UNIVERSITÀ DEGLI STUDI DI UDINE

POLITECNICO DI INGEGNERIA E ARCHITETTURA

Corso di laurea triennale in Ingegneria Elettronica

TESI DI LAUREA

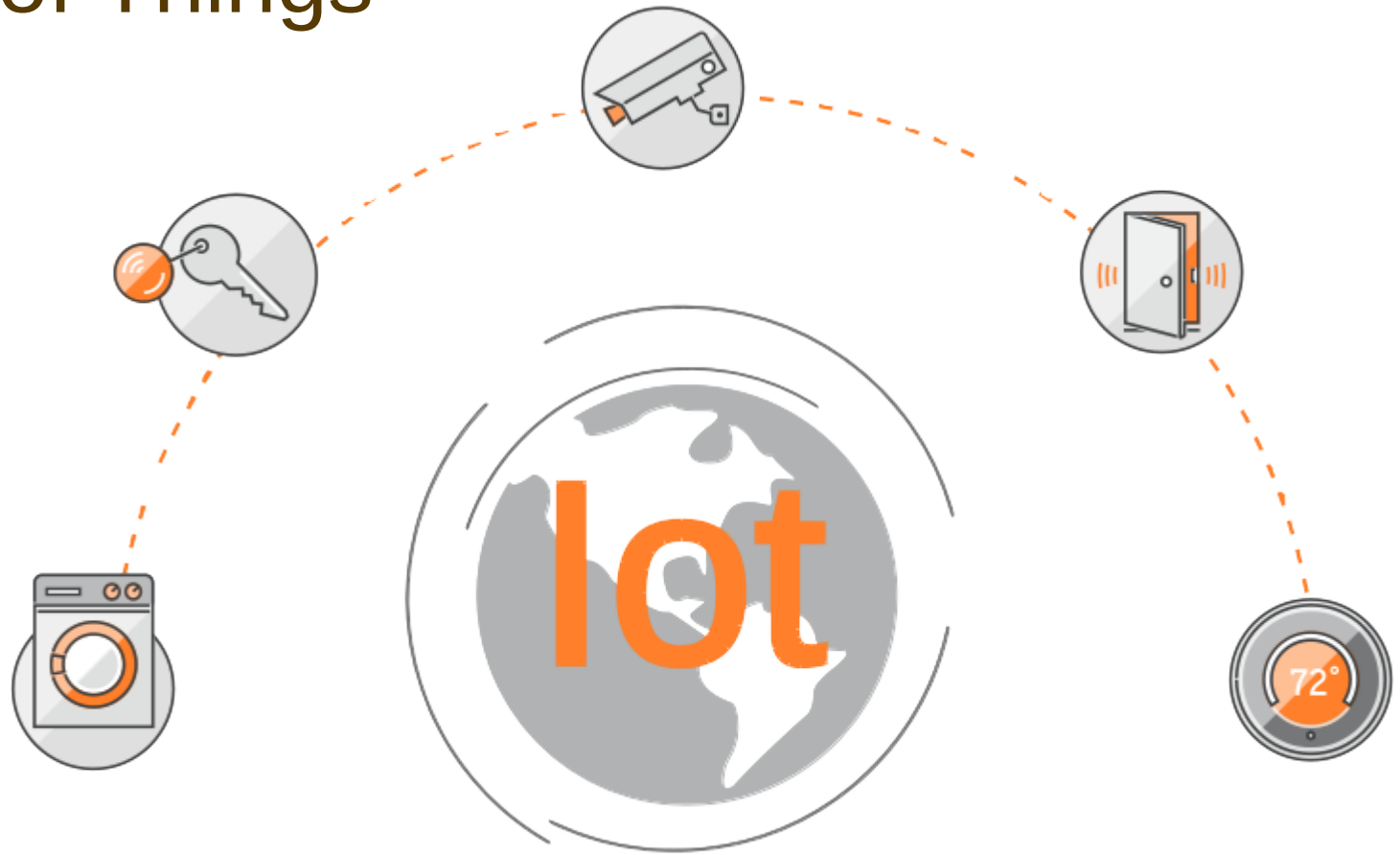
LORA E INTERNET OF THINGS: EVERYWARE SOFTWARE COME CASO DI STUDIO

Relatore: Prof. Antonio Abramo

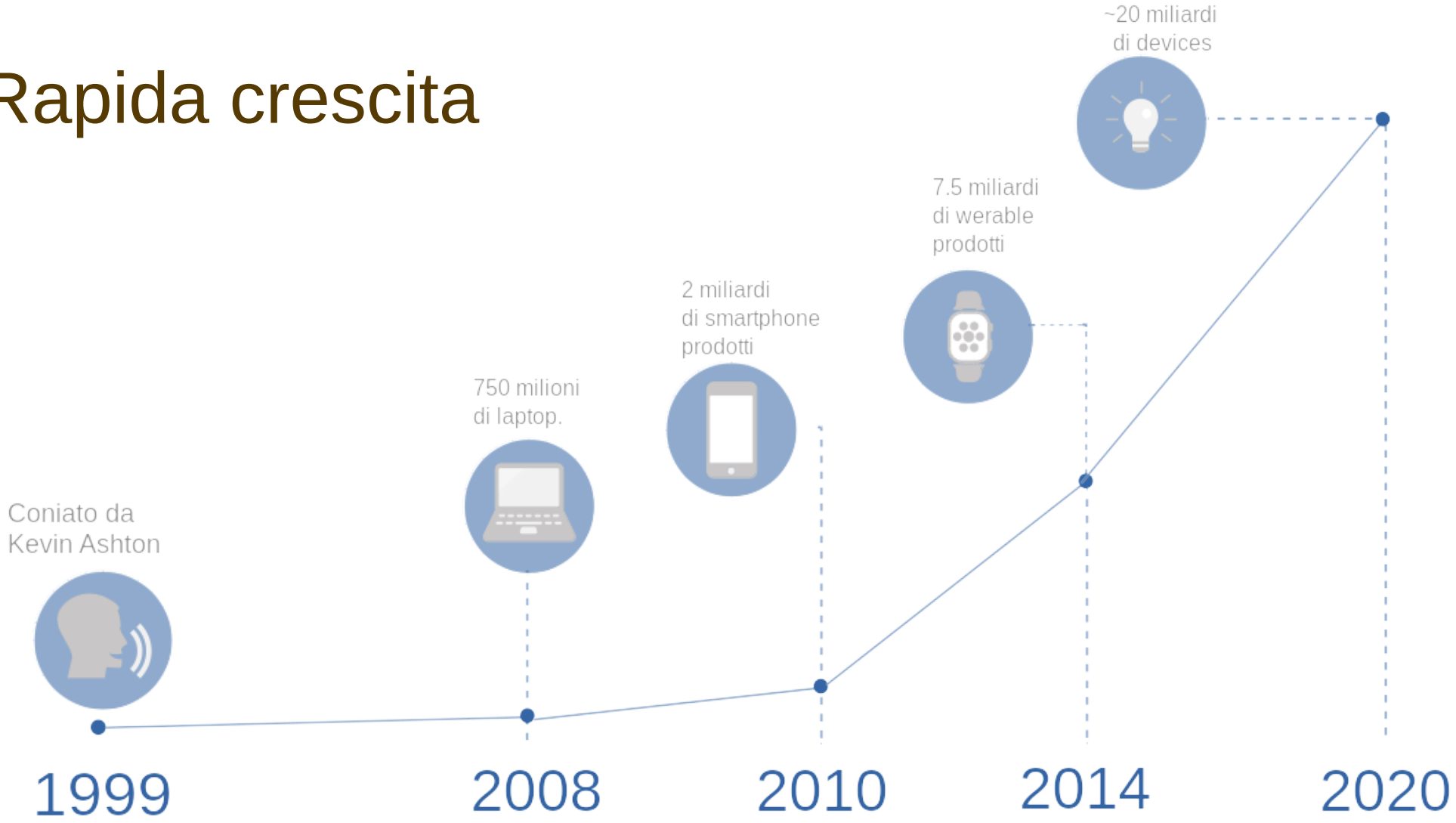
Laureando: Tolotto Enrico

A.A 2016 - 2017

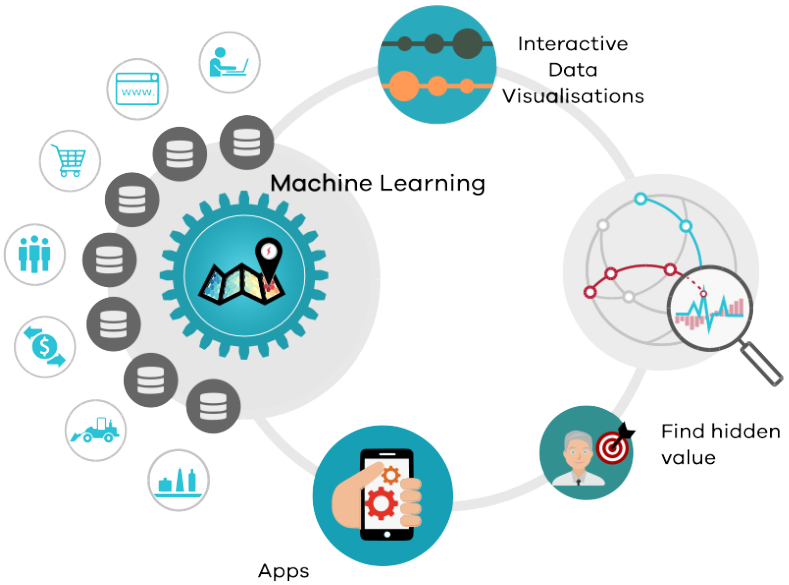
Internet of Things

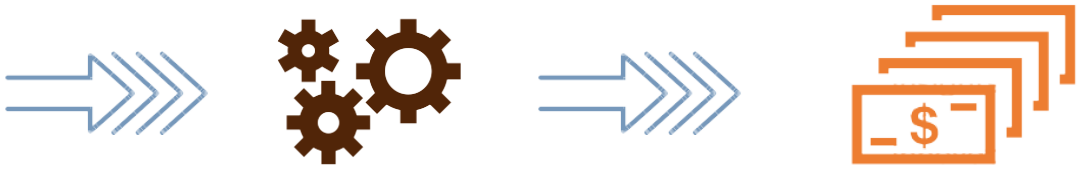


Rapida crescita

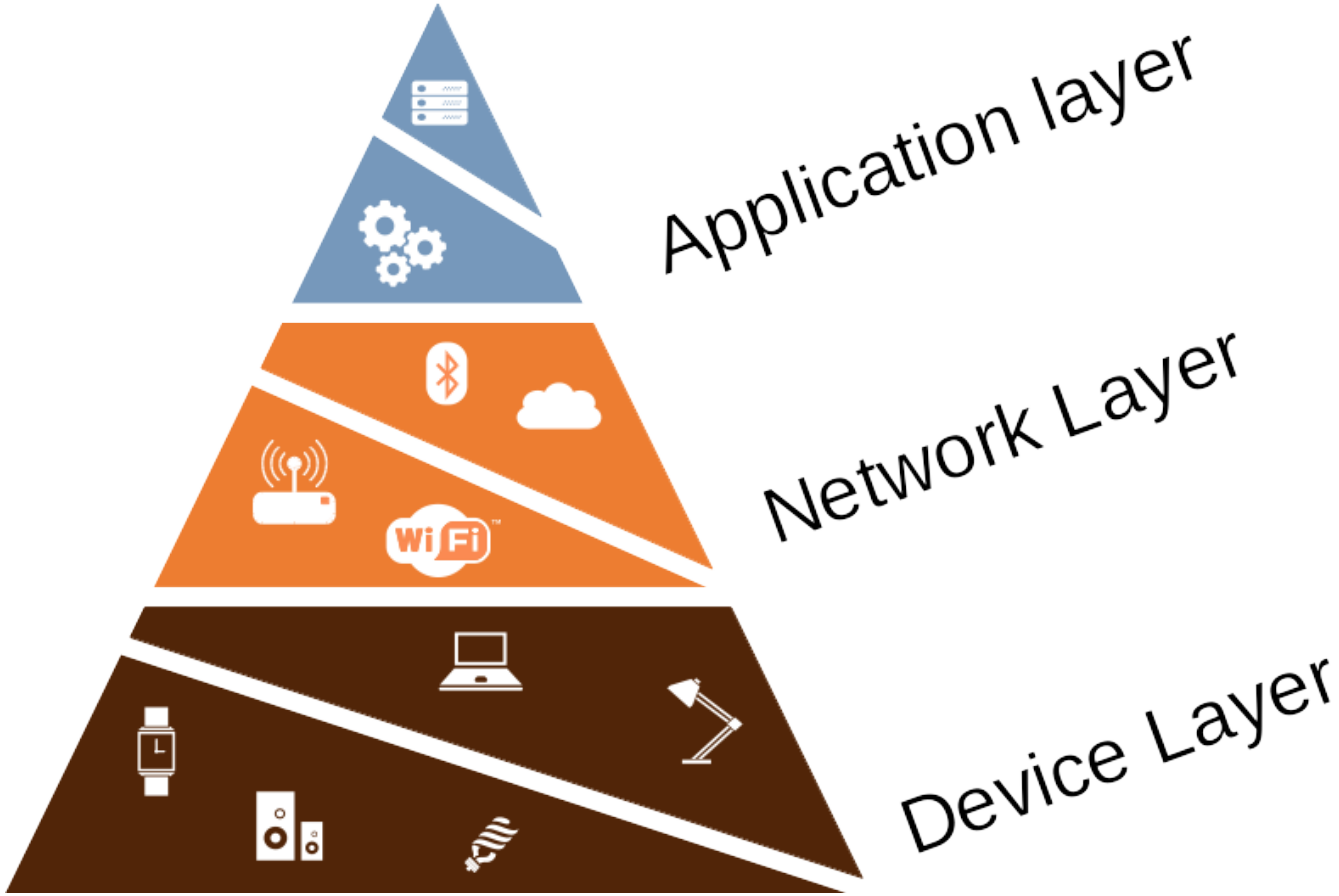


Big Data

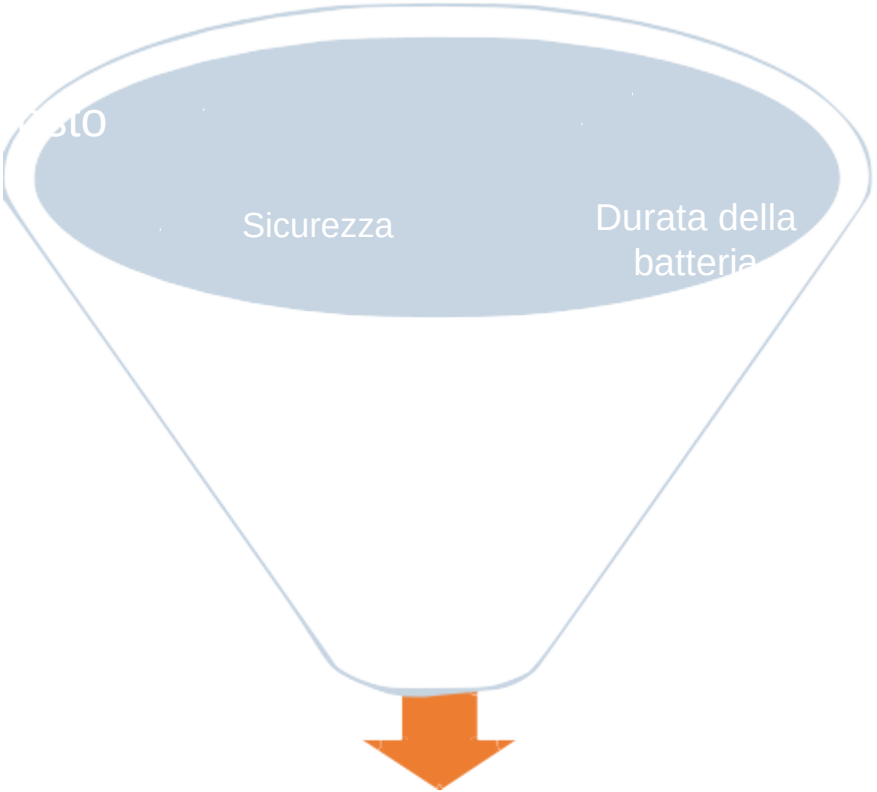

Interactive
Data
Visualisations
Machine Learning
Find hidden
value
Apps



Livelli IoT



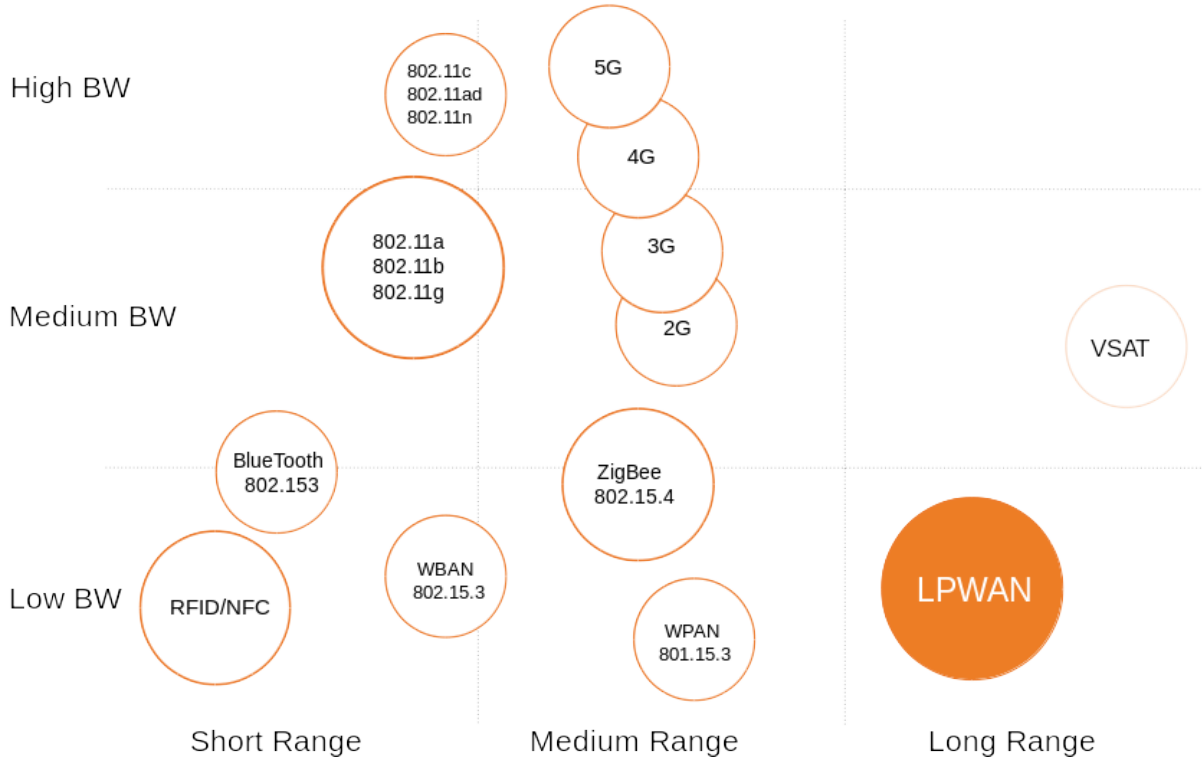
Problematiche



Necessità di ridisegnare il network layer

LPWAN

LOW POWER WIDE AREA NETWORK



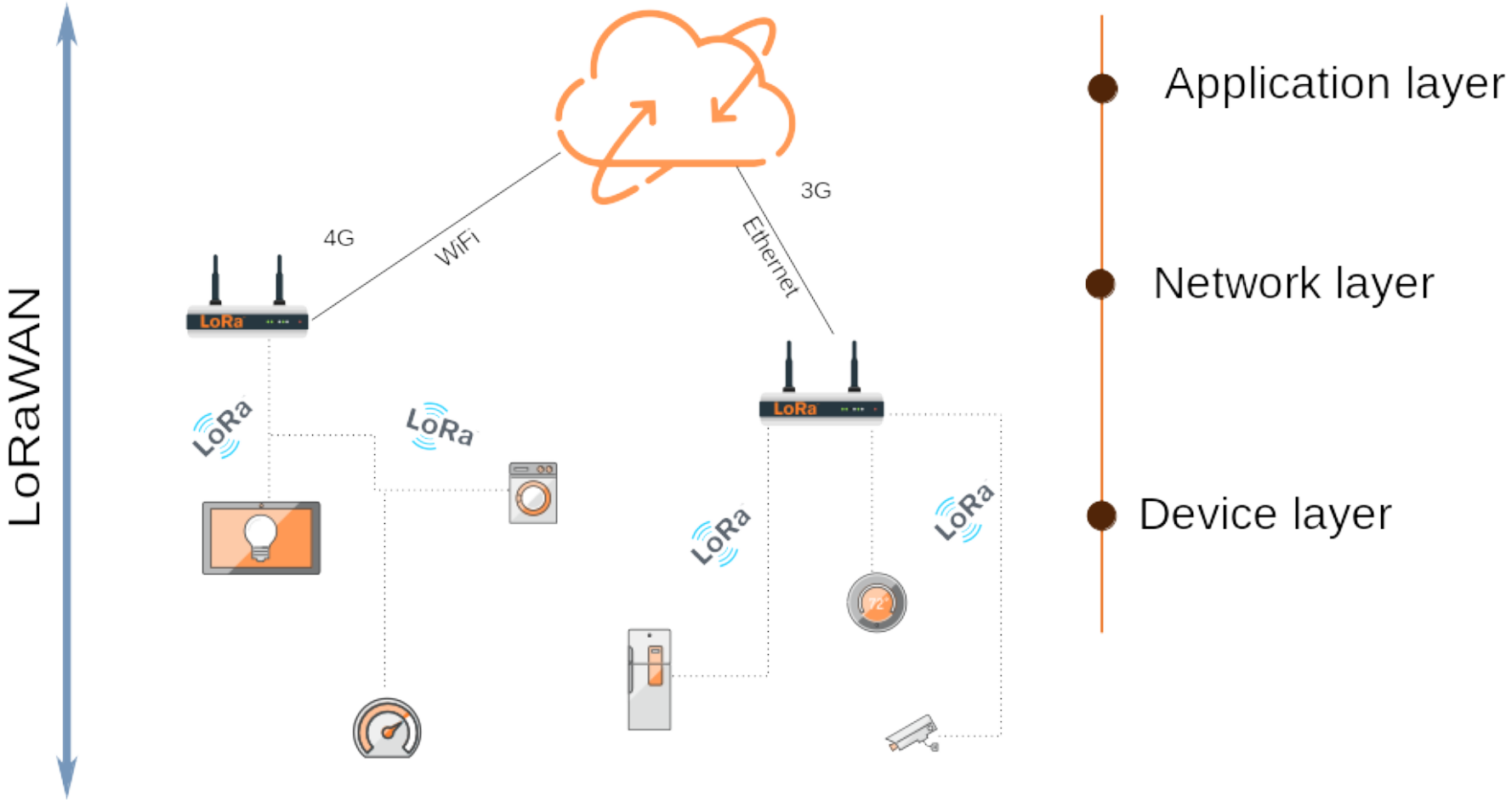
LoRa

- Layer Fisico
  - Frequenze ISM
  - 10-12 [Km]
  - Topologia a stella

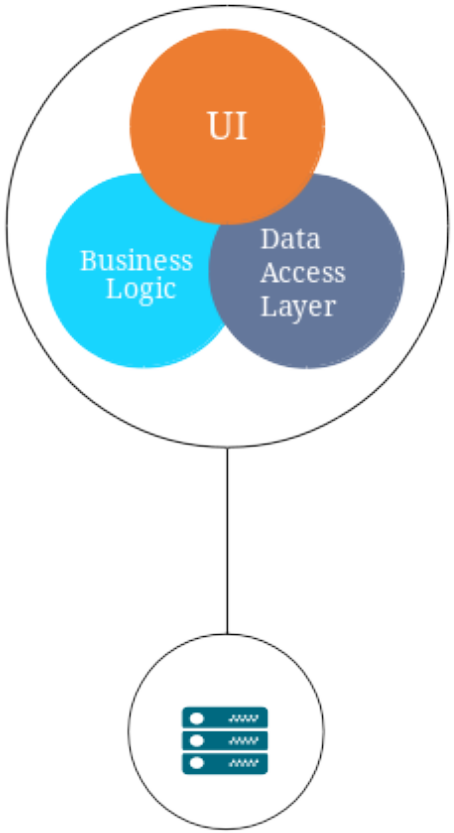
LoRaWAN

- Protocollo MAC
  - 0.3-50 [kbps]
  - Alta resistenza alle interferenze
  - Open source

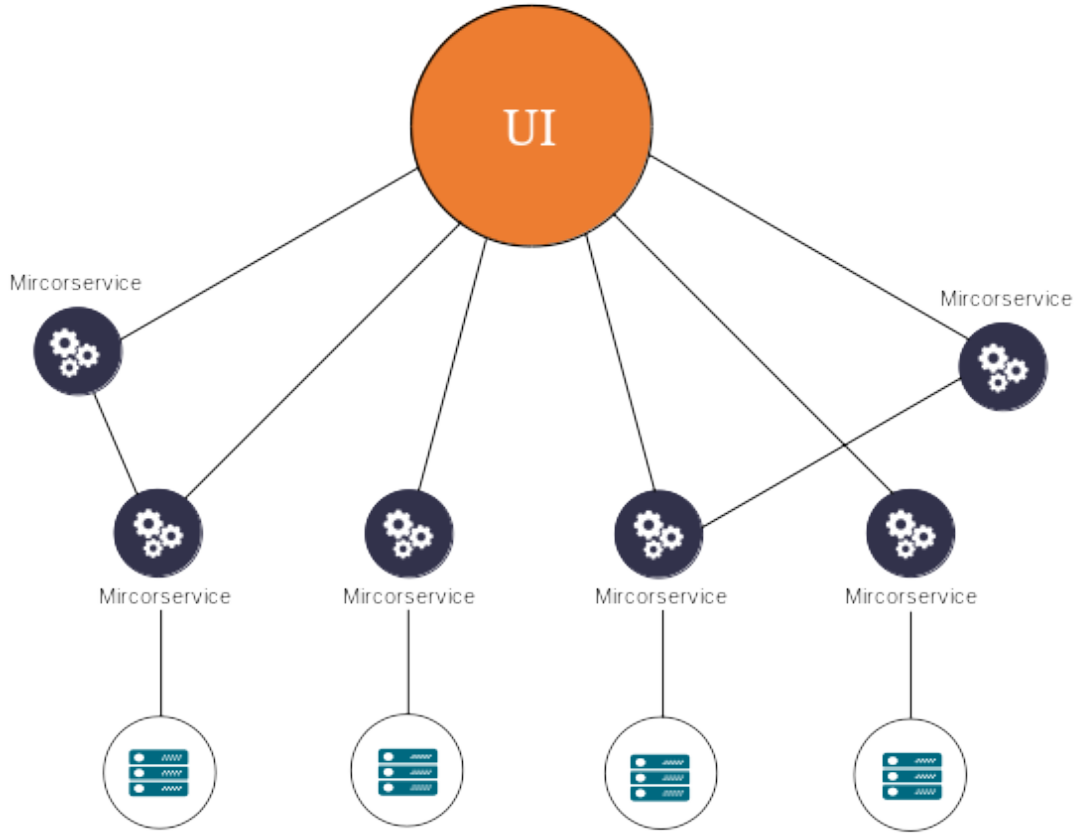
Funzionamento



Microservices

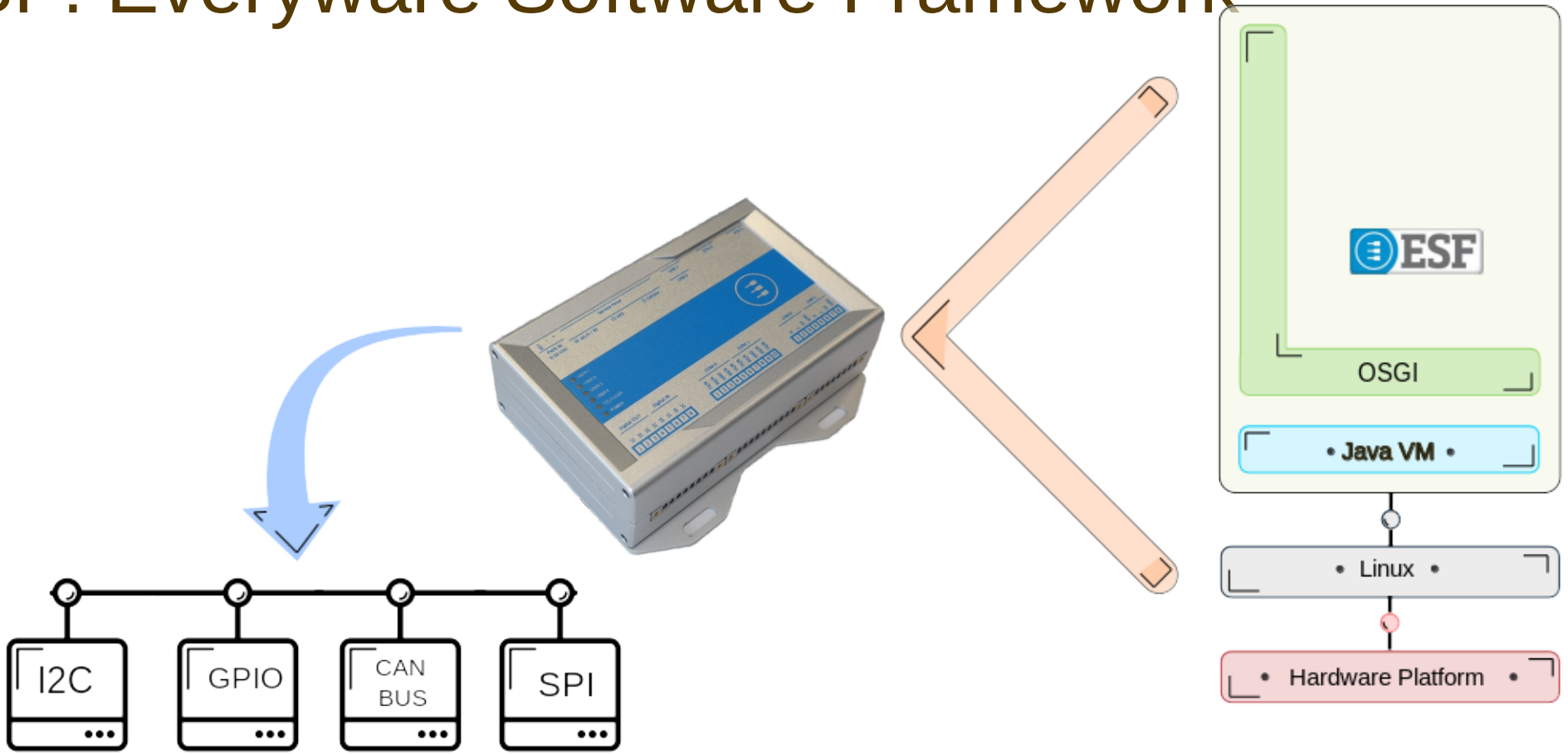


Monolithic Architecture

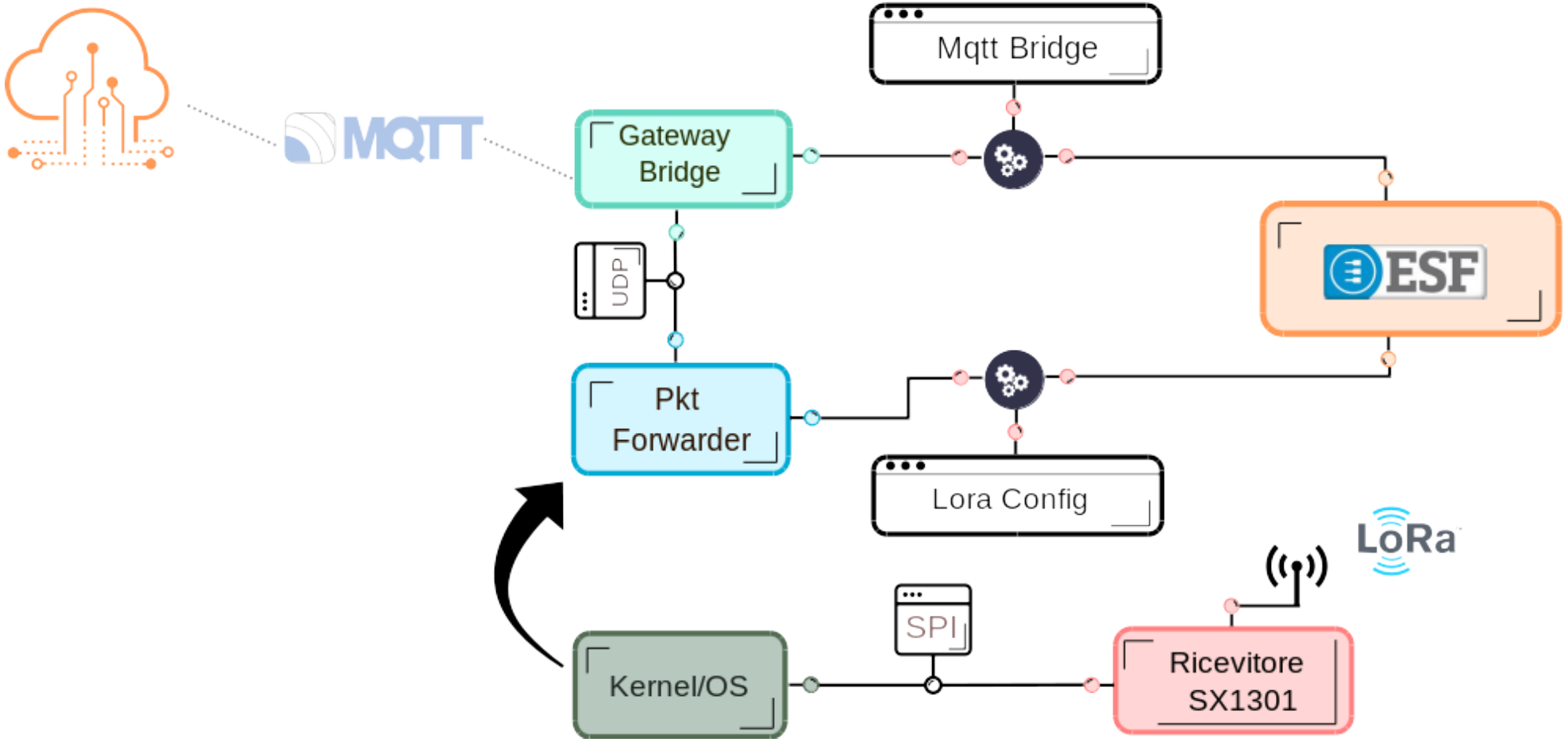


Microservice Architecture

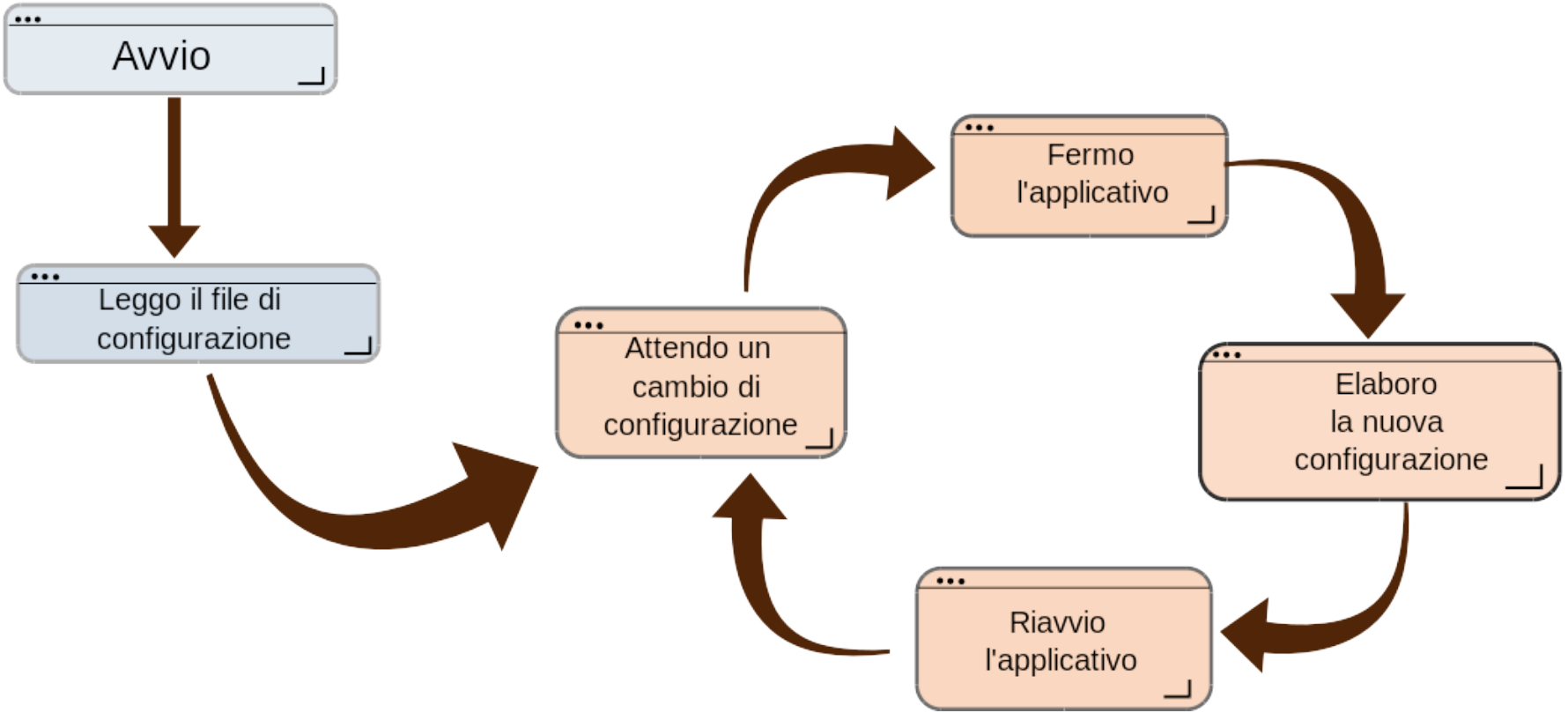
ESF: Everyware Software Framework



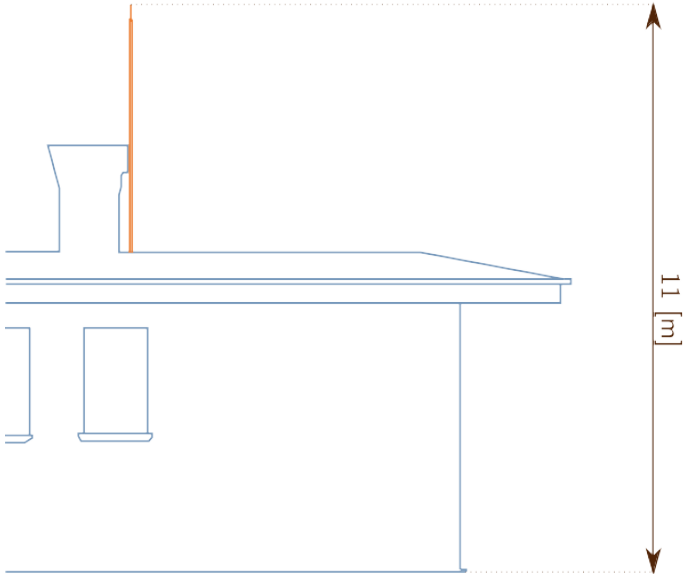
Architettura del software

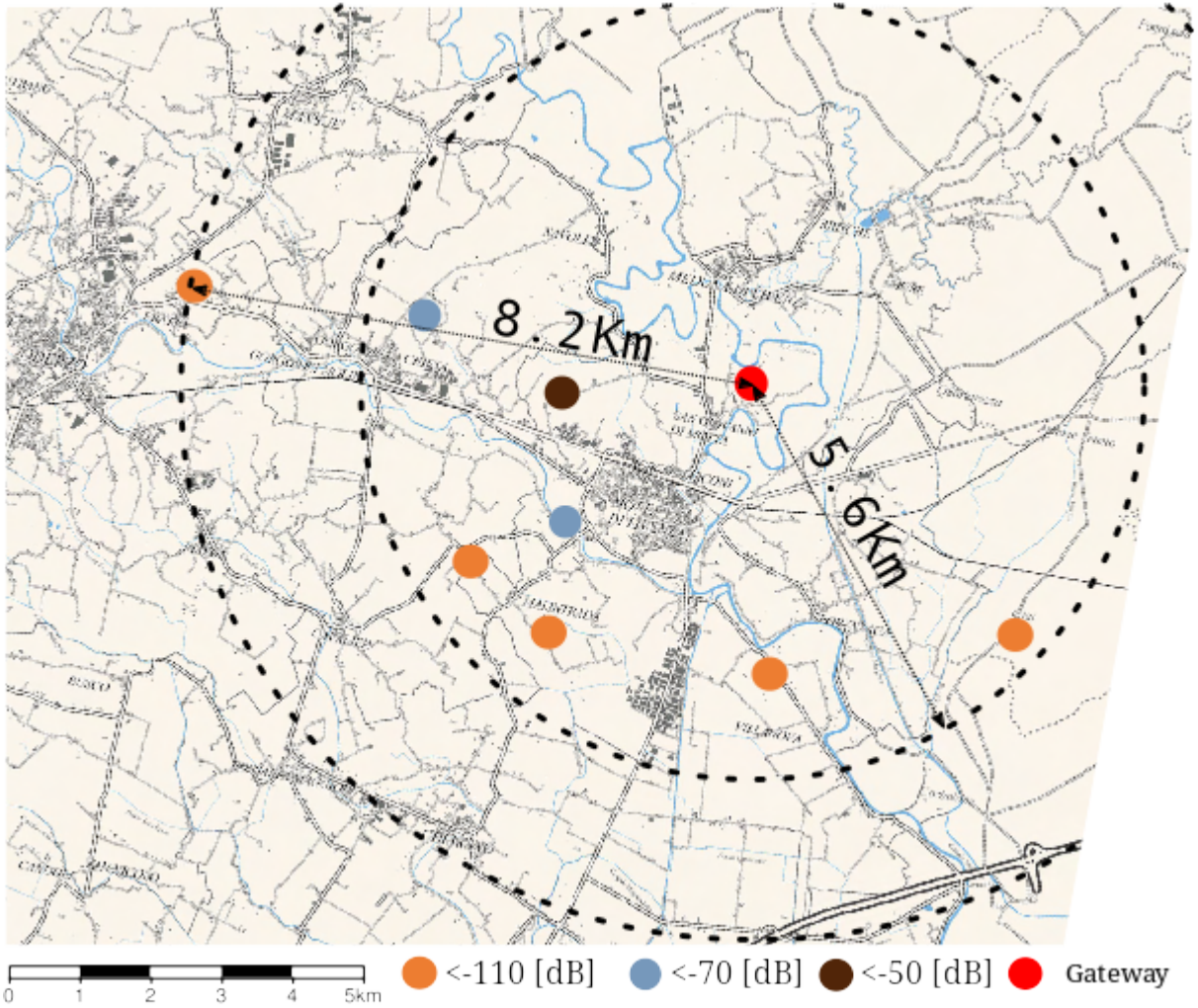


Architettura del software



Misurazioni





Grazie per l’attenzione!

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