FIRST STEPS TO ENABLE TEST AUTOMATION

Test automation is a top priority for organizations today. All, or almost all, are betting on this aspect intending to reuse the effort of carrying out manual tests, avoiding people turnover in projects, motivating employees, and saving time in products and services sales cycle.

But before jumping into automation, some aspects must be considered to achieve this goal.

The first thing is to understand that **three important areas need to be included** in any test automation process: **tools**, **test environment**, and **coverage**; although not necessarily in this order as all the steps are related.

TOOLS

In terms of tools, the first step is to consider which tool meets our needs. **It is important to consider our needs** and the types of validation, architecture, and solutions that allow us to build, manage and report the automation project. The process of selecting an automation tool for web or mobile is not really what we should take into account if we think about an SAP system for example. Therefore, in this case, it is necessary to take a more specific approach concerning technical support and tools that suit the type of system chosen.

TESTING ENVIRONMENT

Regarding test environments, we need **software**, **licenses**, and **infrastructure**, as well as a log of executions and parameterization. Therefore, **it is necessary to define the test data management strategy** and requirements for Continuous Testing. It is also important to keep in mind that to get sandboxes up and running, we need a lot of data. This is an aspect that cannot be ignored.

COVERAGE

When we're talking about coverage, what we have to assess is **what we want to automate**. The initial assessment should aim to define which business processes we will automate. To do this, we must **identify the type of applications we have**, the **repetitive tasks**, and **what we want to automate**. Likewise, we must define at what level will we implement test automation.

With these three fundamentals well established, we can take some additional steps, such as the to **identify a pilot**

application, **small validation steps**, which should be carried out step by step to adequately manage expectations, and **the automation criteria**, which is used to identify the stability of the application in a testing phase. We need to be sure about what will be used and evaluate the application lifecycles; if it will be used for a long time, if it is obsolete or if the testing time is acceptable.

Last but not least, we **must look at the ROI** (Return On Investment), taking into account both **automation costs** as well as **other associated costs**. The important thing is to estimate the break-even point for the development effort, support/maintenance, and the tasks that must be performed manually. The balance will be found when reached approximately 80% profit (considering the use of automation) and 20% effort (which would be the total amount to automate 100% coverage).

"Each organization must define the automation levels to implement and its scale level."

For example, the first level of automation can be defined and correspond to a **basic level**; the **next level** can be considered where there is already a **roadmap**, defined **objectives**, and **KPIs**; a **level above** where a more consolidated **automation framework** is defined, working on processes and not just on applications; finally, a more **advanced level**, where advanced topics such as **artificial intelligence** are introduced.

These levels should be a reference for organizations to define their strategy. The ideal is to have a detailed priority scale. Thus, **as the coverage increases by 60-80%, the investment starts to decrease**. This is a fundamental aspect to consider, before starting your automation journey.

Ultimately, it's important to focus on future usage of test automation, based on best market practices, as well as how to get the ROI we aim to achieve and good ways to measure it.

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