



ELEVATE ALM TOOLS AND PRACTICES – AUTOMATED SOLUTION APPROACH

Introduction

(ALM) tools encompass people, tools, and processes for managing software development from continuous requirements to its development, testing, deployment, and maintenance. ALM tools are transforming software development by enhancing efficiency, quality, end-to-end traceability and collaboration among different teams.

Adopting agile processes has accelerated the implementation and usage of ALM tools among enterprises across industries. The market size of leading ALM tools is projected to grow at a CAGR of 7% from 2023 (~4B USD) to 2035 (~9B USD)¹.

As adoption increases, enterprises struggle to harness the full capabilities of these tools efficiently across teams. The process and technical maturity level of effective tool usage is very low. Our experience with clients and study of market trends show some of the critical challenges faced in ALM implementation and usage:

Lack of standardization of key parameters

(e.g., project templates, work item types, workflows, custom fields, etc of the ALM tool. Different teams within the same organization use it in their own ways, leading to a drop in productivity by 15% to 20%.



Increasing cost of using and maintaining the ALM tool

ALM tools usually have huge license costs, running into thousands of dollars. However, using it as per industry best practices can optimize costs. For example, a 300-user standard plan can cost over \$ 25,000 annually for leading software like Atlassian Jira.



Non-optimum implementations of ALM tools

lead to degraded performance of the ALM software as enterprises scale over time. For example, performance degrades proportionally with an increasing number of projects and users over some time. This can include a slower software response by 5% to 10%, affecting the user experience.



We have observed that enterprises do not have a standard way to assess and improve the maturity of key ALM tools. At most, they resort to ad hoc measures to address these challenges.

At Infosys Engineering Services, we have developed an automated approach and solution that enables organizations to effectively, objectively and automatically assess and improve the maturity of their core implementation tools for ALM and their usage.

The approach has been built and influenced by several years of industry experience with large clients, including highly regulated and compliance-heavy domains like medical, insurance, finance and aerospace. We have a dedicated ALM CoE practice with expertise in leading ALM tools from vendors like Atlassian, Microsoft, Broadcom and HP. This CoE is part of our larger DevSecOps practice, which has been running for over ten years and engaging with 100+ Fortune 500 companies across industries.

The ALM CoE boasts partnerships with some of the top ALM tool vendors.

The solution is devised to be ALM vendor agnostic. At the core of any ALM tool are essential building blocks or parameters like users, projects, work items (of different types like stories, defects, etc.) and workflows that form the basis of Agile software development. The solution works by programmatically analyzing these fundamental building blocks and parameters. Additionally, based on industry benchmarks, it provides current maturity, critical deviations and other relevant insights from multiple correlated parameters. There is an added layer of auto-remediation and a recommendation engine powered by AI and Natural Language Processing (NLP) algorithms to suggest resolutions to the identified gaps. Addressing identified gaps can vastly improve the maturity of ALM tool usage.

Figure 1 depicts the key aspects of the solution:

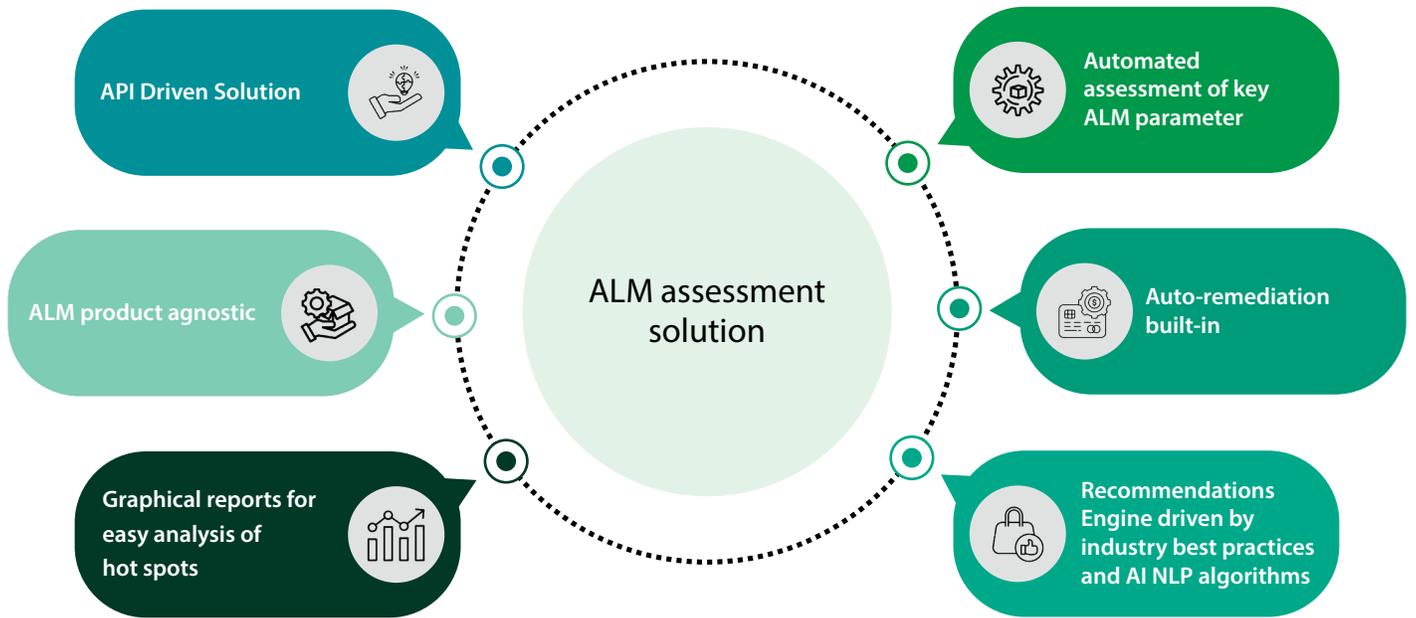
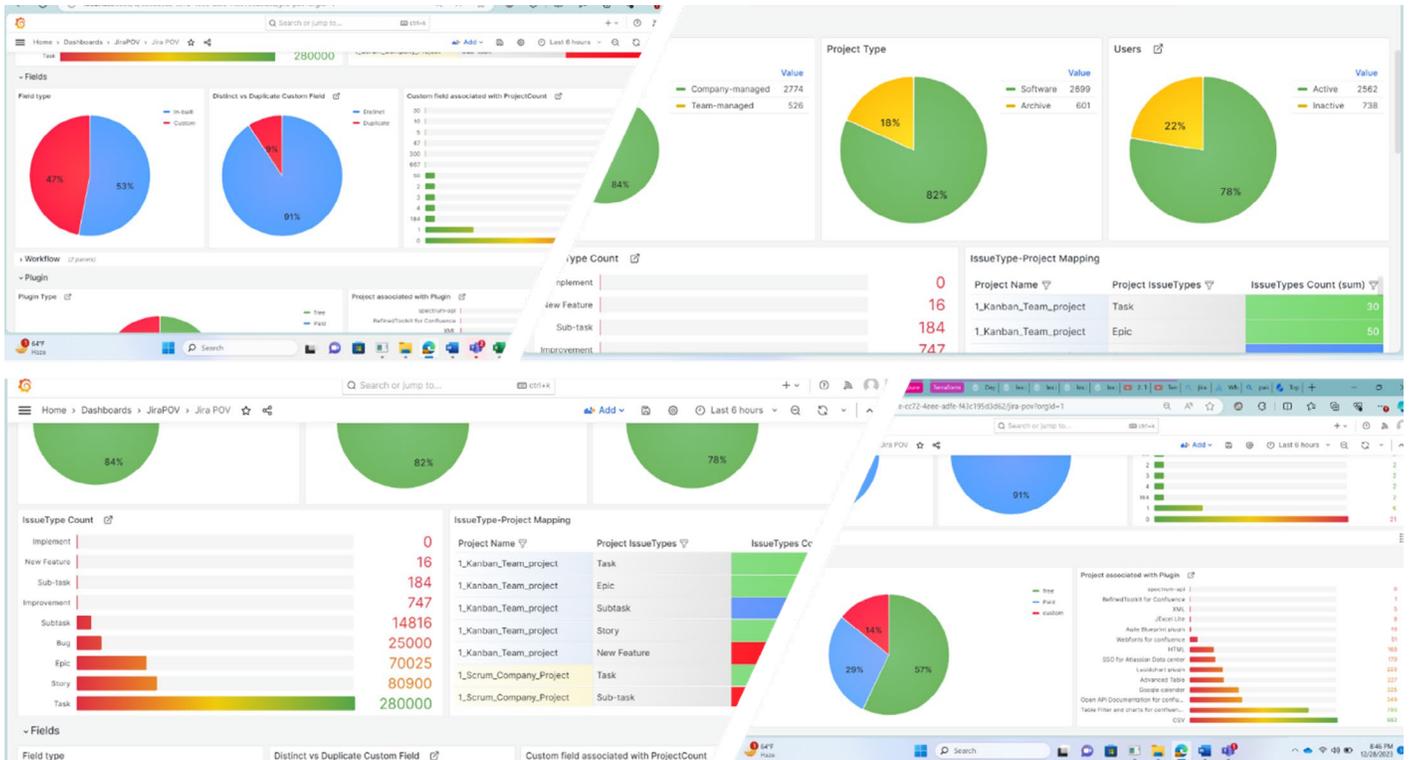


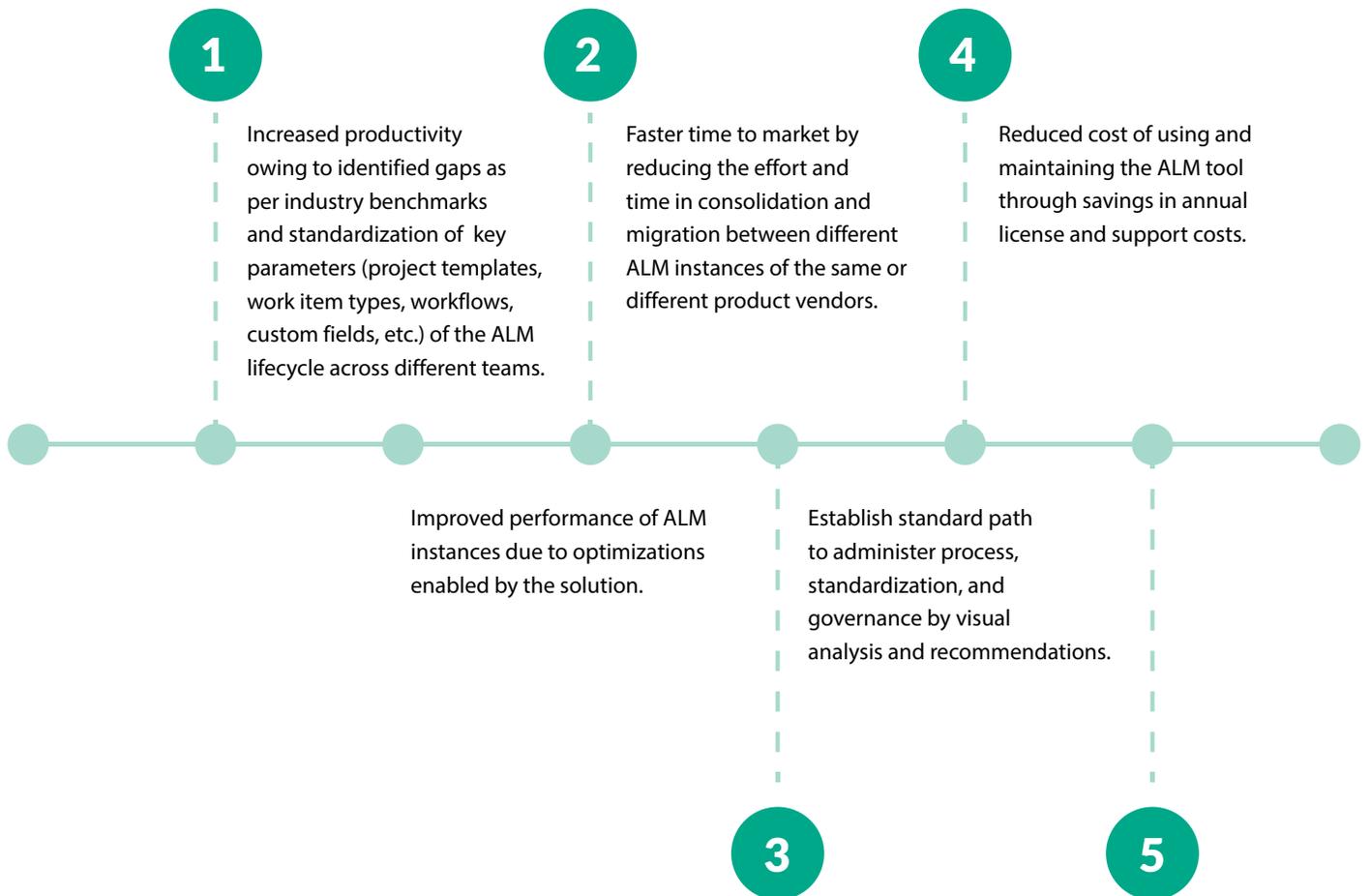
Figure 1 Infosys ALM Assessment Solution



Here are some examples of automated analysis created by the solution for Atlassian Jira - a leading tool in ALM space



The business value derived by our clients with this approach include the following







The following table provides a view of select client engagements which leveraged this approach and solution

| Client | ALM scale | Challenges | Approach | Benefits |
|---|---|---|--|---|
| Leading life sciences company | 7 Jira instances, 2000+ projects, 2000+ users | High cost of maintaining non-standardized and multiple instances of ALM software across different teams. | Automated data gathering, gap identification and analysis automation were used for standardizing the projects' processes and workflows | <ul style="list-style-type: none"> • 20% improvement in productivity due to standardization of ALM parameters and processes • USD 0.5M cost saving due to optimization and consolidation of instances |
| One of the largest credit card companies in the world | 18K+ users, 6500+ projects, 6M+ issues | Additional maintenance and support of different ALM systems, different developer experiences, multiple integration points and lack of standardization | Automated and detailed upfront analysis of ALM landscape and identification of standardization opportunities | <ul style="list-style-type: none"> • 15% savings in consolidation and migration time effort • Over USD 0.5M annual savings to client |
| An American multinational semiconductor company | Two instances, 3000+ users, 1200 projects | Frequent system and performance issues, configuration drift issues | Automated identification of inactive users, projects, non-optimized configurations, plugins, etc. Auto-remediation of users, generation of right-fit recommendations | <ul style="list-style-type: none"> • 15% improvement in performance, including ALM processes and software response • 30% reduction in issues reported • 50% faster closure of triaging issues • 20% effort saved, which was redirected to enhancements work |

Future roadmap

We continue developing and enhancing this solution with constant input and feedback from our clients, ALM partners and industry trends. We plan to strengthen real-time AI-enabled recommendations and continuously measuring deviations from best practices to suggest smart and proactive recommendations. This also includes integrating and automatically analyzing feedback from users, developers, and operations to continuously improve the ALM tools and associated processes.



References

¹researchnester.com

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