How to successfully outsource testing?

by Martin Pol
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Topics:
• Outsourcing, the phenomenon
• Outsourcing of testing, some challenges
• Test outsourcing roadmap

Definition of strategy
Selection of supplier
Creation of contract
Transition
Management & Monitoring
100+ specialists
100% specialized
100% independent

Test management
Test engineering
Test outsourcing
Test consultancy
Test academy

Serving the World

Nokia
Ericsson
T-Mobile
Český Telecom
Philips
Unilever
Huawei
PepsiCo
Microsoft
Novell
Sun
Daimler Chrysler
OTAN/NATO
Statoil
TNT
Lufthansa
KLM
HP
TomTom
Barclays Bank
ING
ABN-AMRO
RBS
TOGA®
Test Outsourcing Governance Approach

- Roadmap for implementation
- Scoping technique, business case planning
- Risk analysis
- RFI, RFP, guidance for supplier selection
- Generic Master Test Plan templates
- Monitoring
  - Metrics standard
  - Audit control
  - Tooling
  - Reporting formats
- Checklists
- Descriptions of functions
- Training material
- Offshoring specials
- Test Outsourcing Improvement Model
- Experience repository
Outsourcing, Why?

- Benefit from the capabilities of others
- Deal with peaks and valleys
- Reduction of resources
- Reduction of ‘lost time’
- Cost reduction
- Cost control
- Independent quality assessment

- To focus on core business

Cost reduction!
Lack of resources
“The transferring of an internal business function or functions, plus any related assets, to an external supplier who offers a defined service for a specified period of time, at an agreed but probably qualified price”

J. Brian Heywood
Is outsourcing new?

- Nature
- Construction
- Aviation
- Catering
- Health care
- .............

Ford:

Early days: 1980: 100% own made
now: 87%
32%
Types of “out”-sourcing

- Outsourcing
- “Sourcing”
- Off-shoring
- In-sourcing
- Co-sourcing
- Right-sourcing
- Near-shoring
- ..........

- Business Process Outsourcing

Back-sourcing?
Levels of “out”-sourcing

- Managed Sourcing
- Time-Material
- Fixed Priced
- Business Process Outsourcing
Where?

Forrester Research:

Offshored by US companies now: 1,000,000 jobs
by 2015: 3,000,000 jobs
Outsourcing in the IT

- Operations/facilities
- System management/maintenance
- System development
  - build
  - test
  - IT as a whole
Outsourcing of Testing: some challenges

• Risk based testing and coverage
• Estimation
Outsourcing of Testing: some challenges

- Risk based testing and coverage
- Estimation
- Test maturity
Outsourcing of Testing: some challenges

- Risk based testing and coverage
- Estimation
- Test maturity
- Final “gateway” to life
Outsourcing of Testing:

- Risk based testing and coverage
- Estimation
- Test maturity
- Final “gateway” to life
- “Agile” development
- Availability of business expertise
- Separation of functions
- Different languages, culture
Outsourcing of Testing: some challenges

- Risk based testing and coverage
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Outsourcing of Testing: some challenges

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- Different languages, culture
- Management and control
- Rigidity versus flexibility
- What remains? Organization
What remains?

Outsourced testing

?
Outsourcing of Testing: some challenges

- Risk based testing and coverage
- Estimation
- Test maturity
- Final “gateway” to life
- “Agile” or not?
- Availability of business expertise
- Separation of functions
- Different languages, culture
- Management and control
- Rigidity versus flexibility
- What remains? Organization
Test outsourcing steps

• Definition of strategy
• Selection of supplier
• Creation of contract
• Transition
• Management and Monitoring

The Roadmap to Successful Outsourcing
Definition of strategy

- Objectives
- Scope
- Strategy
Objectives

• Buying in scarce expertise
• Just focus on core business
• Guarantee for quality
• Cope with peaks and valleys
• Reduction of resources
• Improved time-to-market

• For the time being: No cost reduction
Scope options

- Test execution
- Test automation
- Test levels/types
  - system testing
  - regression testing
  - load testing
  - security testing
- All testing
- Development and testing
- Only (non-)strategic applications
Scope option: Outsource everything (design, build and test), except rqms and final acceptance

Pros:
- Efficiency
- Responsibility, liability
- Transfer of information
- Short communication lines
- Verifiability
- Business knowledge

Cons:
- Separation of tasks
- Required monitoring
- Monopoly/dependency
- Informality

Sourcing options:
- Fully outsourced
- Full TOGA required

Objectives:

<table>
<thead>
<tr>
<th></th>
<th>Score</th>
<th>Weight</th>
</tr>
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<tbody>
<tr>
<td>Quality</td>
<td>7</td>
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<td>Costs</td>
<td>7</td>
<td>-</td>
</tr>
<tr>
<td>Flexibility</td>
<td>5</td>
<td>-</td>
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<tr>
<td>Contribution</td>
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<td>6,3</td>
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Prerequisites:

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<th>Weight</th>
<th>Score</th>
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</thead>
<tbody>
<tr>
<td>Implementation</td>
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<td>2</td>
<td>4</td>
</tr>
<tr>
<td>BAU</td>
<td>2</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>Organisation</td>
<td>5</td>
<td>5</td>
<td>25</td>
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<tr>
<td>Maturity</td>
<td>5</td>
<td>8</td>
<td>40</td>
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<tr>
<td>Doability</td>
<td>5</td>
<td>8</td>
<td>3,7</td>
</tr>
</tbody>
</table>

Time, costs, benefits and balance:

Relative benefit: 10
## Scope score overview

<table>
<thead>
<tr>
<th>#</th>
<th>Objectives</th>
<th>Doability</th>
<th>Relative Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Outsource everything (design, build and test), <em>except</em> rqms and final acceptance</td>
<td>6.3</td>
<td>3.7</td>
</tr>
<tr>
<td>2</td>
<td>Insource all system testing</td>
<td>4</td>
<td>5.1</td>
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<tr>
<td>3</td>
<td>Outsource ST, SIT, UAT, NFt, <em>incl.</em> TM, strategy and planning</td>
<td>5.6</td>
<td>3.2</td>
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<tr>
<td>4</td>
<td>Outsource ST, SIT, UAT, NFt, <em>except</em> TM, strategy and planning</td>
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<td>5.6</td>
</tr>
<tr>
<td>5</td>
<td>Outsource ST, SIT, UAT, <em>except</em> NFt, TM, strategy and planning</td>
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<td>5.8</td>
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<tr>
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<td>Outsource <em>only</em> automated regression testing</td>
<td>7</td>
<td>6.9</td>
</tr>
<tr>
<td>7</td>
<td>Outsource <em>only</em> NFt</td>
<td>4.7</td>
<td>8</td>
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</table>
Next steps, Strategy

<table>
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<th>Objectives</th>
<th>Doability</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Outsource everything (design, build and test), <em>except rqms and final acceptance</em></td>
<td>6,3 3,7 10</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Insource all system testing</td>
<td>4 5,1 5</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Outsource ST, SIT, UAT, NFt, <em>incl. TM, strategy and planning</em></td>
<td>5,6 3,2 8</td>
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<tr>
<td>4</td>
<td>Outsource ST, SIT, UAT, NFt, <em>except TM, strategy and planning</em></td>
<td>6 5,6 6</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Outsource ST, SIT, UAT, <em>except NFt, TM, strategy and planning</em></td>
<td>6,3 5,8 5</td>
<td></td>
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<td>6</td>
<td>Outsource <em>only</em> automated regression testing</td>
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<td></td>
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<td>7</td>
<td>Outsource <em>only</em> NFt</td>
<td>4,7 8 2</td>
<td></td>
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</table>

Rough strategy steps

- Improve processes to “required” level
- Implement “TOGA”
- Implement option 6
- Continue with 5 and 4
- Continue towards 3
- Recruit accordingly
Rough time scale

- Implement “TOGA”
- Improve processes to “required” level
- Implement option 6
- Continue with 5 and 4
- Continue towards 3
- Recruit accordingly

Create plan of actions for outsourcing
What remains?

• Test environments
• Integration tests
• Acceptance tests
• .............
• .............

Outsourced testing

<table>
<thead>
<tr>
<th>Definition of strategy</th>
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<tbody>
<tr>
<td>Selection of supplier</td>
</tr>
<tr>
<td>Creation of contract</td>
</tr>
<tr>
<td>Transition</td>
</tr>
<tr>
<td>Management &amp; Monitoring</td>
</tr>
</tbody>
</table>
Strategy

Based on objectives and scope
• Scope
• Level of outsourcing
• Type of outsourcing
• Order and planning
• Transition time and budget

Don’t forget
• Test environments and tools
• Functions, roles and tasks
• People issues, unions
Selection of supplier

- Respect the objectives
- Time and cost consuming
- More than one, but not too many suppliers
- Gap between decision making and implementation

- Profile of supplier
Profile of supplier

• (Proven) experience in:
  - *test* outsourcing
  - *testing* your type of business
• Completeness of services
  - type of tests
  - test lab facilities
  - *own* professional (certified) testing staff
• Continuity
• Privacy warranties
• Openness, flexibility
• ……….
Creation of contract

• Legal part
• Service levels for test
Legal part

• Objectives and services
• Term of contract
• Exclusivity
• Intellectual property and publicity
• Liabilities
• Communication and reporting
• Responsibility and compensation
• .................

• Arrange the “divorce” before the “marriage”

Your legal advisors must be in charge of the contract process!
Service levels for test

- Standards (IEEE, ISTQB, etc.)
- Scope, what to test?
- Specifications
- Quality characteristics
- Test strategy
  - average risk level
  - test design techniques
- Effort estimation
- Test environments and automation
- Deliverables and acceptance criteria
- Functions and tasks
- .............
Service levels for test

- Definition of strategy
- Selection of supplier
- Creation of contract
- Transition
- Management & Monitoring

**Contract**

- Legal agreements
- Services

**GMTP**

- Generic Master Test Plan
- **generic**
- Project specific

- Project MTP
- Detail testplan
- Detail testplan
GMTP contents

• General
• Test basis and acceptance criteria
• Test process
• Test strategy
• Test organization
• Procedures
• Planning and estimation
• Test infrastructure
• Test deliverables
• Miscellaneous
Transition

- Plan of approach

- New organizational structure
  - contact persons
  - roles and responsibilities
  - management and monitoring
  - meeting structure
  - reporting structure
Transition

• Starting aspects
  - definition and introduction of new way of working
  - pilot
  - training
  - support
  - required budget

• Communication
  - manage expectations
  - demand organization (business)
  - supplier
Transition

- Transfer of:
  - staff (personnel issues)
  - knowledge
  - equipment, tools
  - documentation
Test outsourcing management & monitoring

Outsourced testing

Advised Goal: Reduction of Management & Monitoring effort

SLA

Scoping, selection, etc.
GMTP (management)
Supplier management
Reporting and escalation
Managing demand side
Remaining test activities

Acceptance

Dashboard
Scorecard
Metrics
Health checks

Definition of strategy
Selection of supplier
Creation of contract
Transition
Management & Monitoring
Test outsourcing management

- Scoping, selection, etc.
- GMTP (management)
- Supplier management
- Reporting and escalation
- Managing demand side
- Remaining test activities
- .............
Test outsourcing monitoring

- Framework agreed with supplier
- Defined in the *Generic Master Test Plan*

Outsourced testing

- Test products
- Reports
- Interviews

Scorecard  Metrics  Health check
Test outsourcing monitoring

Outsourced testing

Scorecard | Metrics | Health check

Test products | Reports | Interviews
Test outsourcing monitoring

Outsourced testing

Scorecard  Metrics  Health check

Test products  Reports  Interviews
Test outsourcing monitoring

Outsourced testing

- Test products
- Reports
- Interviews

- Scorecard
- Metrics
- Health check
Test outsourcing monitoring

Outsourced testing

Risk based scaling required

Growing confidence → less monitoring necessary

Scorecard  Metrics  Health check

Test products  Reports  Interviews
Test outsourcing dashboard

test deliverables

test progress

test process

product quality

controls, metrics, health checks, (external) audits

www.polteq.com  info@polteq.com
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Test outsourcing dashboard

Test deliverables
Test process
Test progress
Product quality
Summary

• Main objective = cost reduction

• To cope with 'some' challenges

• Guidance & Roadmap required
  - Scoping
  - Agreements
  - Dashboard

TOGA®
Test Outsourcing Governance Approach
¡Gracias!

test progress

controls, metrics, health checks

test deliverables

product quality

test process
TOGA®
Test Outsourcing Governance Approach

- Roadmap for implementation
- Scoping technique, business case planning
- Risk analysis
- RFI, RFP, guidance for supplier selection
- Generic Master Test Plan templates
- Monitoring
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