Towards an intelligent, AI-native 6G network

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Workshop on "Innovation and intelligence at the edge: the value of secure ICT services"

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NEXTWORKS

HEADING THE FUTURE

Company Overview & R&I&D technology areas

Base

Pisa

Ideal location for the development of advanced technologies

Nextworks maintains excellent links with the local academia

Established

2002

Core team with 20+ years of experience in ICT, telecommunications, control & automation

R&D Expenditure

~20%

**(out of 7 M€ turnover)
The time gap between technological innovation and obsolescence is narrowing, so it's mandatory to invest in research and innovation**

5G/6G

### 5G/6G, AI/ML, NFV, MEC, SDN ARCHITECTURE AND TOOLS

- Network data analytics and AI/ML-based orchestration, slicing, and automation (ETSI ZSM & ENI) in cloud-native infrastructures

- Network security management

- Network Function Virtualization (NFV) and Multi-access Edge Computing (MEC)

- Software Defined Networking (SDN), OpenDaylight and TeraFlowSDN controller and vRAN controller (O-RAN)

- NTN integration

- OpenStack, Kubernetes

CLOUD-NATIVE IoT SOLUTION DESIGN AND DEVELOPMENT

- Smart Home/Building solutions

- Smart Factories solutions

- Joint data and resource control in device/edge/cloud continuum

- Cyber-physical security for IoT platforms

- Big Data analytics in the Edge/Cloud for predictions and optimizations

Key Concepts

- Cognitive Closed Lo[...] optimization

- Distributed and perv[...] through AI-as-a-Servi[...]

- Network exposure e[...] MLOps APIs

- Distributed intent ma[...] translation and close[...]

- Network Digital Twins[...] coordination

- Cross-stakeholder Ne[...] management and ex[...]

- DevSecOps to offer s[...] multiple providers

Relevant standards
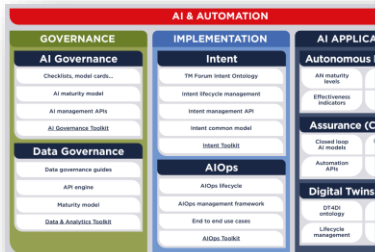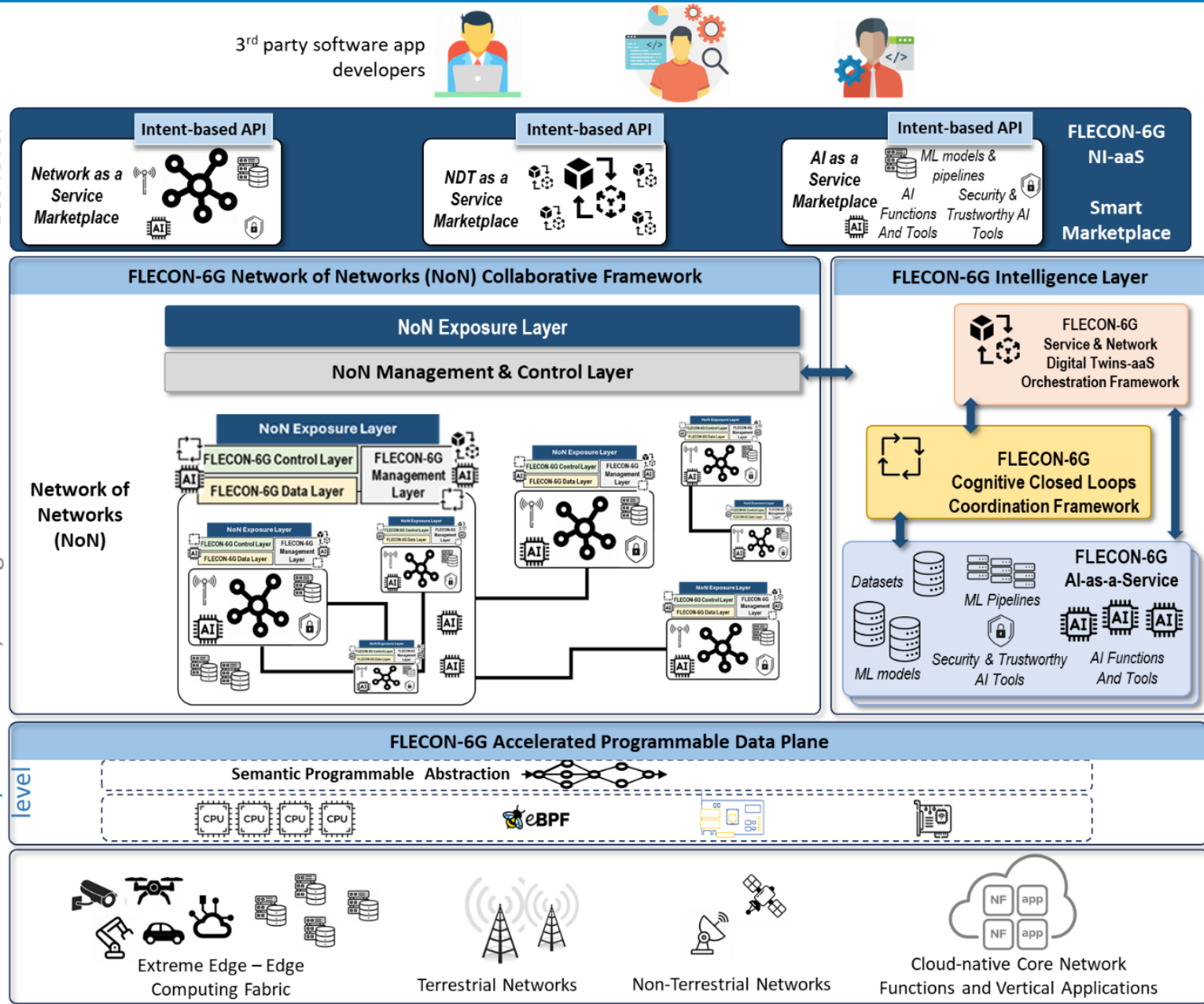
Thanks!

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