Building a test strategy for organisational transformation

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- 37 years old
- Utrecht, The Netherlands
- 15 years in Quality Assurance

- eCommerce veteran
- Loves music, traveling and his wife and new-born son

The situation

Once upon a time a global payments company acquires an Amsterdam FinTech startup

FinTech startup +
Global payments corporate =

Mismatch on standards, processes and quality

The challenge and ask

- Inconsistent release quality caused sprint disruptions and production issues
    - Mature the QA process
- To fit into the corporate landscape a uniform and formalized process was required
    - Define a QA strategy
- Local teams will be growing, and we need to integrate with global development teams
    - Spread the way of working to other eCommerce development teams

The QA strategy problem

- Automation first
  - Get automation back in shape
  - Shift automation to future architecture
- Proper test environments
  - Need for a stable/reusable automation environment
  - Need for a stable integrated acceptance environment
- Component testing first, Integration later
- Document core values and best practices

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The starting point

Testing the start-up way

- Talented developers: TDD approach, unit tests
- Few QA engineers: little time for automation
- Functional automation 30% operational,
  the rest was flaky or failing

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Additional challenges

-Growing the local (QA) team
-Start collaboration with existing off-shore teams
-Accommodate QA strategy to future microservices architecture

Tackling the challenge

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Situation assessment

-Unit test coverage: great
-Integration test coverage: great
-Test automation framework: needs work
-Test automation coverage: needs work
-QA mentality: pretty good, needs attention
-Performance tests: no actual plan

Getting things on track

Automation framework analysis:

- BDD test cases cover most flows
- Functional test automation language != application language
- Can handle functional and API tests
- Already integrated in pipelines

Decision: keep the framework. Starting from scratch takes longer and current framework can be made future-proof. Work starts on fixing failing tests and adding coverage.

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Keeping the good stuff

Creating and extending the documentation

- Unit test coverage requirement
- Enforce the integration test documentation
- Describe the quality steps in the Scrum process

Bring in the missing stuff

Filling in the gaps

- Agree on a uniform QA process
- Formalize Definition of Done
- Automation best practices guidelines

Reinvent the broken stuff

Several issues stopped us from really shining

- Test data often cause for broken tests
- Acceptance environment not stable
- Integrations were a pain point in the emerging microservices architecture

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Getting the team ready

As new QA team members joined
-Onboard them on the application
-Onboard them on the QA strategy
-Automation first approach in testing
-Weekly QA alignment meetings

Meanwhile…

- First functionalities in microservices
- As AMS team grows, teams form around microservices and application areas
- Need to integrate with off-shore teams and their applications
- Creating 0-issue release reputation

How to maintain domain knowledge in growing teams and keep the quality level the same

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Spreading the quality

- Splitting up the local teams and adding near-shore developers
- Onboard full-stack developers to help with test automation
- Onboard off-shore developers on test automation framework
- Align the global QA strategy

The power of example

- Every core team consists of at least 2 AMS developers and 1 AMS QA
- All eCommerce teams have access to AMS core test cases and environments
- All eCommerce QA moves to the same automation framework

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With great collaboration come great releases

Across the company's eCommerce branch releases contained less issues and more features that matched the expectation from customers and sales.

Microservices testing

Each microservice needs to be stable

- Focus on unit test coverage
- Documentation clear and available
- API tests to validate functionality

But needs to work in collaboration too

- e2e functional tests to test integration and user flows
- Performance test plan

A future-proof test automation framework

By splitting up the code, the test cases were bundled to match their respective services. Additionally end-to-end test plans had their own section, as well as customer or country specific test plans.
Tagging further enabled to mix and match test cases where needed for specific features and improvements.

Key take-aways

Keep the good things, bring in the missing things, reinvent the broken things

Don’t spend your time on good practices that you see, just document them as existing values. When you notice teams are not using some of the industry best practices teach them and add them to the strategy. Address the anti-patterns and bad practices with good practices and coach teams to use them.

Sharing your QA strategy creates one level of expected quality

The entire eCommerce department worked according to the same QA strategy. Making sure which level of quality could be expected with every release and from any team.

A proper automation first approach requires attention to many details

Skills and know-how in your teams, available environments and stable test data are only the starting point. Alignment between your test levels and a reusability mentality will make it work. A shared responsiblity for quality and test cases will make it fly 🚀

Thank you!

Questions are very welcome

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