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Agile Development

Topic 7:
Project Management (Part 2 – Quality and Testing)

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Project Management (Part 2 – Quality and Testing) Topic 7 - 7.2

Topic 7 Coverage


This topic will cover:

- Quality and Configuration Management;
- Testing;

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What is Quality?

“Fitness for Purpose”

Quality Control
(testing and rejection of faulty products)

Solution Quality

Quality Assurance
(definition of products and quality criteria)

Process Quality

Quality Management and a QM system
(the feedback from QC & QA to improve the process using a system of tools, techniques and standards etc.)

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Quality Assurance in DSDM

DSDM Quality Audit focuses on these key areas:

- Is business involvement sufficient?
- Is team really empowered?
- Is life-cycle being followed?
- Are products being produced?
- Is feedback from reviews being incorporated?
- Is backtracking possible?
- Are priorities being adhered to?
- Are timeboxes being respected?

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Quality Management Steps

1. Say what you are going to do.

2. Do it.

3. Demonstrate that you have done it.



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Quality Related Activities

Points to consider are:

- Inspection and review against product descriptions
- Dynamic testing
- Static testing
- Review/demonstration of key prototypes

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Maintainability versus Cost

Senior Management decision at outset:

- ✓ Maintainability a requirement for the new system, or
- ✓ Maintainability is not a problem: short system life, replaced before maintenance an issue, or
- ✓ Maintainability secondary to rapid delivery. The business will accept cost of re-engineering

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Group Exercise: Maintainability Decision

In groups, decide which of the 3 maintainability options applies for the case study project.

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What is Configuration Management - 1?



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What is Configuration Management - 2?

Configuration management is the process of:

- Identifying and defining configuration items (CIs) of a system;
- Controlling release and change of CIs throughout the lifecycle;
- Recording and reporting status of CIs and change requests;
- Verifying completeness and correctness of CIs;

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What is Configuration Management - 3?

- Change Control: *the set of formal procedures which record and enable changes to configuration items.*



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Configuration Management

Why is CM necessary?


- Iteration implies change, which must be managed
- Changes must be reversible - version control
- Solution developers need to be confident of right version


What is a CM Champion?

- Tech. Co-ordinator?
- Within team



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Configuration Management Strategy

Baselining: a snapshot at a point in time

Continual integration

Baseline prototypes:

- Before demonstration
- After approval

Baseline:

- Daily?
- After each item unit-tested?
- End of development timebox (at minimum)



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Metrics in DSDM

Points to consider include:

- Immediate payback in an iterative environment;
- Why measure?
- Keep it simple, make it easy;
- What are we measuring?;
- Compare measures (need > 1!);
- Measures drive behaviour.

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Group Exercise: Metrics

In groups, think of one simple (but imaginative!) metric which would measure the success of the case study project.



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Agile Testing Concepts

- Collaborative
- Repeatable
- Prioritised
- Risk-based
- Independent
- Test-driven
- Fail fast
- End-to-End Experience



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Group Exercise: Using the Key Techniques in Testing

In groups, describe how the below techniques could help in testing in an Agile (DSDM) project:

- Modelling
- MoSCoW Prioritisation
- Facilitated Workshops

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Summary of Quality and Testing

The topic has covered:

- Quality
 - What is quality?
 - Maintainability
 - Configuration management
 - Baselining
 - Metrics
- Testing

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Any Questions?

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