DEVOPS TEST MANAGEMENT STRATEGIES

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WHO AM I?

My Linkedin

PASSIONATE QA MANAGER

14 years of ensuring top-notch quality in software. I’m all about delivering excellence and driving innovation.

LIFELONG LEARNER

Continuous learning, always studying, always growing. I love diving into the latest to keep my skills sharp and up-to-date.

YOGA TEACHER & MEDITATOR

Balancing code with calm. My yoga and meditation practice keeps me grounded and ready for any challenge.

WHY ARE WE HERE?

01 **DEVOPS**

DevOps framework overview

02 **QA ROLE**

The role of QA in a DevOps framework

03 **TEST PLAN**

3 Levels you need to consider for your QA Test Plan

04 **TEST STRATEGY**

Building a Test Strategy for a DevOps project

05 **CO-EXISTING**

The importance of two co-existing test strategies

06 **KEY TAKEAWAYS**

Approach benefits

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UNDERSTANDING THE DEVOPS FRAMEWORK

Collaboration, Efficiency, Quality

DevOps is the combination of cultural philosophies, practices, and tools that increases an organization's ability to deliver applications and services at high velocity: **evolving and improving products at a faster pace** than organizations using traditional software development and infrastructure management processes.

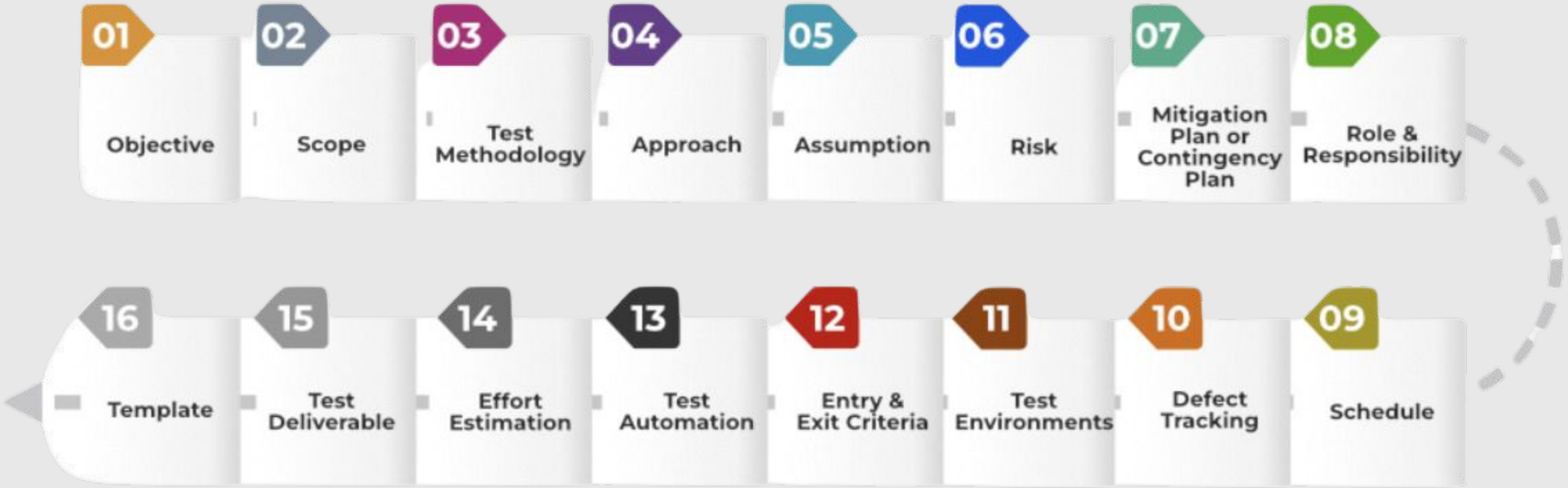
QA & Continuous Testing

"DevOps It's all about fostering collaboration, efficiency, and quality by breaking down silos. In this continuous delivery model, QA plays a crucial role by ensuring end-to-end testing integrates seamlessly into the DevOps pipeline."

Continuous Testing

“It automates and validates code changes continuously, enabling rapid feedback and risk reduction, enhancing product reliability and accelerating release cycles.”

DEVELOPING A QA TEST PLAN



TEST PLAN LEVELS

ORGANIZATIONAL LEVEL

Always start your Test Plan considering your organization standards and approach

PROJECT LEVEL

Plan for your entire project, have in mind Risks and contingencies

SDLC LEVEL

When mixing Agile with DevOps, plan testing for iterations and conduct more thorough regression tests for larger increments

"By creating these three levels of test plans, a QA manager ensures that testing activities are consistent with organizational goals, flexible to individual project requirements, and adaptive to specific development practices like DevOps, leading to a robust and efficient quality assurance process"

ORGANIZATIONAL LEVEL TEST PLAN

- **Purpose:** This test plan establishes the overarching goals and standards for quality assurance across the entire organization. It ensures consistency in testing practices and aligns the testing strategy with the organization's mission and quality objectives.

- **Content:** It includes guidelines for testing methodologies, tools, compliance with industry standards, risk management strategies, and resource allocation. It serves as a framework for all project-specific test plans.

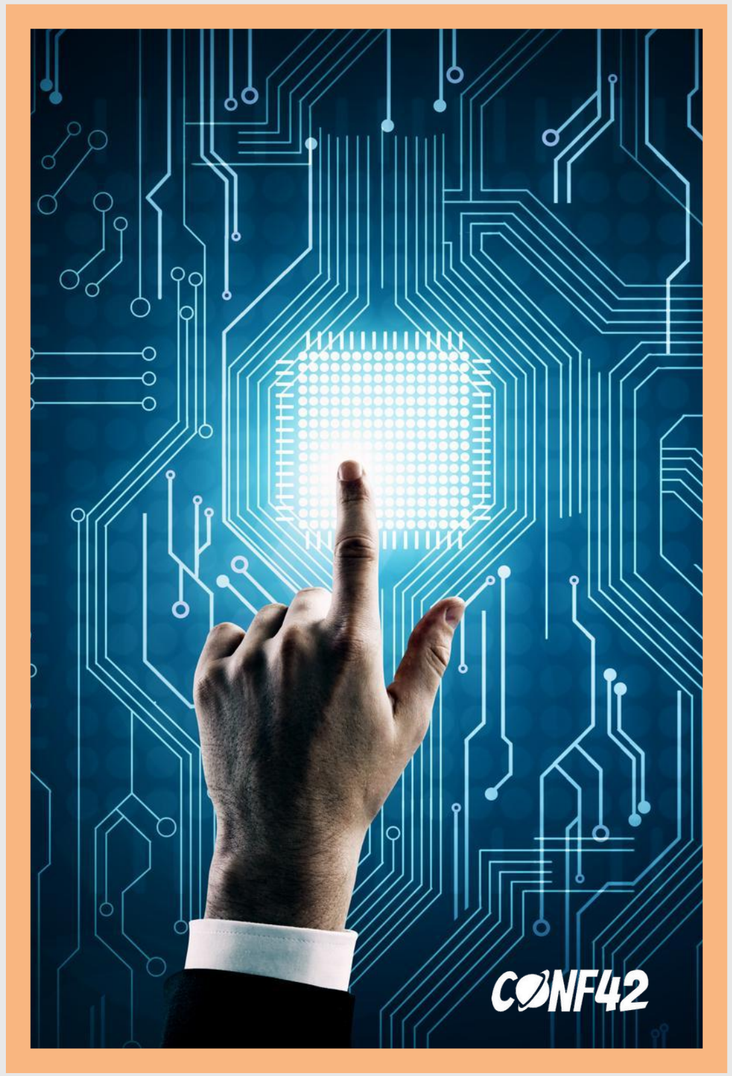
PROJECT LEVEL TEST PLAN

- **Purpose**: At the project level, the test plan focuses on the specific needs and goals of a particular project. It is tailored to the project's scope, objectives, technologies, and timelines.

- **Content**: This plan outlines the testing approach, resources, timelines, specific test cases, risk analysis, and roles and responsibilities for the project. It is more detailed and contextualized than the organizational test plan and uses the organization's standards as a foundation.

SDLC LEVEL TEST PLAN

- **Purpose:** A test plan at the SDLC level addresses the specifics of the development lifecycle being used, such as Agile or DevOps. It ensures that testing is effectively integrated with the development process and aligns with its iterative and collaborative nature.
- **Content:** It specifies testing activities tied to each phase of the SDLC, such as continuous integration/continuous deployment (CI/CD), automation strategies, acceptance criteria for each iteration, performance testing, and monitoring practices. This helps ensure that testing is ongoing and adaptive to changes during the development process.



CONSTRUCTING YOUR TESTING STRATEGY

CONTINUOUS TESTING

Automatic test run every time code is committed, allowing quick feedback & rapid iterations as DevOps base line.

SHIFT-LEFT TESTING

Test Strategy number one. Lets review!

RISK BASED TESTING

Test strategy number two. Lets review!

SHIFT-LEFT TESTING

Goal: Identify and fix defects early in the development process by starting testing activities as soon as possible.

Approach: Engage testers early in the sprint or iteration, incorporate testing into the design and coding phases, and carry out early non-functional testing such as performance and security testing.

RISK-BASED TESTING

Prioritize testing activities based on the risk and impact of different components or features. By focusing on areas that present the highest risk, you can ensure critical functionalities are thoroughly tested, which is essential in a DevOps environment where rapid delivery is important. **This strategy includes: Risk Analysis & Risk Control.**

RISK ANALYSIS

- **Risk Identification**

Interviews - Retrospectives - Risk Workshops - Checklists

- **Risk Assessment**

Determining the Risk Level by establishing the Risk likelihood and the risk impact upon occurrence.

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RISK CONTROL

RISK MONITORING

Risk-based testing allows reporting on Test progress in terms of the residual risk level at any point in time

RISK MITIGATION

Test prioritization is based on the Risk level assigned to the test scripts associated to each feature/functionality

TEST EXECUTION: DEPTH-FIRST OR BREADTH-FIRST

Execute all test scripts in strict descending order of the level of risk starting with the Highest, or execute one High priority test per risk first.

KEY TAKEAWAYS

WHY CHOOSE A MIXED TEST STRATEGY?

EARLY DETECTION OF DEFECTS

EFFICIENT RESOURCE ALLOCATION

ENHANCED COLLABORATION

IMPROVED QUALITY & SPEED

INFORMED DECISION-MAKING

“THE PRODUCT QUALITY IS HIGHLY INFLUENCED BY THE QUALITY OF THE PROCESS BEING USED AND APPLIED”

GET MORE INFORMATION
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Certified Test Manager

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THANK YOU!