# Optimising Software and Systems Engineering Projects with Collaborative Life Cycle Management

The Engineering Life Cycle as applied to both software and systems projects has remained fairly stable for many years. This is because the concept and mechanisms are effective in the design and delivery of a product. Why change something that works? The recent developments in Collaborative Life Cycle Management do not aim to alter the life cycle as such, but to optimise and accelerate the development process within the framework of the life cycle. By making development and process data available to all relevant parties and adding workflow control, projects are accelerated and product quality improved.

Traditional Development

With software or systems development in a manual environment, even within a strictly process controlled life cycle, there is an incredible waste of resource particularly in the review and approval stages.

A typical scenario is as follows:
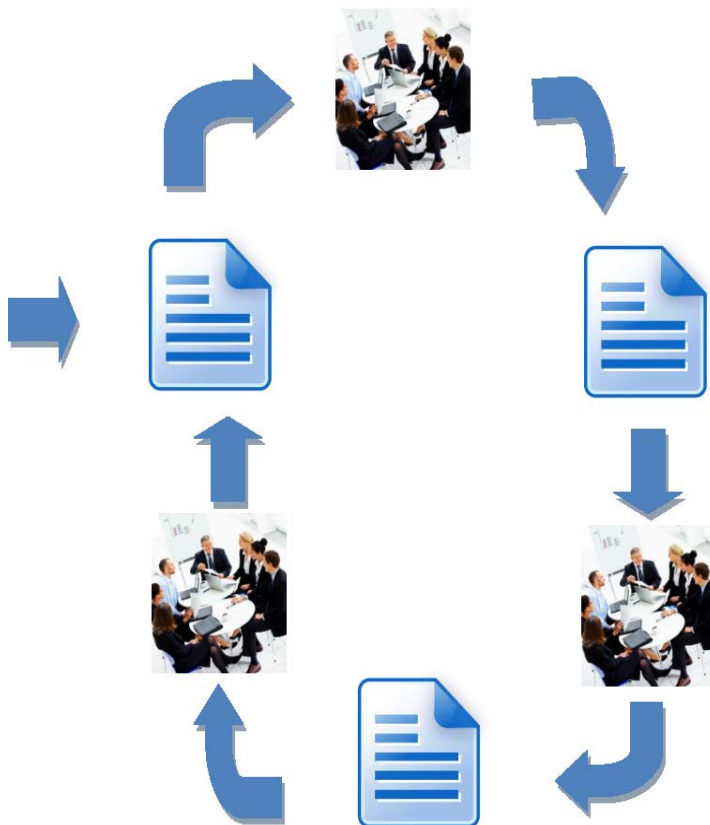
A requirement is raised by the user and a User Requirement (UR) document produced in a generic Office document. A meeting is then convened with stakeholders from all departments getting around a table and discussing the UR. This may be approved or reworked before convening another meeting.

Once approved the development team can then work on the design and produce a Design Document (DD). Another meeting is will be convened to discuss and approve or rework this document. The process continues with the test team producing manual test procedures and going through a formal approval process for this.

Does this sound familiar?

Collaborative Life Cycle Management

There are considerable efficiencies to be made by implementing a solution where all stakeholders are able to dynamically comment on project artefacts with the information held in a central repository. Approval can be made by authorised personnel in the system rather than gathering in a physical meeting. Workflow control can be applied to support process and project planning with task tracking integrated to provide a single view of the project at all stages. The economies and efficiencies made through not having to search for the current version of a document, and not having to hold regular or unscheduled meetings, are notable. The quality of the product is also increased as there is engagement with stakeholders throughout the life cycle. The test team can raise issues earlier in the life cycle where it is much more economical to address. There are a number of vendors producing solutions that enable this collaborative approach. One of the most intuitive is the IBM® Rational® Collaborative Life Cycle Management solution built on the Jazz™ platform[1].

The IBM® Jazz™ platform provides the single repository of project related artefacts and crucially provides seamless traceability between all applications in the CLM solution.

In–Context Collaboration is the ability to share related information across the lifecycle. The test team can link tests to requirements and the requirements team can easily see that all requirements have a corresponding test. User Requirements are linked to Design Requirements and all discussions and comments related to the artefacts are visible in a single one stop dashboard and not lost in the email system.

Real-time planning is possible because all the effort recording and progress is available from the repository at any given point. Predictability is enhanced due the availability of real-time project data and costs are reduced through continuous development.

[1] The Total Economic Impact of the IBM® Rational® Solution for Collaborative Life Cycle Management

Conclusion

The IBM® Rational® Collaborative Management Solution eliminates the traditional element of isolated project stakeholders working independently to deliver a product. Information sharing is key to effective collaboration, and combined with a framework for effective planning and workflow control, configurable to support the internal process flows for review and approval, project success is improved with reduced effort.

✓ **Maximise Product Value with In-Context Collaboration**

✓ **Accelerate Time to Delivery with Real-Time Planning**

✓ **Improve Quality with Life Cycle Traceability**

✓ **Achieve Predictability with Development Intelligence**

✓ **Reduce Costs with Continuous Improvement**