TMMi Assessment

How BHP Billiton used a TMMi Assessment to identify its testing maturity and systematically implement improvements.

BHP

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Key outcomes

- Better quality deliverables from an integrated approach to improvements.
- Better understanding of risk management.
- Improved communication throughout the SDLC.
- Reduced contingencies in estimates.
- Decreased postproduction support.

Delivered

- TMMi Assessment

BHP Billiton is a leading global resources company. Their purpose is to create long-term shareholder value through the discovery, acquisition, development and marketing of natural resources.

BHP engaged Planit as the local supplier of the TMMi Assessment based on their proven record of uplifting organisational testing and expertise in delivering to quality expectations. This was conducted with the view to building a strategic partnership between the organisations.

Background

The Service Delivery Transition Release Test Team is the only permanent test team in BHP Billiton Iron Ore (WAIO). The scope of their responsibilities has grown significantly evolving from a single monthly release test of port operations to now include end-to-end business process testing of Pit-to-Port operations as well as regular regression testing of most rail, middleware and business systems.

The team possesses an incredible knowledge of the systems they test, although their testing processes have evolved organically with no overt ownership and little time spent documenting and confirming that current processes are fit for purpose.

Given the wide range of project testing efforts all running independently, this resulted in numerous conflicts in processes, definitions and terms. This equated to unnecessary costs for WAIO through overly complex processes and work duplication, while also posing a risk though missed scope.

"I am very impressed with the TMMi Assessment conducted by Planit, as it lived up to my expectations in every regard. I can clearly see the ROI from this investment and I look forward to a continued relationship with Planit."

Paul Ward | Test and Validation Supervisor
BHP Billiton Western Australia Iron Ore

The challenge

The objective of the review was to provide a current state assessment of BHPB IO test capabilities, with reference to the Test Maturity Model integrated (TMMi) assessment. The review would cover:

- Processes - including those as touch points with other teams

- People - capabilities, skills, training, knowledge transfer, extensibility

- Tools - test tools currently in use and used functionality compared to available functionality

- Technology - linked to tools - what are we using, compared to what we have available

- Environments - current management practices and test coverage

- The current state review included a gap analysis to TMMi Level 2, and a plan to achieve Level 2 across the organisation within 18 - 24 mos.

Also the objective of this review was to recommend subsequent capability uplift to achieve TMMi Level 3 within 36 - 60 months.

The Test Review provided a baseline for the capability necessary for BHPB IO to deliver effective and fit-for-purpose testing services, again, benchmarked to the Test Maturity Model integrated (TMMi) assessment.

The plan was to develop a strategic improvement program to improve test delivery, through:

- Establishing common tools, processes and terminologies

- Following common benchmarking and reporting frameworks

- Delivering recommendations to effectively deliver non-production environment management

- Leveraging current test toolset to provide automated and performance capabilities

- A collaborative approach to provide the best test outcomes for BHPB IO

The solution

Planit submitted a Statement of Work recommending analysis of software quality management and test processes using Test Maturity Model integration (TMMi) assessment. This established a sound process foundation at a project level, which could be then implemented as an industrialised organisation-wide framework. Additionally, it provided detail for integration of Test Process Improvements across the software quality lifecycle, moving away from defect detection to defect prevention, in turn realising major cost savings and efficiencies.

Planit's approach incorporated a survey of 240 staff across different roles throughout the quality lifecycle. This was followed by 13 interviews across 10 process areas covering details up to TMMi level 3, designed to validate the survey responses and investigate more details about the strengths, weaknesses and gaps in their software quality management and testing activities.

58 artefacts were also reviewed including test plans, testing reports, test cases and defect reports. As part of the assessment, we scored 583 sub-practices leading to the results achieved. The findings were then presented in a process review workshop with an agreed path forward being established based on the results of the assessment.

Some of the key activities identified as part of the roadmap that BHP committed to implementing were:

- Re-structuring the organisation to enable strong leadership in testing. This included devising strategies for maintaining skilled test teams as well as providing a consistent and controlled use of tools

- Developing an optimised test documentation structure. This included defining and gaining sign-off of the test policy and the master test plan documents

- Creating a single consolidated metrics framework to provide meaningful and actionable information. This was used to provide critical data to project and programme teams, as well as providing the insights needed to facilitate targeted process improvements

- Ensuring testing staff were suitable skilled, possessing ISTQB Foundation Certification at minimum, to ensure a consistent and common use of terminology and increased knowledge of testing practices and processes

Outcome

This exercise derived many important benefits for BHP. By simplifying test delivery, providing a common framework, leveraging tools for automation and ensuring test coverage is fit-for-purpose, WAIO was able to improve their testing capability's cost effectiveness while better supporting project delivery and ensuring operational stability.

Some of the operational impacts included:

- Gaining a better understanding of risk management

- Improving communications throughout the SDLC

- Reducing contingencies in estimates

- Decreasing post production support required

- Implementing an integrated approach to improvements resulting in better quality deliverables.

- Projects started under the new system demonstrated considerable improvements in the quality of products delivered. This raised the profile of BHP's testing team, lifting perceived value and gaining recognition as a critical service internally whilst also building confidence within the testing team.

Planit's strong relationship with BHP continues beyond the assessment, providing performance testing, functional testing, test management, test strategy and general test consulting services.

Conclusion

BHP Billiton were aware that they needed to improve their test processes and by undertaking an independent assessment aligned to the TMMi model, they able to map key improvements and reach their goals.

Planit will continue to work with BHP to ensure continued growth of their testing discipline, reducing key person dependencies and creating an efficient and effective Testing Centre of Excellence that focuses on IP retention and establishment of common re-usable practices.

About Planit

TMMi is an internationally recognised model designed to help organisations optimise their testing. Our expert insights will enable you to achieve better testing outcomes with less effort.

Find out how we can help you build your understanding of the TMMi model, identify your testing maturity and systematically implement improvements and attain TMMi certification.

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