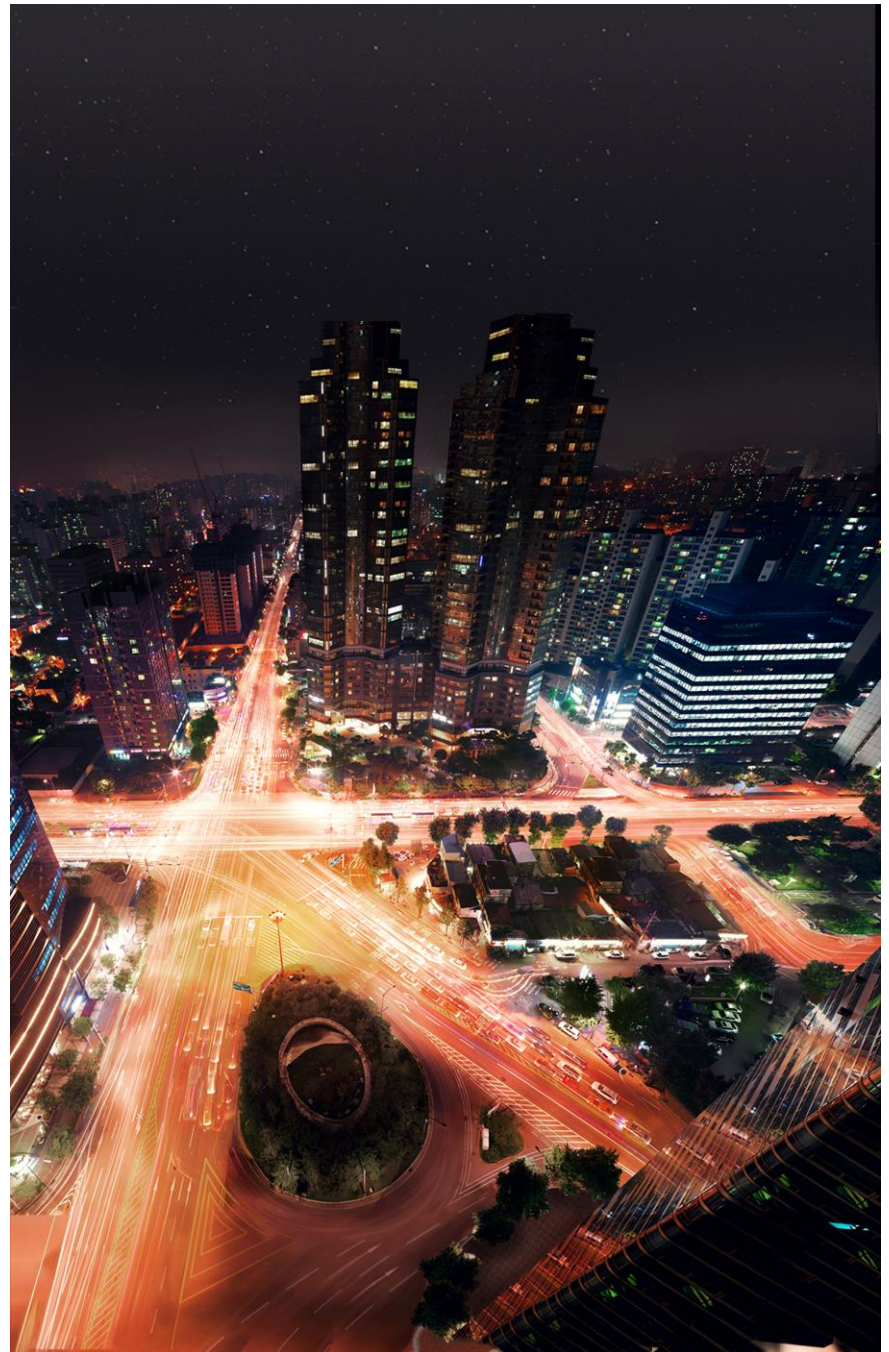


KT Orchestration 현황 & SDI (SW Defined Infra) 전망

옥기상 | 2016.11.25



목차

I Network virtualization in KT

II Open Issues

III Going Forward

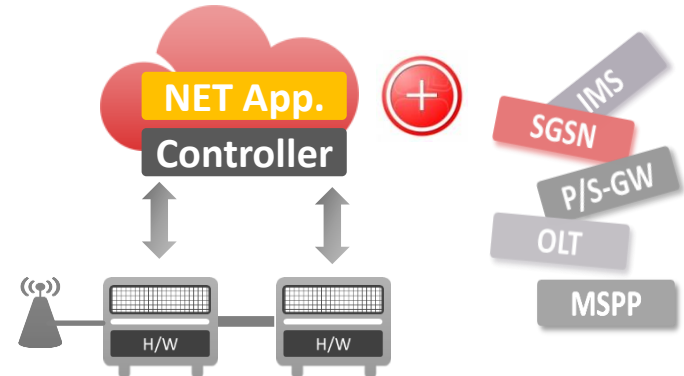
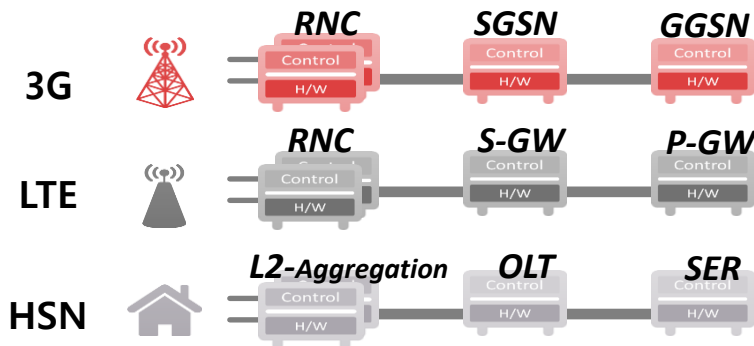
I.1 Challenges in Networking Paradigm: Network + IT

Diverse IT Services over Complex Networks

Phone



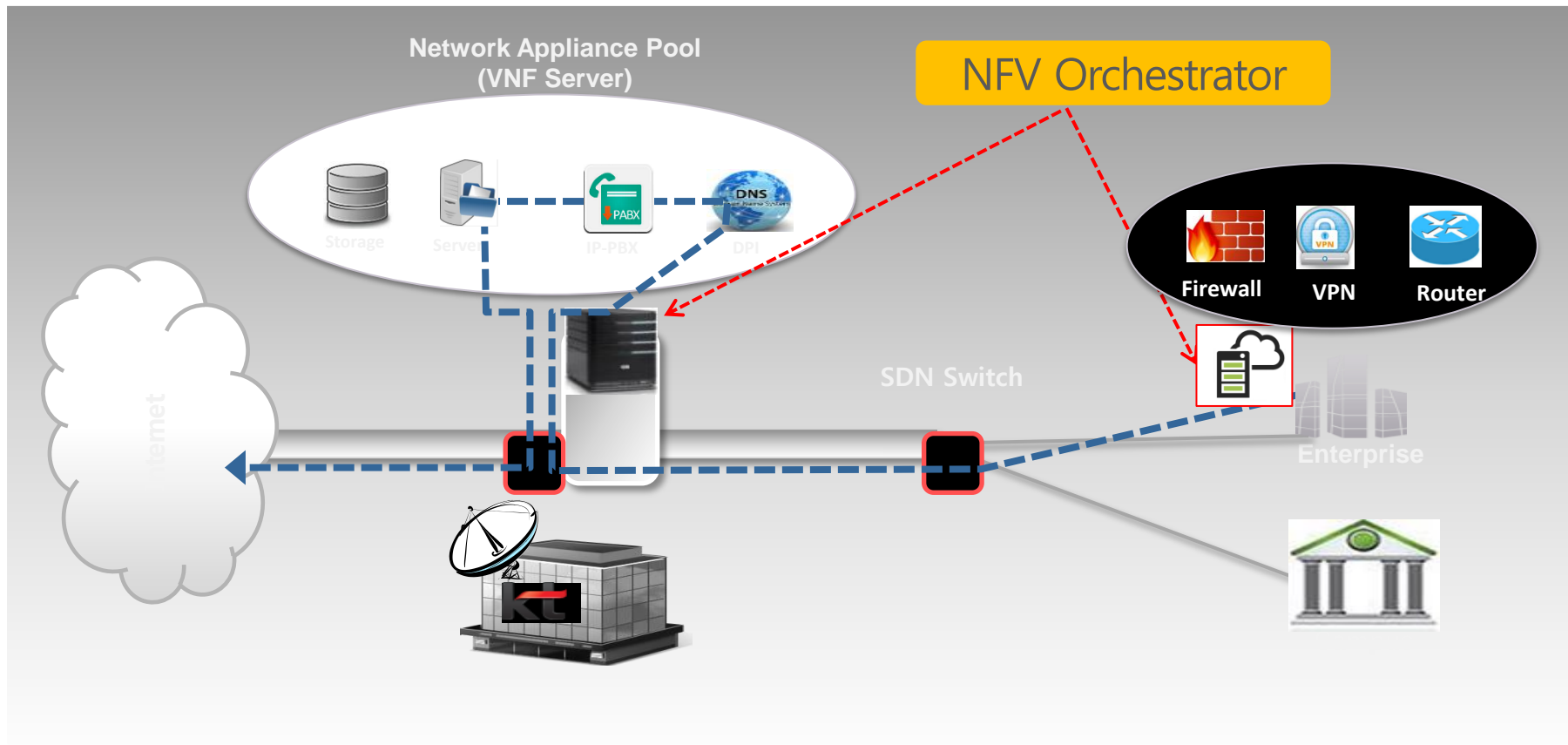
Network



5G ???

I.2 KT Use Case: vCPE for Enterprise Customer

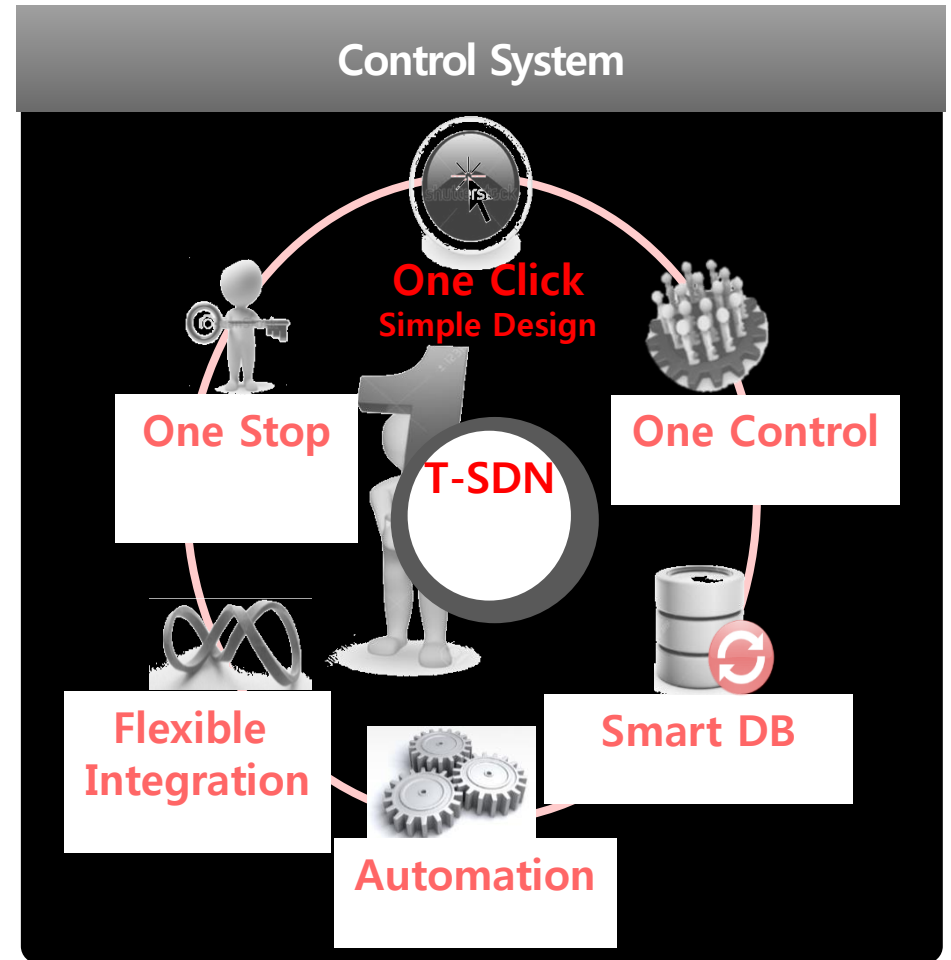
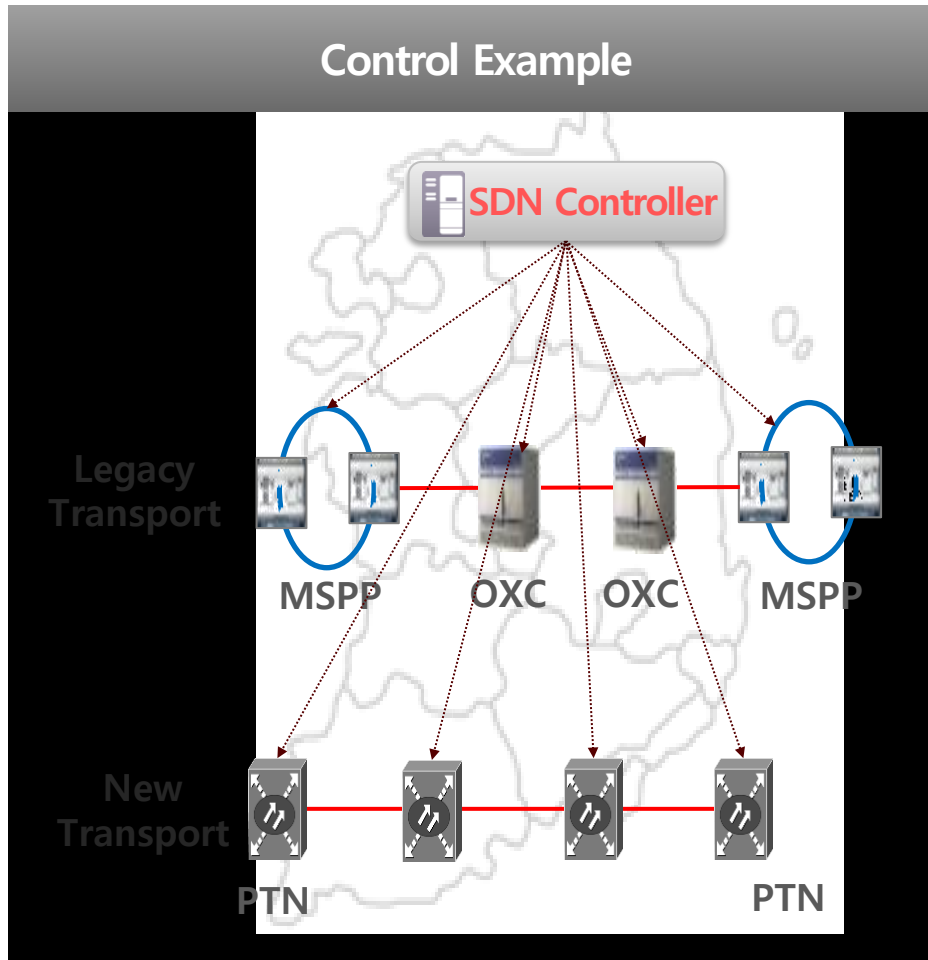
- CPE virtualization at Premises (Firewall, VPN, L2/L3, ...)
- CPE virtualization at Central Office (IP-PBX, DPI, vServer, vStorage, ...)



<Network Appliance Virtualization and CAPEX Saving>

I.3 KT Use Cases: Transport SDN

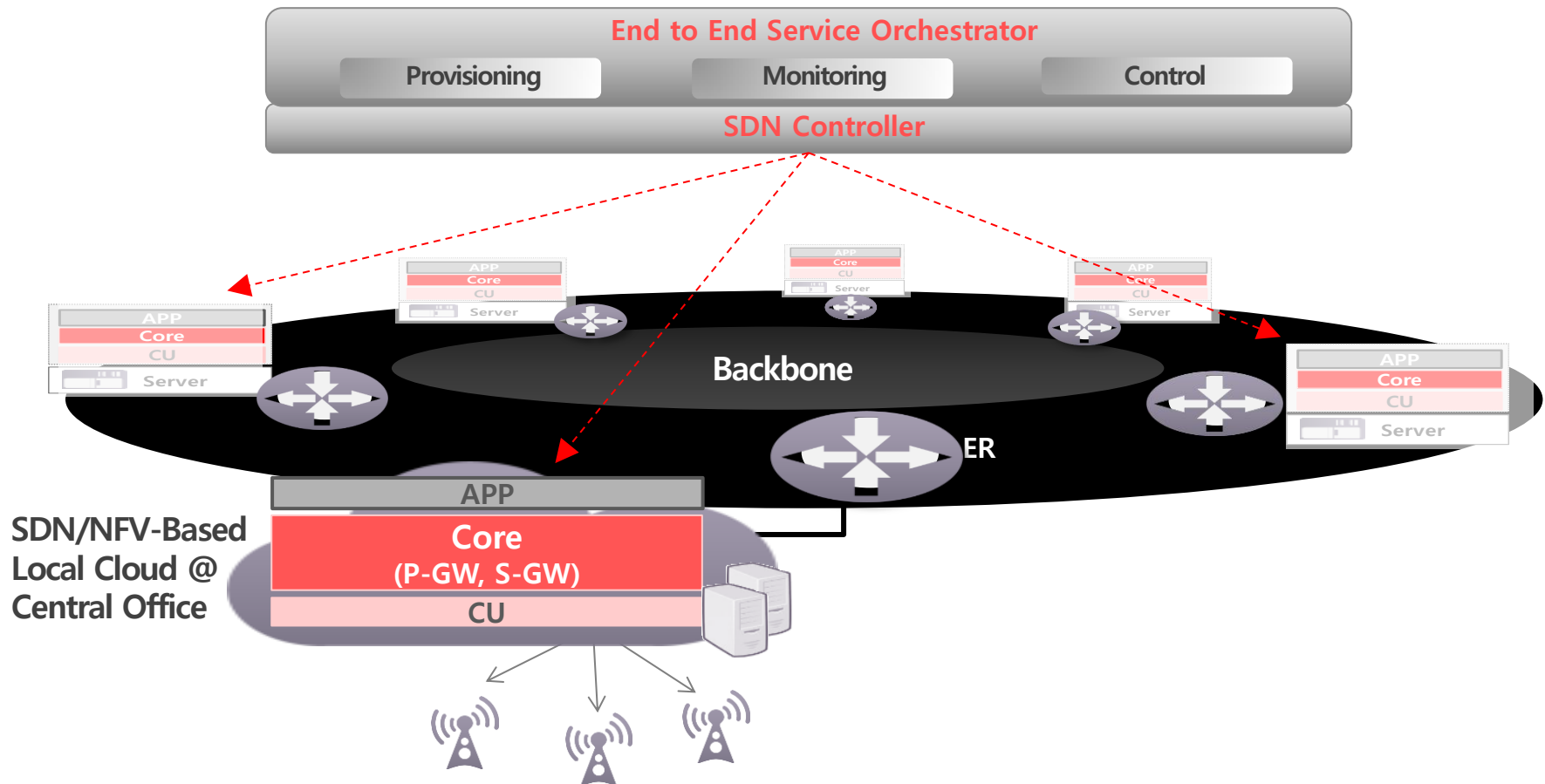
- Transport SDN and NaaS



I.4 KT Use Case: vEPC for 5G and LTE Service

- **5G Core Distribution**

- **SDN/NFV** distributes core functions over edge NFV clouds
- **Orchestrator** balances service loads over flat architecture



II.1 Network virtualization (SDN/NFV) Status

- Where is the Network Softwarization (NFV/SDN) ?

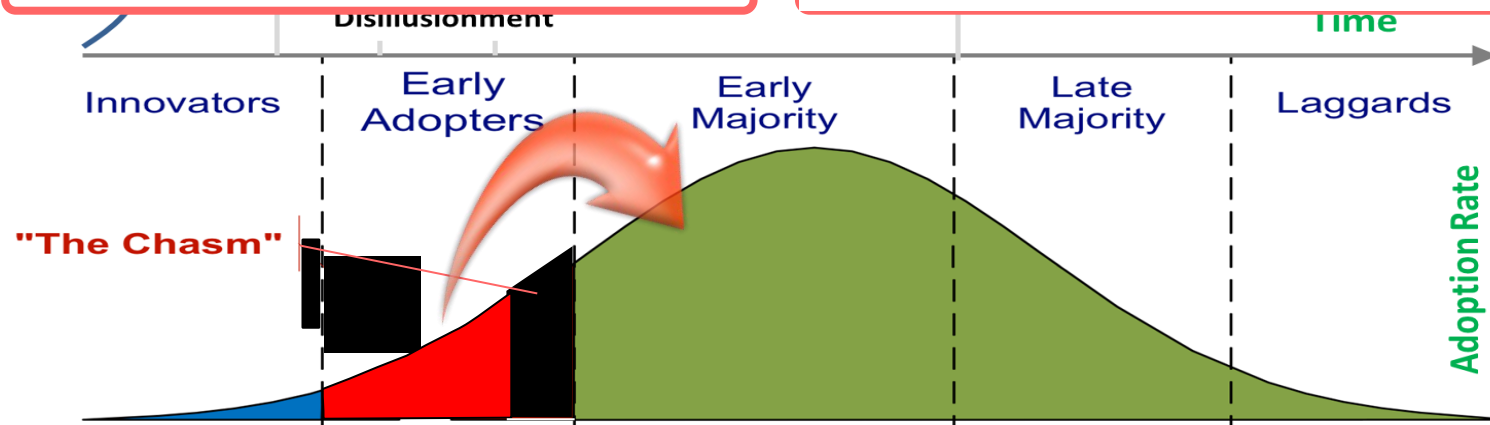
[Business] Define Target Market!

- ✓ Define Target Niche Market as a Best Practice
- ✓ Make Bowling Alley



[Technology] Solve the Issues!

- ✓ Operation
- ✓ Standardization
- ✓ Ecosystem



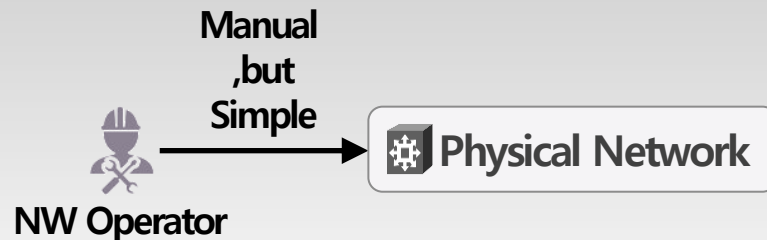
II.2 Challenges – Multi-Layer Operation

- Intelligence & Analytic functions support Multi-Layer ICT Infra

[AS-IS]

NW functions with CT Infra

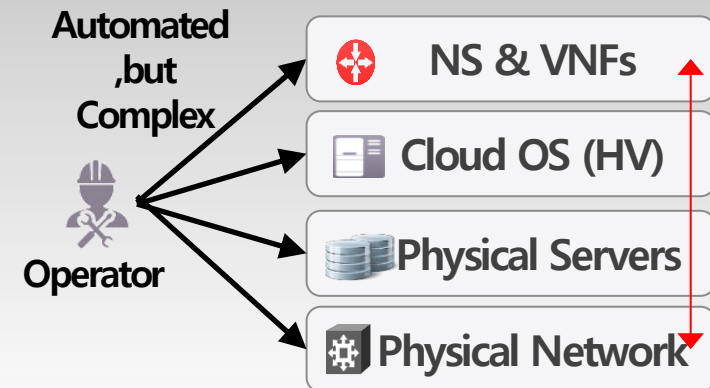
- Manually deliver & Install
- Operator handle only physical NW infra



[TO-BE]

NW functions with multi layer ICT infra

- Automated, remote install & Configure
 - Difficult to handle multi layer ICT infra
- Intelligence, Analytic functions needed (E2E Proc. Analysis, Root cause Analysis...)



<Support Management paradigm change : Management Complexity>

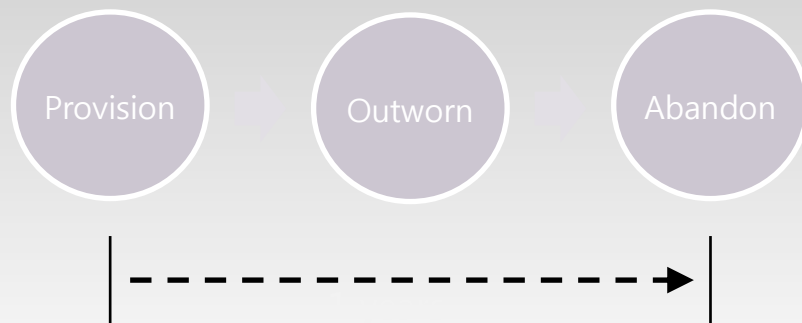
II.3 Challenges – Architecture Standardization

- Enhanced interfaces for lifecycle management need to be defined as Standard

[AS-IS]

HW Equipment Lifecycle

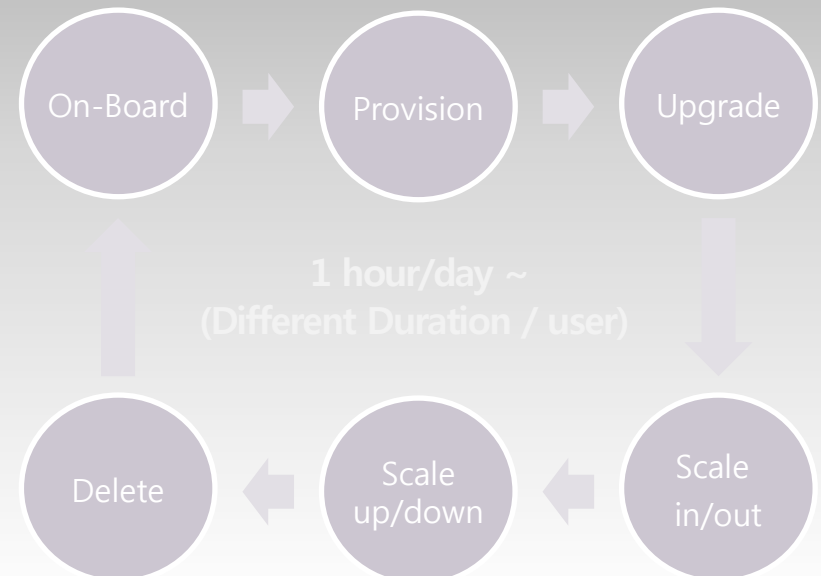
- Simple, Long Lifecycle
- Little modification after introduction (embedded License)



[TO-BE]

SW Equipment Lifecycle

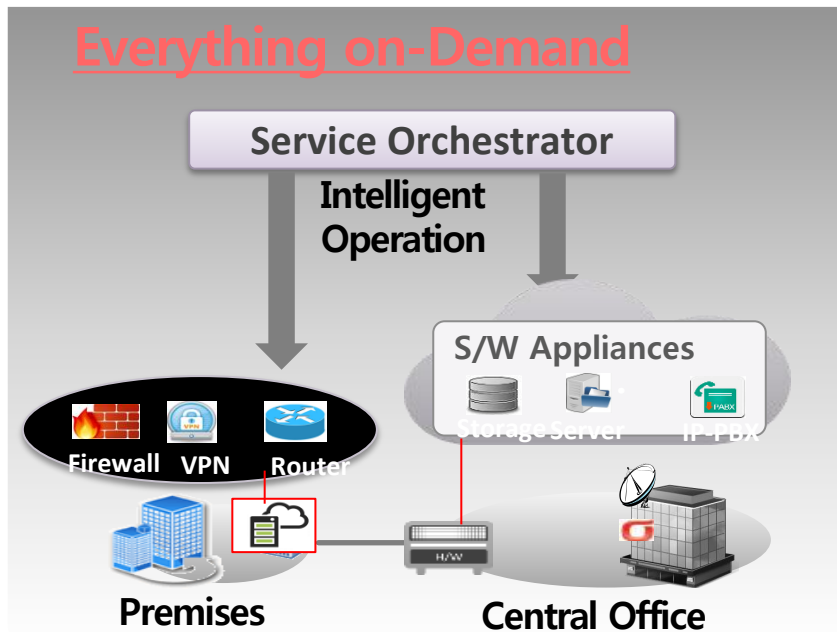
- Complex, Short Lifecycle
 - Frequent modification after introduction
- VNF License Management
 - AAA (Authentication, Authorization, Accounting)
 - Configuration Mgmt. (Backup/Restore)



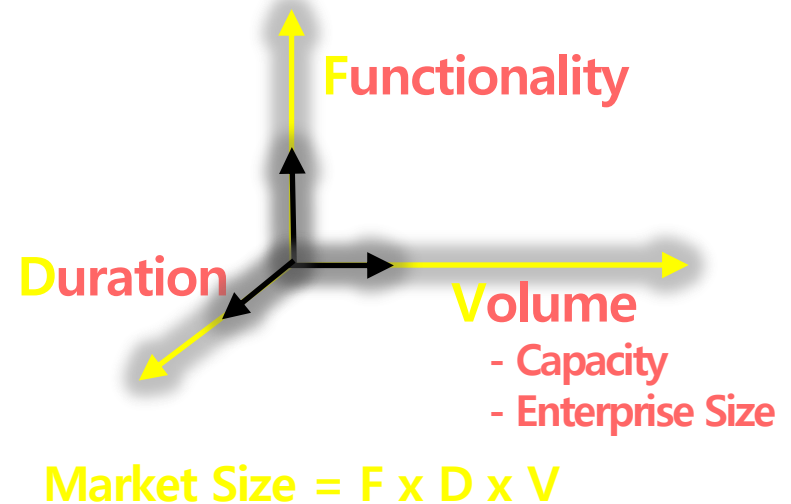
II.4 Challenges - Ecosystem

- NFV/SDN Catchphrase : 1st - Capex ↓ → 2nd - Opex ↓ → (?)
- Vendors and Operations groups are reluctant to virtualized for legacy network

Low motivation for replacing legacy network → Find **new Biz** to boost Ecosystem



Market Diversity



- Everything will be provided as On-Demand service
- **Diversity of 3 dimensions (F x D x V) by NFV extends the reachable market**

III. Going Forward

Think Big!

- ✓ **Vision:
Extreme Agility**



Plan Big!

- ✓ **Bowling Alley:
Make Strategy &
Plan for whole
products**



Start Small with Eco!

- ✓ **Making Success
Story**
- ✓ **Collaborations for
Ecosystem**



Thank you

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