

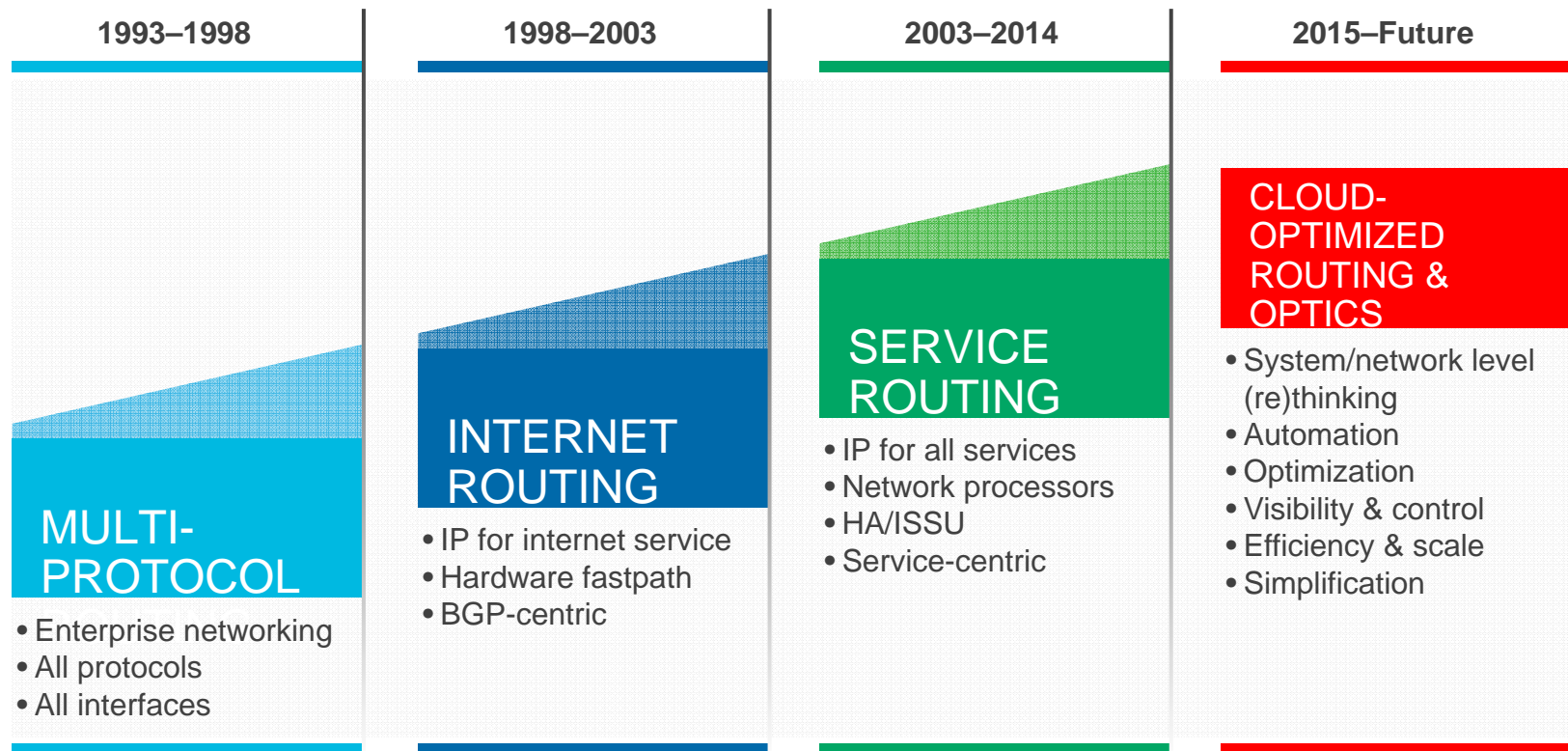
NOKIA

IP Networks for the Cloud Era

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IP technology evolution – 4 waves of innovation



New demands on networks

Expanding requirements for Cloud, IoT and 5G demands a new architecture

Zero Downtime, Enhanced Security & QoS are standard features today

Massive capacity

to provide a great experience consistently

Massive connectivity

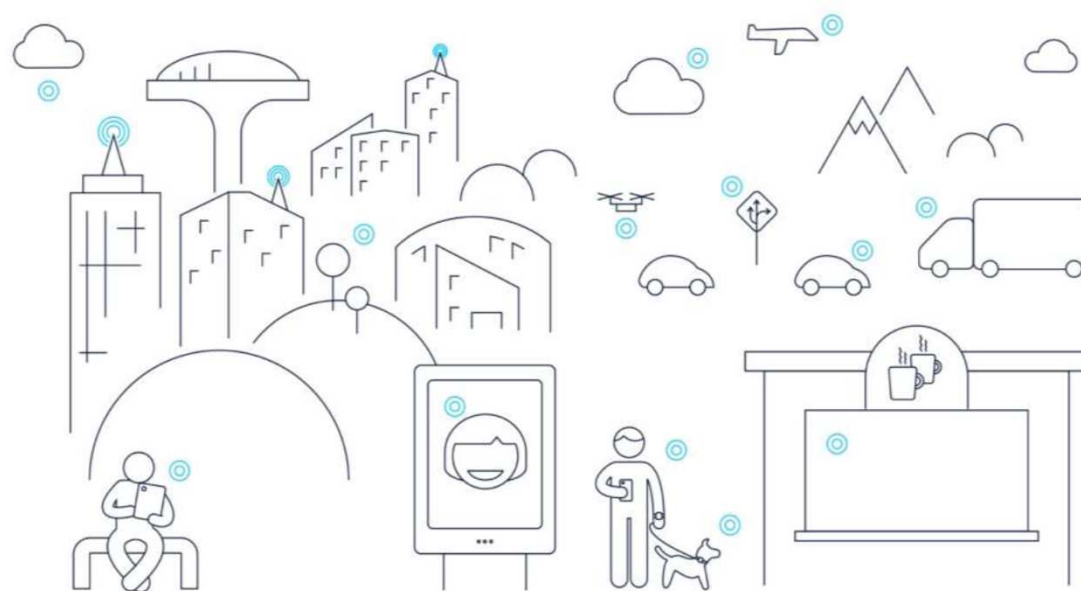
to connect billions of devices

Massive capability

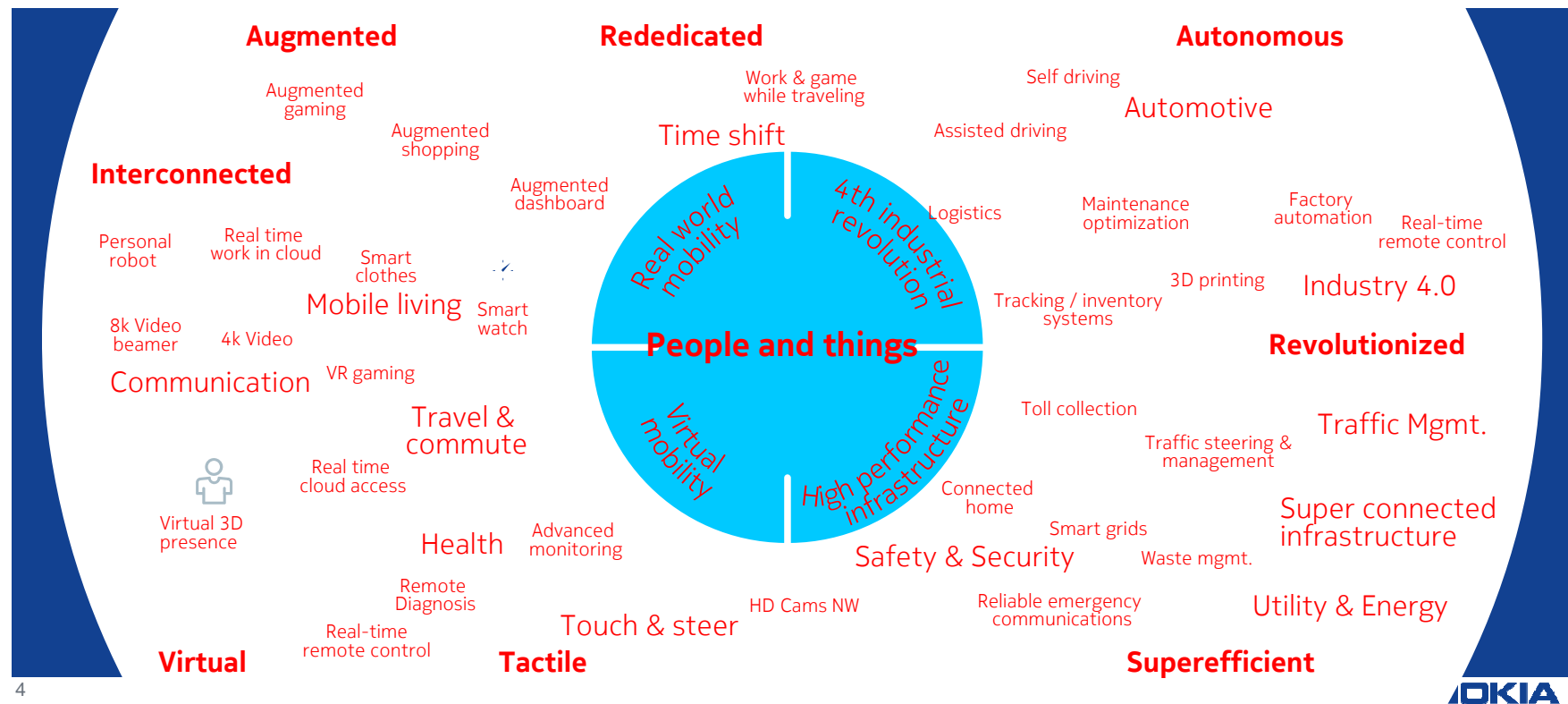
to deliver diverse and extreme services and convergence

Massively consumable

to make services as easy to buy and use as cloud compute

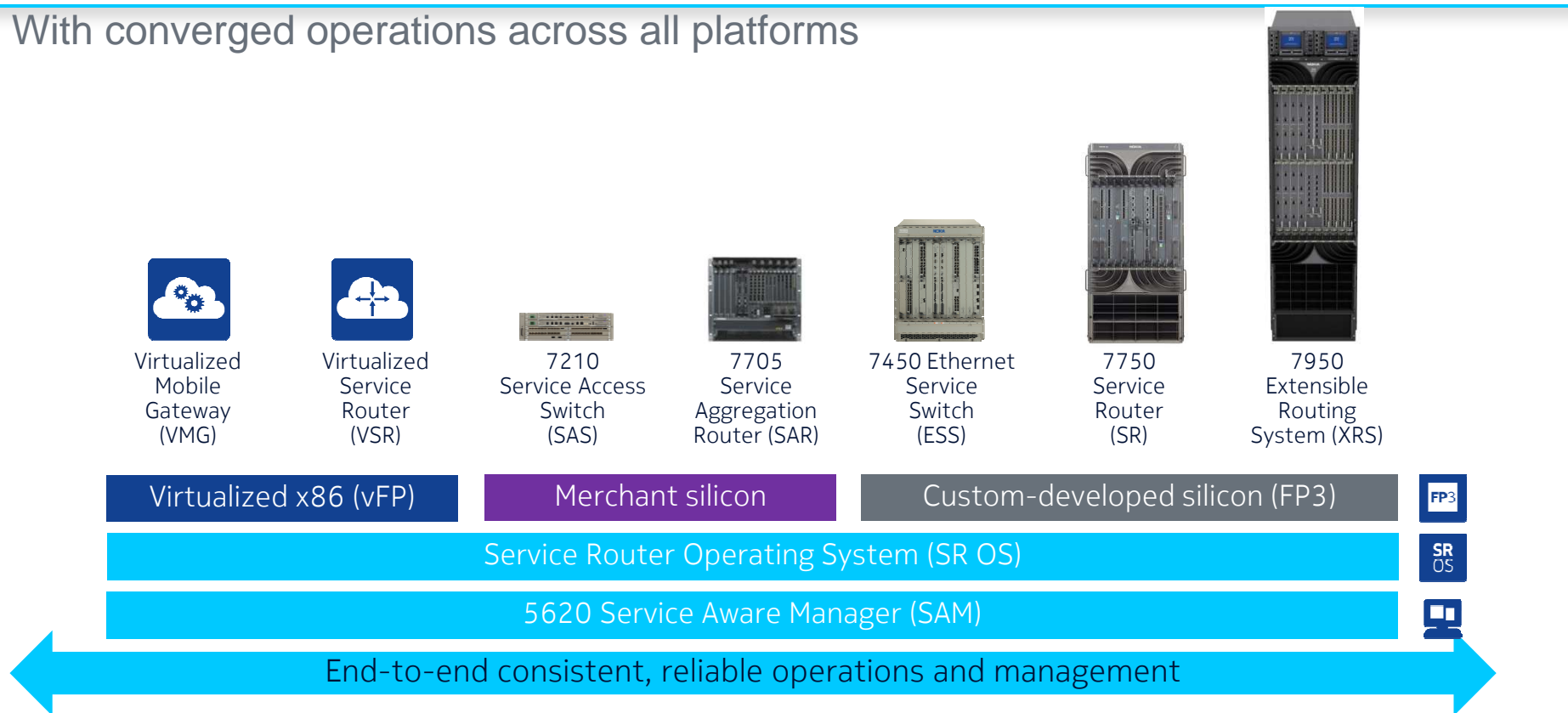


Drivers for architecture evolution: Rise of the Machines



Nokia IP portfolio: Core, edge, access and aggregation

With converged operations across all platforms



Network Function Virtualization in IP

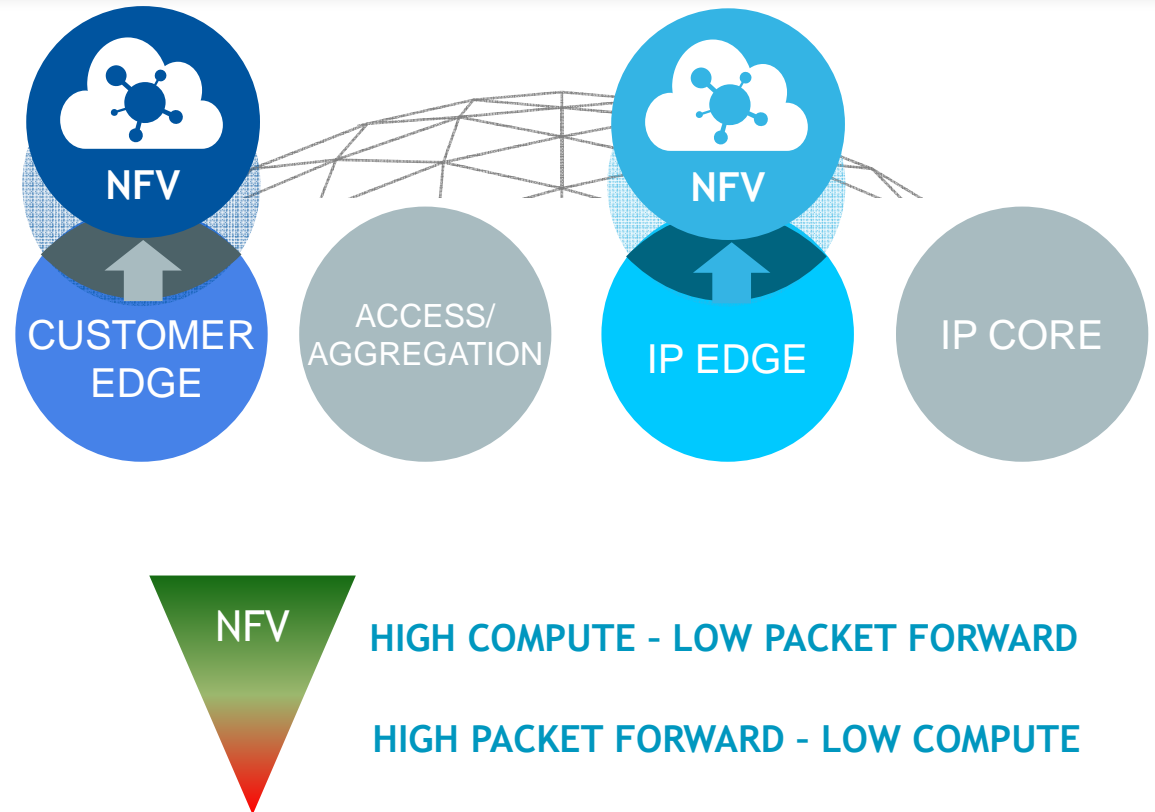


- **WHY NFV?**

- Agility & speed
- Elasticity & Automation
- Homogenization of physical structure (operational impact)

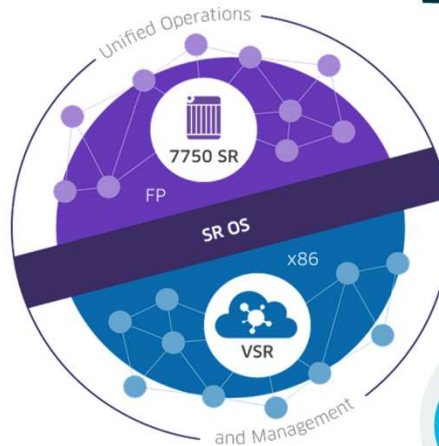
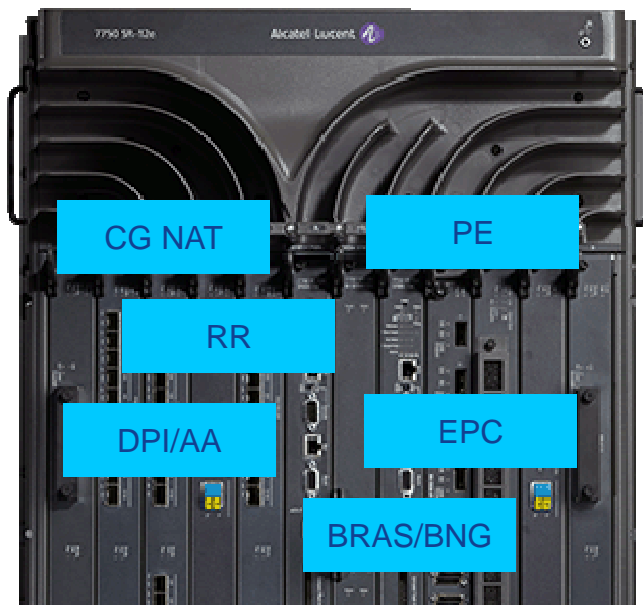
- **WHERE TO START?**

1. High compute (vRR...)
2. vEPC, value added services (vAA, vCG-NAT...)
3. VSR as edge

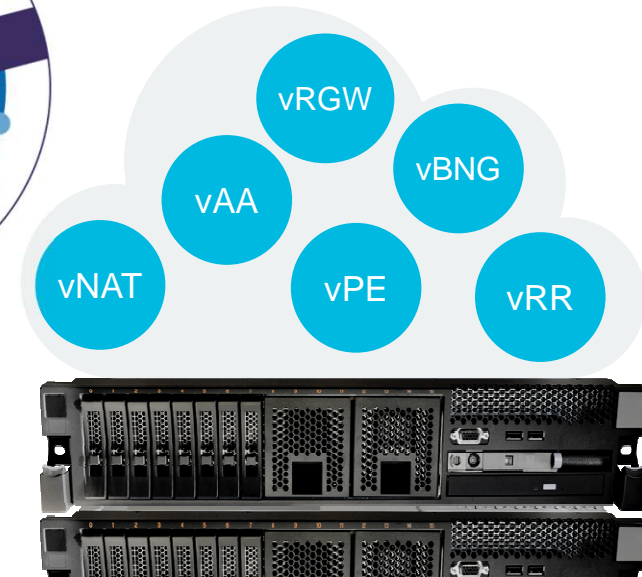


NETWORK FUNCTION VIRTUALIZATION (NFV)

SPECIALIZED CUSTOM ROUTING NPUs



VIRTUALIZED x86 ARCHITECTURES



Decouples networking functions from specialized hardware
Standard IT virtualization technology to offer VNFs on x86 servers

Nokia Telco Cloud

Key takeaways

Strong
commitment to
open standards and
initiatives

**Support for open
standards**

Designing SW to
take the most of
the Telco Cloud
infrastructure

**Cloud optimized
SW design**

Building the future
infrastructure to
support new
operator business
models and
services

**Driving towards
IoT and 5G**

Since everything is in the Cloud, we'd better learn to fly...

