Is there room for Test Strategy in Agile?

Mirjana Kolarov
PNSQC 2021
Is there room for Test Strategy in Agile? / @mirjanakolarov

My context
• Technology services company
  • >50 clients, multiple teams per client
  • Client oriented
  • 30+ projects (startups & enterprises)

• Testing department:
  • 20 people
  • on >5 projects
Data for this talk

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• Assignment: Define a Test Strategy
• “We lack strategies on some project”
• I recalled the times from Waterfall era
• Collected info from >10 projects
Variations

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5 APPROACH

5.1 Test levels

5.2 Evaluation

5.3 The «name test level»

5.3.1 Goal

5.3.2 Short description

5.3.3 Responsible

5.3.4 «Optional: test environment to be used»

5.4 Phasing per test level

5.5 Test products

6 ORGANIZATION

6.1 Organization structure

6.2 Roles, tasks and responsibilities

6.3 Structure of meetings

6.4 Structure of reporting

6.5 Completion

7 INFRASTRUCTURE

Master test plan

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Fast Forward to Agile
Isolated assessment
Architecture assessment
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<tr>
<th>Test Aspects</th>
<th>Current State</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Level:</td>
<td></td>
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<tr>
<td>Unit testing</td>
<td>• Test coverage is 30% on the backend projects</td>
<td>• To have at least 70%-unit test (code) coverage;</td>
</tr>
<tr>
<td></td>
<td>• Unit tests for the backend services are run as part of CI via Bitbucket</td>
<td>• To cover all applications with unit tests with the above coverage in mind;</td>
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<td></td>
<td>pipelines;</td>
<td>• To run all those tests on each push as part of the build in CI pipeline;</td>
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<td></td>
<td></td>
<td>• Enable tracking plugins on all projects;</td>
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<tr>
<td>Integration Testing</td>
<td>• Exists, not enough APIs covered with integration tests;</td>
<td>• To create a list of the most used APIs which will be the priority for the automation;</td>
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<td></td>
<td>• As of recently, integration tests have scheduled run each night on Bitbucket</td>
<td>• To write them as black-box tests;</td>
</tr>
<tr>
<td></td>
<td>pipelines;</td>
<td>• To switch focus from writing automated UI tests to integration tests;</td>
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<td></td>
<td></td>
<td>• Move integration tests code base into backend project repository;</td>
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<td>• Start using mocks and run them as part of the build pipeline before deployment to environment;</td>
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<td></td>
<td>• Enable running integration tests on any environment with switching mocks on/off;</td>
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<tr>
<td>System Testing</td>
<td>• Exists (focused on mobile applications);</td>
<td>• To identify the business crucial test scenarios and focus automated UI testing on that;</td>
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<td></td>
<td>• X apps covered with some scenarios;</td>
<td>• To increase test automation coverage of X and Y apps;</td>
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<tr>
<td></td>
<td>• Y app not covered at all;</td>
<td>• Include exploratory testing (Session Based Test Management) instead of Zephyr test cases (use Zephyr test cases only for business-critical scenarios - part of the Regression suite);</td>
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<td>• Automated system tests are checking the UI flows and not the correctness of data;</td>
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<td>• Test cases are written in Zephyr plugin for Jira and are not consistent in the level of details;</td>
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<tr>
<td>Acceptance Testing</td>
<td>• No formal business sign-off;</td>
<td>• To be included as a mechanism to ensure the features are meeting business needs;</td>
</tr>
<tr>
<td>Test Type:</td>
<td></td>
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<tr>
<td>Functional testing</td>
<td>• Exists;</td>
<td>• To introduce exploratory testing of the tickets in sprint (optimized time and higher coverage on a functional level);</td>
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<tr>
<td></td>
<td>• Not systematic and insufficient depth of implementation;</td>
<td>• Use Session Based Test Management to document and structure exploratory testing;</td>
</tr>
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<tr>
<td>Performance testing</td>
<td>• Exists;</td>
<td>• To have a separate Performance environment - production like;</td>
</tr>
<tr>
<td></td>
<td>• There is no clear performance testing strategy;</td>
<td>• To define a list of the mostly used business flows that will be covered with scripts and the usage of load generator;</td>
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<td>• To agree on the wanted load and metrics;</td>
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<td></td>
<td>• Start with performance tests regularly and then define a detailed plan for a performance testing;</td>
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C-level client
Hello C-level,

I’m going to briefly describe our Test strategy for SuperX project in this email with the intent to make testing activities and ideas more visible, and understandable for all.

**The Goal of Test Strategy** is to make time to releasing to production shorter and increase our trust in the quality. To achieve this goal, we are going to use automated tests which are going to cover business critical scenarios and use them to validate each new feature is working as expected when integrated into existing solution. Along with automation we will use well known technique of exploratory testing to include our critical thinking about the product under tests. Both functionality and performance testing will be executed. Security testing will be conducted before each feature release.

Teams are going to use Scrum and Story will be considered as Done only when it passes both functional and performance tests. Business facing tests are going to be human readable and status of each run will be visible to all on appropriate dashboards.

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Trustfull client
Conclusions
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Figure 8-4. Deployment g-forces, courtesy of Paul Hammant
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What to put in the Strategy?
Mandatory:

- Goal
- Approach explained
Think about

- Scope
- Testing on different levels
- Approaches to
  - exploratory testing,
  - regression,
  - test automation,
  - security testing
  - smoke testing
- Team organization
- Test environments
- Tooling

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Advises

• Which questions for me? For others?
• Together with team, business
• Collaboration tool
• Wide perspective
• Give presentation with highlights
• My goal: Test strategy on all projects
If we don’t have strategy, we’ll be lost. Team members will not understand what they are supposed to do. And others will not understand testers!
Whole team approach to define and implement strategy!
Test Strategy is living document!
Evaluate! Iterate!
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Thank you!