CORE ACTIVITIES

NETAPP MANAGEMENT PLATFORM

The development and integration of a full-stack NetApp Management Platform including state-of-the-art control and data plane solutions based on intelligent OSS layer, scalable microservices-based cloud orchestration platform, and advance user interfaces for the porting of NetApps and the monitoring of their attributes.

5G EXPERIMENTATION INFRASTRUCTURES

The deployment of industry driven 5G Experimentation Infrastructures based on heterogeneous real-world industrial fields, (covering key large-scale sectors, such as automotive, energy, and home appliances), combined with public 5G network infrastructures.

INDUSTRY 4.0 NETAPPS

The development and deployment of advanced Industry 4.0 NetApps, showcasing the support of a variety of innovative Industry 4.0 market verticals through the demonstration of advanced use cases that meet demanding Industry 4.0 and 5G KPIs (e.g. ultra-low latency, fast service deployment, high service reliability, while accommodating industrial-grade scalability demands).

BUSINESSES AND EXPLOITATION POTENTIALS

The identification of the enabling Businesses and exploitation potentials towards all the impacted market stakeholders (i.e.
1. industrial players,
2. network operators, and
3. a large pool of NetApp developing SMEs/start-ups), through a beneficial business model for all, while maintaining discrete and distinct roles for each of these stakeholders.

5G INDUCE

An open cooperative 5G experimentation platforms for the industrial sector NetApps

OVERVIEW

5G-INDUCE targets the development of an open, ETSI NFV compatible, 5G orchestration platform for the deployment of advanced 5G NetApps. The platform's unique features provide the capability to the NetApp developers to define and modify the application requirements, while the underlay intelligent OSS can expose the network capabilities to the end users on the application level without revealing any infrastructure related information. This process enables an application-oriented network management and optimization approach that is in line with the operator's role as manager of its own facilities, while it offers the development framework environment to any developer and service provider through which tailored made applications can be designed and deployed, for the benefit of vertical industries and without any indirect dependency through a cloud provider.

CONTACT US

PARTNERS

USE CASES

1 AUTONOMOUS INDOOR FLEET MANAGEMENT

Nowadays, AGVs at Ford premises only perform for some indoor functions, guided through lines. Specific needs though have been identified for connectivity and modernization of the AGVs fleet that would allow optimizing some of the processes of the logistics distribution chain for items, among and within the factory's warehouses and between these and the suppliers' warehouses.

2 SMART OPERATION BASED ON HUMAN GESTURE RECOGNITION

Natural gesture control and intelligent monitoring will revolutionize the industrial experience and security. The use of the smart operation system provides two main advantages (i) the operator does not need to wear special equipment so that no extra time is spent; (ii) no costs on equipment are expected, since no special features are requires.
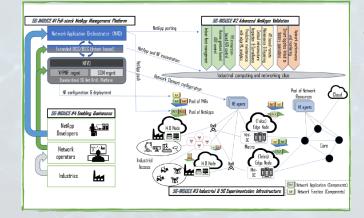
3 VR IMMERSION AND AGV CONTROL

Through the immersed experience, the industrial operator will obtain a high-quality interactive view of what is happening in each AGV. Moreover, this use case will additionally bring to the industry extra beneficial services such as security or person recognition.

4 ML-SUPPORTED EDGE ANALYTICS FOR PREDICTIVE MAINTENANCE

Predictive maintenance is mostly performed with data not being actually real-time nor finegrained, using aggregations and utilising centralised infrastructures. Thus decision accuracy suffers as ideally computations should be performed at the edge to allow real-time monitoring based on analytics running on edge nodes, and be push instant notifications.

5 INSPECTION AND SURVEILLANCE SERVICES FOR CRITICAL INFRASTRUCTURES

The effective inspection and surveillance of critical industrial infrastructures is important in order to prevent accidental or malicious damages. The goal for inspection is to identify early corrosion or mistreatment signs or even critical operation levels (e.g. in storage tanks or pipelines). The goal for surveillance is to identify unwanted and potentially malicious presence of humans or even animals.

6 AR-BASED REMOTE MAINTENANCE, REPAIRING AND UPGRADE

The idea of this use-case is to deliver new and advanced safety and security features for Remote Assistance in maintenance applications. Minimum latency and high bandwidth allow to run demanding audio or image processing algorithms on HD/UHD video/audio streams, e.g. to anonymize confidential areas or faces and provide live speech translation services.

7 SMART LOGISTICS OVER SUPPLY CHAIN LINKED WITH FACTORY OPERATIONS

Today the supply chain approach is structured on a human interactive scenario monitored on legacy ERP systems. Key activities include storing of resources for supplying remotely located facilities (PPC case) in a scheduled manner and supply of goods from multiple providers Whirlpool case). Item damage and location cannot be identified, especially in case of intermodal transport.

8 DRONE ASSISTED NETWORK PERFORMANCE AND COVERAGE MONITORING FOR INDUSTRIAL INFRASTRUCTURES

Industrial and Smart factory communications infrastructures impose challenges in terms of 5G network operational performance and technological specifics (e.g. indoor/outdoor facilities with EM obstacles and high dynamics in interference). Smart monitoring for the support of high availability and reliability, ultra-low latency and mission critical operation are of paramount importance.