



**ITU Kaleidoscope 2011**

**The fully networked human?**  
Innovations for future networks and services

# **LABQoS: A PLATFORM FOR NETWORK TEST ENVIRONMENTS**

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**Cape Town, South Africa**  
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# OUTLINE

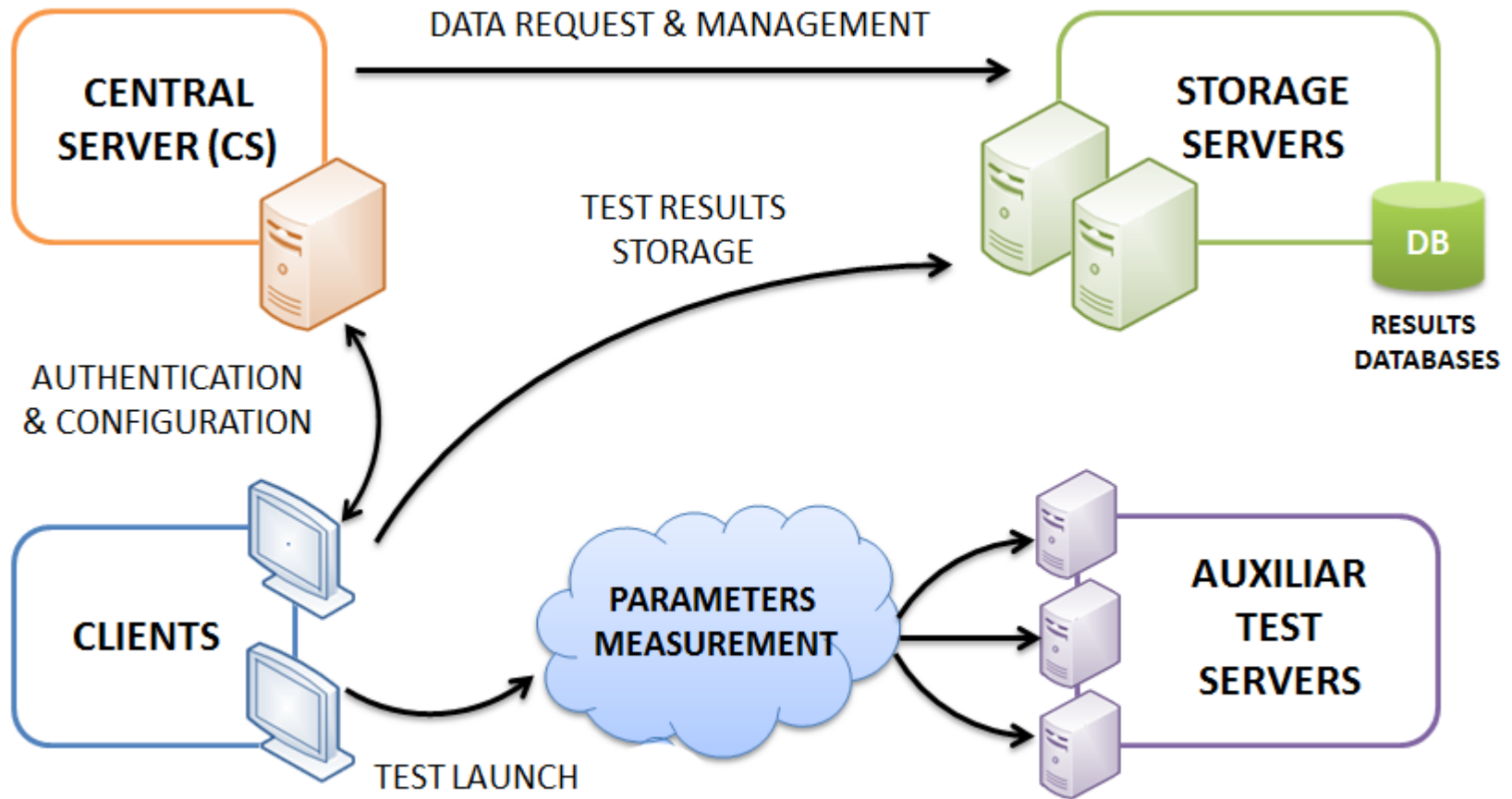
- ❑ Introduction
- ❑ Objectives
- ❑ Definition of experimental scenarios
- ❑ Test Environment Builder architecture
- ❑ Adaptation logic
- ❑ Measurement tool
- ❑ Conclusions

# Introduction

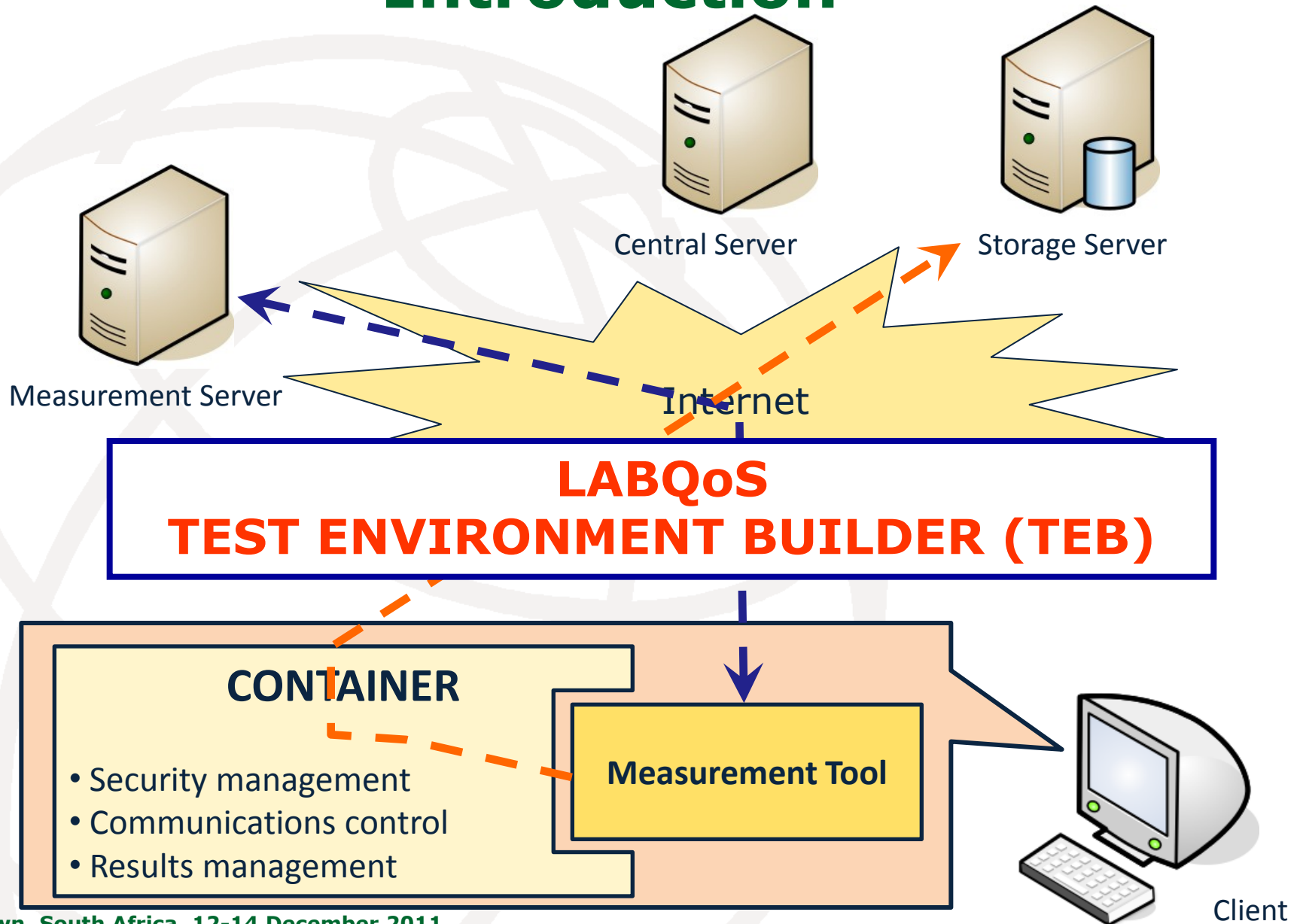


Generic platform to measure Quality of Service

# Introduction



# Introduction



# Objectives

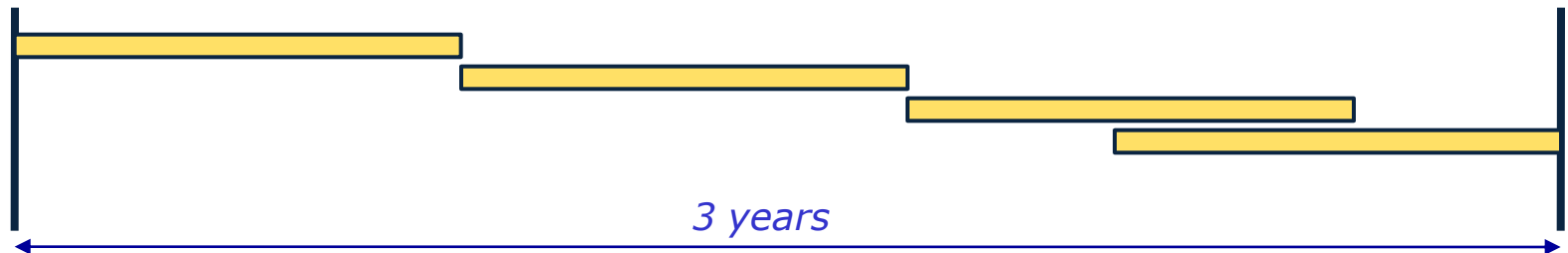
- The aim is to develop a software platform that allows the deployment of controlled experimentation scenarios in order to make the testing of different environments easier.

## **TEST ENVIRONMENT BUILDER (TEB)**

- LabQoS (Laboratory for Quality of Service) will focus on carrying experiments related to the network performance measurement and the impact of new services on end users.

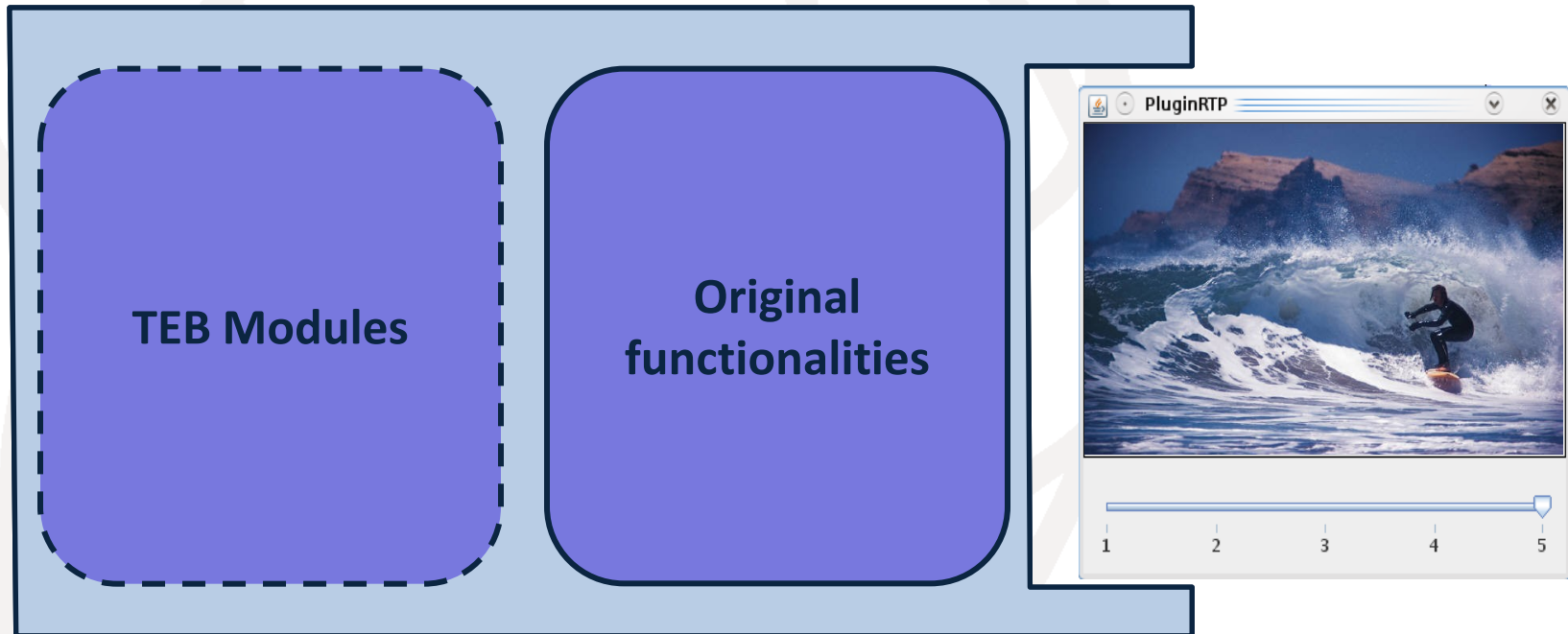
# Objectives

- ❑ Software development in four stages:
  - ✓ I: Initial design for TEB and field test
  - ✓ II: Validation of the design and integration with QoS METER
  - ✓ III: TEB reengineering and product validation
  - ✓ IV: QoS METER adaptation to TEB. Service creation



# Objectives

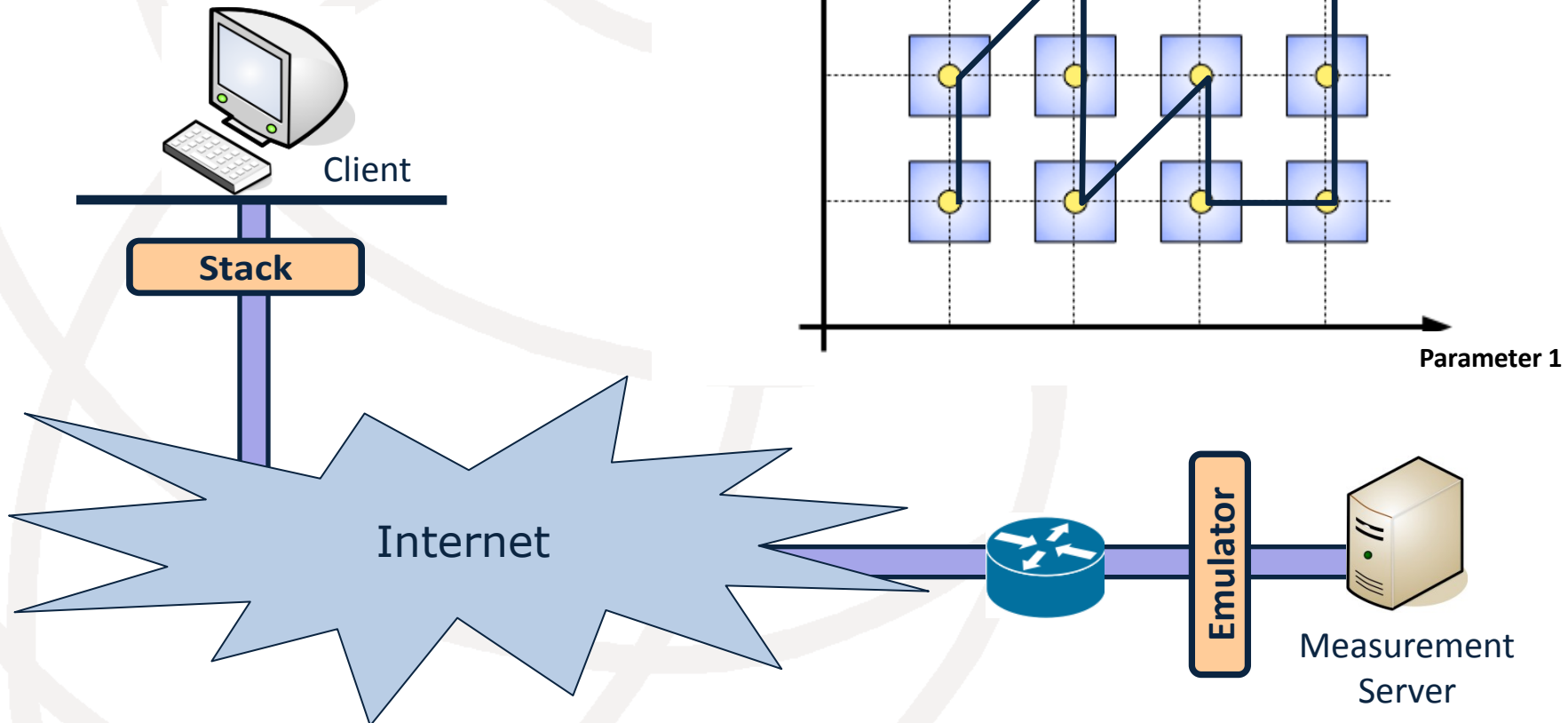
- ❑ Design the platform to build experimental environments.
- ❑ Design an experimental tool for the analysis of the subjective quality of service in multimedia services
- ❑ Implement an experimental and working prototype integrated with QoS METER





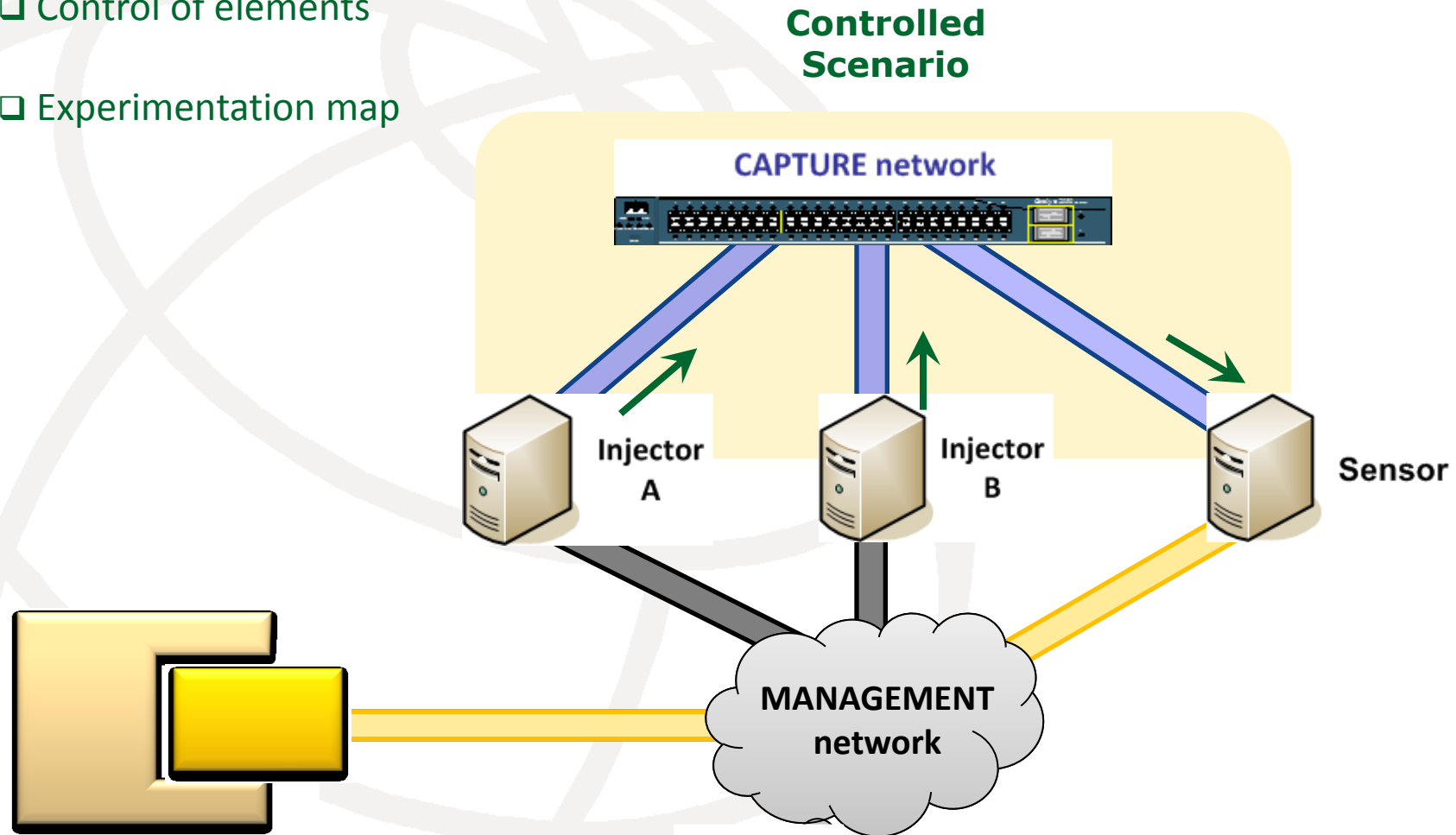
# Definition of testing scenarios

- Control of elements
- Experimentation map



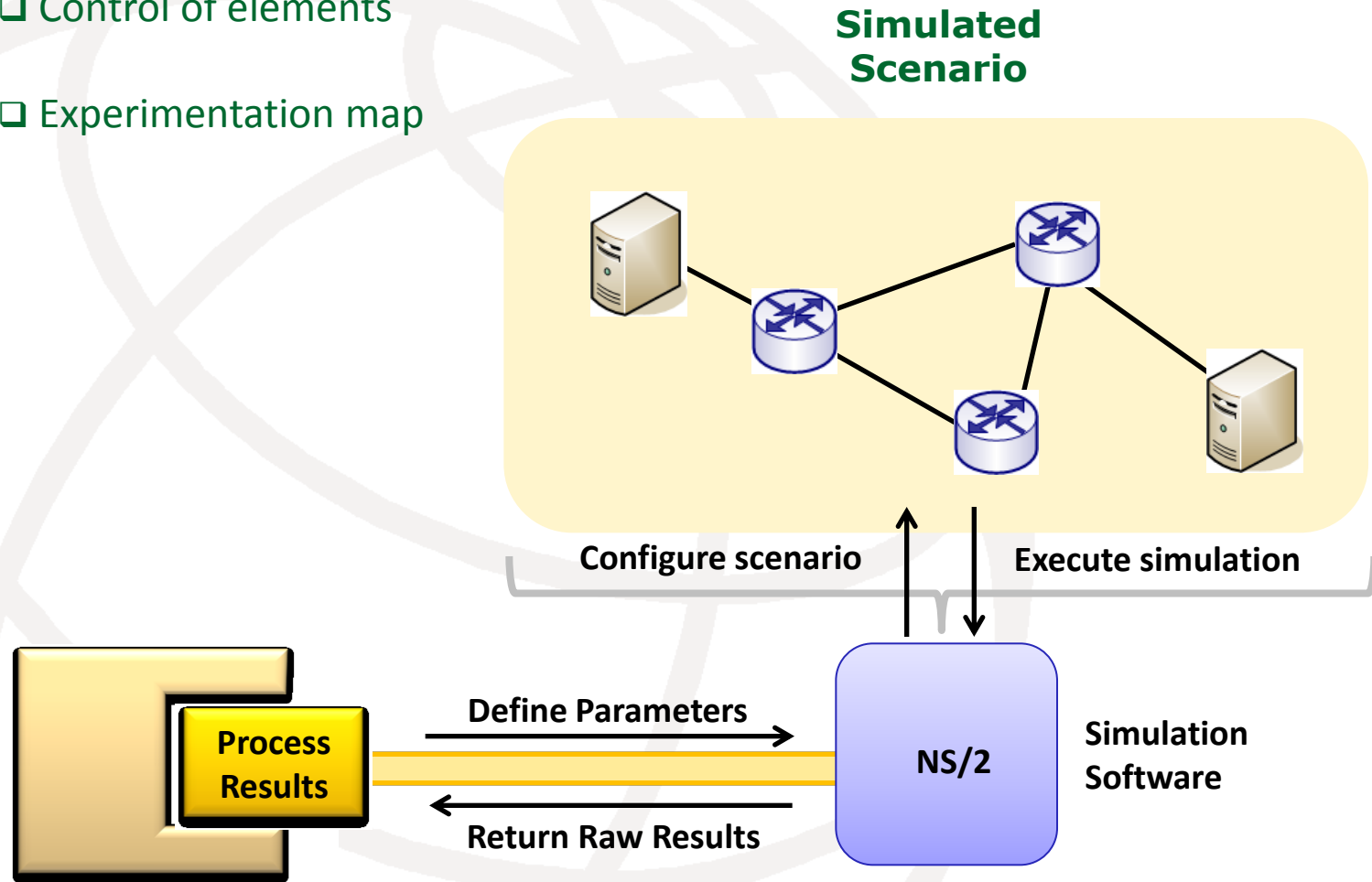
# Definition of testing scenarios

- ❑ Control of elements
- ❑ Experimentation map

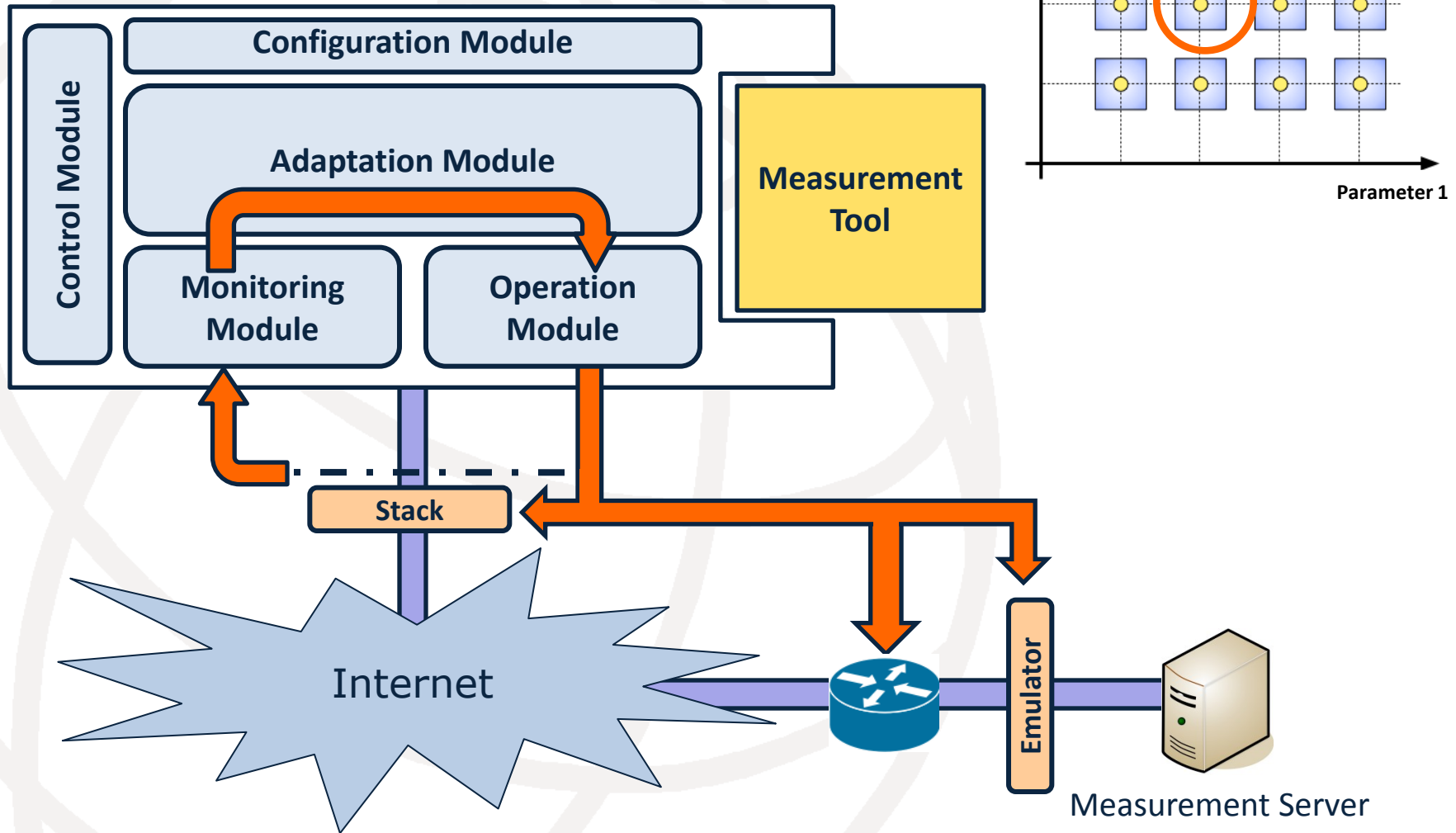


# Definition of testing scenarios

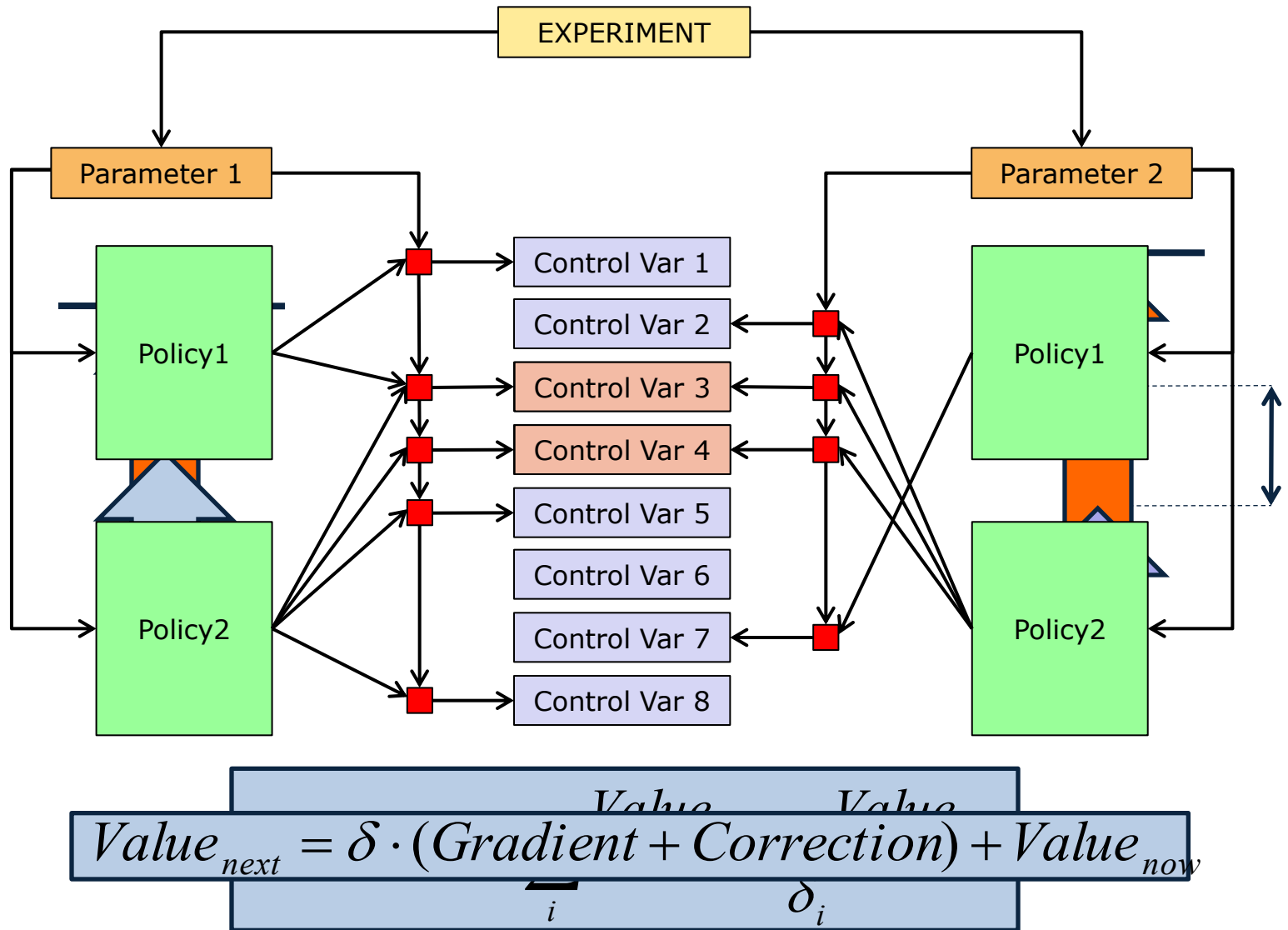
- Control of elements
- Experimentation map



# TEB Architecture



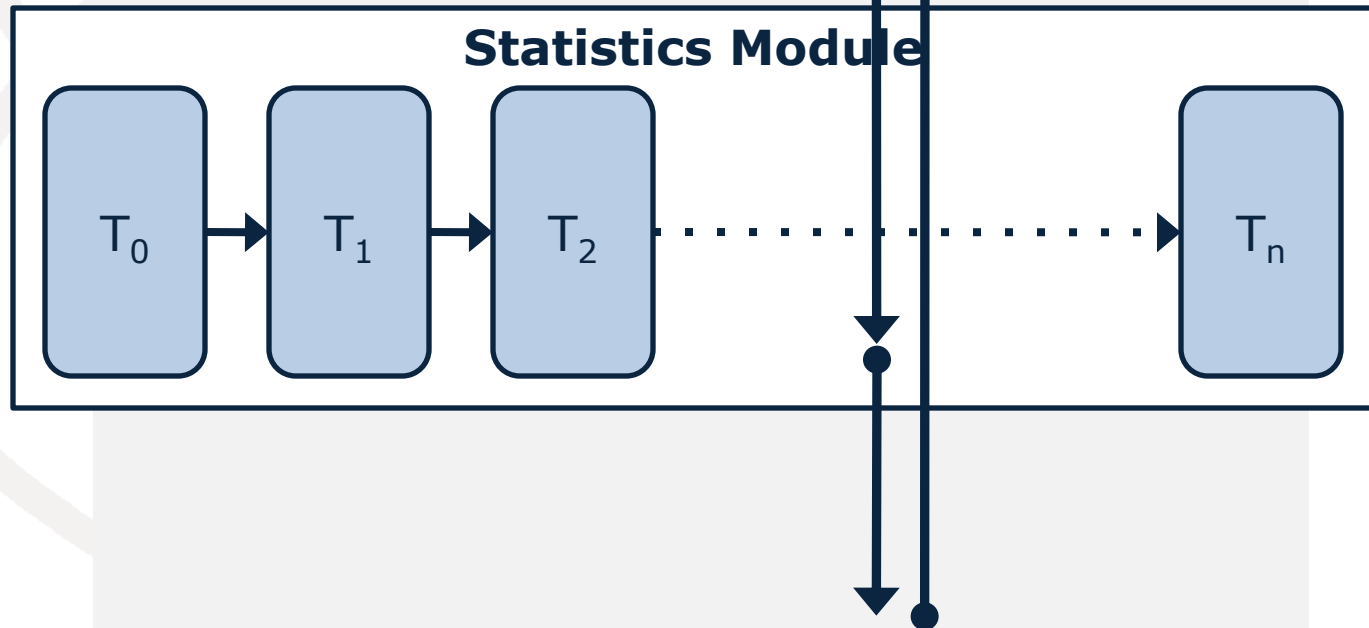
# Adaptation Logic



# Measurement Tool

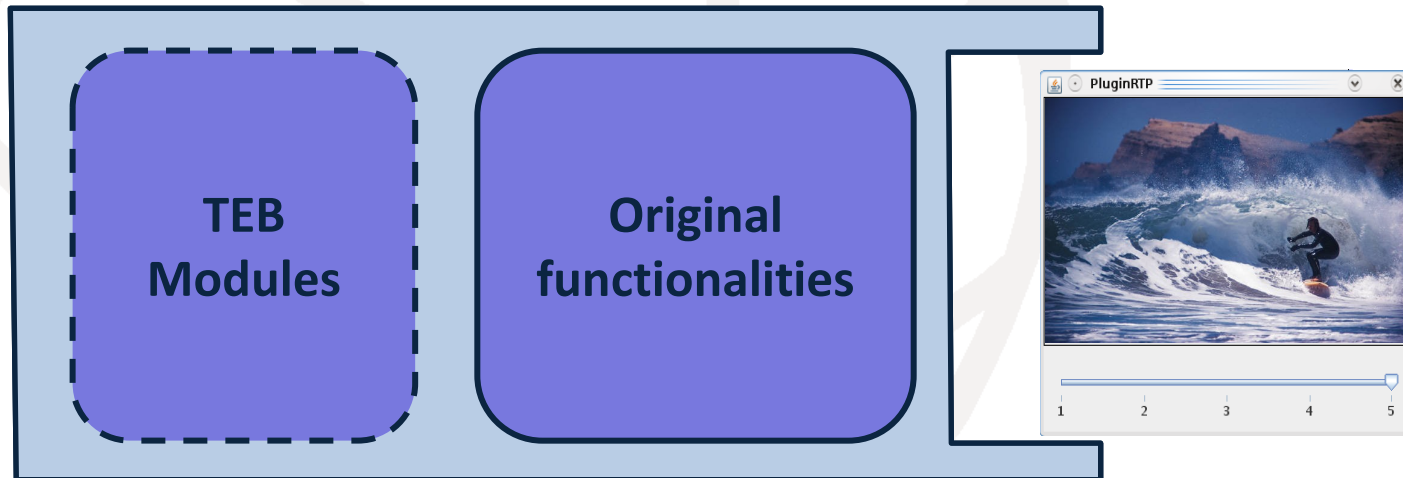
- Integration of **VLC Player** and **LiveMedia** library in **Java** **engineering** process is needed. The newly integrated elements ought to perform the desired functionalities.

## Generation of partial evolution statistics



# Conclusions

- ❑ LabQoS test platform allows experiments to be performed with different combinations of parameters in a stable way.
- ❑ Logic of the experimental adaptation is remarkable
- ❑ It provides a common platform for researchers in order to share tests (validating and reproducing them)
- ❑ Some european initiatives (TMA, etomic, DIMES...) can be potential users
- ❑ Improvement for the QoSMeter measurement system



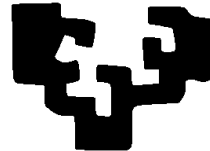
## LabQoS: A Platform for Network Test Environments

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**Thank you for your attention**

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