IBM Engineering Lifecycle Management

Where compliance meets traceability: Engineering insights at scale

Highlights
Use digital threads to overcome challenging data silos

Minimize risk, lower costs and support compliance

Address increasing complexity with confidence

In today's software and product development landscape, decentralized tooling decisions have led to a proliferation of data silos. Compounded by a massively increasing array of software options, this results in challenges like data fragmentation, tool overload, limited process traceability, compliance issues, high rework costs and burdensome pressure to innovate. To overcome these challenges in an era of escalating software complexity, business leaders need a holistic solution that empowers teams to make better-informed decisions, improve product quality and accelerate time to market.

IBM Engineering Lifecycle Management (ELM) is a powerful, comprehensive solution designed to help engineering teams mitigate the negative impacts of data silos in engineering. It does this by creating a digital thread built upon a linked data architecture (OSLC) based on open standards, seamlessly guiding you from Requirements to Systems Design, Workflow and Test Management.

The IBM ELM portfolio comprises the following core capabilities:

- Requirements Management
- Systems Design
- Test Management
- Workflow Management
- Reporting and Insights
- Process Enablement
- Integration Hub

Use digital threads to overcome challenging data silos
Data silos have long been a barrier in the path of engineering teams looking to establish effective collaboration and decision-making processes. When critical engineering data is scattered across various tools, vendors, databases and departments, it creates isolated islands of information. This fragmentation hinders efficient communication, slows down project progress and increases the risk of errors and misalignment among teams.

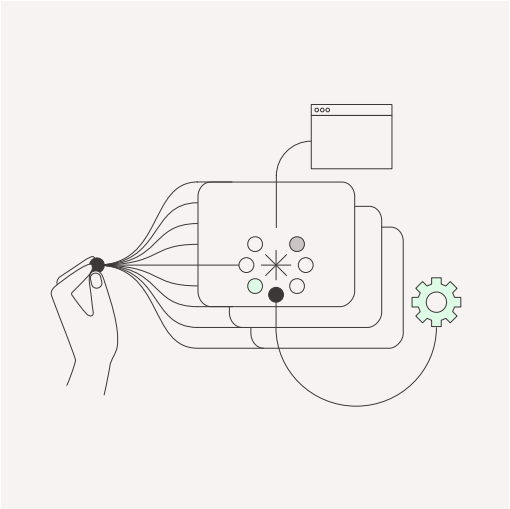
Data silos often result in limited traceability between different stages of the product development lifecycle. With ELM, digital threads allow organizations to trace requirements, designs and test cases across the entire development process. This enhanced traceability provides a clear view of the relationships between various elements, helping teams manage the many versions of their engineering work and related traceability through open standards-based global configuration management.

IBM ELM takes an all-encompassing approach to product and software development, making it easier to coordinate multiple workstreams and foster collaboration among all stakeholders—including suppliers. Managing product complexity becomes easier with the help of a unified, open platform that streamlines communication, aligns teams and reduces the risk of misunderstandings.

Minimize risk, lower costs and support compliance
IBM ELM minimizes risk by maximizing transparency and continuous testing, streamlining change management and reducing rework. The platform's proactive approach to issue identification empowers teams to avoid costly errors and transition to a proactive—rather than reactive—workflow.

IBM ELM also addresses inefficiencies caused by data silos, which helps to streamline workflows, improve collaboration and promote informed decision-making. This agile approach reduces late-cycle rework, improves product quality and enhances overall productivity.

As with any enterprise function, regulatory compliance is crucial. This is especially true in safety-critical industries. IBM ELM addresses this need by providing a comprehensive, end-to-end audit trail to simplify auditing, reduce compliance risks and enhance your organization's reputation for reliability and quality.



Address increasing complexity with confidence
Driven by advancements in technology and an ever-increasing number of software components, physical products today are becoming increasingly complex. IBM ELM addresses common “system of systems” challenges and reduces complexity across the entire product development lifecycle.

IBM ELM facilitates the reuse of engineering artifacts across product lines or families, maximizing efficiency and return on investment. It automates change management processes, minimizes confusion and duplication of work and supports the efficient propagation of asset changes across all instances where the asset is used.

The platform further streamlines work by addressing key challenges that dispersed development teams face on a routine basis. IBM ELM enhances real-time collaboration and automates repetitive tasks, improving traceability and allocation of resources throughout the development lifecycle. This results in increased productivity, as teams can focus more on value-adding tasks and less on administrative overhead.

IBM ELM empowers organizations with robust reporting capabilities, allowing them to generate reports that identify the source of issues, communicate project status and highlight areas for potential process improvement. These insights help reduce costs, improve product quality and ensure on-time product delivery.

In an era where sustainability is of paramount importance, IBM ELM supports organizations in meeting the challenges of sustainable product design. Customers, investors and governments increasingly demand sustainability in business processes, and engineering teams must respond by integrating sustainability considerations into the core of the product development process—without compromising other product objectives.

With IBM ELM, you can design products with sustainability in mind, ensuring that decisions align with environmental, social and governance (ESG) goals. The platform’s digital threads facilitate the documentation of sustainability efforts, demonstrating a commitment to responsible and sustainable engineering practices.

Conclusion

IBM ELM offers an all-encompassing solution that addresses the complex challenges of modern software and product development. It streamlines processes, enhances collaboration, minimizes risk and embraces ESG initiatives. The platform empowers organizations to thrive in a competitive landscape by delivering high-quality products while supporting regulatory compliance and general sustainability.

Why IBM?

The scalability, integrations and time-tested capabilities of IBM ELM culminate in a unique capability to implement high-value, cost-efficient engineering lifecycle management solutions. IBM® remains committed to open integration standards like OSLC and offers greater development productivity, affordable pricing, improvements to product quality and support for long-term innovation.

For more information

To learn more about IBM Engineering Lifecycle Management, contact your IBM representative or IBM Business Partner or visit ibm.com/products/engineering-lifecycle-management.

IBM Corporation
New Orchard Road
Armonk, NY 10504

Produced in the
United States of America
November 2023