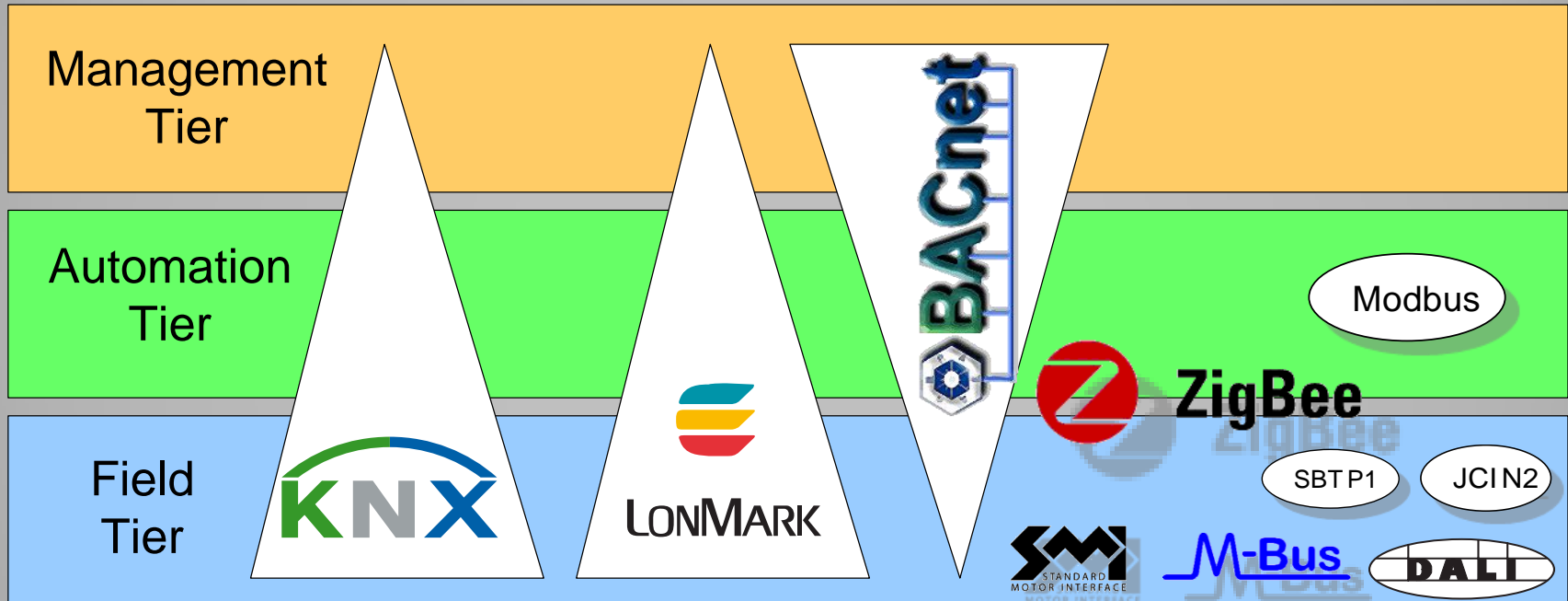
Dominique Genoud - HESSO//Valais Switzerland

University of Applied Sciences
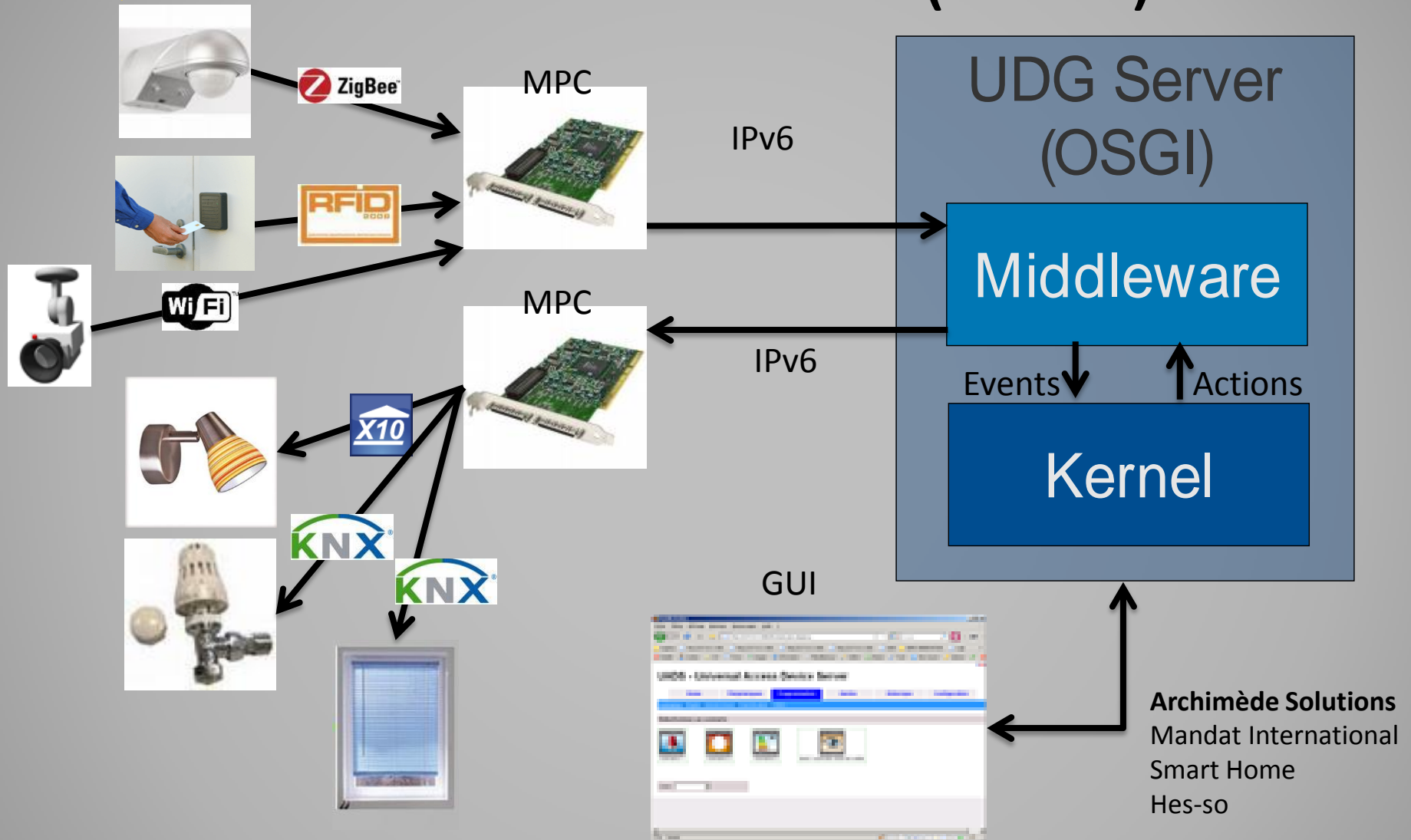
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de Suisse occidentale
Fachhochschule Westschweiz
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Western Switzerland

# Buildings : multiple protocole

# Now : Building automation layers & protocoles

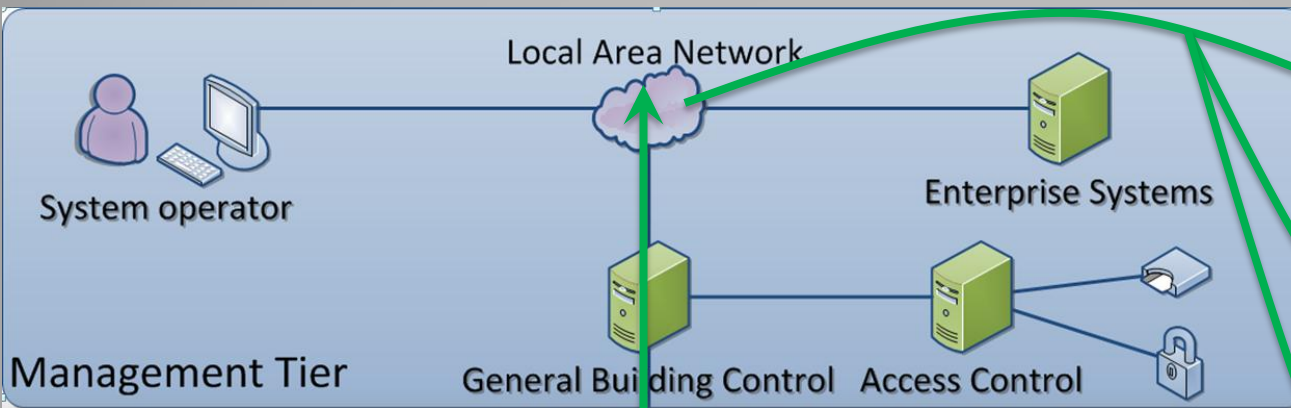# UDG Architecture(2007)



MPC

IPv6

MPC

IPv6

X10

KNX

KNX

**UDG Server (OSGI)**

Middleware

Events ↓    ↑ Actions

Kernel

GUI

**Archimède Solutions**
Mandat International
Smart Home
Hes-so
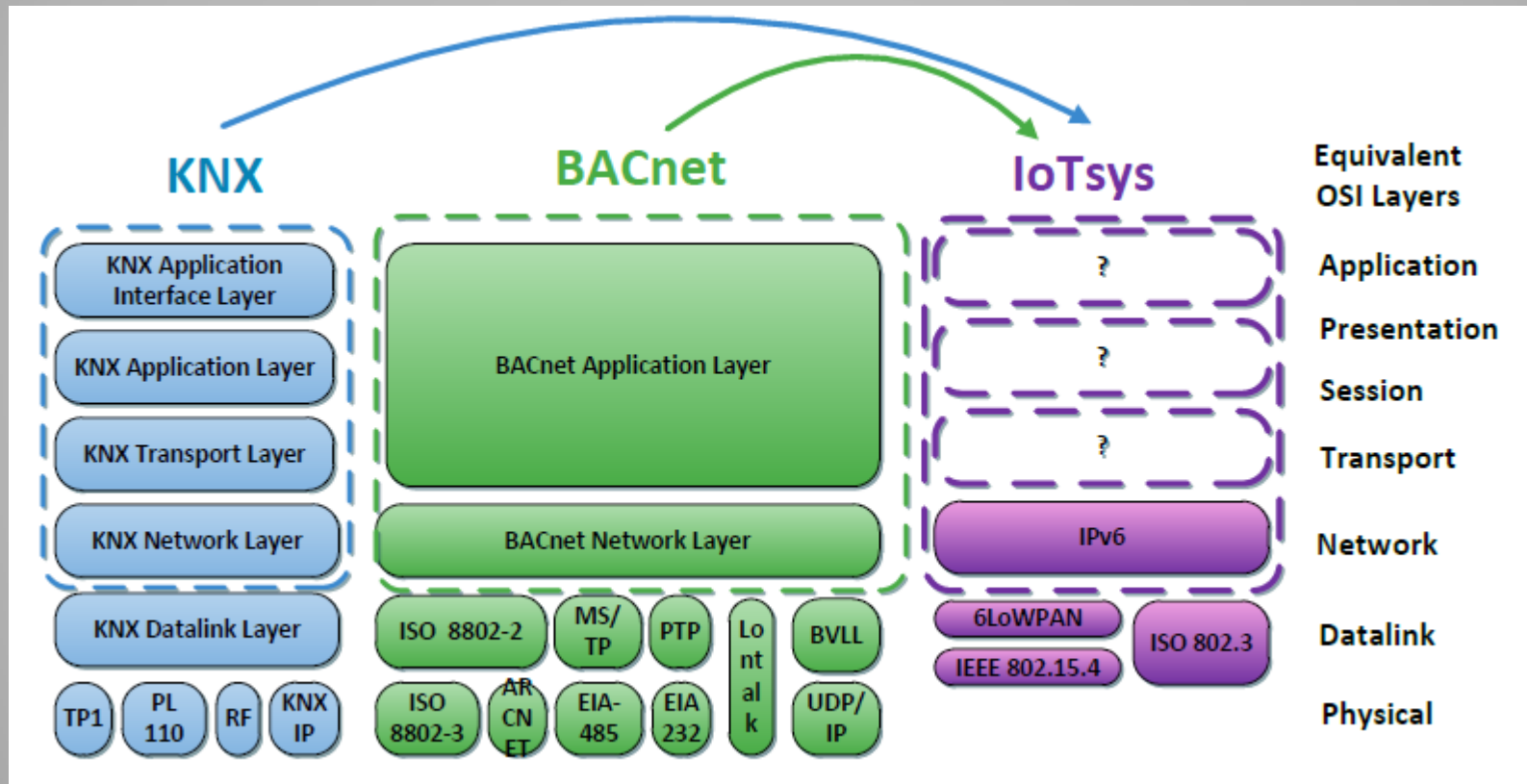
# Building Automation : 3 tiers
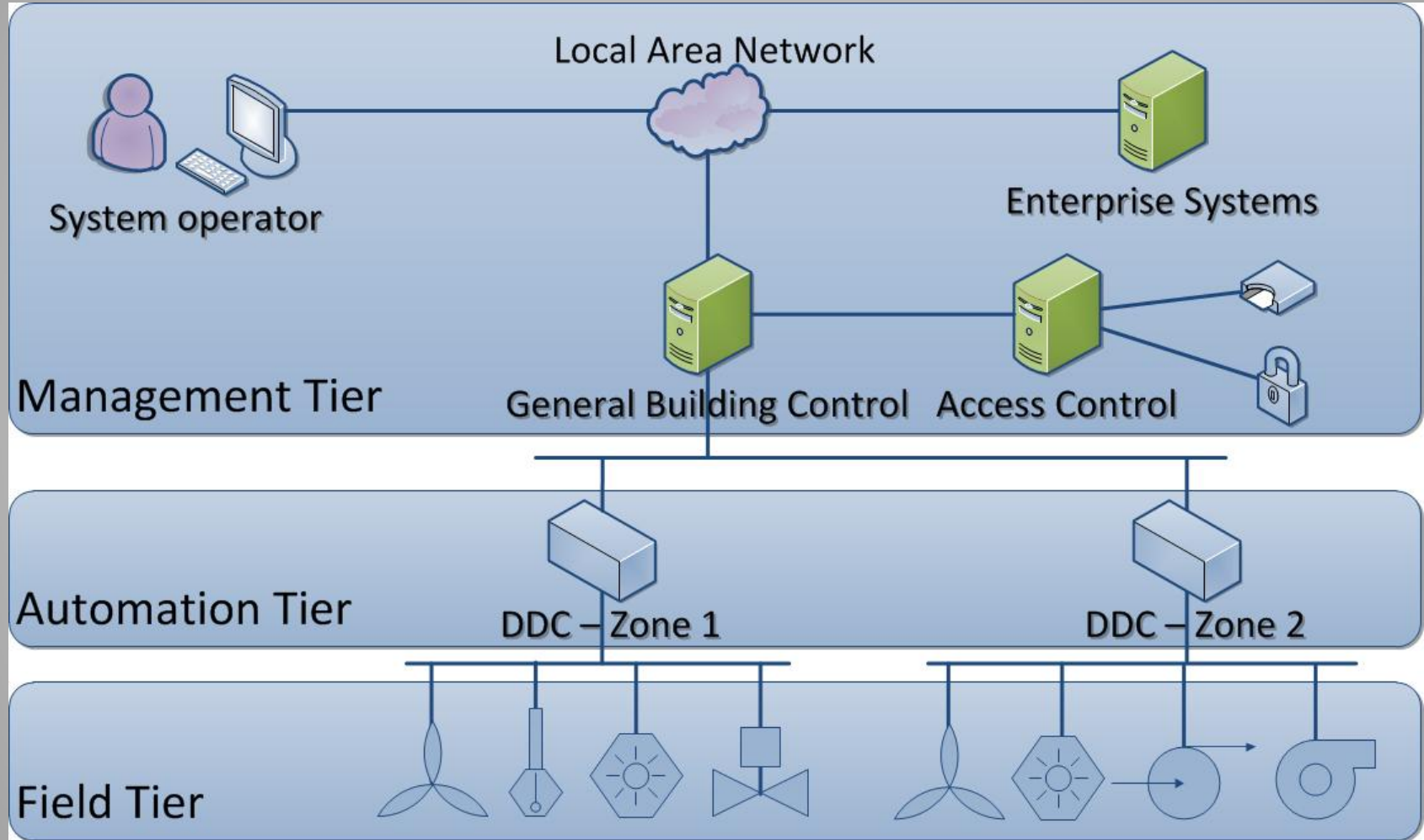
# UDG Architecture + IoT6
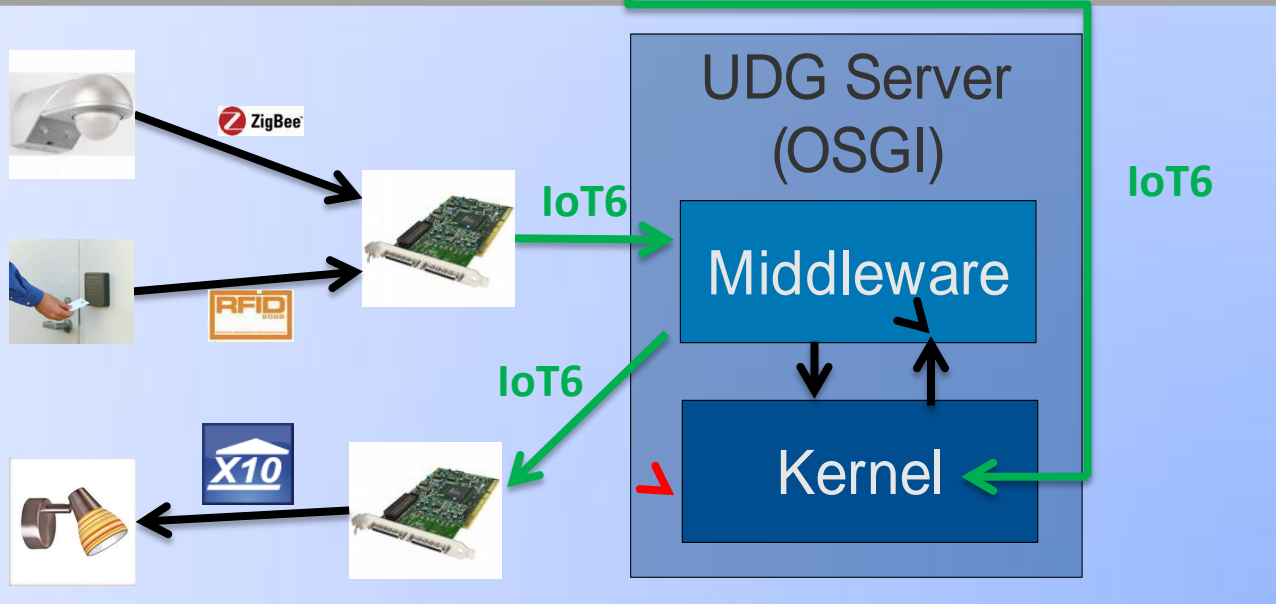
# IoT6 : New protocol : IPv6 based

# *Experimenting flexible and polyvalent integration of subsystems*

A. ## Holistic control and monitoring system
able to interact with all the connected sub-systems.

B. ## Protocol translator between different subsystems, enabling a
device or a sub-system to interact with another device or sub-system using a different protocol.

C. ## Meta controller complement to other control and monitoring systems; with the possibility to overview them and to
enable interaction among them.

D. ## IPv6 proxy
for the underlying devices and sub-systems, enabling existing devices or sub-systems based on non-IP protocols to be easily integrated into an IPv6 framework. It paves the way to all sorts of new web-based applications.
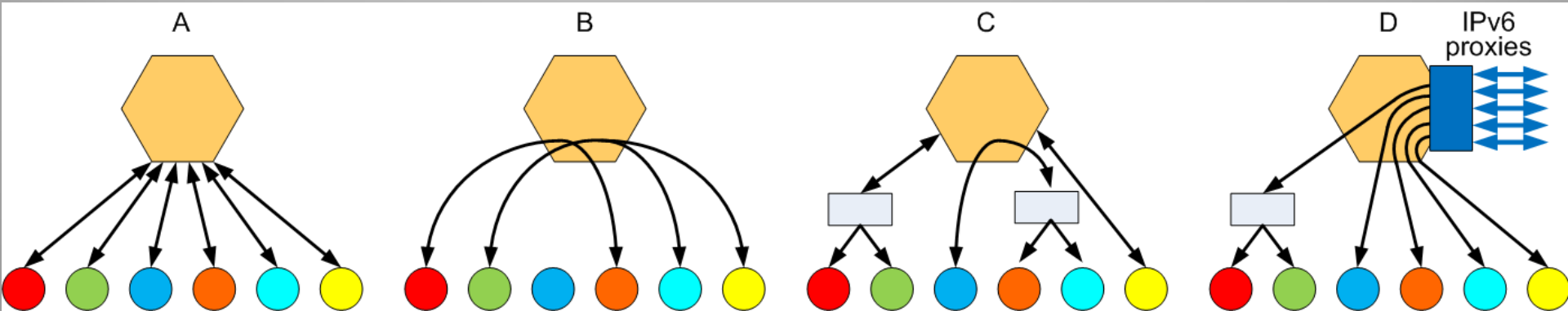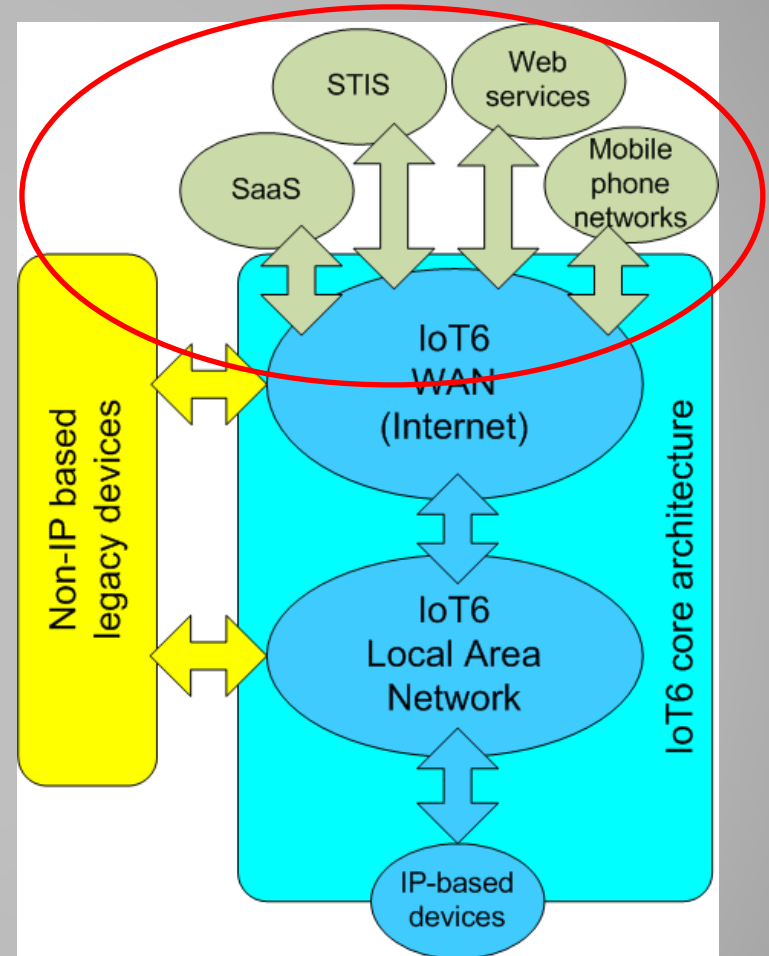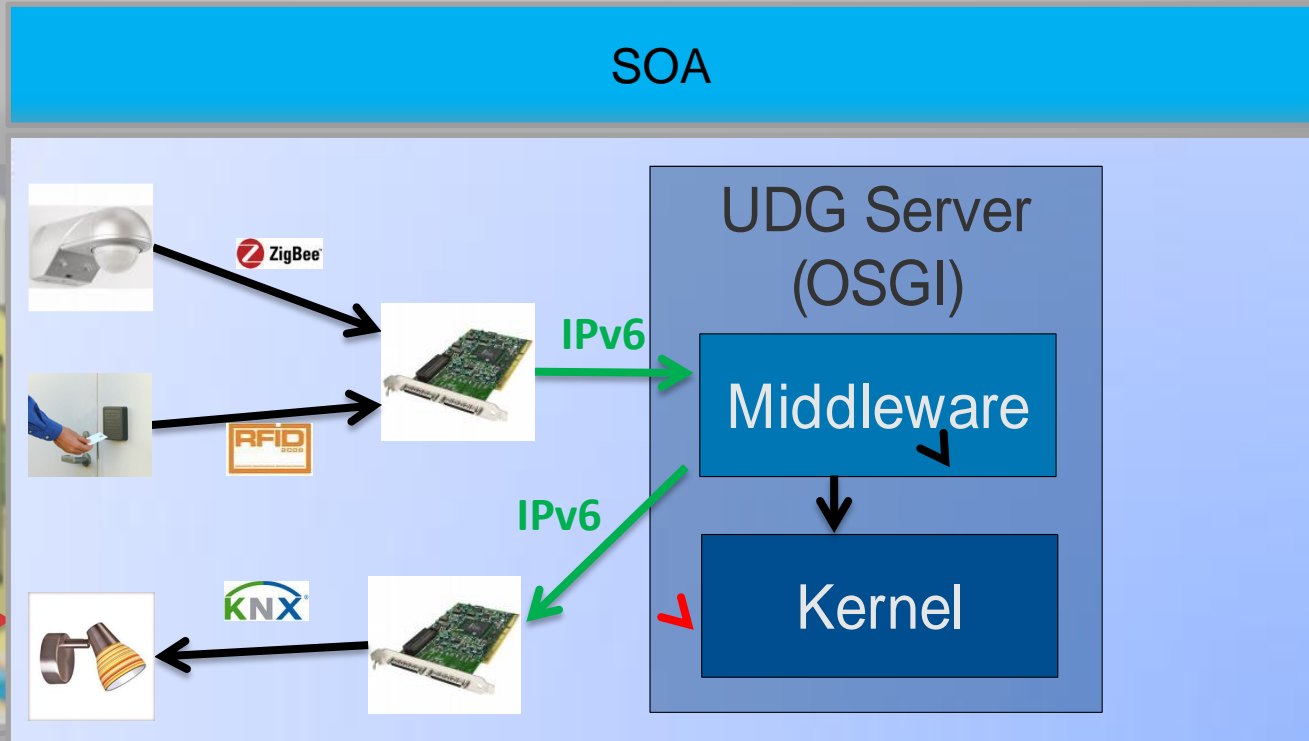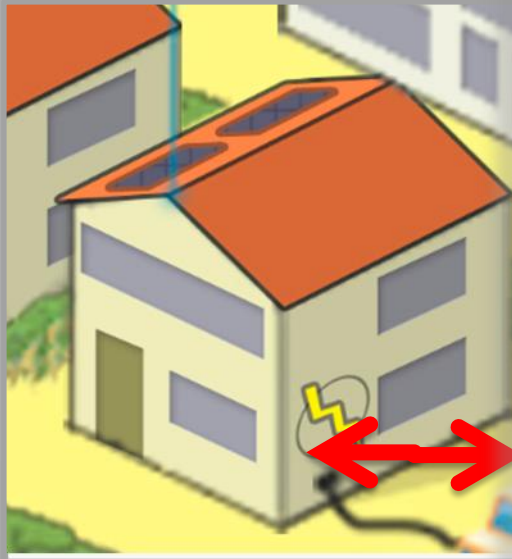
# IoT6 : integrating legacy

Service Oriented Architecture

Integration of **non-IP based devices** into the IoT6 architecture
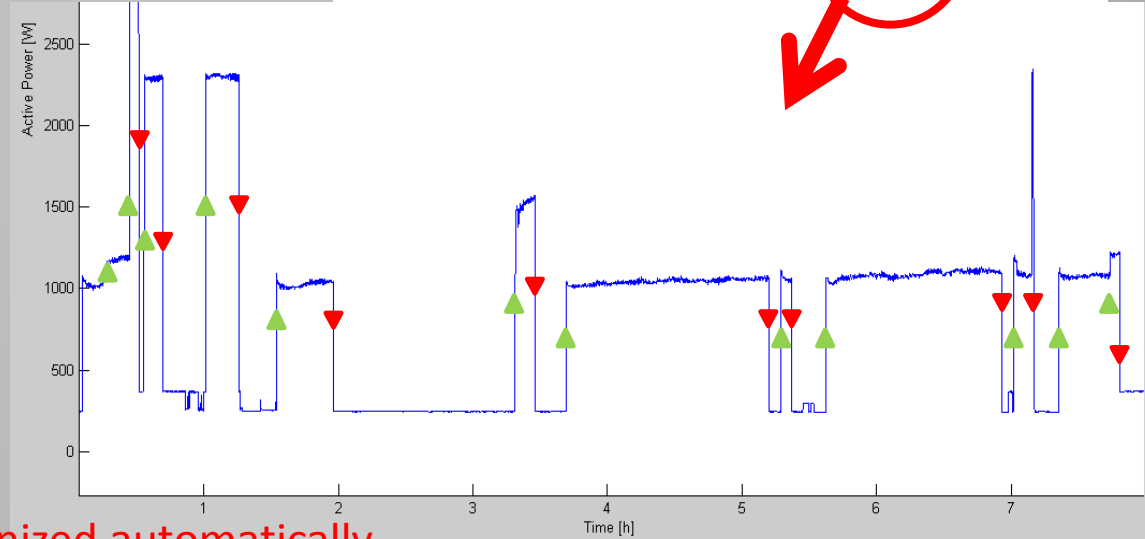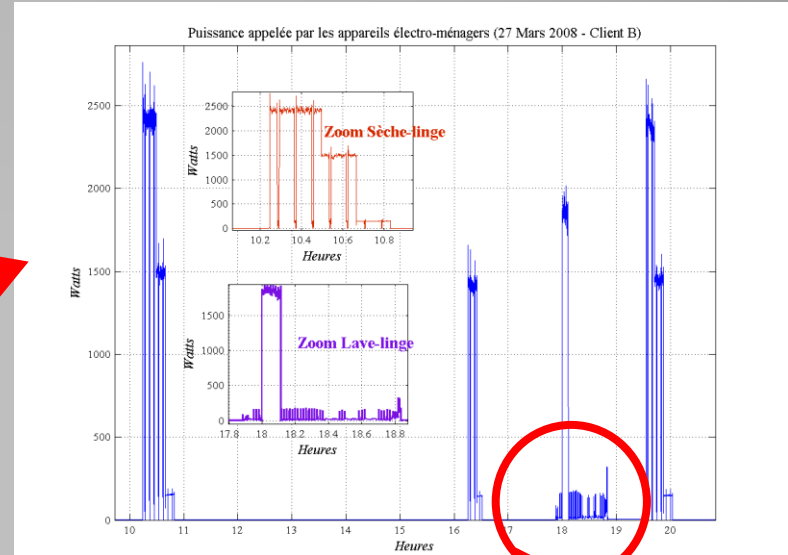
and more generally into IPv6 and 6LoWPAN

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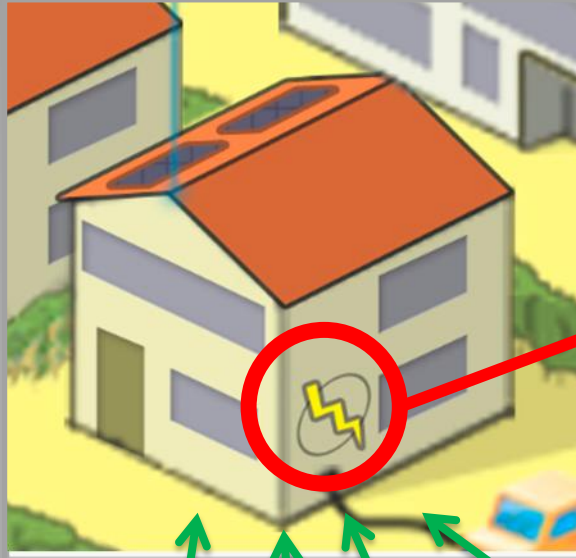University of Applied Sciences
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# Use case:
# mixing UDG + Buidling Automation

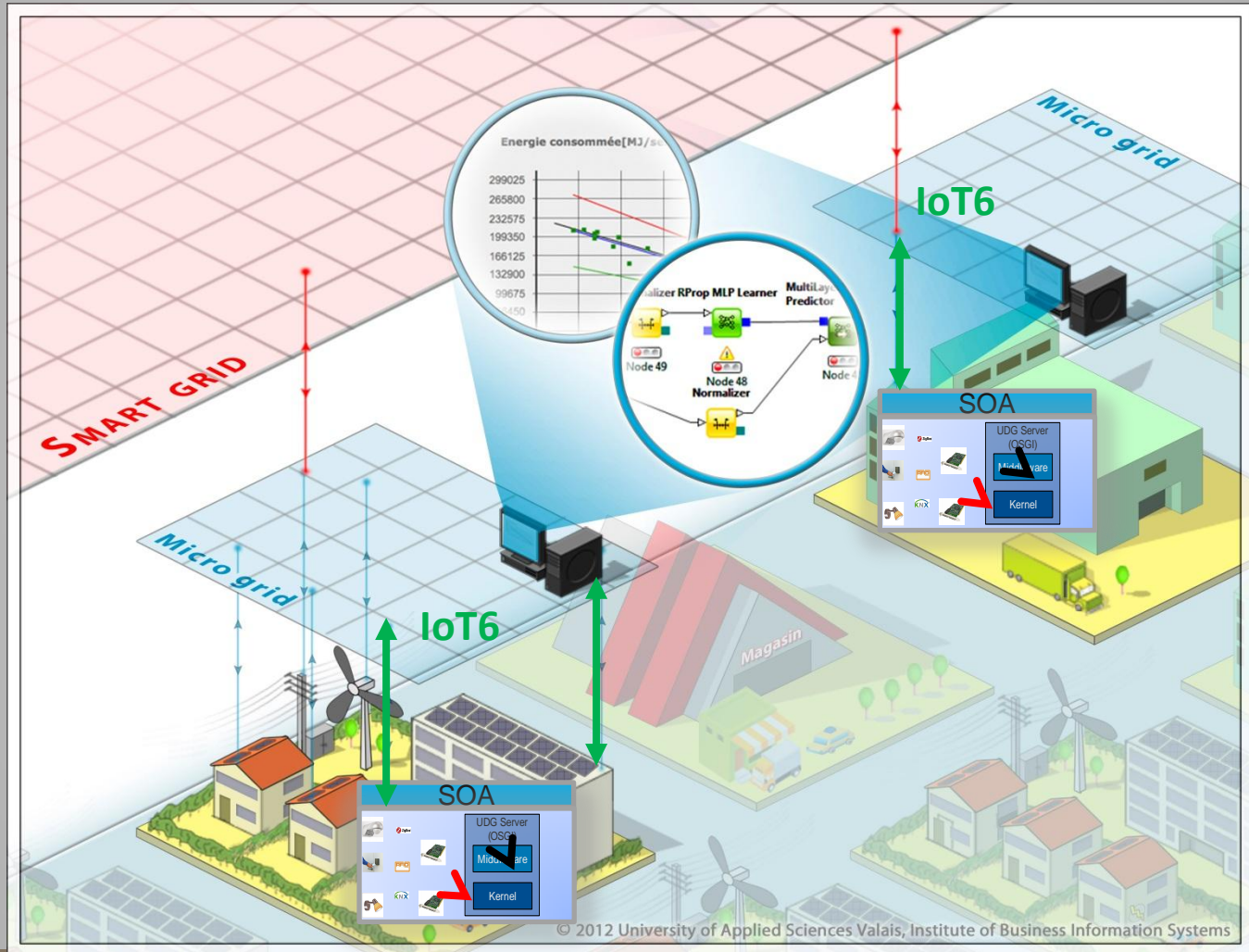# Legacy device Helper:
# Electrical device signature detection



Link to old devices that will be recognized automatically

# Use case :
# Electric Smart-grid : a data driven micro-grid approach



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# IoT6 : taking advantage of IPv6

- One unified framework where all non ip devices can discuss  inside  an holisitic IPv6 network.

- Service oriented information system

- Legacy Device as a Service → LDaaS

- Partners for IoT6 integration :
  - VUT : Vienna University of Technology
  - Mandat international Geneva