



## CREATING BUSINESS VALUE WITH MATURE QA PRACTICES

### Abstract

The IT industry across the globe has rapidly evolved in recent times. The evolution has been primarily driven by factors like changing regulation policies, progression in information technology, globalization, changing customer demands and business needs, collaborations, mergers & acquisitions. To address the challenges brought about by this evolution, IT firms need to provide software testing services which have robust processes in place, can easily & quickly adapt to changing business requirements and meet business goals by providing services that enable faster delivery of systems at lower costs.

This article would discuss the different approaches that would help accomplish enhanced business value with QA Programs, distinguish a traditional QA project from a business value driven QA project, define a high level approach to articulate the business value in QA projects and finally discuss some best practices in QA that facilitate the realization of enhanced business value for organizations.

## Introduction

Clients and customers across all sectors have become extremely demanding with their expectations around faster response times, information that is easily accessible, flexible and reliable communication channels with their stakeholders like employees and prospective customers, systems that support services round the clock and easily adapt to newer technologies.

To fulfill the challenges listed above, multiple projects need to be handled simultaneously and managing those projects especially from a QA perspective becomes extremely critical and challenging along with the assurance to deliver a high quality product. A testing team has to ensure that the product or application is validated and defect-free. At the same time, they need to ensure the fulfillment of the overall strategic business goals by enhancing an organization's business value, with QA programs.

## How to create Business Value with QA Programs?

Here below we have described some ways and methods that help achieve business value with QA programs:

**Test with a Business Focus:** A thorough understanding by the QA teams of the business process that the application would support enables them to easily detect critical business process defects.

**Test from an end-user's perspective:** Testing an application keeping the end - user in mind helps the QA team deliver an enhanced experience post the final system roll out.

**Map Business Impact:** While formulating the test plan, when tests are based on the criticality of business requirements, optimal QA coverage is achieved with minimal risk.

**Measure Business Metrics:** Today, it is extremely important to track business program metrics instead of just testing program metrics as it helps us quantify and communicate the business value derived from a QA program enabling QA to justify its credibility.

## What are the differences between a traditional QA project and a Business value driven QA project

The focus of a traditional QA project is restricted to capturing program metrics across a testing lifecycle like quality, productivity etc. and it does not have details around the business impact of QA. Also, QA teams come into the picture later, usually during the design or the testing phase of a project lifecycle and the outcome of these projects are based on the success of the testing phase. This is too late in the software lifecycle and the overall project cost does not see any improvements in a traditional QA project. Moreover, there is a mismatch in expectations of the business needs met while reviewing QA program metrics against pre-defined business goals.

Whereas, business value driven QA programs capture business metrics which helps businesses measure the success of QA programs against business goals. Here, QA teams get involved very early in a project lifecycle and influence a positive outcome on the business metrics. The differences between traditional QA projects and business value driven QA projects have been articulated against some important parameters in Table 1 :

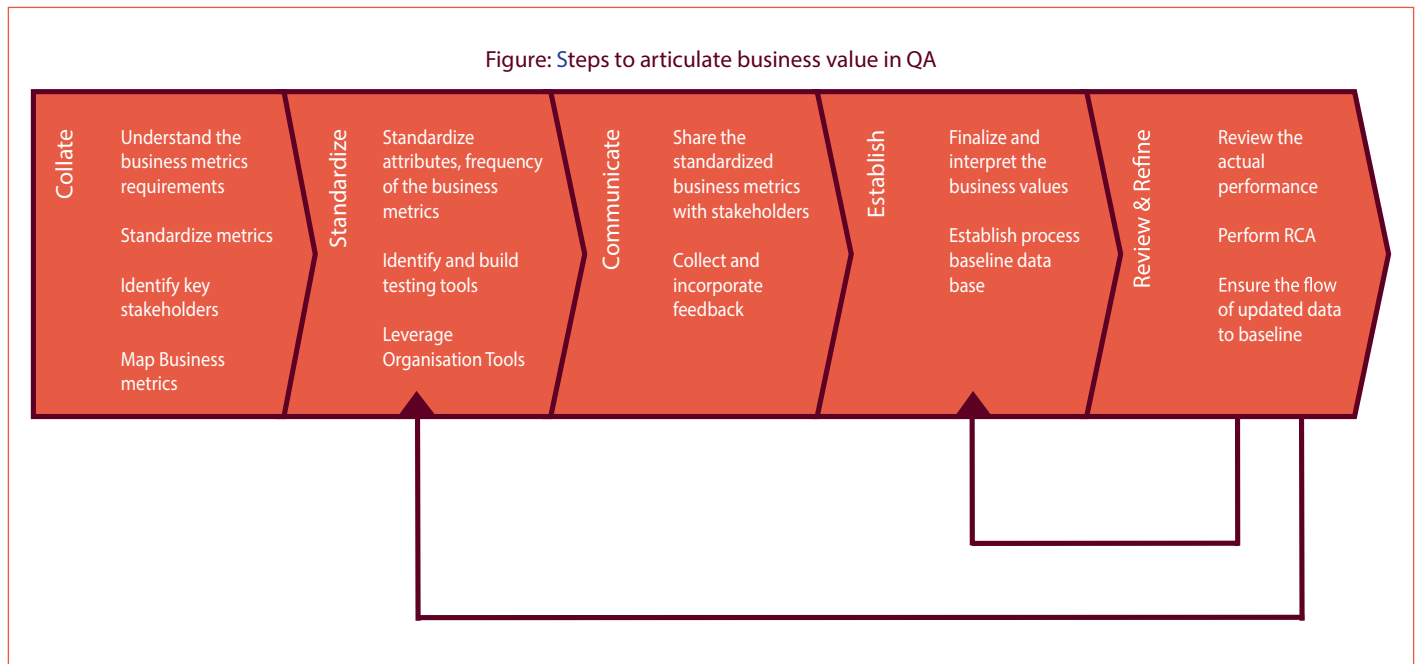
Parameters	Traditional QA Projects	Business Value driven QA Projects
Requirement Focus	Functional requirements	Business requirements
Planning & Execution Focus	Achieve maximum test coverage	Achieve maximum test coverage in optimal time with Risk Based Testing
Handling Defects	Reactive approach with no plan to predict defect occurrence	Historical data and pattern analysis is used to accurately predict defects
Perspective	Only from a QA tester's perspective	Both from a business analyst and a QA tester's perspective
Tools Used	To improve productivity	Defect prevention
Quality Enhanced with	Efficient defect detection	Is based on a strategic goal like faster time to market
Productivity	Is based on the number of test cases written or executed	Historical data and pattern analysis is used to accurately predict defects
QA Management	Is efficient project management	Is efficient project management which takes stakeholders into account
Team Composition	A fairly fixed team with ramp-ups and ramp-downs based on project dynamics	Composed of a fixed core team and a flexible & specialized variable team
Metrics	Metrics are oriented towards the program (or project)	Metrics are oriented towards the business
Efficiency	Is achieving testing objectives	Is achieving business goals with robust testing
Pricing Model	Is based on time or has a fixed price	Is unit of work or outcome based i.e., Risk-Reward based pricing scenario

Table 1: The Differences between Traditional QA projects and Business value driven QA projects

## How do you articulate the Business Value in QA?

The following steps help articulate the business value in QA. These steps are further explained in Figure 1 below:

- **Collate:** Understand the business objectives from all stakeholders and map them in the business metrics
- **Standardize:** Standardize all business metrics based on inputs from all involved stakeholders
- **Communicate:** Maintain a continuous dialogue with all concerned stakeholders and incorporate their feedback in the business metrics
- **Establish:** Establish a baseline for business process data (to capture business metrics)
- **Review & Refine:** Review all the captured data from QA projects and measure it against the baseline metric value



## Techniques to achieve enhanced business value with mature QA Practices

The following techniques in QA help deliver and realize enhanced business value in organizations:

- **Co-creation:** Co-creation of testing solutions, tools and accelerators help enhance business value as all key stakeholders are involved in the QA processes, which eventually has a positive impact on the business goals.
- **Lean-method adoption:** With a focus on eliminating inefficiencies and improving effectiveness in a QA life cycle helps in delivering systems faster to the market.
- **Early life cycle validation:** Early lifecycle validation focuses on the business requirements at a system level and before integration takes place. This helps in defect prevention at a very early stage which eventually leads to reduced testing costs.
- **Progressive Automation:** By initiating automation at the design stage in a project lifecycle, ROI is realized faster.
- **Reuse:** Test planning productivity increases considerably when test artifacts from a prior release in regression testing projects are reused.
- **Enhance testing techniques:** Adaptation of risk based testing coupled with intelligent test data management improves test coverage and reduces the upstream dependency for test data.
- **Defect Prediction:** Defect prediction helps reduce redundancy in effort at the beginning of the project itself and becomes a key factor in improving productivity.
- **Process Improvisation:** Continuous improvement is the key for sustenance in an environment that is constantly changing too. Critical quality parameters need to be analyzed to accurately measure the outcome of key business strategies.
- **Management focus:** The best practices from QA programs can be capitalized with an investment in building the needed competency which strengthens credibility and helps in ensuring future business.

## Conclusion

In today's volatile economic conditions, the demands from stakeholders to deliver more value with lesser costs have been escalating every day. All organizations want high level quality products which help increase their business value. This article has helped understand the methodology to go about doing this with business value driven QA programs and realize an organizations overall business goals. We can clearly conclude that some of the direct benefits that can be achieved with business value driven QA programs are improved quality, reduced costs and faster time to market. However, a clear vision and an understanding of an organization's long term business and strategic goals are highly crucial to establish mature QA practices, which help deliver all the benefits outlined above.



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