Testing As A Service
KVIV

3rd April 2014
AGENDA & INTRO
Agenda

- Who am I? Trasys?
- The Testing “Eco system”: Drivers for change and TAAS enablers
- Definition of Testing “As A Service”
- TAAS components
- Benefits
- Pitfalls & Challenges
- TAAS & Cloudcomputing
- TAAS – Test Factory?
Intro: Trasys & me

- Practice Director Testing
- Started Testing career in 1999
- ....
**Key facts and figures**

- **Independent IT Services provider**
  - Created in 1981 (Tractebel)
  - Owned since 2006 by AvH & CNP (84%) and Mgmt (16%)

- **680+ specialists over 8 locations in Europe**
  - Near-Shore delivery unit in Greece
  - ISO 9001 Certified

- **Revenue 68M€**
  - Profitable since creation
  - 30% of revenue outside Belgium
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<th>Cost Of Quality: Testing as a commodity</th>
<th>From CAPEX to OPEX</th>
<th>Regulatory Compliance</th>
<th>Governance &amp; QA over testing</th>
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<td>Customer awareness about NFT</td>
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The Testing “Eco system” : Enablers of TAAS

Cloud Computing PAAS

Security and bandwidth of networks support remote access

Testing tools offered as SAAS

Testing is Standardised & professionalised in a body of knowledge

Maturing customer (project & service mgt)
Definition of Testing “As A Service”

**TAAS**

Service delivery and outsourcing model of software testing whereby the service provider undertakes the activity of testing applications & solutions for a (set of) customer(s) as a service (mainly) through the internet
TAAS Components: Service Delivery & Governance Model

Customer (i.e. SSC)

(FW) Contract Manager

Service Manager

Project or Application Manager

Development team and/or business

Service contract
SLAs
Service review

On demand request
KPIs

Test plan
Test strategy
Test reports

Test cases
Test script
Test results

Defects

TAAS Provider

(FW) Contract Manager

Service (line) Manager

Test Manager

Test Engineers
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<th>TAAS Components: (Framework) Service Contract</th>
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<td><strong>Service catalogue</strong> (test types, test levels and test activities)</td>
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<td><strong>Pricing model</strong> (pay per use, fixed price at service level, test points,..)</td>
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<td><strong>Agreed delivery conditions</strong> (entry, exit, suspension, resumption)</td>
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<td><strong>Scope ‘test object’</strong> (assets, projects, releases)</td>
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<td><strong>Governance model</strong> (SLAs, KPIs and penalties, meetings, service evaluation and improvement)</td>
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<td><strong>High level planning</strong></td>
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<td><strong>RACI matrix for both parties: deliverables</strong></td>
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<td><strong>Reporting, Communication &amp; follow up</strong> (operations mgt.)</td>
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<td><strong>Agreement about Tools</strong></td>
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<td><strong>Agreement about Test environments &amp; test data</strong></td>
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TAAS Components: RACI in service contract

- As provider: often you will be in a “triangle relationship” with the customer and a third party (other service provider, dev. Contractor, hosting provider,..)

- RACI matrix clarifies who is responsible for what and should provide / communicate the deliverable / information / service to the other party

- RACI should be established between Service Provider, Customer and often third party (dev. Contractor, hosting partner)

- Items in RACI could cover:
  - Test tools (test & defect mgt, test automation, NFT tools,..)
  - Test levels & Test types
  - Test activities (test mgt, test prep, design, execution, defect mgt)
  - Test Base (Requirements, use cases, technical design,..)
  - Test Environments (split by test level and test type)
  - Test Data & test data mgt.
  - Test object / AUT
  - Test reports & test ware
TAAS Components: Service items / test types in Service Catalogue

TRASYS Example

Testing of solutions
- ERP & CRM testing
- Cloud testing
- Mobile application testing
- Big data - DWH and BI

Test automation
- Model based test automation
- Data driven I.M test automation
- Keyword driven test automation
- Agile driven testing

Non functional testing
- Performance testing & profiling
- Code review & requirements review
- Portability testing
- Security & reliability

Functional & business oriented
- Functional system testing
- Integration and SOA testing
- E2E business process testing
- Compliance testing (Solvency II, SEPA, CSV)
- Usability & Crowd testing
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<th>TAAS Components: Test Tools</th>
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<td><strong>Trasys Example</strong></td>
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<td>SOASTA (cloud based)</td>
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<td>SOAP UI (SOA testing)</td>
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<td>HP Agile Manager (cloud based)</td>
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<td>Open Cloud architecture (Cloud Foundry)</td>
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<td>MaTeLo (model based testing)</td>
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TAAS Components: Operating Model

Service Customer # 1 (one or several services)

- Initiate – Request WP – Specific Contract
- Prepare & plan
- Perform & communicate, meet
- Monitor budget, progress, risks, resolve issues
- Complete & close, with lessons learned

TAAS Provider
Manage Customer Portfolio

- Delivery Management
- Infrastructure Management
- Resource Management & Capacity Planning
- Service Management
- Operations & Financial Management
TAAS Components: Zoom on Resource Management

Service Customer # 1
- Initiate – Request WP – Specific Contract
- Prepare & plan
- Perform & communicate
- Complete
- Monitor & Improve

TAAS Provider
- (FW) Contract Manager
- Service (delivery) Manager
- Onsite team
- Nearshore team
- Offshore team

Resource Pools in Test Centre of Excellence
- NFT
- TM
- TE

Sourcing / Service Partners
- Pool Managers
- Recruitment
- Crowd sourcing
Test environments, test data & test tools must be acquired and managed
Main driver for TAAS is taking over (a part) the investment and management of
the test environments, tools, data & infrastructure components
Test tools as SAAS in cloud or hosted on premises at service provider
Test environments as PAAS -> in cloud or hosted in data Centre at service
provider/ third party with remote VPN access
Test base and test ware is remotely accessible by customer and service
provider
Best practices are enforced:
- Separate environments for each test levels and test types
- Data privacy, encryption, test data scrambling
- Secure remote access to test base, test ware, tools via VPN / secure
tunnel
- Segregation of information access by customer / project
TAAS Components: Zoom on Infrastructure Management

Service Provider

Customer specific test env. (hosted)

Test Tools SAAS (hosted)

Customer

Connection Server

SharePoint / document mgt. Sys.

Cloud Test Environment

SAAS Test Tools

PAAS Test Platform

ECM SAAS Platform (customer or provider)
TAAS Benefits

- **Test from anywhere** with cloud enabled TAAS or remote connection -> enables nearshore / offshore and even “crowdsourcing”

- Reduce TCO of testing with 30% and shift from CAPEX to OPEX
  - Test tools as a service (SAAS) and on demand -> pay per use
  - Near shore test centre (save about 20% compared to local resources)
  - Use Cloud for test environment infra (PAAS)
  - Optimized test process – re-use / continuous improvement
  - Optimised resource allocation / forecasting / test organisation

- Schedule acceleration due to: Process standardisation + Service management optimisation + Instant provisioning of resources (test resources / tools / environments)

- Testing is a governed process under QA with a result commitment by the provider (defined service outcome, SLA’s) -> Service quality optimization and operational risk transfer to provider

- Access to niche expertise and wide range of test services :”one stop shop”
# TAAS Pitfalls & challenges

## Provider Challenges

- Manage multiple customers & projects (capacity planning)
- Differentiate through expertise and service portfolio (one stop shop)
- Manage knowledge of resources
- Provide “independent” feedback about quality level.
- Agree with customer and third party on who does/delivers/provides what (RACI): deliverables, test tools, test environments, test data, defect mgmt, etc.
- Manage changes and variability in resource availability & in customer demand...worst case scenario
- Gain trust from customer
- Low maturity level @ customer side in service mgmt and / or testing and / or other discipline interacting with testing (i.e req. mgmt).
- SDLC alignment with customer
- Not always possible to do everything off site...technology constraints: mainframe or SAP landscape...security and access constraint, legal constraints

## Customer Challenges

- Establish a long term vision and relation with service provider (trust)
- Contribute to continuous service improvement (provider is not just a “subco” but a partner)
- Sufficient maturity in service management is critical (and idem for test process)
- Provide access to test object (AUT), test base, test environment, test tools,...as agreed with the provider
- Document test base in a way that it can be used by the provider (language, keep up to date, freeze)
- Manage change (of provider or service)
- Language and cultural differences (and time differences) -> nearshore <-> offshore
TAAS & the cloud

TAAS does not require Cloud computing but it is handicapped without it i.e more expensive and less agile

TAAS use cases for Cloud:

- SAAS test mgt & PM tools (for example HP Agile Manager & HP QC in cloud)
- PAAS test environments and DSAAS (Dev SAAS)
- ECM in the cloud to support document exchange and collaboration... access to test base, reports, test ware
- “Test from anywhere” with cloud enabled TAAS-> enables nearshore, off shore and crowd testing
- Use cloud as a load generator: for example use Amazon Elastic Compute Cloud (EC2) in combination with SOASTA CloudTest to load test a system/website
- Cloud based mobile app functional test automation...SOASTA TouchTest
- Use Mobile devices as a service...Perfectomobile MobileCloud
TAAS is an evolution of the “Test Factory” and not a revolution…
Thank you for your attention!