the**Networking** Channel

Panel Discussion, May 19<sup>th</sup> 2021

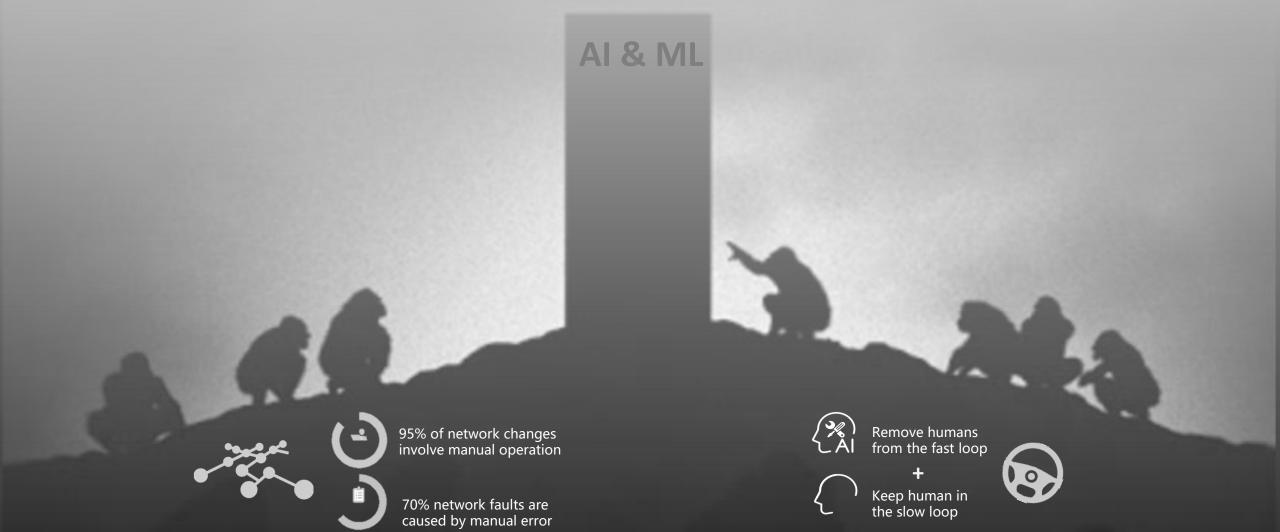
Emerging Trends in AI/ML and

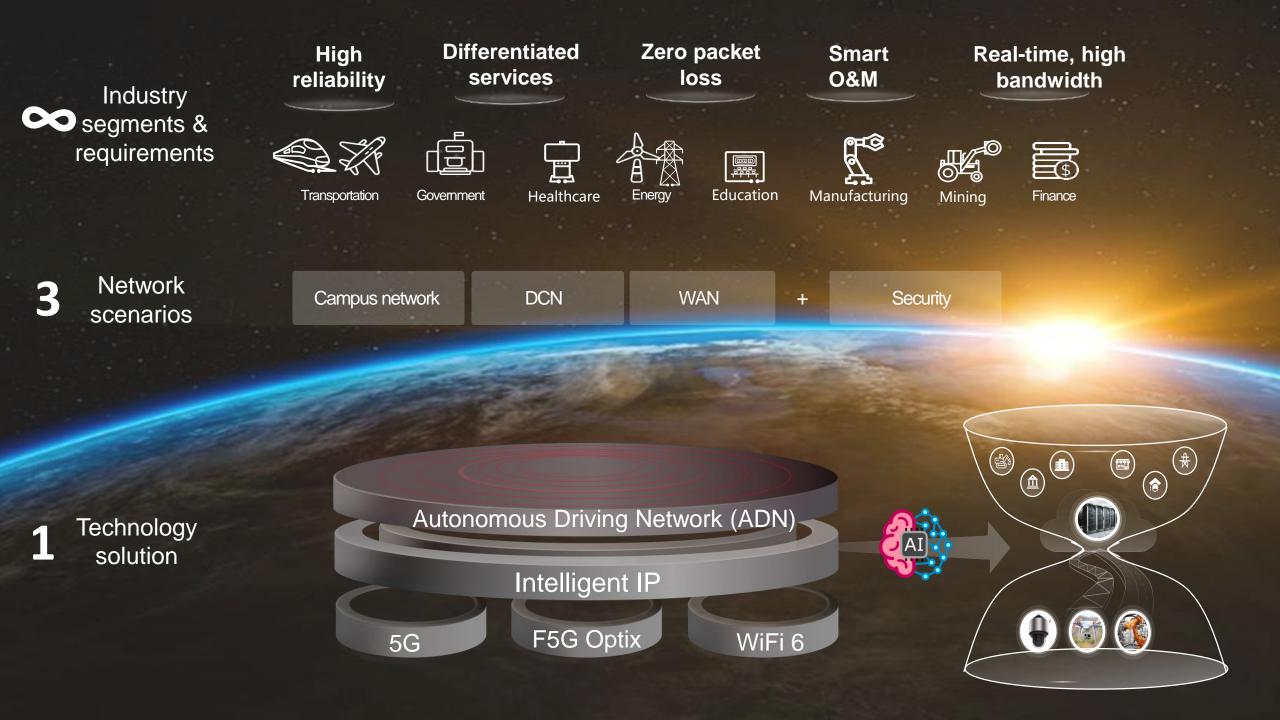
Implications for Networking Research

Dario Rossi dario.rossi@huawei.com

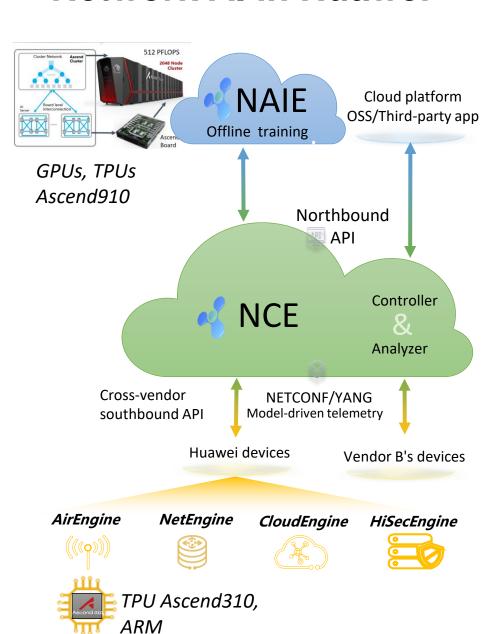
Huawei, Network AI CTO Director, DataCom Lab, Paris Research Center

## Autonomous driving network





## **Network AI in Huawei**







Network-wide analysis, inference & closed-loop optimization



Measurement, edge inference & real-time decision-making

## Opportunity & challenges

Schedulers
Al-aware job
schedulers

General:
Multi-vendor
graph/models,
Transfer learn

Specific:
Deep Models
Quantization &
Distillation

*Training:* 

**Federated** 

Learning

Control:
large-scale,
data-driven,
explainable
deep RL

Deploy:
Cloud vs
edge vs fog
vs mist ...

Real-time: inference & control

Model selfawareness, Self-supervised learning XAI O&M:
Unsupervised
Fault detection,
Semi-supervised
repair

Keep humans in the slow loop

Incremental & continuous learning

Remove humans Al from the fast loop

Net

4AI

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## Thanks



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