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Getting the Most From Your Test Process Improvement

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Overview

- Test process models can greatly help your improvement program
- When we implement the improvement goals, the new test process needs to be fit for purpose
- There are some common pitfalls in “overdoing” test process improvement
- To get the most from your improvement program, find the balance between theory and practice

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What is process improvement?

- Change current practices that give you problems
- Adopt new practices that give you good results

The big questions are...

- ... where do I start?
- ... when do I stop?

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Why use a test process model?

Models provide a structure for implementing change:

- A mechanism for assessing current status
- Defined test process areas
- A hierarchy of maturity levels
- Incremental improvement goals for each test process area

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Test process areas

	1. Scope of methodology	2. Test lifecycle management	3. Involvement on projects	4. Strategic test planning & schedules	5. Test team & team management	6. Test team & team management	7. Test spec techniques	8. Requirements & traceability	9. Metrics	10. Reporting	11. Defect management	12. Inspections	13. Developer testing	14. Release/Change control	15. Test tools	16. Test environment
Optimised																
Efficient																
Controlled																
Foundation	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Ad-hoc	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█

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The key is “fitness for purpose”

- The models identify improvement goals, but we can overdo the complexity of the processes when we implement them
- The new processes need to be appropriate, else:
 - You will be accused of stifling creativity
 - The processes will be come shelf-ware
- Find the right balance between the theory (of what to do) and the practical (of how best to do it)
- Find the right timeframe for the activity

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Typical improvement goals

Most of us need....

- More testers and more experienced testers
- To do more strategic planning
- Better requirements
- Better test documentation / a test library
- To measure and report progress
- To make sure our work is technically correct
- To keep track of test results and raw test data
- To use test tools to support the testing process

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Seek independence, not isolation

The improvement goal: More testers, more experienced testers (build up a test team)

A common pitfall: Too separate from the developers

- physical separation
- less technical domain knowledge

Can promote an Us vs Them mindset

The right balance: Sit near the developers
Get involved earlier in the lifecycle
Ask questions, workshop technical issues
Be nice

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Devise a specific & realistic test strategy

The improvement goal: Do more strategic planning

A common pitfall: Copy out the textbook into a theoretically correct document with lots of "motherhood" statements... that never gets looked at again

The right balance: A practical and appropriate solution:

- Identify concrete objectives and outcomes
- Give specific info, not generic statements
- What *exactly* are you going to do?
- Scale test coverage and doco detail to suit timeframe and risk

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Don't confuse detail for analysis

The improvement goal: Better requirements

A common pitfall: Document lots of detail for the easy functions but the "harder" requirements are missing (analysis avoidance)

The right balance: A good requirements spec includes:

- Error handling and alternative flows
- Failure and recovery scenarios
- Interface behaviour

And should not include:

- Design detail that may change

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Repeatability is good, but...

The improvement goal: Better test documentation / a test library

A common pitfall: Spend time writing very detailed tests and not enough time executing them and looking for defects

The right balance: Spend more time documenting test cases (to get the test design right)

Work out the test steps during first test run

Use a "short form" of commonly used key sequences

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Use metrics in moderation

The improvement goal: Measure and report progress

A common pitfall: Collect too many metrics, which...

- you collect because you can (a tool)
- the project doesn't do anything with

The right balance: Metrics are only meaningful if you use them to make decisions or adjust your approach

Collect metrics that you know you can use

Use the metrics you collect

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Allow creative differences

The improvement goal: Make sure our work is technically correct

A common pitfall: Being too picky/making subjective comments in peer reviews (on issues like level of detail, wording used, format used, etc)

The right balance: Just because it is different, doesn't mean it is wrong... promote individual initiative while getting value from a 3rd party viewpoint

- Provide guidance (style guide, template) but don't be pedantic
- Concentrate on technical issues

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Be realistic about record keeping

The improvement goal: Keep track of test results & raw test data

A common pitfall: Take screen shots on every test step, even if you saw the correct expected result (to prove that you really saw it)

The right balance: Test results help us:

- Confidently confirm defect fixes
- Determine release readiness
- Investigate unexpected system behaviour

The "confirmed passes" are far less critical than the "confirmed fails"

Prioritise your time – shouldn't you be doing more testing?

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Use tools wisely

The improvement goal: Use tools to support the testing process

A common pitfall: Buy or build tools without really considering what you want to achieve with them (and the value proposition in doing so)

The right balance: You need to understand the process before you can effectively automate it

Don't let the tools hinder your processes for:

- Defect tracking
- Test execution
- Test management

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In summary... Balance your improvements

Your overall improvement goal:
To improve your testing processes

The biggest pitfalls:
To go overboard with theoretical complexity
To focus on your favourite KPA rather than the best value KPA

The right balance:
Listen to the model – target your weakest areas first
It is better to adopt a simple (but possibly incomplete) process rather than a complex one that isn't followed

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