

Control and Management of COexisting Networks (COMCON)

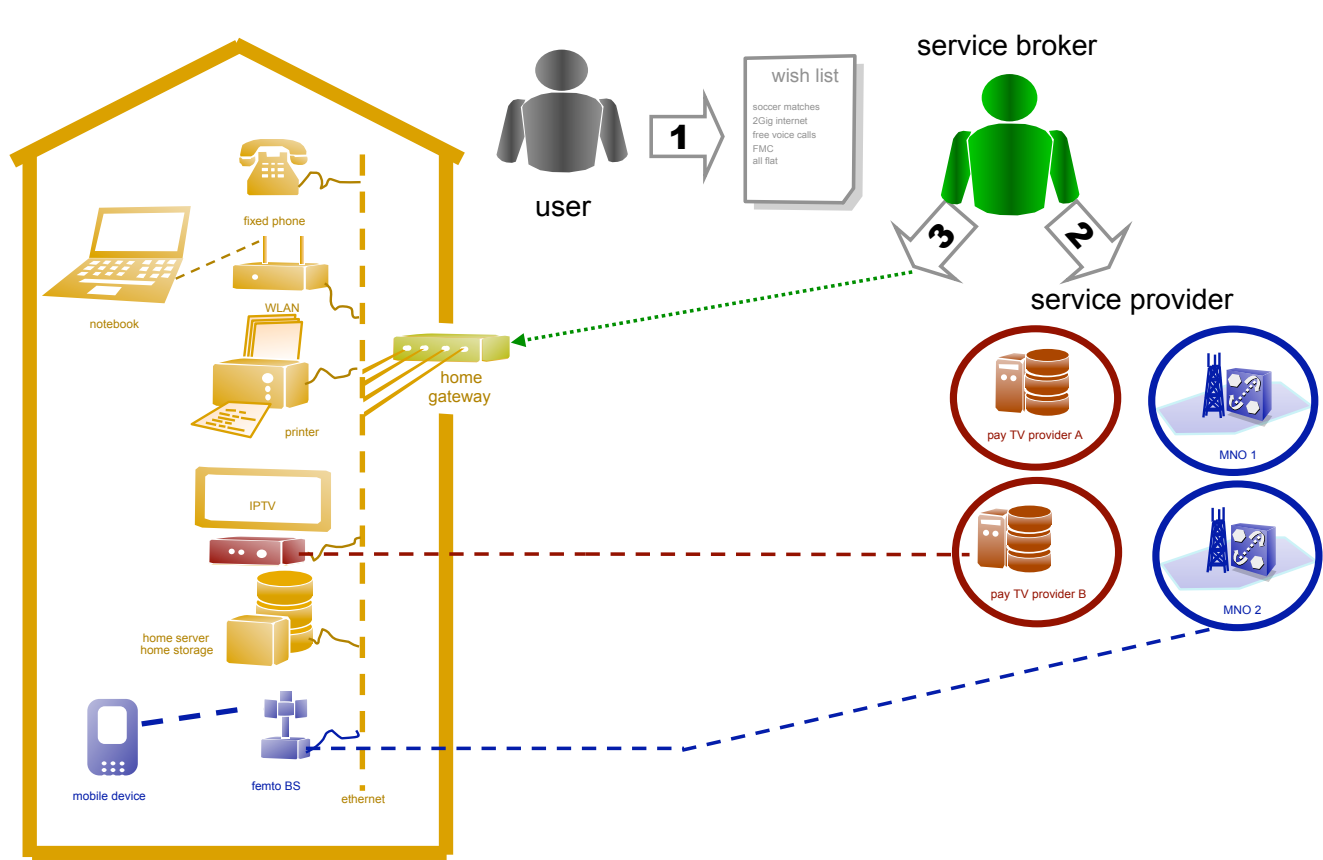
Innovations of COMCON

- ◆ Use of virtualization to support the introduction of new services and new transport networks
- ◆ Specification of interfaces between business roles
- ◆ Provider and operator-grade management and control of coexisting networks (by network virtualization)
 - ◆ Intelligent isolation of slices
 - ◆ Dynamic reassignment of network resources
 - ◆ Efficient and effective monitoring for virtualized networks (e.g. QoE)

Validation of requirements and management concepts through use cases

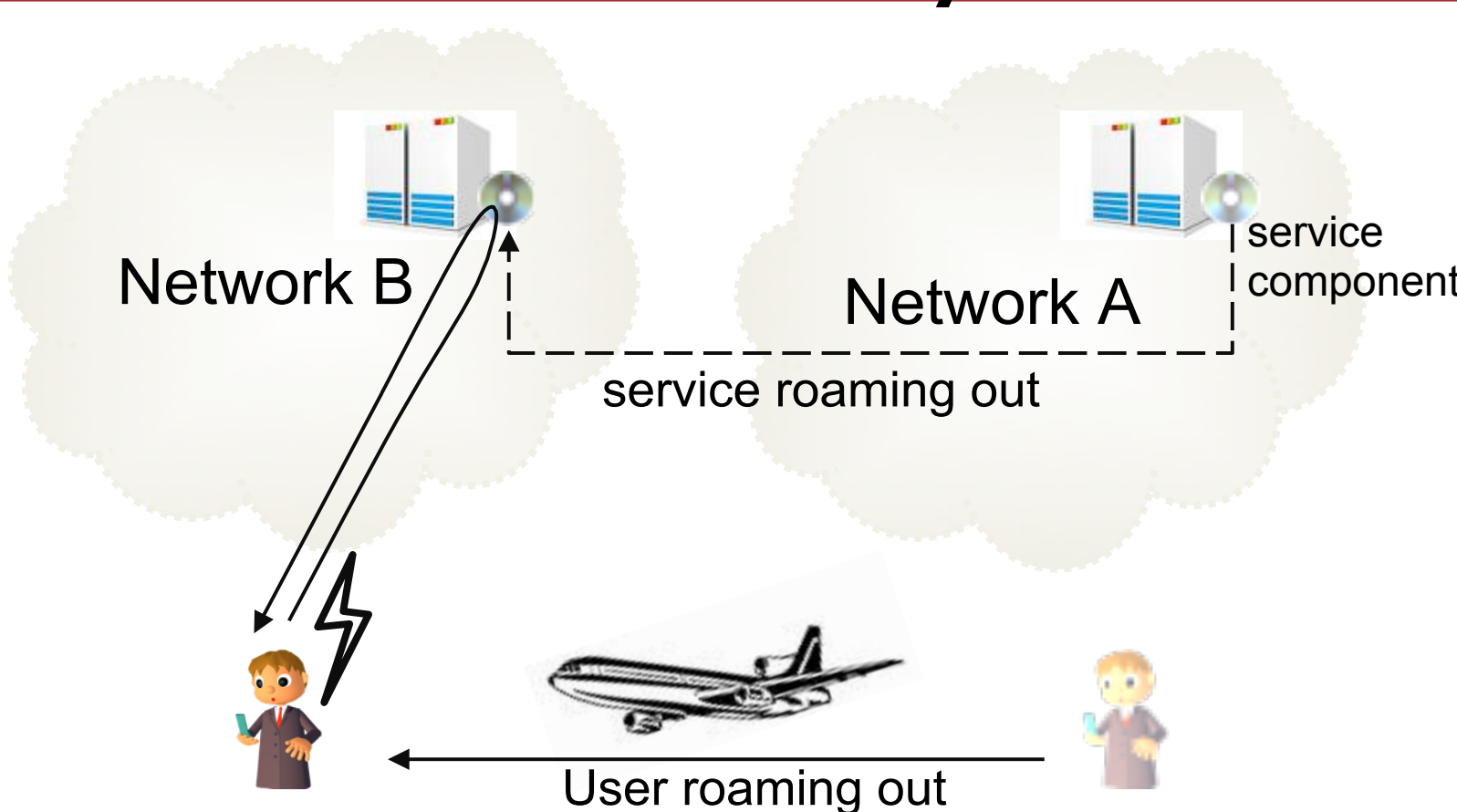
- ◆ Service Broker
- ◆ Service Component Mobility
- ◆ Beta Slice
- ◆ Mobile Virtual Network Operator
- ◆ Multi Generation Network
- ◆ Special Purpose Networks
 - ◆ Banking Network
 - ◆ Multimedia Networks
- ◆ Cross Sectional Use Cases
 - ◆ Network Isolation
 - ◆ Resilience
 - ◆ Monitoring
 - ◆ Management
 - ◆ Energy Efficiency

Service Broker



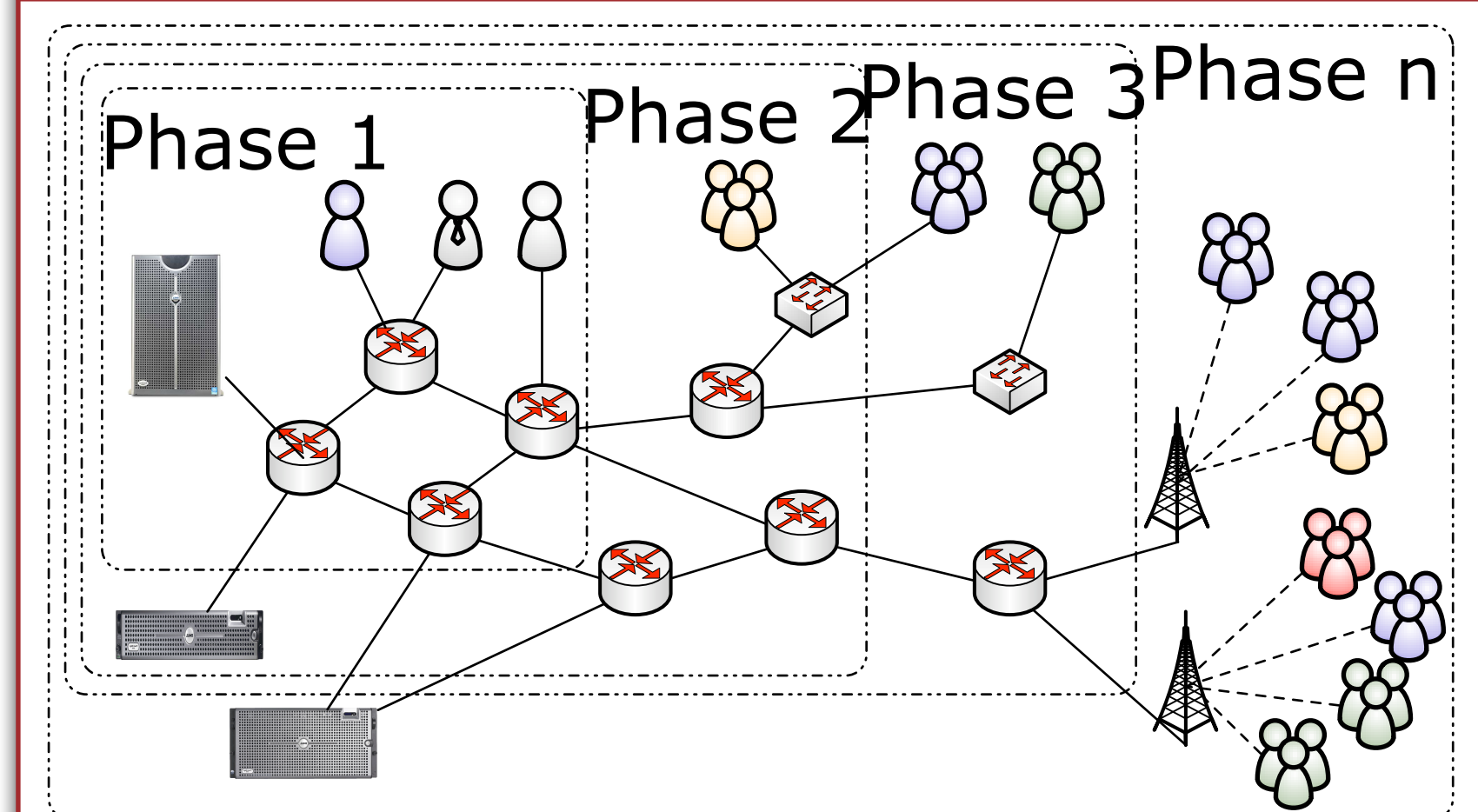
- ◆ Single physical device in each household
- ◆ Manages the customers' demands
- ◆ Suggests appropriate service providers
 - ◆ Service type or bundles?
 - ◆ Service quality level?
- ◆ Handles service establishment

Service Component Mobility



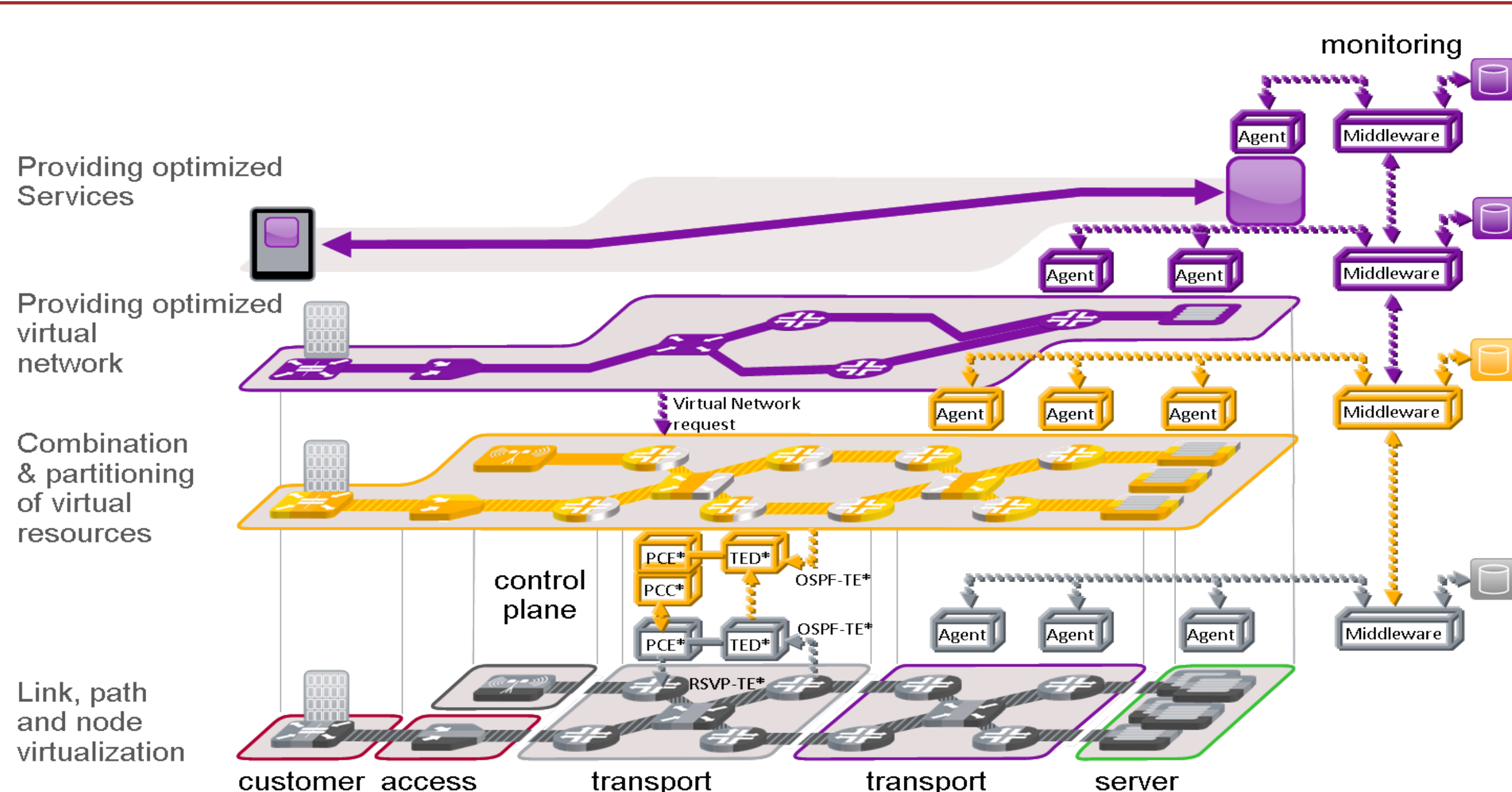
- ◆ Deliver quality services to roaming users
- ◆ Monitor quality of experience (QoE)
- ◆ Proactively adapt delivered service
 - ◆ Optimize network parameters
 - ◆ Change network topology
 - ◆ Relocate service closer to the user
- ◆ Increase customer retention

Beta Slice



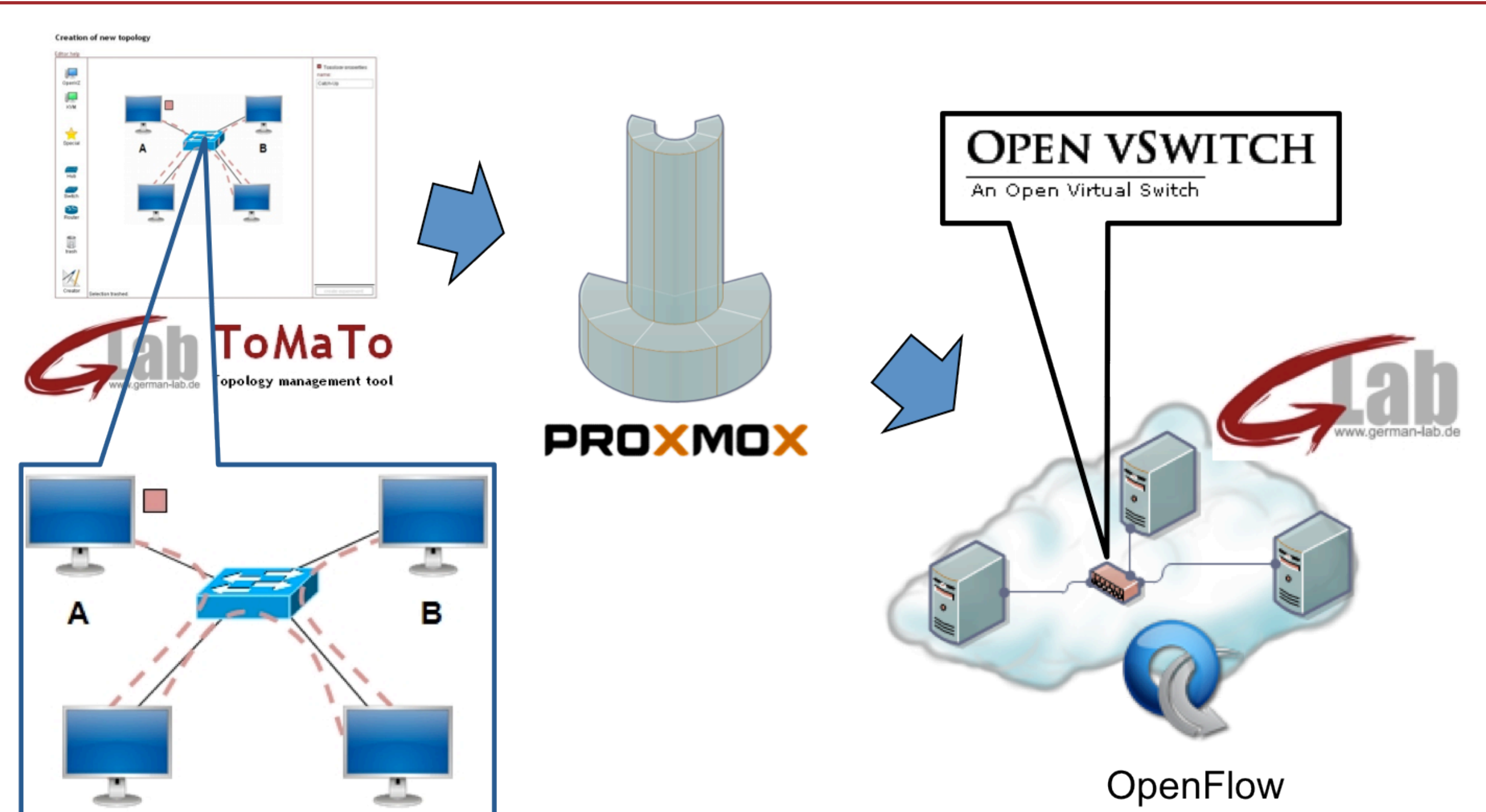
- ◆ Support the development of new services
- ◆ Start with a small setup
- ◆ Increase reach and size
- ◆ Test scalability
- ◆ Include different technologies
- ◆ Simplify rollout
- ◆ Decrease time to market

Architecture



- ◆ Provisioning, operation and teardown of virtual networks
- ◆ Extended control plane architecture
- ◆ SLA monitoring between all business roles
- ◆ New virtualization business model

Integration of OpenFlow in G-Lab



- ◆ OpenFlow enabled COMCON experiments
- ◆ Dynamic topology creation using ToMaTo
- ◆ Integration in existing G-Lab experimental facility and user tools
- ◆ Network emulation across different G-Lab sites