assist-iot

Architecture for Scalable, Self-*, human-centric, Intelligent, Secure, and Tactile NGIoT

ASSIST-IoT aims at designing, implementing and validating an open, decentralised **reference architecture**, associated enablers, services and tools, to assist human-centric applications in multiple verticals

Architecture

Multi-plane reference architecture based on decentralised P2P topology

APPLICATION AND SERVICES PLANE

DATA PLANE

SMART NETWORK AND DATA PLANE

DEVICE AND EDGE PLANE

MANAGEABILITY · SCALABILITY · SECURITY, PRIVACY AND TRUST · INTEROPERABILITY · SELF-*
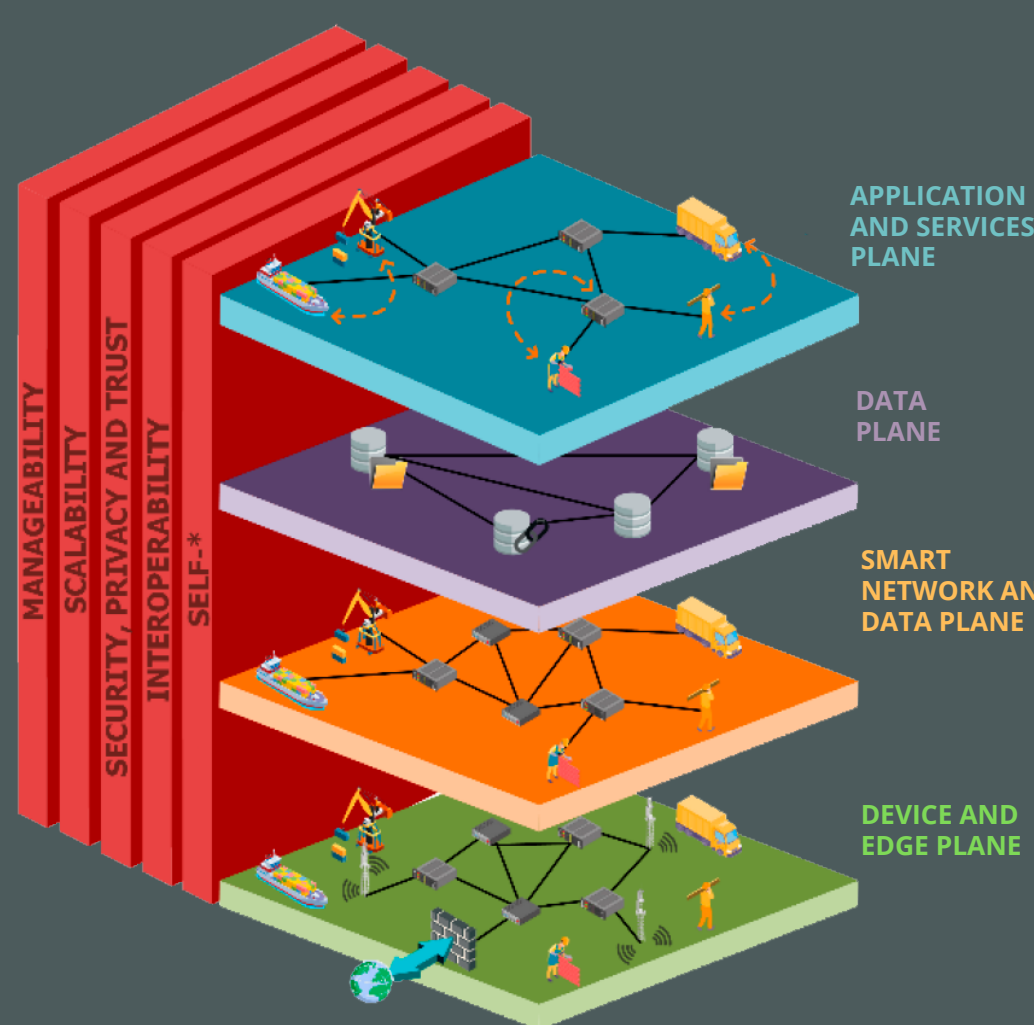
Horizontal technological components to support NGI paradigm, Tactile Internet and human-centric applications.

Cross-plane enablers to provide different capabilities that improve modularity and adaptability in environments with heterogeneous data sources.

Evolve from the traditional centralized platform-based IoT deployment to a decentralised edge approach

Port Automation Pilot

Congestion or collapse result in negative effects in port business operations. Data explotation and latency are far from optimal.

1- Automated alignment of container handling equipment (CHE)
2- Yard fleet assets location
3- Augmented Reality and Tactile Internet interfaces for fleet yard drivers
4- Remote control of CHE

Increase health and safety at the dynamic environment of a busy construction site
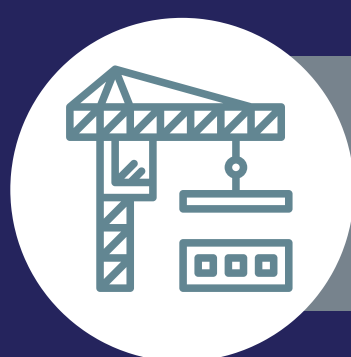
Smart safety of workers Pilot

Deficient control of machines, tools or handling equipments result in fatal accidents. High latency and limited reliability are pending areas for improvement.

1- Optimisation of safety and health plan with AR support
2- Smart actuation of intelligent IoT devices with an adjustment to individual needs
3- Identification of suspicious and undesirable behaviours within the construction site

Accelerate the development process and increase monitoring capabilities

Cohesive vehicle monitoring and diagnostics Pilot

Initiatives covering IoT deployment are difficult to implement due to heterogeneous sources. There is no application or deployment that integrates information in a interactive friendly environment to improve diagnostic tools.
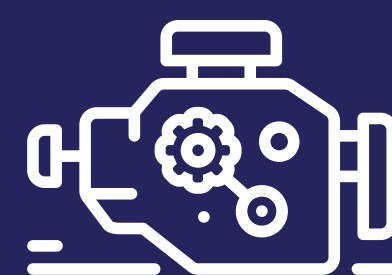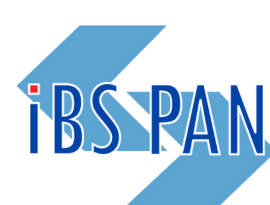
1- Advanced powertrain monitoring and diagnostics
2- Vehicle condition monitoring

SDN/NFV

5G

IoT