WHERE DO YOU GO NFV?

ERICSSON

IT STARTED WITH...

Innovation

"Providing cloud services to enterprise"

Senior VP of Technology

Speed
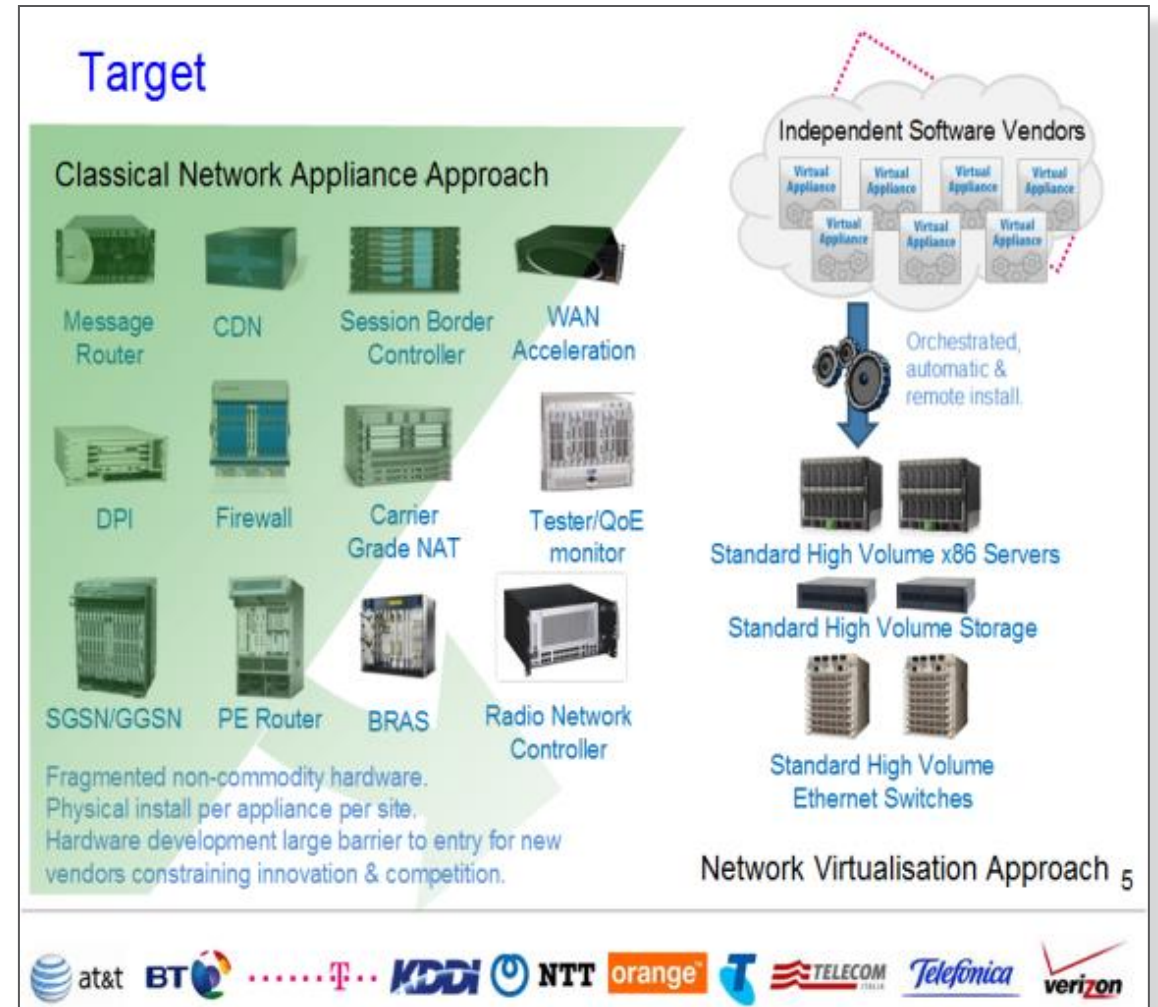
"Bring products to market much quicker"
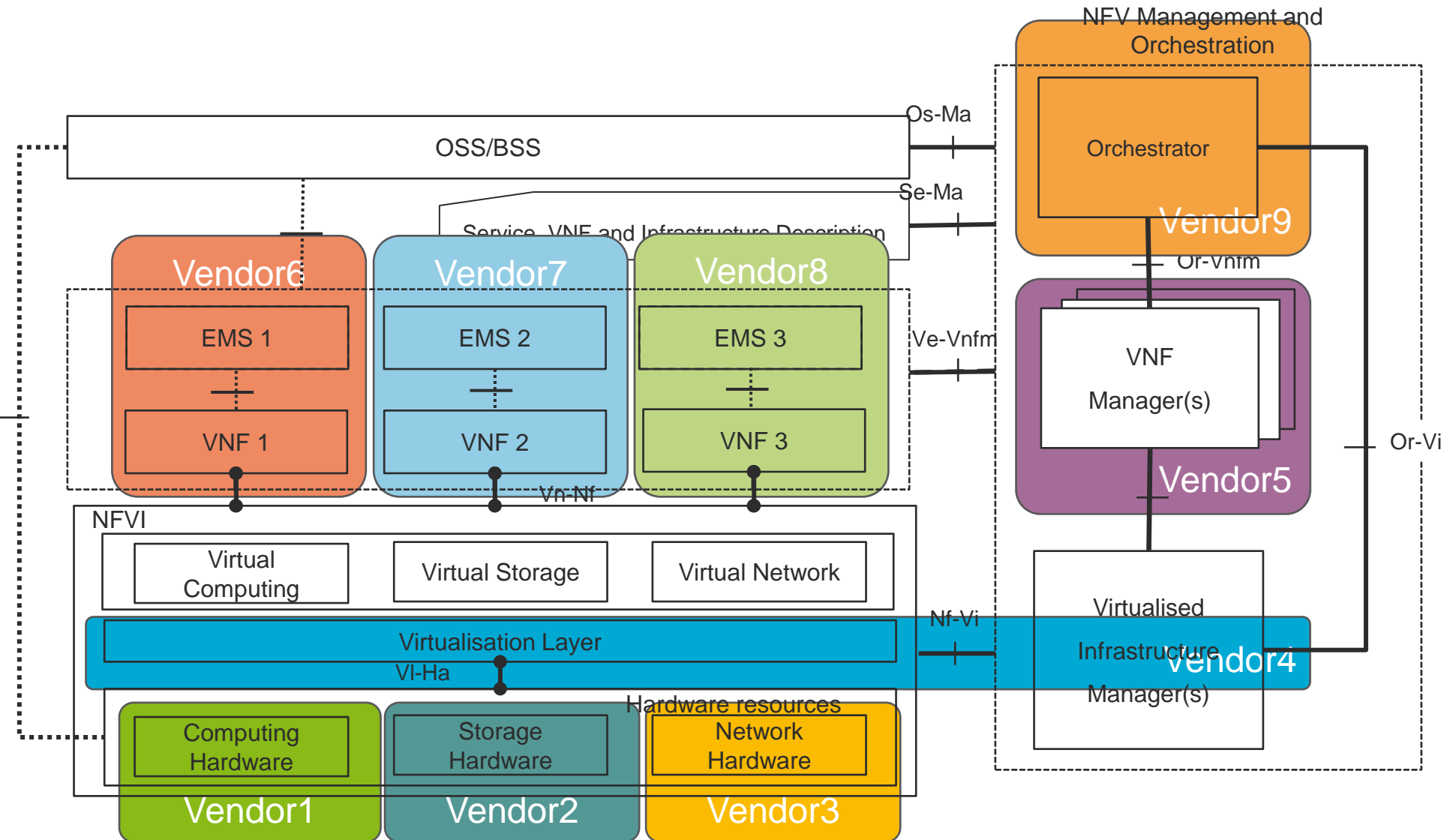
Executive Director

Efficiency

"Radically simplified network"

CTO

Target

Classical Network Appliance Approach

Message Router | CDN | Session Border Controller | WAN Acceleration

DPI | Firewall | Carrier Grade NAT | Tester/QoE monitor

SGSN/GGSN | PE Router | BRAS | Radio Network Controller

Fragmented non-commodity hardware.
Physical install per appliance per site.
Hardware development large barrier to entry for new vendors constraining innovation & competition.

Independent Software Vendors

Virtual Appliance (×8)

Orchestrated, automatic & remote install.

Standard High Volume x86 Servers

Standard High Volume Storage

Standard High Volume Ethernet Switches

Network Virtualisation Approach 5

at&t BT ·······T··· KDDI NTT orange TELECOM Telefónica verizon

ETSI NFV ARCHITECTURE

NFV Management and Orchestration

OSS/BSS

Os-Ma

Orchestrator

Vendor9

Se-Ma

Service, VNF and Infrastructure Description

Vendor6

Vendor7

Vendor8

EMS 1

EMS 2

EMS 3

Ve-Vnfm

Or-Vnfm

VNF Manager(s)

VNF 1

VNF 2

VNF 3

Vendor5

Vn-Nf

Or-Vi

NFVI

Virtual Computing

Virtual Storage

Virtual Network

Nf-Vi

Virtualised Infrastructure Manager(s)

Virtualisation Layer

Vl-Ha

Vendor4

Hardware resources

Computing Hardware

Storage Hardware

Network Hardware

Vendor1

Vendor2

Vendor3

Is it simpler?

Is it cheaper?

Is it faster?

Is it easier to operate?

Does it boost innovation?

CHALLENGES

TODAY

- LCM of highly heterogeneous stacks

- End-user service quality assurance

- Centralization and multi-country vs. Legal compliance

- Organizational changes

- Datacenter HW efficiency

- E2E and holistic management covering native, NFV and SDN

DEMAND OF 5G

- Scalability vs management complexity

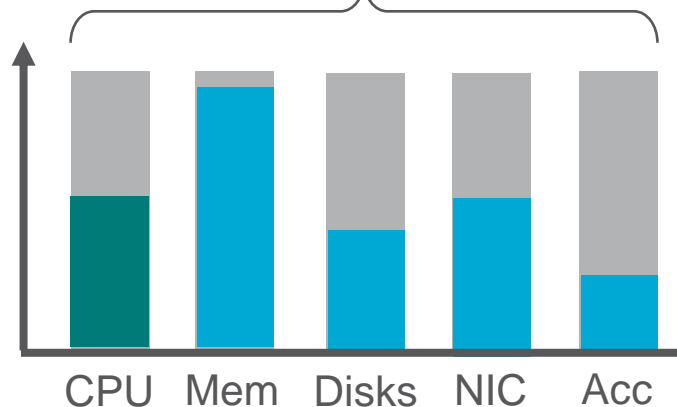- Distributed cloud to meet 1ms target

- Hybrid cloud

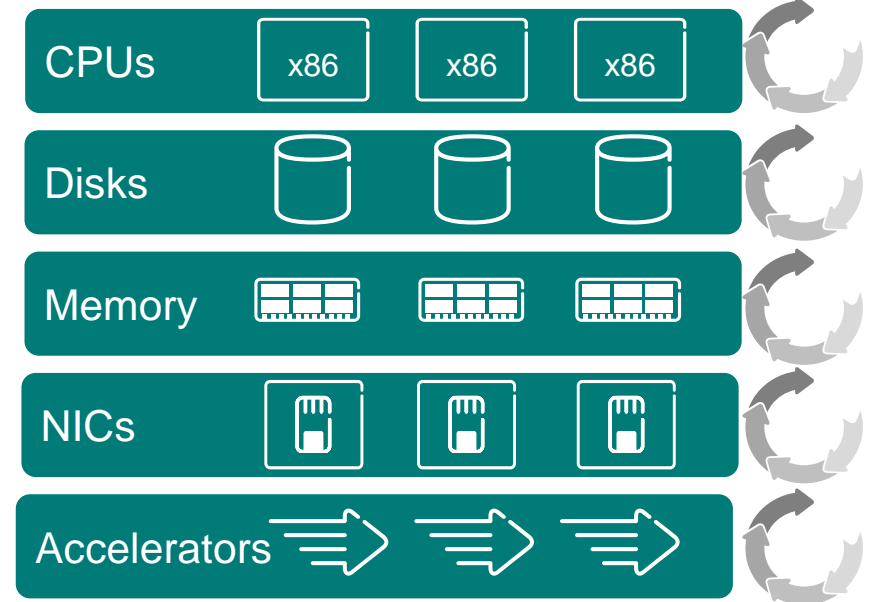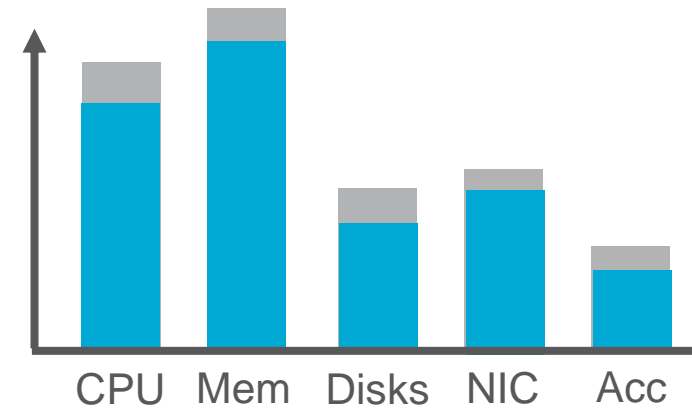# A DISAGGREGATED ARCHITECTURE TO KEEP YOU LEAN

Today's servers
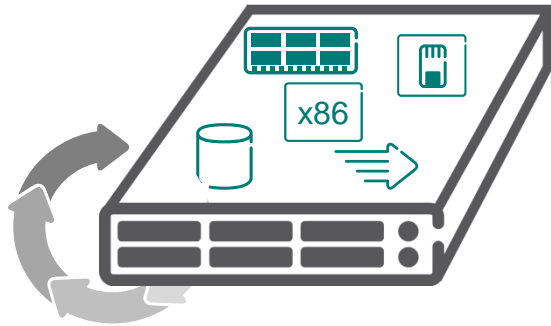
~80% of HW CAPEX & power consumption

Disaggregated Datacenter

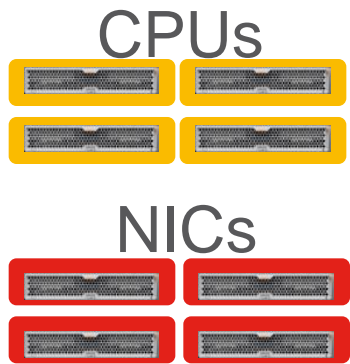| CPUs | x86 | x86 | x86 |

| Disks |

| Memory |

| NICs |

| Accelerators |

Un-used hardware

Workload usage

CPU Mem Disks NIC Acc

CPU Mem Disks NIC Acc

HDS 8000 HW SOLUTION

Command center

CPUs

RAMs

NICs

Disks
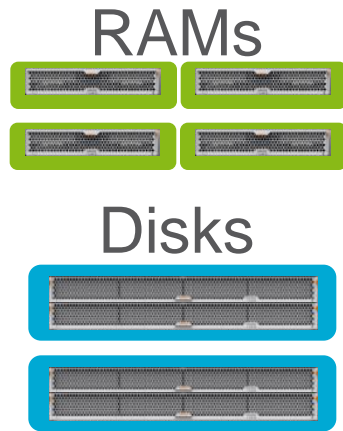
Disaggregate and pool (Intel RSA)

Optical interconnect
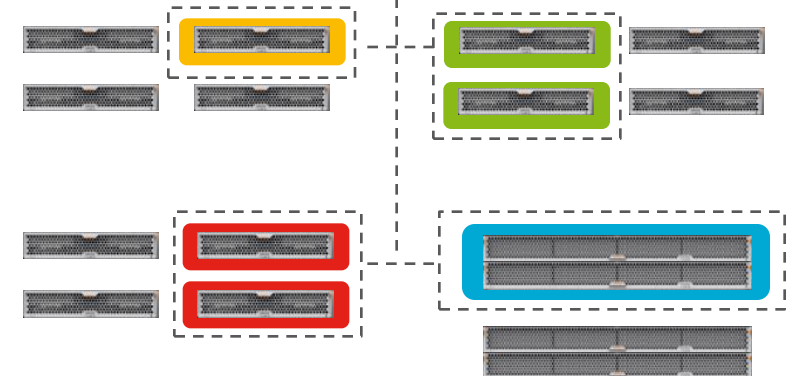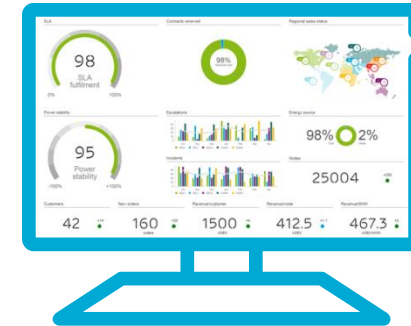
Software defined composition

ONE POOL, ALL WORKLOADS

Telecom Cloud	IT Cloud	Commercial Cloud
Network functions	OSS/BSS, Media & IT functions	Commercial XaaS Offerings

Workload optimized, dynamically provisioned datacenter hardware

HDS Command Center & RSA

Optical Backplane

CPU Pool	Memory Pool	Storage Pool	Networking Pool	Accelerator Pool