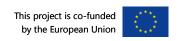


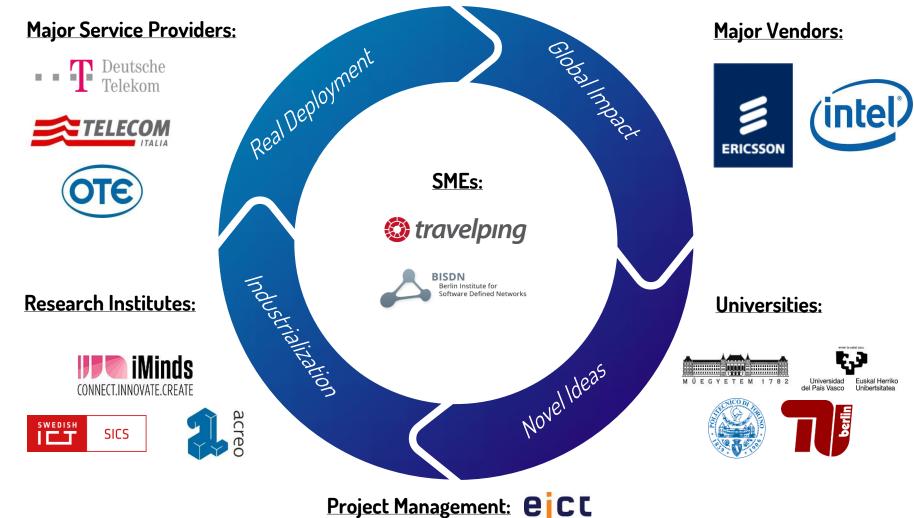
### Workshop on Network Virtualization: Contribution to Orchestration issues group

F.-Joachim Westphal, Deutsche Telekom



### The UNIFY project (Nov 2013 - April 2016)





### Unifying Cloud & Carrier Networks. Unifying Cloud & Carrier Networks.



#### Why?

"Today, rigid network control limits flexibility of service creation."

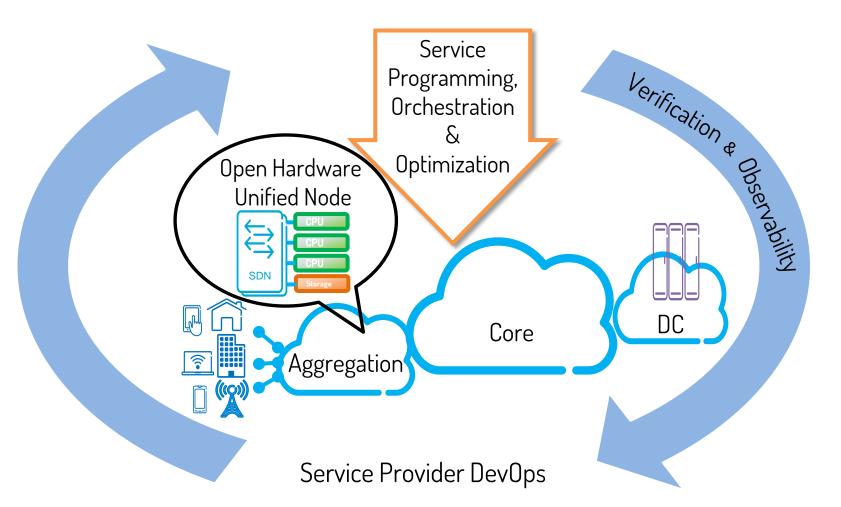
- Operators view: agility (velocity), flexibility (granularity), simplicity (automation), scalability (lower OPEX), integration (shareconomy)
- quality of experience, rapid provisioning of elastic services, • Users view: on-demand **SLA** configuration & monitoring, "Follow-me" services

#### How to?

- Virtualization of networks and network functions (NFV)
- Programmability (services and nodes)
- Dynamic service chaining
- COTS node (universal node)
- Service Provider DevOPs

### VISION: FLEXIBLE, AUTOMATED SERVICE PROGRAMABILITY.





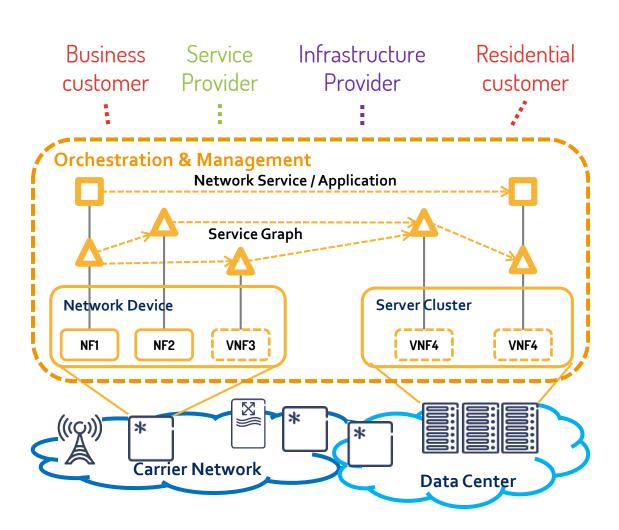
#### Overview Use Case Groups.



UC Group3: Invocation of Dynamic Service Chains

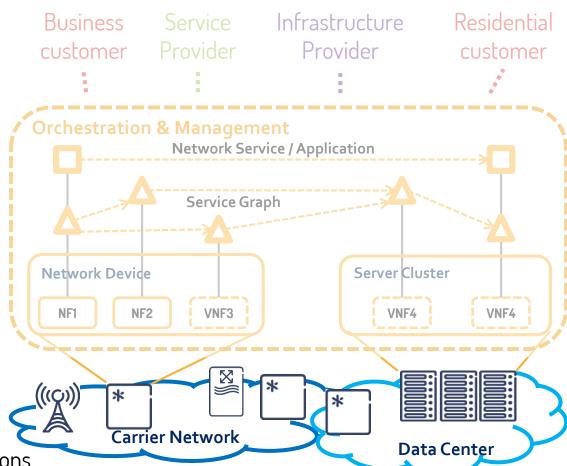
UC Group2: Dynamic Service Chains

UC Group1: Infrastructure Virtualization



# UCGroup1: Infrastructure Virtualization

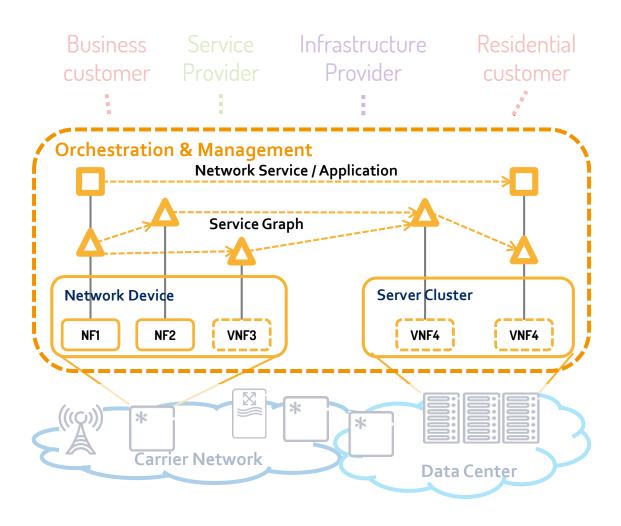




- Generic hardware based on standard x86
- Instantiation of network functions

## UC Group2: Dynamic Service Chains.

- Service graphs combining network functions
- Integration of existing and virtual network functions
- Abstraction allowing programmability



## UC Group3: Invocation of Dynamic Service Chains



- Multi-provider support
- Self-Service support for end-customers

