Tosca in a Business Transformation Programme

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Agenda

1. Programme Overview
2. Test Automation Process
3. Application Coverage
4. Testing Tools
5. Execution and Reporting
6. Q & A

Programme Overview

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What is the Programme delivering?

- A multi-year business-wide transformation, which will redefine how the company operates, where work happens, and the processes and systems used to support the business.

- From a systems perspective this includes a greenfields SAP implementation, and a number of other new or updated applications.

- The processes and tools to deliver these solutions are also changing.

- The solution will be rolled out into production over time across a series of releases.

Test Automation Goals

- Long Term: provide a robust and maintainable automation suite that will serve the business for many years to come.

- Short Term: stand up the foundational toolset and framework to deliver quick wins, contribute and integrate into the overall testing process from day one.

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Test Automation Team

- Currently consists of an Automation Test Manager and 4 Automation Engineers.

- A mix of contract and permanent resources.

- Many years of combined experience in test automation, testing in general, and the company's systems and business processes.

- Team members all started between March-May 2022

Test Automation Process

Test Automation Process

Utilise Jira to manage automation scope and workflow

Analyse and capture steps to be automated

Select and prioritise automation candidates

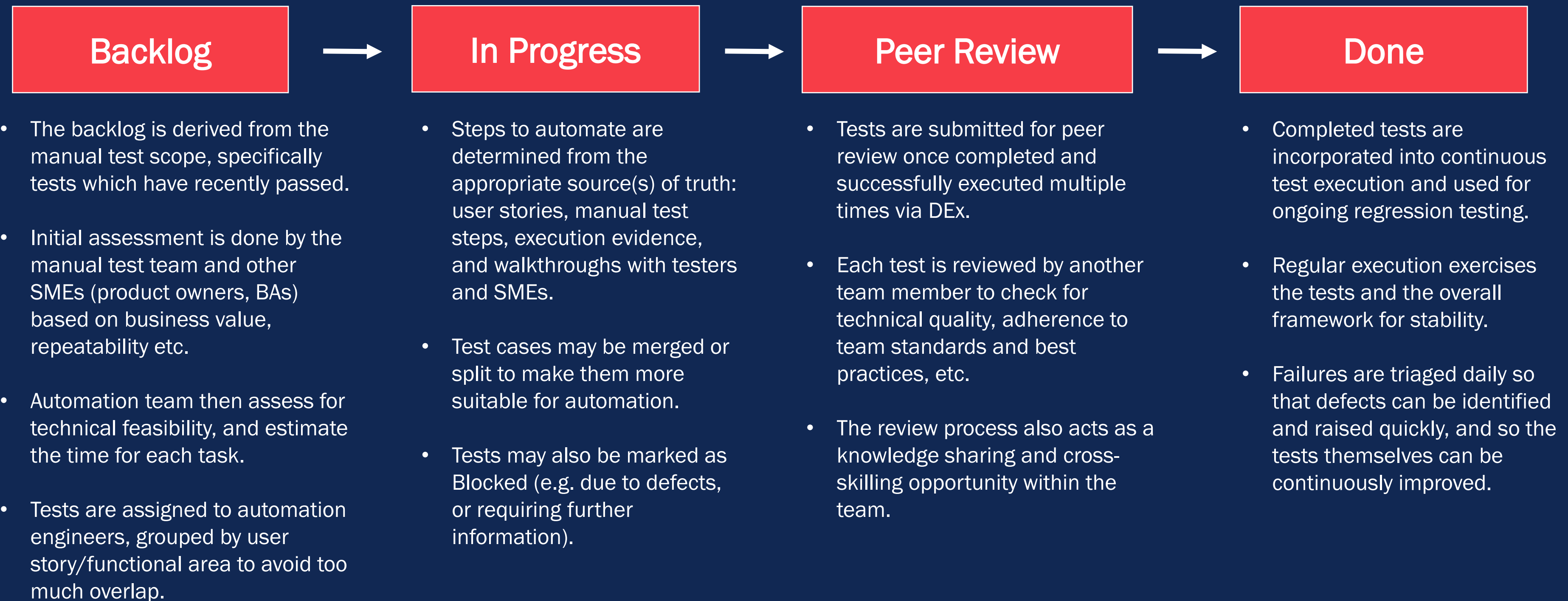Design and develop an optimized test suite with test data management

Conduct regular demos, reviews and retrospectives to ensure that value is delivered

Run tests continuously, iterate and improve

In-Sprint Activities

Backlog	→	In Progress	→	Peer Review	→	Done

Backlog

- The backlog is derived from the manual test scope, specifically tests which have recently passed.

- Initial assessment is done by the manual test team and other SMEs (product owners, BAs) based on business value, repeatability etc.

- Automation team then assess for technical feasibility, and estimate the time for each task.

- Tests are assigned to automation engineers, grouped by user story/functional area to avoid too much overlap.

In Progress

- Steps to automate are determined from the appropriate source(s) of truth: user stories, manual test steps, execution evidence, and walkthroughs with testers and SMEs.

- Test cases may be merged or split to make them more suitable for automation.

- Tests may also be marked as Blocked (e.g. due to defects, or requiring further information).

Peer Review

- Tests are submitted for peer review once completed and successfully executed multiple times via DEx.

- Each test is reviewed by another team member to check for technical quality, adherence to team standards and best practices, etc.

- The review process also acts as a knowledge sharing and cross-skilling opportunity within the team.

Done

- Completed tests are incorporated into continuous test execution and used for ongoing regression testing.

- Regular execution exercises the tests and the overall framework for stability.

- Failures are triaged daily so that defects can be identified and raised quickly, and so the tests themselves can be continuously improved.

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Application Coverage

Application Coverage with Tosca Automation

- SAP (Web)

- Retail website (Web)

- POS system (Java)

- REST APIs

- PDF Documents

- Email

- More to come!

Testing Tools

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Testing Tools used in the Automation Process

- qTest
  - o Test cases (manual and automated) + traceability to requirements
  - o Test execution results (manual and automated) + linkage to defects
  - o Trigger automated tests and receive results
  - o Reporting
- Jira
  - o User stories – synced to qTest as Requirements
  - o Defects – linked to qTest execution runs
- Tosca
  - o Automated test development
  - o Execute automated tests via Distributed Execution (DEx)
- Bitbucket Pipelines
  - o Trigger automated tests and publish results

REQUIREMENTS
Jira

DEFECTS
Jira

TEST
TRICENTIS qTest

DEPLOY
Bitbucket
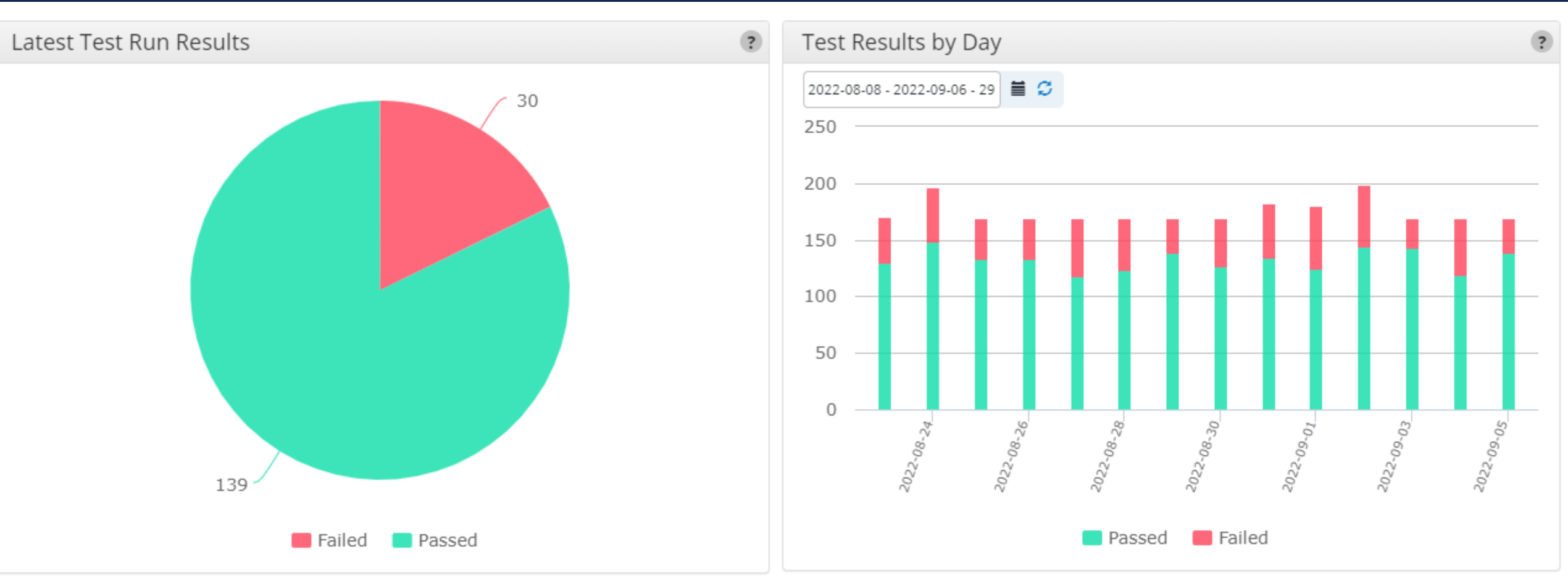
AUTOMATED TESTS
TRICENTIS Tosca

Execution and Reporting

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Execution and Reporting

- Bitbucket Pipelines for applications using automated deployment (CI/CD pipeline): trigger Tosca tests on demand

- qTest for applications using manual deployment: trigger Tosca tests on a scheduled or ad hoc basis
  Regression suites are currently scheduled daily

- Both methods the Tosca Execution Client (formerly CI Client) to trigger test execution and monitor progress

- Execution is orchestrated and performed via Tosca DEx (Distributed Execution)

- Test execution results are imported into qTest

- qTest provides a single source of truth for test results, and a single platform for reporting (Insights)

- qTest shared dashboards are used to share reports to non-qTest users

- Execution logs (including screenshots) in Tosca are used for triaging and debugging failures

Tosca DEx Monitor

qTest Insights

Q & A