QUALIZEAL

Testing Center of Excellence - Locking In Quality Across Enterprise Systems

Preface

With the world rapidly transitioning into a digital-first approach, enterprises of today face myriad challenges as they try to keep their applications' quality while responding to the ever-growing customer demands.

The three most pressing challenges in the industry today are:

- Inconsistent test processes across geographies, locations, and teams.
- Underperforming test and QE functions
- Suboptimal use of resources, tools, and infrastructure

The traditional Quality Assurance processes are threatened with several businesses opting for dispersed testing operations.

In order to combat with the aforementioned challenges and to stay relevant among their competition, several large organizations are rooting for "Centre of Excellence" models with resolute teams focused on standardizing deliverable execution models to ensure the quality of critical business processes and systems.

Testing Center of Excellence or TCoE is a model for a centralized testing platform that standardizes test processes and optimal utilization of resources for quality and test purposes.

In this guide, our QualiZeal's team of experts have curated their insights on

- What is a TCoE and When is it Useful For Your Organization?

- How To Successfully Implement TCoE for the Critical Success of Your Business?

- The TCoE Stages of Evolution

- Key Metrics to Measure the Quality of A Testing Center of Excellence

What is a TCoE and When is it Used for Your Organization?

A Testing Center of Excellence or TCoE is a framework that defines, implements, and measures testing controls and standards across the organization. With this framework, the testing protocols, toolsets, and KPIs are maintained at a centralized level while the testers themselves have shared resources across teams.

By setting up a testing center of excellence, an organization will have the ability to deploy any tester to any team while perpetually maintaining the Quality Engineering principles and compliances.

When Will Establishing A TCoE Be Beneficial For Your Organization?

In case your organization experiences any of these pain points, implementing a TCoE would be an ideal solution.

You have a complex organizational structure:

If all your testers do not report to a single manager or they do not have shared goals, it can be quite challenging to standardize processes and tooling across the organization.

You want to identify and establish common testing KPIs and track trends:

Making sure of quality across multiple teams can be quite a daunting task, and the risks stand taller when you don't have a dedicated team whose primary focus is on it. By implementing a robust TCoE structure, a business can keep an eye on how teams track certain KPIs, define common metrics, and measure quality throughout your organization.

You desire to standardize processes and tooling across teams:

The main objective of establishing a TCoE is to homogenize processes and tooling, and this results in much lesser time spent on defining and implementing irrelevant multiple variations. Furthermore, it also increases cross-team communication in terms of best practices and guidelines pertaining to test-case writing, automation scripting and execution.

You are forced to reduce your time to production:

The Quality Engineering cycle of writing test cases, scripting, and executing takes a considerable amount of time in the software development lifecycle. Having a robust TCoE strategy in check will cut out the repetitive processes across teams, making them only focus on the tasks that matter.

You want to encourage persistent innovation:

A tester's mundane day is filled with writing test cases, scripting, executing, and reporting defects, and there is typically not enough time to innovate and advance the way they work. A TCoE ensures that someone at your organization is constantly engaged on this critical component.

How To Successfully Implement TCoE for the Critical Success of Your Business?

Now that we have established when your organization should consider implementing TCoE, in case your leadership team agrees to the framework of a Testing Center of Excellence, it takes some doing to successfully implement it.

In order to successfully establish a TCoE, the following steps need to be followed:

Step 1:
Define the Challenges

Layout the challenges that you have for the TCoE to solve or account for. At the bare minimum, the motive here should be to standardize your tools and processes. In addition to that, you can also tailor and customize your TCoE to include discovering and implementing new technologies, setting, and measuring important KPIs, or even recruiting and onboarding new QA resources. Honestly, the sky is the limit.

Step 2:
Identify Who Will Govern Your TCoE

Ideally, there should be a dedicated team of handpicked individuals to properly represent your testing team as a whole in order to take control of your TCoE. While a few organizations partner with the vendor themselves for implementation, others prefer having a fully equipped team in house.

Step 3:
Trace your TCoE Roadmap

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Step 4:

Document your current tools, KPIs, processes, and methodologies

There will be a previously agreed upon set of tools and processes both prior to and during the TCoE implementation. It is crucial that an organization ensures a properly documented repository for future reference and onboarding.

Step 5:

Engage your teams to understand starting deficits

Even after you have implemented a proper TCoE strategy, chances are, there might be a few testers who don't adhere to previously defined processes or maybe they are using an unapproved set of tools. It is prudent that you engage all your teams and validate them to understand their needs as well as any gaps in the current processes to build a strong foundation from early on.

Step 6:

Communicate across your organization

By this stage, most of your employees would be aware of the Testing Center of Excellence and also know what it means. However, one shouldn't take this for granted. Rather, it is necessary that an organization communicates the existence of a TCoE, its purpose and goals to everyone in the organization
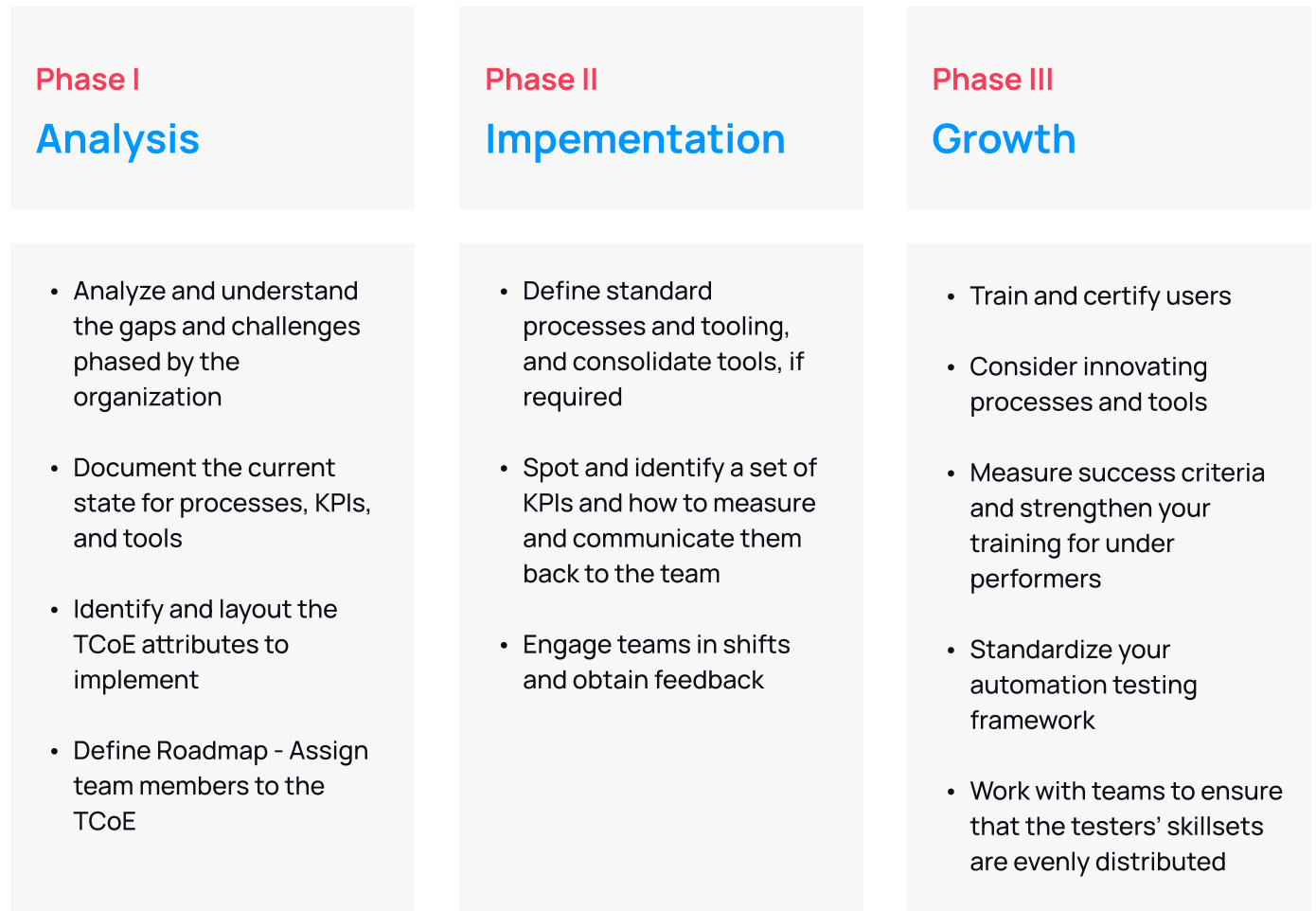.

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The TCoE Stages of Evolution

The flowchart below outlines the different phases of TCoE:

Phase I

Analysis

- Analyze and understand the gaps and challenges phased by the organization

- Document the current state for processes, KPIs, and tools

- Identify and layout the TCoE attributes to implement

- Define Roadmap - Assign team members to the TCoE

Phase II

Impementation

- Define standard processes and tooling, and consolidate tools, if required

- Spot and identify a set of KPIs and how to measure and communicate them back to the team

- Engage teams in shifts and obtain feedback

Phase III

Growth

- Train and certify users

- Consider innovating processes and tools

- Measure success criteria and strengthen your training for under performers

- Standardize your automation testing framework

- Work with teams to ensure that the testers' skillsets are evenly distributed

5 Key Metrics to Measure the Quality of A Testing Center of Excellence

Establishing a Testing Center of Excellence has become more of a mandate than a necessity in this digital-first era, and it is common knowledge that the current spend on quality has increased considerably and it is growing at a faster rate than the overall IT spend.

Providing an independent view on quality, and as the saying goes, what gets measured, gets improved. While it is important to not bombard your customers with more measurements, it is also equally essential to identify the key metrics that can pave the way for making relevant course corrections.

Here are the five key metrics that can help facilitate the smooth functioning of your TCoE.

Defect Removal Efficiency (DRE)

It is measured by the percentage of all the defects detected in the testing phase, over all the defects detected. The key here is to have a high DRE as a low DRE represents weakness in the testing process during the earlier stages of the SDLC. However, DRE can be enhanced to a whole new level by conducting root cause analysis of all the defects that are found in subsequent phases and learning where the gap is.

Test Scripts On Time Delivery

This particular metric gives an organization a holistic view on whether the estimation model is correct, and in case your company is slacking by not meeting the proposed schedule, it is due to the lack of initial planning. By measuring this metric, it gives one an indicator on how to plan future projects better.

Test Coverage

This metric shows the percentage of requirements covered by testing over total

requirements. This is one of the most critical metrics as it pinpoints which requirements do not have an associated test case. The goal of your quality engineering team is to hit all the requirements while ensuring maximum coverage.

Test Execution Metrics

The percentage of test execution can be calculated as follows: Test Execution Percentage = (Number of passed tests + Number of failure tests + Number of blocked tests)/ Total number of test cases.

In this scenario, the test execution percentage will have to be 100%, failing which, the team needs to review every unexecuted test case in order to understand and address the gap. By doing this, it also allows the QE Manager to analyze and perform Risk-Based Testing based on the requirements of the project.

Defects by Severity

This metric gives you an insight on how many defects were found across the severity levels as defined by the QA program, and in case most of the defects fall under the HIGH category, it is essential that the development team runs a root cause analysis and identify actions that can be undertaken to reduce the occurrence.

These 5 Quality Engineering metrics are crucial to implementing a well-established Testing Center of Excellence. Reporting these metrics in regular intervals will make sure that the project quality is always a notch higher than expected. This is critical to helping the customer make project decisions and right course corrections, which will eventually lead to an enhanced business outcome.

How Can QualiZeal Help Your Organization Reap the Benefits of Establishing a TCoE?

A Testing Center of Excellence gives organizations an ability to set and implement a standardized set of testing principles and tools across any number of teams with quality being the first priority. Furthermore, it also helps in defining and measuring KPIs, thereby ensuring a consistent, quality product for the customer.

If implemented right, a TCoE can scale testing without compromising the quality.

Analyzing where your organizational challenges lie today, and how you see those disrupting your abilities to scale and shift priorities in the future, you have a good starting point in deciding whether it is a best fit solution for your organization or not.

Once you have made the decision to move forward with TCoE, it is prudent that you plan ahead to avoid last moment hiccups and implement it successfully. In addition to that, you also need to ensure that your testers have good communication skills while having a solid grasp on the testing principles.

Make sure that you fully define the success criteria of your TCoE and engage all levels of your organization by conveying its purpose and desired outcome appropriately. A well-thought out and robust TCoE can bring in a plethora of benefits for your organization.

At QualiZeal, our experts are adept at handling projects of various sizes and complexity, and you can be assured that your TCoE gets implemented on time and budget without compromising your organization's productivity. Are you ready to propel your organization to the next level, stay relevant among your competitors, and ensure a faster time-to-market? Book a Consultation with us today!