This Communication is part of a project that has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°957258

IOTWeek

Dublin —— June 20-23, 2022

ASSIST-IoT as NGIoT reference architecture provider

An introduction

Mr. Ignacio Lacalle Úbeda (UPV – Researcher)

GLOBAL VISION:

IoT TODAY AND BEYOND

IOTForum

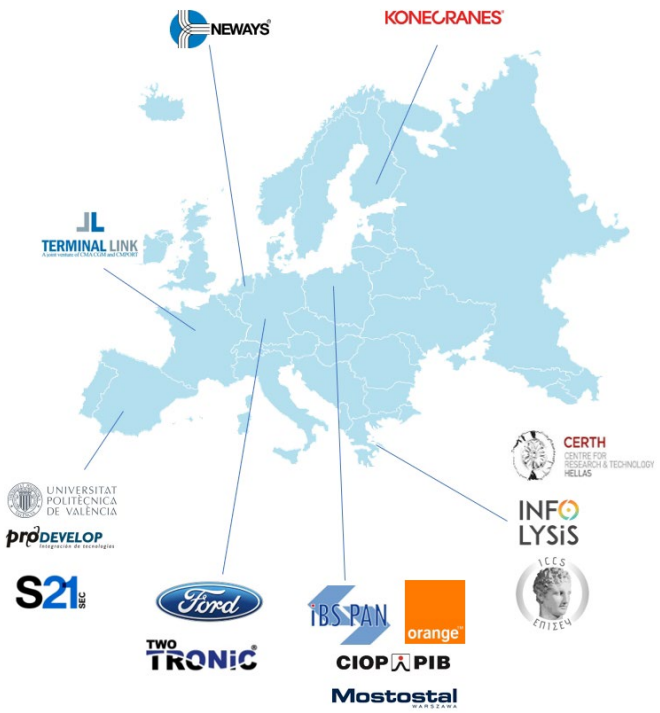
ASSIST-IoT Global figures and goals

IOTWeek Dublin June 20-23, 2022

“Architecture for Scalable, Self-*, human-centric, Intelligent, Secure, and Tactile next generation IoT”

assist-iot

Call: H2020-ICT-2020-1
Topic: ICT-56-2020
Type of action: RIA
Duration: 36 months
Start date: 1 November 2020
Partners: 15
Countries: 7



This Communication is part of a project that has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°957258

ASSIST-IoT NGIoT encompassing approach

IOTWeek
Dublin — June 20-23, 2022

Multi-plane-oriented architecture

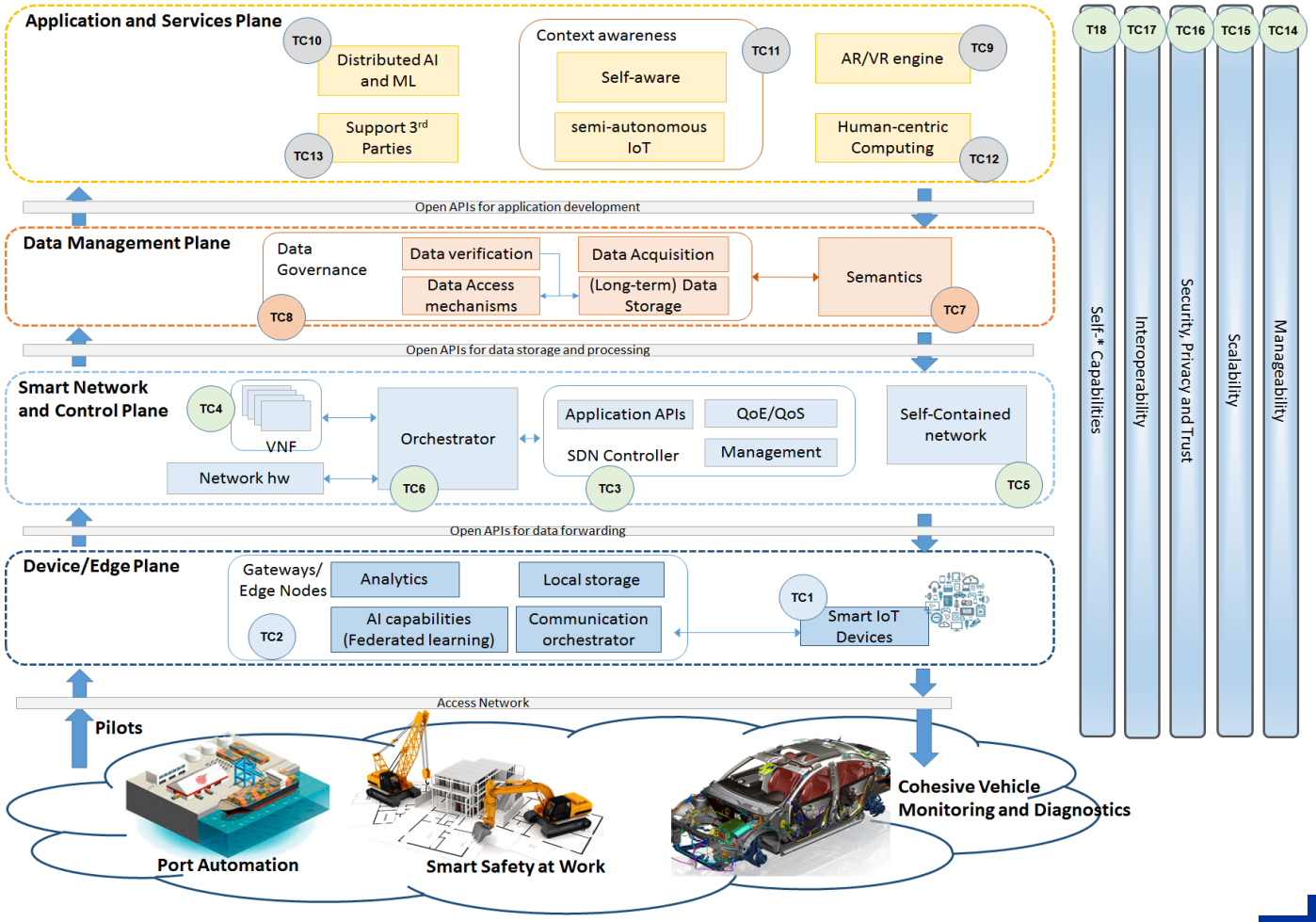
- To be integrated as:
  - Modularity and adaptability
  - Scalable
  - Decentralised
  - Human-centric
  - Interoperable ecosystem

- Supported by **key enablers** atop a smart network infrastructure, with low latency capabilities.
- Transferring **intelligence closer to the edge**.

This Communication is part of a project that has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°957258

ASSIST-IoT Architecture Vision

IOTWeek
Dublin — June 20-23, 2022

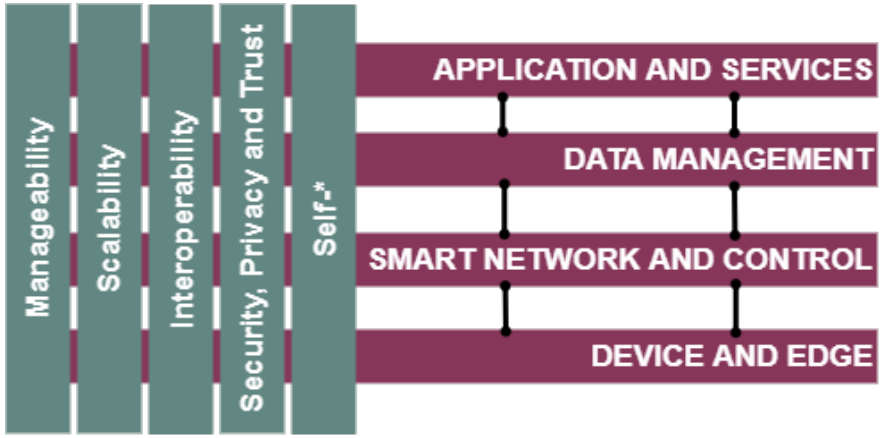


- Decentralised Architecture
- Hyper-connectivity and Interoperability
- Context-awareness
- Distributed and Decentralised Intelligence
- Distributed Data Protection and Differential Privacy
- Human-machine interfaces for collaboration and interaction
- Ambitious Pilots and Scenarios

This Communication is part of a project that has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°957258

ASSIST-IoT architecture planes

IOTWeek Dublin June 20-23, 2022



- **Multi-plane** reference approach:
  - **Horizontal planes** → Provide different capabilities
  - **Vertical planes** → Support required cross-plane technologies

Core enablers' goals

- Support **Innovative interactions** with a strong focus on human-centricity.
- Guarantee **data governance** and privacy.
- Provide **secure** tactile support for **real-time** applications.
- Facilitate **distributed AI.**

Transversal enablers' goals

- Better exploit **specific functionalities.**
- Higher potential to **modularity and adaptability.**

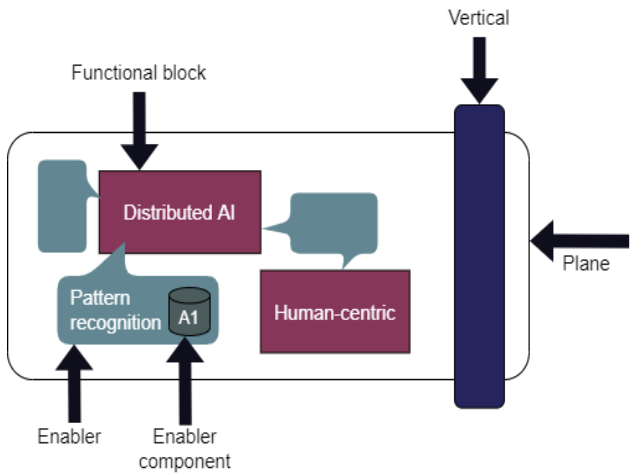
This Communication is part of a project that has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°957258

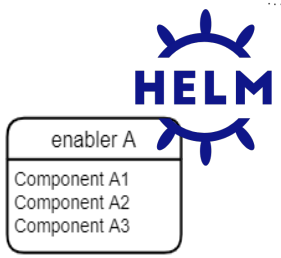
Technical approach

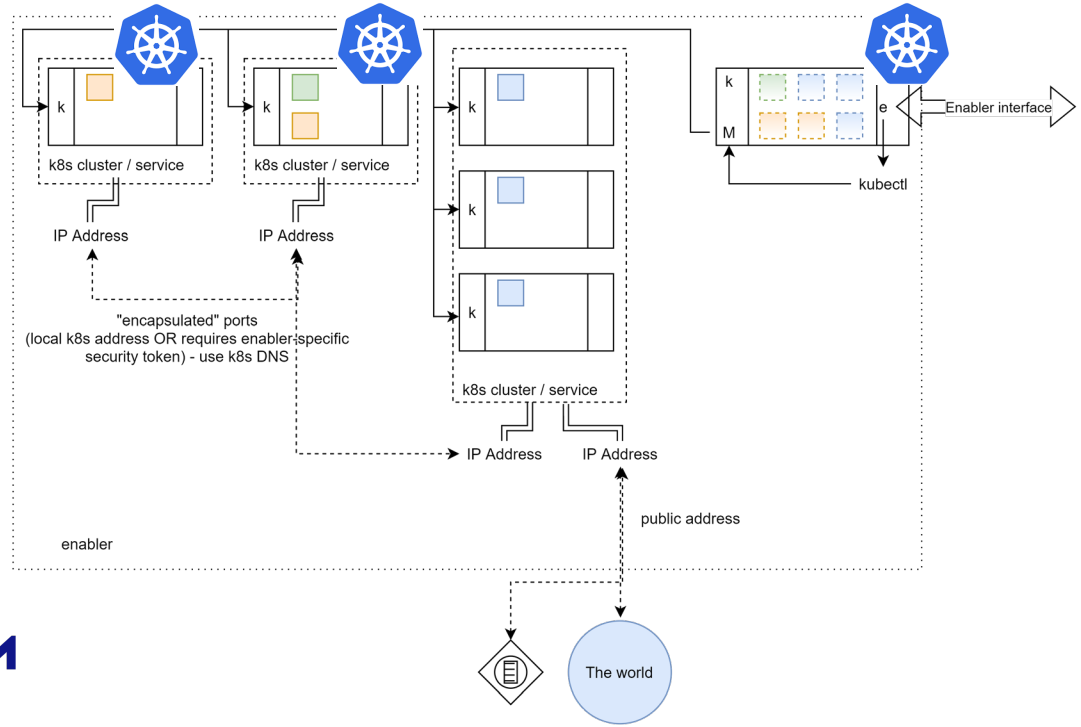
Functions and *capabilities* are delivered as **encapsulated enablers**

Encapsulated enabler: (**Helm Charts**)

- Delivers a specific *function / service* ***containerized and used via K8s (or similar) orchestration***
- May be plane-specific, or transversal
- Collection of interconnected *components* / internal (micro)services
  - Does not expose internals (encapsulation)
  - Self-managed internals
- Can use other enablers







This Communication is part of a project that has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°957258

ASSIST-IoT partners

IOTWeek
Dublin — June 20-23, 2022

UNIVERSITAT POLITÈCNICA DE VALÈNCIA

prodevelop
Integrating technologies

IBS PAN

CERTH
CENTRE FOR RESEARCH & TECHNOLOGY HELLAS

TERMINAL LINK
A joint venture of CMA CGM and CMPORT

INFOLYSIS

CIOP-PIB

Mostostal
WARSZAWA

NEWAYS

ICCS
ΕΠΙΣΕΥ

KONECRANES

Ford

TWO TRONIC

S21 SEC

orange

This Communication is part of a project that has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°957258

IOTWeek

Dublin — June 20-23, 2022

@AssistIot

/assistiot

ASSIST-IoT Project

/assistiot

ASSIST-IoT H2020 Project

Thank you!

Find more:

https://assist-iot.eu

iotweek.org

This Communication is part of a project that has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°957258