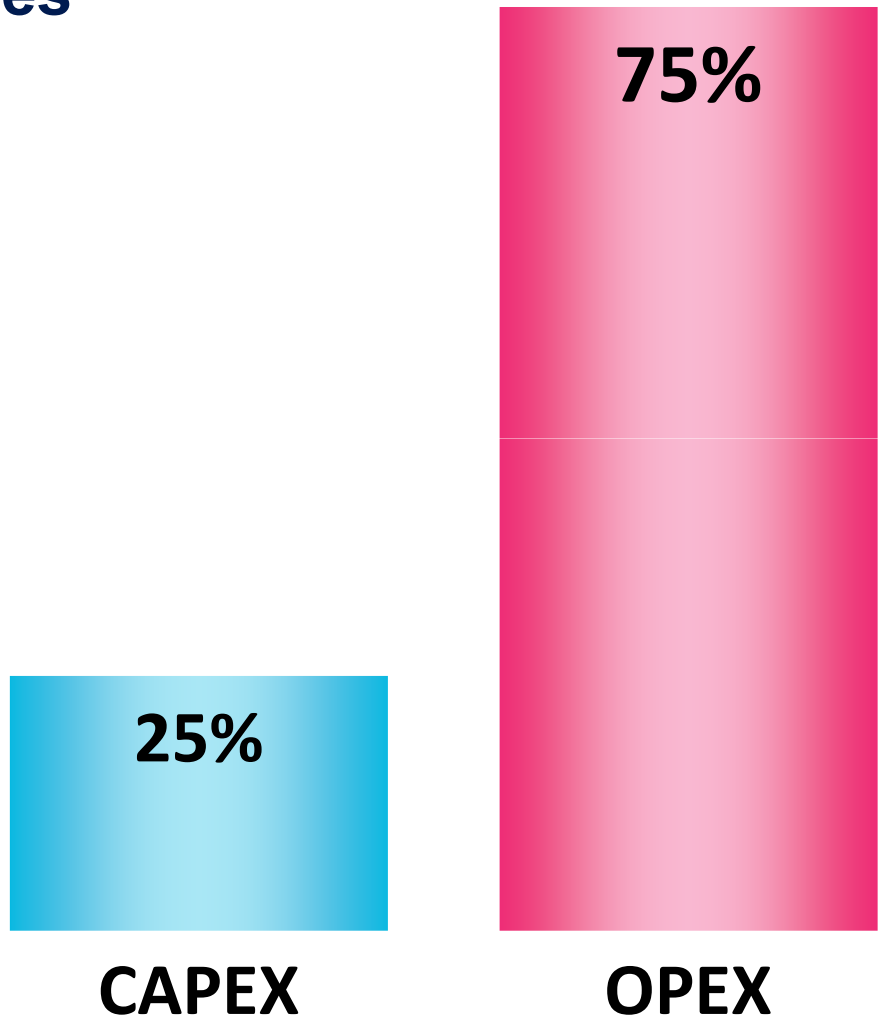
FP7-UNIVERSELF Overview

Future Internet Cluster meeting

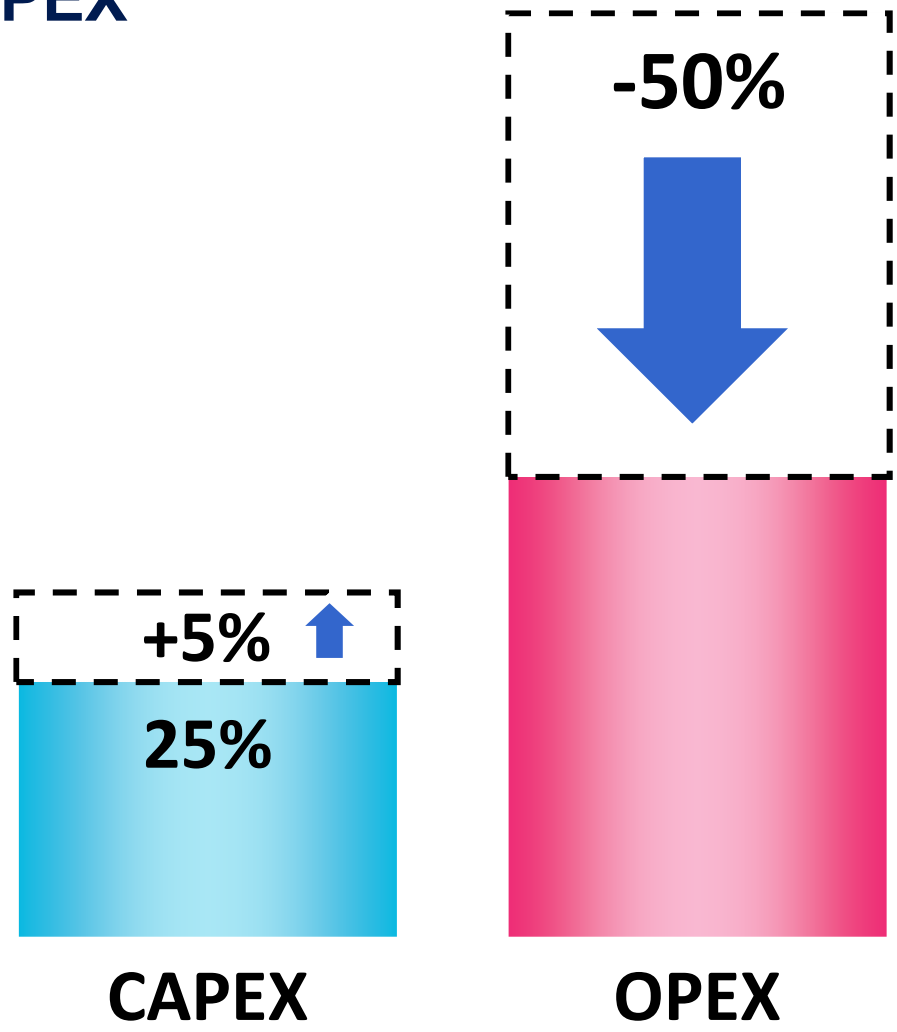
What are we trying to do?

Simple figures



What are we trying to do?

Reducing OPEX



What are we trying to do?

Solve live-networks manageability bottle necks

- Operators need tangible and concrete results to re-evaluate their network operation strategy in the coming years
- Vendors need customer requirements to engage into development and deployment and need solutions to problems

Achieve efficient service management

Get away from technological silos

Shift from research to engineering

Develop global standards, interoperability and European intellectual property

Set a trend on vertical trust by means of labelling and certification

How is it done today, and what are the limits of current practice?

Network Operations Centres (NOCs) …

- **Can they scale and adapt to meet**
  - the ever increasing demands and expectations?
  - the immersion of networked services and applications in our lives?
  - the endless accumulation of technologies?
  - the need for business driven operations?
- **Can they keep-up the pace of networks' evolution?**
- **Is the solution to increase NOCs' size and capacity?**

How is it done today, and what are the limits of current practice?

Networks require extensive involvement of human operators to:

- **plan, configure, operate & manage, monitor, maintain and tune networked systems.**

Operations expenses (OpEx) is up to 75% of total carrier expenses and increasing

Networks will continue to grow in size, number and complexity (e.g. Machine to Machine (M2M) communications)

Current approach CANNOT scale, nor cope with the dynamics/complexity

What's new in our approach and why we think it will be successful?

Upfront design of an architecture

- Limited impact activity
- UniverSelf will capitalize on existing propositions but let the architecture emerge from use-cases (specialization/instantiation)

Technology specific solutions

- Do not catch the full extent of the problem
- UniverSelf takes fixed/mobile convergence as a granted context

Dissemination and Impact

- Papers, communications, workshops, … : of course
- UniverSelf is also concerned by adoption and adoption is based on trust and confidence

What's new in our approach and why we think it will be successful?

Federating

- Time to consolidate achievements
- Both systems and services need to be managed
- Services span multiple technological domains (wireline and wireless)

Impactful

- Need to address live-networks management bottlenecks identified by operators/providers
- Need to quantify/measure the value of autonomics
- Need standards for industry wide adoption
- Need Trust and certification to foster deployments

Who cares?

Network operators

Service providers

Equipment vendors

Third-party developers/Partners

SDOs, …

European Commission, and European citizens

Last but not least: We care

If we're successful, what difference will it make?

“Cost-efficient” network management

Future Networks capable to scale

Future Networks capable to cope

New business models emergence

How much will it cost?

vs. Cost of doing nothing (keep status quo)

vs. Cost of piecemeal/proprietary solutions

How long will it take?

Different time scales

Took already more than 10 years without big success

(Need more) focused developments/deployements

Trend setting

- **e.g. certification/labelling**

Also

- **IT/Telco convergence**

What are the midterm and final "exams" to check for success?

Standards readiness, footprint

Industry awareness/interest

Industry take-up/commitment

Back-up slides

Future Internet Cluster meeting

Project scope

“Cleaned state not clean slate”

End-to-end

- From access to core
- Wireless, fixed and service

Focus on Network operators/Service providers

- Solving infrastructure and service operational bottlenecks

Project objectives

“Realizing Autonomics for Future Networks”

Federating

- Unification of existing architectures and convergence of network management principles across multiple technological contexts

Empowering

- Embed intelligence inside network equipments

Impactful

- Impact the telecommunication industry and push towards exploitation of its results

Trustworthy

- Foster adoption of autonomics by means of trust and confidence

Technical objectives #1

Federate research on autonomic networking	
Results	▪ UMF definition, standardization and demonstration ▪ new method of network management ▪ new method of network governance ▪ **process and interfaces for federating different autonomic frameworks** ▪ open solutions ▪ embedding management systems with managed systems

Technical objectives #2

Embed intelligence in the network

Results	▪ tools, models, and methods for network self-management ▪ test results of the (UMF) self-management solutions ▪ **reference embodiments of solutions into the equipments** ▪ mechanisms for cooperation and orchestration

Technical objectives #3

Impact the telecommunication industry	
Results	▪ **large-scale demonstration of integrated autonomic functions** ▪ prototypes of autonomic functions ▪ simulations of autonomic functions

Technical objectives #4

Generate confidence in autonomics	
Results	▪ impact analysis for given scenarios ▪ **certification procedures for autonomic functions (labelling)** ▪ migration strategies for given scenarios ▪ progress of standardization ▪ community representation

Project ID

FP7 Call 5 Integrating Project

Total Cost: ~16M€ ; EC Contribution: ~10M€

17 Partners

Duration: 36 months

Start date: 01/09/2010

Kickoff meeting: 04-06/10/2010 in Paris

Website: www.univerself-project.eu

Consortium

UNIVERSITY OF SURREY

VTT

UCL

UNIVERSITY OF TWENTE.

THALES

Fraunhofer FOKUS

INRIA

france telecom

NEC

Alcatel·Lucent

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NATIONAL & KAPODISTRIAN UNIVERSITY OF ATHENS

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