



Aalto University
School of Electrical
Engineering

ELEC-E7830 Value Network Design for Internet Services

Case Cumucore – STOF method

8th March, 2016

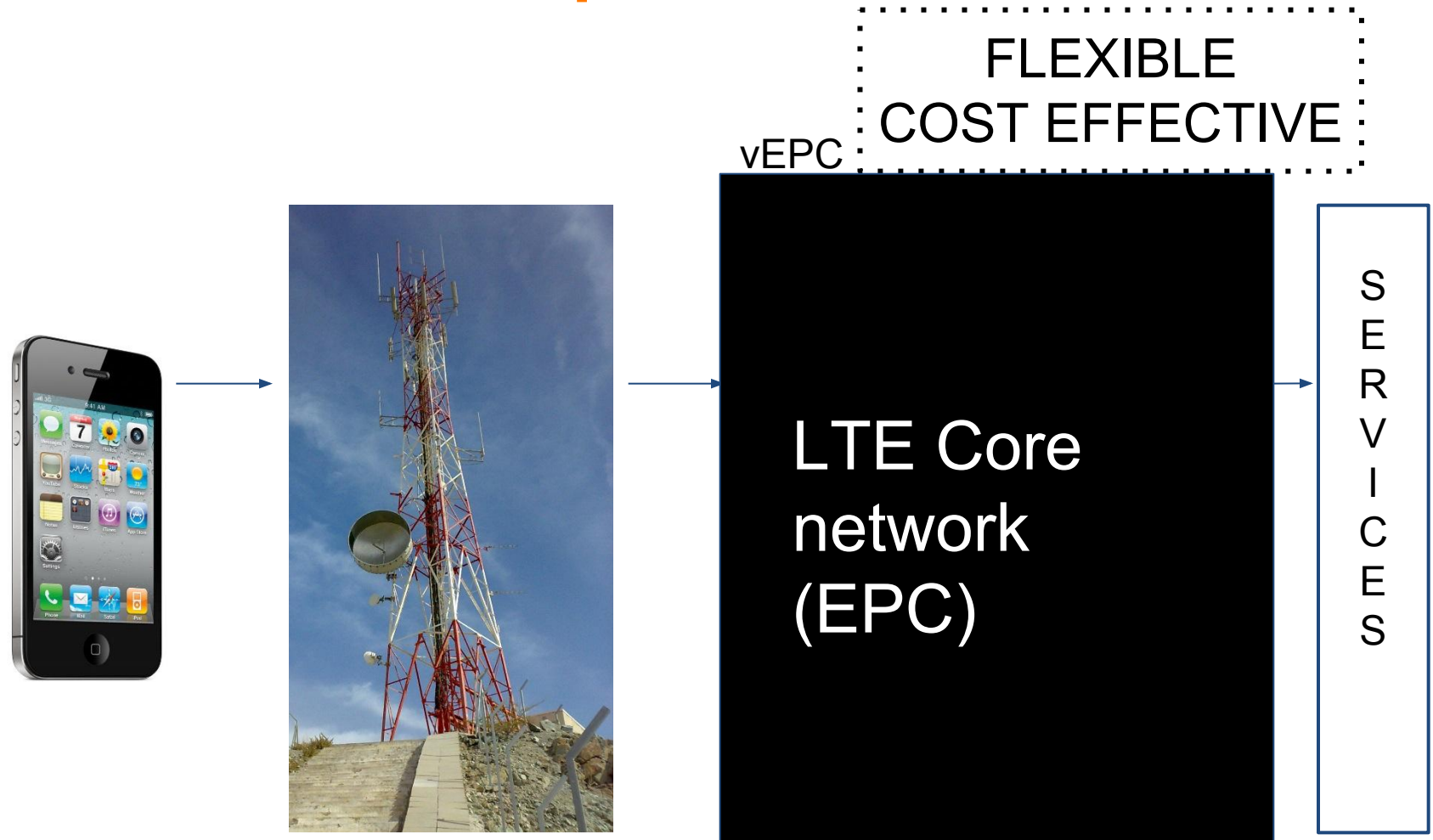
Vicente Tortosa

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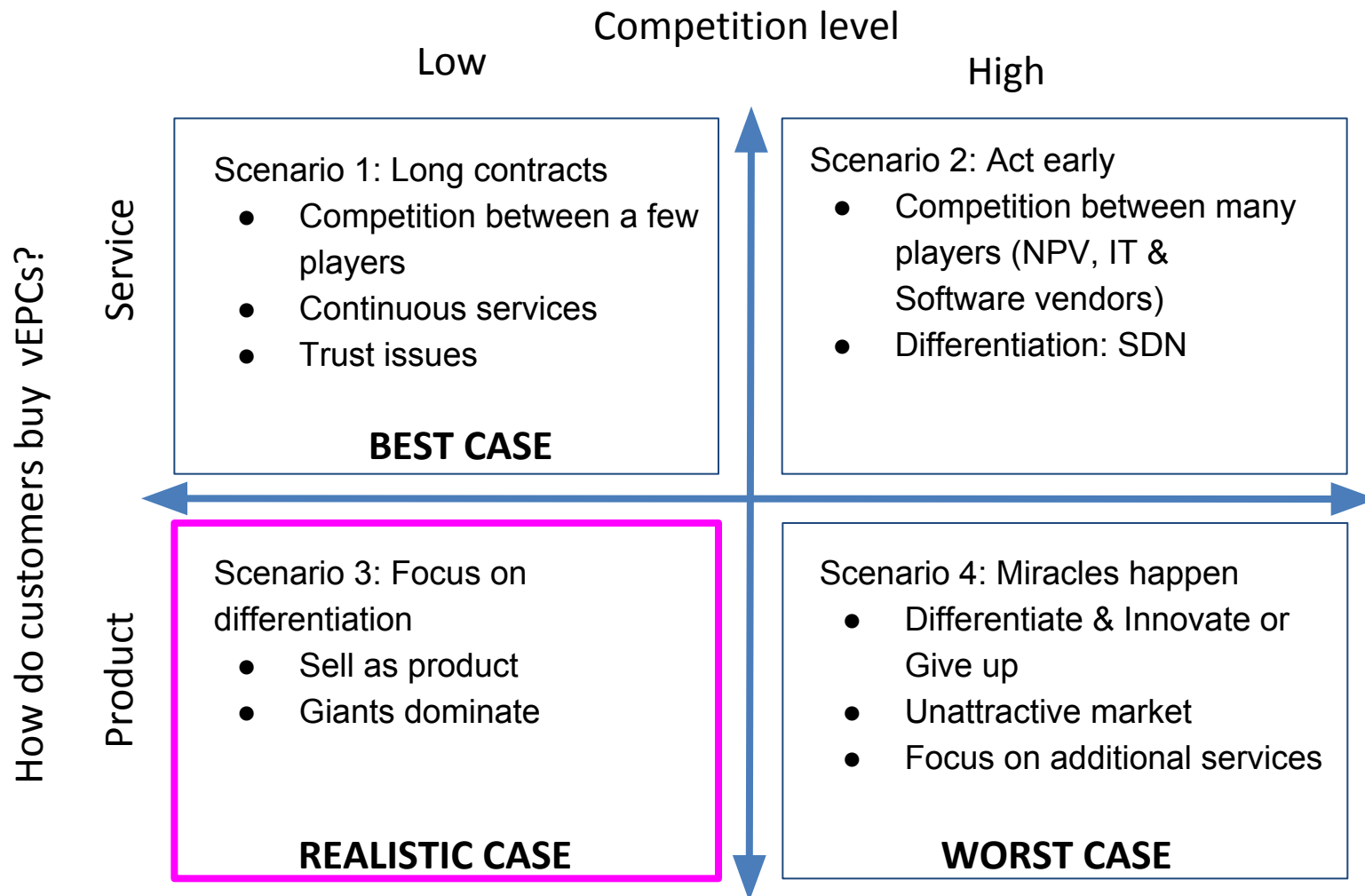
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Technical description



Possible Scenarios



Service domain

Service concept:

- Offering Cloud based LTE technology as a service
- Target customers: operators, service providers
- Additional services: QoS for IPTV / IoT, caching

Value proposition:

- Fast and cheap way to launch mobile network capability
- Flexible and easy to scale, lower OpEx and CapEx

Technology domain

Core technology

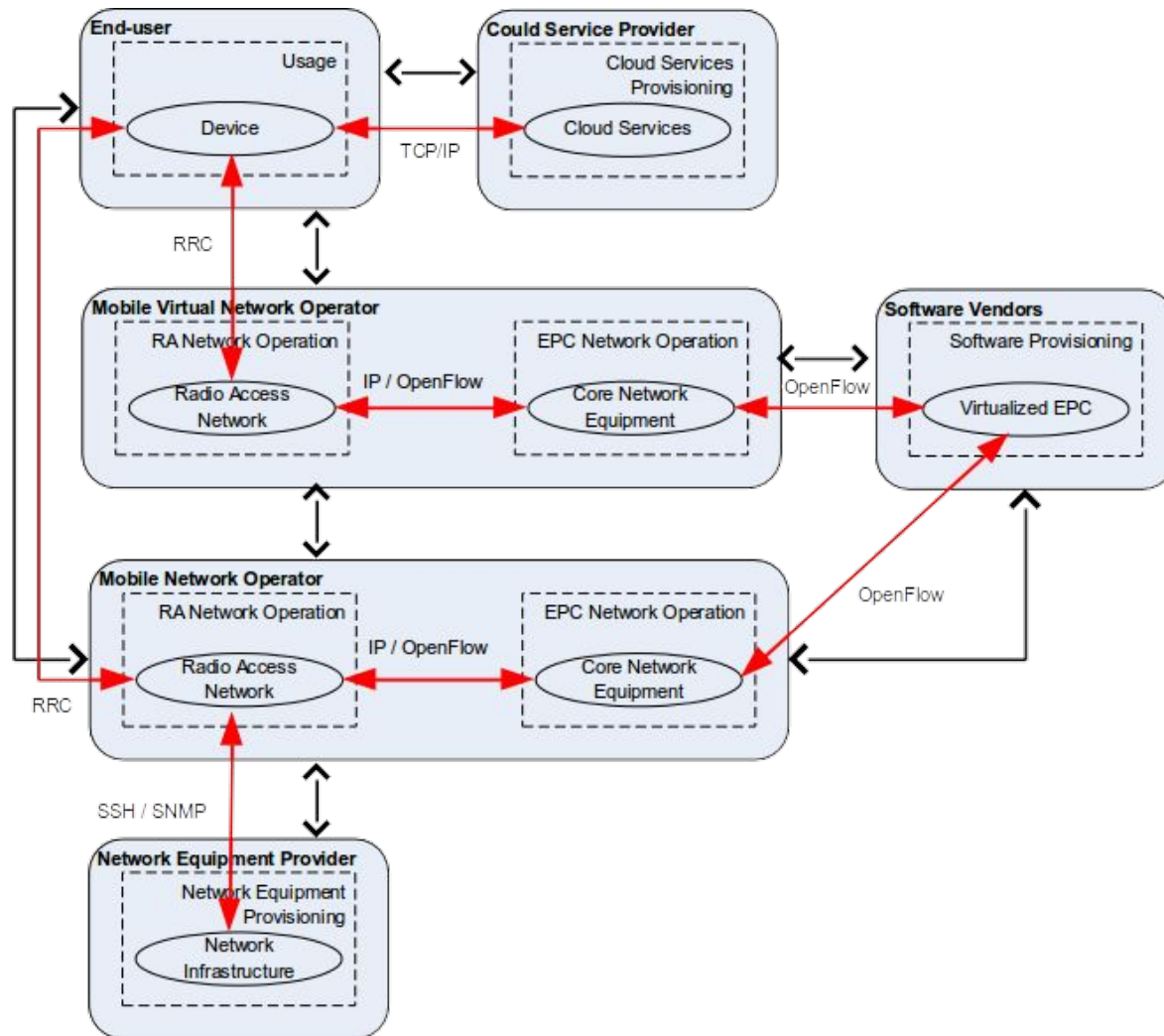
- Virtualized network functions
 - SDN
 - Capability to work on COTS hardware
 - OpenStack and OpenFlow
-
- Flexibility and elasticity
 - Capable to operate on current hardware
 - SDN removes current tunneling = better service, more value

Organization domain

Organizations involved:

- MNOs - providing RAN, customer
- MVNOs - customer
- NEPs - providing hardware
- Cumucore - Software vendor
- Aalto University - Holding the current patent

Focus on Differentiation Scenario VNC



Finance domain

- Costs
 - OpenFlow switches
 - One time purchase and yearly maintenance fee
 - After a year Aalto will own 2-3% of Cumucore
 - Other Sigmona participants need to pay licensing fees to Cumucore if they use the technology
- Risks
 - Self-funded, haven't received any funding - limited resources
 - Cumucore loses the patent if there is no proof of business in one year

Evaluation of CSFs

Service domain

- Compelling Value Proposition - Lower CapEx and OpEx
- Clearly Defined Target Group - Mobile operators and service providers

Technology domain

- Better Quality of Service - Dynamic infrastructure, capable to be scaled up/down

Organization domain

- Acceptable Division of Roles - Cumucore's role is clear

Finance domain

- Acceptable Profitability - Not profitable at the moment
- Acceptable Risks - Little to lose, a lot to gain

Refining based on CDIs

- Creating value: How to create value for the user?
- Trust: Do users have trust in Cumucore's abilities?
- System integration: For the maximum benefit also SDN needs to be implemented
- Partner selection: Easier market entrance with large vendors
- Pricing: How to price the product?

Thanks!

Q & A



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