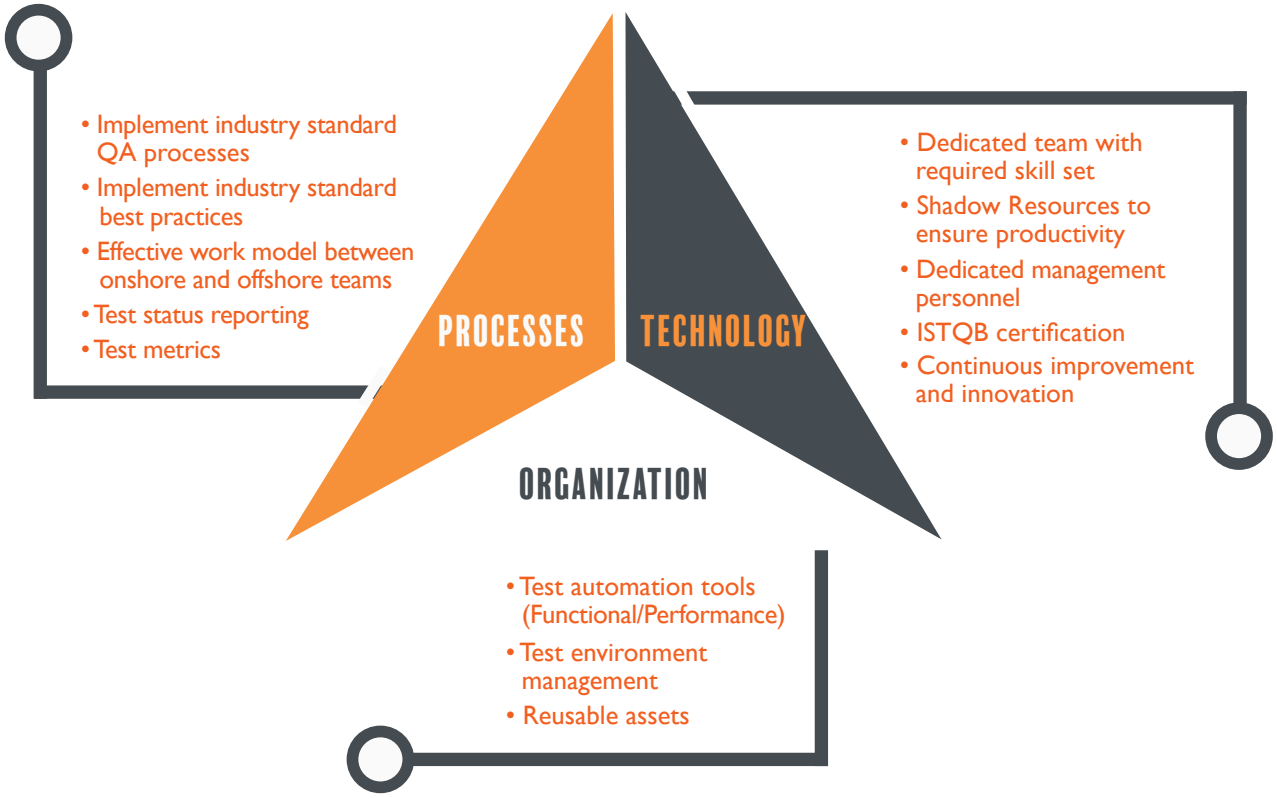
IN TIME TEC
Creating Abundance

Center of Excellence at In Time Tec
Quality Assurance

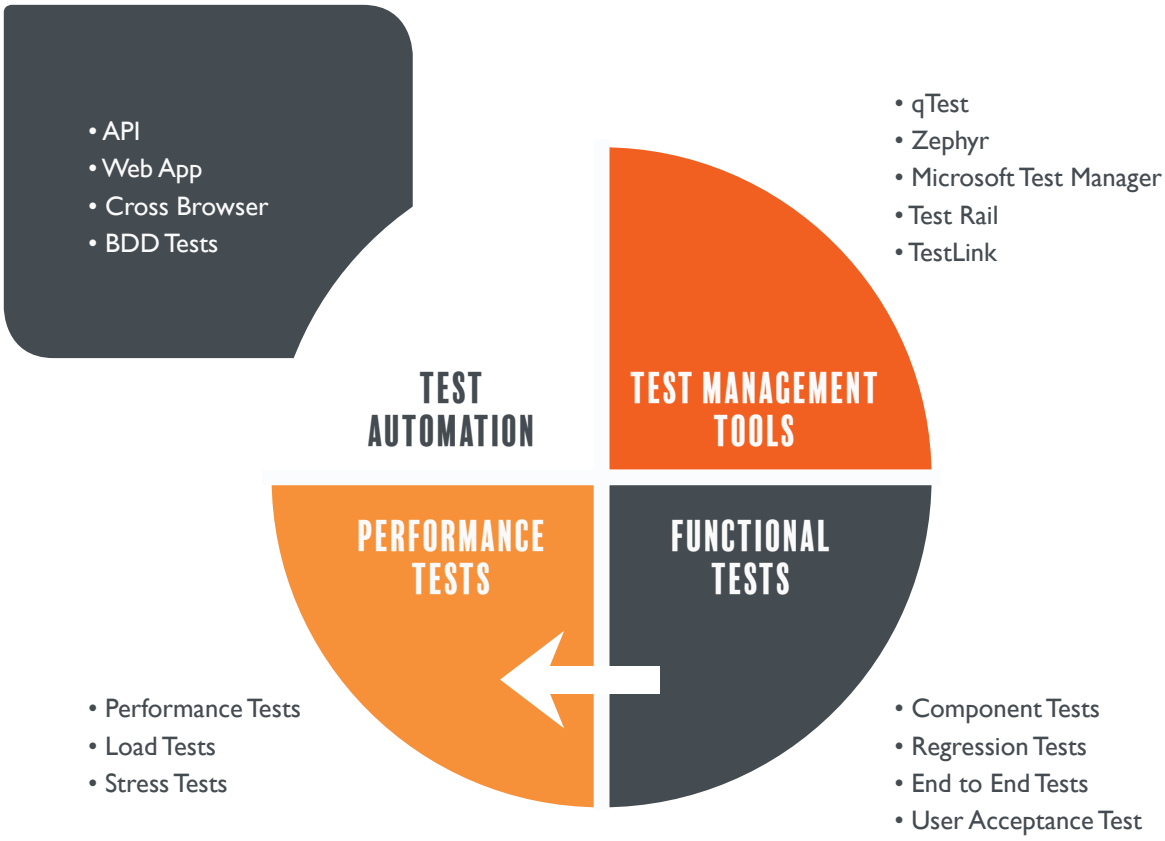
Quality is a planned and concerted effort to produce superior results. To stay competitive in this era of fast-changing technology, a business needs software systems that are efficient, reliable, and capable of supporting complex business processes. Implementing standardized testing methodologies, such as best practices, automation, metrics and tools, has become mission critical for business success. The goal of our QA Center of Excellence is to accelerate the delivery of innovation across an enterprise, while reducing the risk and cost of change.

In Time Tec can partner with you in helping to establish a center of excellence for Quality Assurance by providing a framework to speed business process validation, eliminate redundancies, ensure high business process quality, and reduce risk to the organization.

1. Pivotal Ellements of QA COE:



2. Core Competencies:



3. Test Automation - The need of the hour

As the complexity of the software grows, so does the testing required to validate the software. Adding new features requires additional test time and resources. Automating tests frees up the testers to focus more on exploratory tests. The key here, however, is to setup a suitable Automated Test Framework providing maximum ROI.

In Time Tec has extensive experience in setting up Test Automation Frameworks in accordance with customer needs. We can expand on existing framework to accommodate the latest technologies and tools with minimal rework and impact.

4. Behavior Driven Development (BDD) Testing

Behavior-driven development (BDD) is a software development methodology in which an application is specified and designed by describing how its behavior should appear to an outsider, such as a user or stakeholder. BDD is oriented around describing the application functionality in terms of features and scenarios.

In BDD, tests are written in a plain descriptive English format known as Gherkin. This is meant to bring clarity to non-technical stakeholders, product owners, and marketing professionals. The Gherkin statements, when executed, call their respective test step definitions written in Java, C#, Ruby, Python, PHP, or JavaScript. BDD provides readability and common understanding of the tests both for the development team and those who provide the requirements. In Time Tec has in-depth implementation experience in BDD style Test Automation.

5. Test Automation Tools

User Interface

Visual Studio Coded UI for desktop and Web app automated testing
Selenium for browser-based automated testing
Appium and Calabash for mobile app automated testing

BDD based Tools

Cucumber - Ruby, Java
Behave - Python
Specflow - C#, .NET

Performance and Stress

JMeter
LoadRunner
Perl Scripting

6. Portfolio

Lowering Manual Test Effort and Test Failure Triage Time

In Time Tec developed a SpecFlow Behavior Driven Development test framework, which was developed in C#/.NET, and plugged automated tests into the existing TFS development pipeline. This utilized a Visual Studio development platform and a Team Foundation Server build environment. We developed detailed reporting logs to identify the cause of failures with zero triage time. Previously, the client needed one day for manual system tests, three days of triage time for a failure, and had one day of idle time for developers. After our work, automated tests only take an hour, with zero triage time and zero idle time for developers.

Implementing Industry-Standard QA Processes and Best Practices

We evaluated, identified, and implemented Test Management Tools for an enterprise product with a defined timeline. By identifying and utilizing a test case tool for recording manual test steps, we significantly reduced test authoring time. All test cases now have a Behavior Driven Development style description, and automated basic regression cases have reduced a manual test time. Our Jmeter-based performance scripts help identify major performance issues early in the schedule. We authored 704 test cases in 15 weeks, and the client has gone from having no functional performance tests or automation processes to now having a well-defined workflow for test creation, execution, and reporting.