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5<sup>th</sup> International Conference on  
Software Testing

## From Requirements to Test Cases & Executable Test Scripts

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**Practices Experience Knowledge Automation**



**STeP-IN SUMMIT 2008**  
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## From Requirements to Test Cases & Executable Test Scripts

### LEIRIOS SMART TESTING™ SOLUTION FOR TEST CENTERS

Michel Guez – VP business development  
Eddie Jaffuel – Senior Consultant



## Who we are


- **LEIRIOS** is a French software product company
- Our flagship solution is **SMART TESTING™**
- **SMART TESTING** is used in Europe by:
  -  **BNP PARIBAS** - 5th largest European Bank
  -  - French railways company, 2<sup>nd</sup> European largest
  -  - 7th world largest IT company
  -  - largest chip card manufacturer worldwide
- **LEIRIOS in INDIA**
  - Business partnership with **Qualitree** → **Smart Testing Centre**
  - POC with **Infosys & Intelligroup**



# Agenda

## THINGS YOU SHOULD REMEMBER after this presentation 😊

- Test factory or Test centres
- Industrialisation
- Functional testing
- Test design automation
- Model-Based Testing



# Industrialisation

## A CLEAR POLICY FOR FUNCTIONAL TEST

**IT Governance**

- IT & Business Alignment
- Risks Management

**Globalization**

- Outsourcing
- MultiShoring/Externalization

**Constraints**

**TEST CENTER**

- Ressources
- Processes
- Tools


**Risks**


**Compliance**

- Regulatory compliance
- Auditability and Conformity


**IT Transformation**

- ERP application upgrade
- Application migration/SOA





**TEST FACTORY**






## Industrialisation

### THE CHALLENGES OF TEST CENTRES:

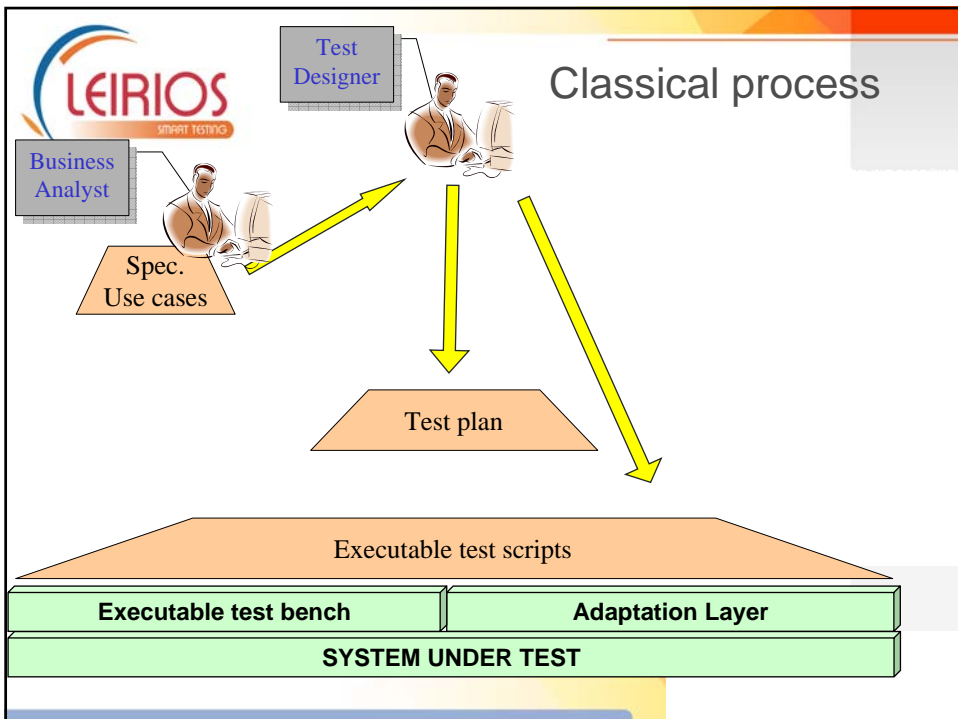
- Productivity
  - from manual test to automation
  - test platform reusability across projects
- Quality (secure your SLA)
  - optimised test coverage
  - alignment with business requirements / auditability
- Human Resources
  - Resources motivation & retention
  - Intellectual capital investment

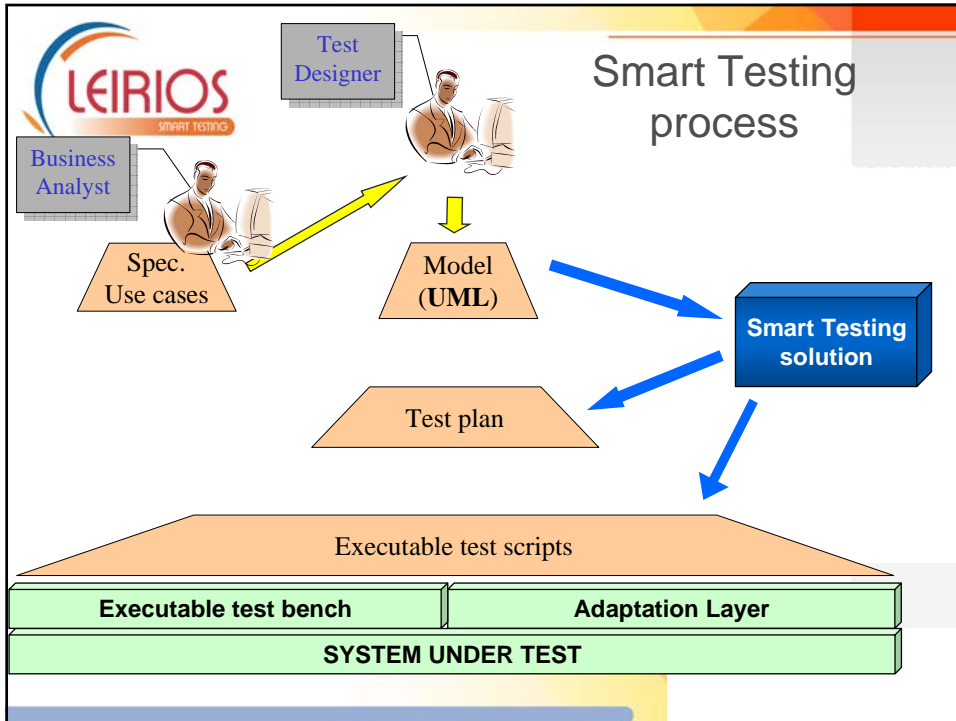


## Model-Based Testing

### LEIRIOS SMART TESTING™ IMPLEMENTS MBT:

- Automatic generation of executable test scripts from UML model of the AUT
- Systematic & highly productive approach
- Automated Requirements traceability  
→ requirement-based testing
- Seamless integration with existing test management and test execution tools
- Parameterisation





## Benefits 1/3

### SMART TESTING™ MEETS THE CHALLENGES:

- **Productivity**
  - from manual test to automation
  - Test platform reusability across projects

- From ~20% automated tests to ~80% automation => easy regression testing
- 25% productivity gains on test design  
Ex: on a customer project, 300 man/days budgeted with manual design, 200 m/d actually consumed with Smart Testing
- ~70% productivity gains on maintenance of test asset




## Benefits 2/3

**SMART TESTING™ MEETS THE CHALLENGES:**

- **Quality (secure your SLA)**
  - optimised test coverage
  - Alignment with business requirements / auditability

- Model = specs debugger & formal contractual document (not ambiguous)
- Model = communication document
- Requirements traceability matrix automatically generated
- Model = contribution to CMMI certification



## Benefits 3/3

**SMART TESTING™ MEETS THE CHALLENGES:**

- **Human Resources**
  - Resources motivation and retention
  - Intellectual capital investment

- Specialisation of expertise
- Promotion of the testing team expertise
- Model raises the level of abstraction
- Model transfer easier than test plans



## Even More Benefits...

### SMART TESTING™ MEETS THE CHALLENGES (4):

- Intellectual Capital assets with “Verticals”
  - Library of models
  - Ex : ERP, business domain, technical domain...

→ INTELLIGROUP Testimony