Effective Requirements Management with HP Quality Center
Connecting Business Goals and Quality

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Swiss Requirements Day, June 22, 2011, Zurich

Integrated Requirements Management

- Requirements are the foundation of the entire software lifecycle
- The effective connection from requirements to testing enhances both disciplines
- It adds business value to the contributions of IT and software development
- Effective requirements management and test management must be supported by tools
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Business Value of IT & Software Development

- Fast
- Usable
- Useful
- Flexible
- Maintainable
- Productive
- Low Cost of Ownership

Deliver valuable solutions

Application Lifecycle Management

- PLAN
- DELIVER
- RUN
- RETIRE
- INITIATE
- ENHANCE
- REPAIR
- MONITOR & TUNE
- ITERATE
- RELEASE
- DEPLOY

Prioritize & Invest

Establish Governance

Monitor & TUNE

Establish portfolio mgmt.

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Integrated RM Delivers Business Value

HP Solutions to Master the Core Application Lifecycle
HP Lifecycle Solutions & Operating Principles

Legacy Delivery: Islands, Point Tools & Brute Force
Modern Delivery with HP Application Solutions

RM Challenges & Objectives

- Variety of Business Scenarios
- Collaboration & Communication
- Transparency
- Distributed Development
- Flexibility & Adaptability
- Process Guidance
- Consolidated Tool Landscape
Different Business Scenarios for RM

- Application development for internal use
  - project-driven, occasional to continuous, one or few centrally hosted instances, subsequent releases, long lasting, change request driven
- **Product development for market**
  - continuous, customer & market driven
- Internet app
  - agile, short release cycles
- System development
  - embedded software

Recommendations for Integrated RM

- Establish evolving requirements practices
- Provide information structures for guiding requirements development & management
- Support collaboration among RM stakeholders
- Utilize a learning framework
## Requirements Structure

Establish structure based on standard or good practice

e.g. IEEE Std. 830-1998, Volere

<table>
<thead>
<tr>
<th>Requirement Type</th>
<th>Folder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Owner</td>
<td>Folder</td>
</tr>
<tr>
<td>Scope</td>
<td>Folder</td>
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<tr>
<td>Business requirement 1</td>
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<td>Business requirement 2</td>
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<td>Business requirement 3</td>
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<td>Release 3.0</td>
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<td>Folder</td>
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<tr>
<td>Interoperability</td>
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</tr>
</tbody>
</table>

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## Good Requirements Definition: Volere Shell

![Volere Shell Diagram]

- **Requirement #: Unique ID**
- **Requirement Type:**
- **Description:** A one-sentence statement of the intention of the requirement
- **Rationale:** A justification of the requirement
- **Source:** Who raised this requirement?
- **Fit Criteria:** A measurement of the requirement such that it is possible to test if the solution matches the original requirement
- **Customer Satisfactions:**
- **Customer Dissatisfactions:**
- **Dependencies:** A list of other requirements that have some dependency on this one
- **Supporting Materials:**
- **History:** Creation, changes, additions, etc.
- **Degree of stakeholder happiness if this requirement is successfully implemented:** Measures scale from 1 = extremely pleased to 5 = extremely displeased
- **Degree of stakeholder unhappiness if this requirement is not part of the final product:** Measures scale from 1 = hardly matters to 5 = extremely displeased

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S. Robertson and J. Robertson: Mastering the requirements process (2nd Ed.), Addison-Wesley, 2006.
Fit Criterion: Link RM with Testing

- A measurement of the requirement such that it is possible to test if the solution matches the original requirement.

Quality Requirements

- Correct
- Useful
- Testable
- Feasible
- Unambiguous
- Prioritized

Characteristics of quality requirements

See: ISO/IEC 9126-2001
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Requirements Definition in HP Quality Center

Agile Requirements

User Story estimation

User Story as a requirement type

Unique Backlog Order

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Rich Text Requirements

Traceability
Transparency

Understand where you are at any point in time based on requirements coverage analysis

Connect Business Process Models

View critical paths for development and testing

Import Business Process Models

Link Requirements to Model
Support Project Management

Kick-off  Inception  Elaboration  Construction  Stabiliz.  Transition

Phase 1  Phase 2  Phase 3  Phase 4  Construction complete  Release

Requirements State

Tool Landscape for RM

Efficient solutions required

Solution design with defined processes
Introducing Integrated RM: RM Tool Exists

Introducing Integrated RM: No RM Tool, Yet
Benefits of Integrated RM

- Requirements managers can easier define good requirements and achieve higher productivity
- Project managers gain new levels of transparency and control
- Business departments and customers receive more useful software and services faster

Thank you

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