Growing to a Next Level Test Organisation

Tim Koomen

EuroSTAR 2011
Average TPI score ...
Common findings

- Insufficient risk based test strategy
- Unclear use of test design techniques
- Lack of a structured test process
- Some kind of test organisation ...
 Typical improvement horizon

- No surprise …
  - Risk based test strategy and use of techniques
  - Structured and transparent test process
  - Permanent test organisation, “test factory”, with clearly defined services
  - (+ some 1-3 other points)
Different types of organisation

<table>
<thead>
<tr>
<th>Result</th>
<th>Resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project agreement</td>
<td>Ad-hoc contracting</td>
</tr>
<tr>
<td>Outsourcing</td>
<td>Resource commitment</td>
</tr>
</tbody>
</table>

- **Test Factory**
- **Test Expertise Center**
Services existing TEC

- “Resource pool”
  - Supplying (internal or external) testers, test managers and test automation specialists
- And sometimes:
  - “Guardian” of test method
  - Test consultancy
  - Coaching users in an acceptance test
  - Training.
Level of ambition: Test Factory

Test Factory as lever for improvement:

- Permanent
- (More) delivery commitment
- Motivator
- More power in organisation
Test Factory?

- What does it look like?
  - Processes
  - People
  - Services
  - Infrastructure
- Advantages
Process model

Organisation / process model set-up

- Permanent test organisation
- Services

- General management (financial and operational)
- Human resource management
- Services management
- Planning
- Delivery management

- Support and monitoring
- Initiation
- Execution
- Completion
People

- Function descriptions, career path and training for testers
Examples:
- System and acceptance testing
- Agile testing
- Management of test processes
- Test consultancy
- Test automation
- Auditing test processes
- Test environment management
- Training
- ...
## Services in detail

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Short description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>Required input from customer</td>
</tr>
<tr>
<td>Entry-criteria</td>
<td>What requirements must the customer meet for the service to be successful?</td>
</tr>
<tr>
<td>Approach</td>
<td>Required processes, standards and techniques (norm)</td>
</tr>
<tr>
<td>Required functions</td>
<td>Test manager, tester, test automation engineer</td>
</tr>
<tr>
<td>Output</td>
<td>Expected output of the service: products, reports</td>
</tr>
<tr>
<td>Type of assignment</td>
<td>delivery commitment / resource commitment / no commitment</td>
</tr>
<tr>
<td>Service level</td>
<td>The service level of the service: measured in time, money and/or quality, also: knowledge conservation, reliability</td>
</tr>
<tr>
<td>Costs</td>
<td>Costs of the service in money or hours.</td>
</tr>
<tr>
<td>Added value</td>
<td>What is the advantage for the customer and the organisation to use this service?</td>
</tr>
</tbody>
</table>

**KISS!**  
- Start from current situation  
- Communicate  
- Make type of commitment explicit
Infrastructure

- Often owner of test infrastructure
- Optionally managed by another department
- Under control of Test Factory
- Tooling: projects x line (system management, licences), integration with development
Advantages

- Test organisation in general:
  - Better use of (scarce) expertise
  - Potentially lower costs through centralisation and scaling
  - Shorter start-up time

- Test Factory versus TEC:
  - More predictable quality of testing
  - Continuous improvement
  - Knowledge preservation and development
  - Costs and lead time are better manageable
Change process steps

(after assessment)

- Communicate findings/recommendations
- (Management) commitment
- Organise (coordination of) improvement activities
- Implementation plan
- Supporting test and TPI expertise
- Brainstorm over future test organisation
- Implement and pilot improvements
- Going x growing concern

Hard part: changing people
Basic Change Method

- Combination of most effective notions from cognitive and social behaviour psychology
- Basis:
  - Change = adopting new habitual behavior
  - This requires management of behaviour intentions and change situations
  - Change goes through phases and has costs (time, money, ...)

Ben Tiggelaar, “Do!”
Phases BCM

- Get Real
  - Goal oriented behaviour intentions (required results and other habitual behaviour)

- Make Plans
  - Prepare most difficult change situations (with triggers and counter behaviour, action plan)

- Take Action
  - First measure behaviour, only later measure results of behaviour
  - Reward
Implementation ...

- Work groups create all kinds of deliverables. And now ...?

- For each deliverable several activities:
  - Communication (how and to whom)
  - Set-up
  - Training
  - Coaching/support
  - Monitoring
  - Feedback

- Plan these activities - “Service group plan 2011”
Example: KPI’s

<table>
<thead>
<tr>
<th>Goal</th>
<th>Managed test processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>TF-meetings, email, newsletter</td>
</tr>
<tr>
<td>Set-up</td>
<td>SAP, extranet, part of standard progress reporting</td>
</tr>
<tr>
<td>Training</td>
<td>Instruction meeting for test managers</td>
</tr>
<tr>
<td>Coaching/support</td>
<td>1 x for each test project</td>
</tr>
<tr>
<td>Monitoring</td>
<td>Test manager meetings, TF-manager</td>
</tr>
<tr>
<td>Feedback</td>
<td>Quarterly evaluation whether KPI's give right info + trends</td>
</tr>
</tbody>
</table>


Resistance?

- Yes!
  - “Not in my (running) project”
  - “Not in my starting project”
  - “My project is just a bit different ...”
  - “No time”
  - “This is just maintenance”

- Be patient
- Management commitment required
- Don’t walk too far ahead ...
- Counter “Not Invented Here”: people create and implement solutions themselves
- Reward (by giving attention)
Finally: Agile and Test Factory?

- Can this be combined?
- Not in its pure form ...
- But sourcing testers as a service, where the testers use a transparent process and generate predictable results, comes close
Conclusion

Test organisation is often just a resource pool

Test Factory as a lever for change

Basic Change Method helps
... but leaves enough of a challenge
...
Questions or remarks?