USE CASE: STREAMLINE PROCESS WORKFLOW AND PROGRAM VISIBILITY WITH APPLICATION LIFECYCLE MANAGEMENT

CASE STUDY

Lhp

CHALLENGES

Increasing complexity in the product development workflow pushes companies to invest big dollars in the associated tool chain. But the intricate interdependencies in the development workflow requires these tool sets to communicate with each other so that any product development related information is being entered into the smallest number of interfaces as possible. Many companies in their drive to achieve efficiencies overlook the importance of process change and tools adaptability. In this case, LHP customer had existing ALM tools and processes which were lacking to meet the organization goals of streamlined workflow and project health visibility. LHP was approached to perform a gap analysis to identify areas of improvement and recommend an action plan to better utilize existing tools investment and implement new processes to address the complexity and interdependencies in the development workflow.

During gap analysis LHP identified few key areas where the customer was struggling with the most:

- Lack of project health visibility for the engineering teams which resulted in their lack of understanding on how their work is connected to other teams and the surrounding environment
- Lack of workflow visualization which inhibited the management to predict an upcoming or ongoing problem and prepare for remedy plan
- Lack of tools adaptability and usability which made it difficult for the engineering team to finish project deliverables on time

SOLUTIONS

During gap analysis LHP identified various area of improvement and proposed a recommended action plan to utilize workflow management for customer to execute development more efficiently and provide visibility to various levels of organization about ongoing development
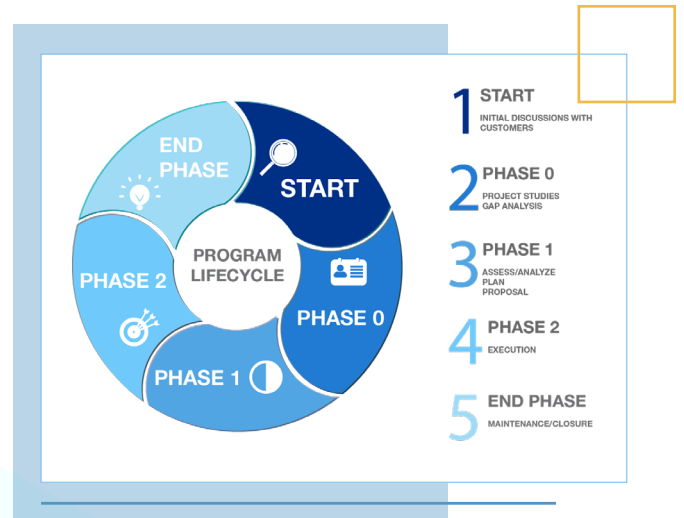
ABOUT THE PROJECT

Industy
- Automotive

Company Name
- Fortune 500 OEM

Tools/ Technologies/ Skills
- ALM Tools Suite
  - Rational DOORS
  - Rational Team Concert
  - Rational Quality Manager
  - Rational Rhapsody & Design Manager
  - Enovia PLM

Goals of the Project
- Provide customer with applications and tools that allows for Real-time visibility of program progress across the different product variants
- Establish robust and stream line communication channels between Project Management, Business Analysts, Developers and Testers
- Provide developers and testers an advanced platform for collaborative work
- Identify and map process of the various workflows for product development lifecycle

Application Area
- Application Lifecycle Management (ALM)
- GAP Analysis
- Recomendation & Execution

work, potential mounting issues and inactivity. During program lifecycle implementation phases LHP ensured that the execution approach started small, demonstrated success, and applied proven change management techniques around each process improvement and that the existing customer assets were being leveraged wherever possible. Experience shows that a well-documented product development process should not impede strategic objectives or innovation. And hence a thorough requirements gathering process should begin as early as possible and derive an accurate and comprehensive plan of time, test criteria and resource needs throughout the product development cycle. During gap analysis phase LHP also shared the industry best practices with respect to ALM and Functional Safety per customer request.

As part of our solution LHP created a dashboard for project visibility for various levels of organization such as Executive, Department, Engineering, team level etc. Some of the features of the dashboard are:
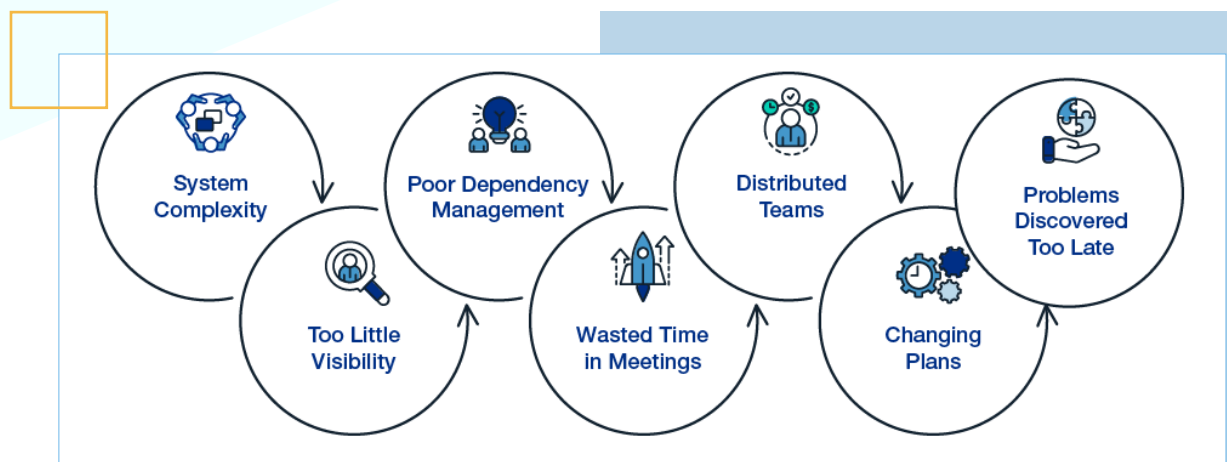
- Overall and milestone specific work plans for development lifecycle
- Team work activity trends
- Team work distribution metrics
- Team progress and risks status
- Overall program status and risks
- Resource and cost metrics

MAIN FEATURES

Based on the findings of gap analysis, LHP proposed several work packages to address the challenges and implement a work flow process which is scalable and is tailored to the customer's organization goals and product development cycle.

Management of Technical Engineering Documentation

LHP addressed customer needs by developing an automated process for gathering information and managing the quality and traceability to the Technical Engineering documentation, while at the same time capturing the requirements and improving traceability, change management and visibility to all stakeholders. LHP developed a custom software solution allowing executives to populate high level project information once into a common interface, and then distribute access to each feature team's engineer for their submission of detailed status reporting. The application rolls this information into a single report, formats the data in a tightly prescribed layout combining graphics and text, and sorts the pages based on the approving technical evaluator for each system under review. This automation achieves a five-fold reduction in resource hours by replacing the manual copy/paste operations, mitigates a risk with high impact but low detection

System Complexity → Too Little Visibility → Poor Dependency Management → Wasted Time in Meetings → Distributed Teams → Changing Plans → Problems Discovered Too Late

where engineers overwrote each other's entries, and drastically reduces the rate of failed technical reviews based on deviations in the report format.

Other pain points addressed by this system are the significant reduction of source files scattered across numerous file servers and email inboxes, posing a data security risk as well as unnecessary storage costs. A set of instructional documents were replaced by a series of tool tips and prompts in the user interface to assist newer users through the process. The business process overall was streamlined as well, as initial reviews are now conducted from the system interface, and only on successful completion of the final review is the report document extracted for archival in the global database.

Workflow Mapping

LHP worked on a SIPOC activity for the customer to measure effective use of tools and processes for coordinating and tracking the workflow process; clarity of milestones, roles and responsibilities, visibility of milestone progress, identification and quantification of risks across the organization. This activity resulted in increased visibility and traceability of problem reports and software changes across the development lifecycle and across the organization, and effective tracking and management of resources. All detailed workflows relevant to requirements gathering through verification were captured to be the input to overall process improvement effort.

RESULTS

As a result of LHP efforts to establish a company-wide ALM process, the customer now has Realtime visibility of program progress across various levels of organization which saves company several hours of resource time. The ALM solution has helped the customer to establish and map process workflows across various engineering teams. The newly established ALM workflow enables customer to have a streamlined channel of communication and greater visibility. With increased project visibility driven by the new established ALM process, customer can estimate future project parameters such as cost, resourcing needs, and timeline with higher level of accuracy setting them on a path of success. Once a new process is established it becomes even important to track the success and look for inefficiencies. LHP is now continuing our efforts with this customer to collect data and help customer to address workflow and processes inefficiencies.