IHS Markit™

Enabling Adoption of ISO/IEC/IEEE 15288

Are You Ready to Accelerate Your Product/Process Life Cycle and Increase Knowledge Discovery?

Product/process variety and complexity are increasing just as development costs are rising. Combined, these factors put an enormous strain on engineers, technical professionals, and knowledge workers, all of whom are dealing with myriad challenges along the path to innovation. Regardless of industry, product development is a lengthy process that can literally span decades from initial concept to the actual point where a product enters service.

Reducing this lifecycle isn't easy with traditional means. Along the way, a tremendous amount of information is generated about the product or project—information that also spans multiple PLM systems and careers of individual engineers. As such, defining, understanding, and using a common set of terminologies across the system life cycle are nearly impossible.

In turn, this prevents engineers and other technical staff members from locating past project information and engineering artifacts. Engineers can spend 40% or more of their time searching for information – and often failing to find the information they need. Prior lessons learned are lost, mistakes are repeated, and less-than-optimal decision making takes place, all of which produce ultra-costly downstream consequences.

Up to
30% of all
expenditure in R&D is wasted on **redeveloping existing inventions**

SOURCE: European Commission (DG Research) and the European Patent Office

13 Unique data sources
are used to find answers to each engineering challenge

SOURCE: Aberdeen

40%
of engineers' time is spent searching for information

SOURCE: Deloitte

Market Advisory Service Key Features:

The ISO/IEC/IEEE 15288:2015 standard for system lifecycle processes is used across numerous industries and by companies of all sizes. This standard establishes a common framework of process descriptions for depicting the lifecycle of systems created by humans. It defines a set of processes and associated terminology from an engineering viewpoint—processes that can be applied at any level in the hierarchy of a system's structure.

Adopted by organizations like the Department of Defense (DoD), ISO/IEC/IEEE 15288 addresses manmade systems that may be configured with one or more of the following elements: hardware, software, data, humans, processes (e.g., processes for providing service to users), procedures (e.g., operator instructions), facilities, materials, and naturally occurring entities.

Don't Assume Your PLM Will Handle it

While companies often assume that their PLM systems will satisfy their need for extracting the information to support the adoption of ISO 15288, knowledge discovery remains a challenge because this information is scattered across PLM and other systems. In some cases, systems are no longer in use, given the long lifespan of capital-intensive projects such as in A&D or O&G.

Using Engineering Workbench by IHS Markit, companies can drastically reduce the lifecycle process by improving knowledge discovery across PLM and other systems—all while complying with ISO 15288. Using the platform, organizations can ferret out the knowledge buried within their data to make better decisions and improve performance.

Engineering Workbench offers:

- A single repository for easy discovery of engineering artifacts
- An audit trail of past research and decision making
- Advanced research technologies that help pinpoint relevant answers and enable engineers to quickly digest and apply knowledge

Tackling Data-Hungry Research Tasks

Infusing knowledge into the Change Management Workflow, Engineering Workbench manages many different data-hungry research tasks that help drive up engineering efficiency, including:

- Creation of the change description and notes
- Verifying that no prior Engineer Change Order/ Request (ECO/ECR) exists for this change
- Identification of all documentation impacted by the change
- Understanding the impact to parent, child, and other component items
- Establishing levels of impact – who must review & approve, and why
- Research to obtain information about the ECO/ECR
- Extensive investigation and research in many areas depending on impact of change and area of expertise: (i.e. Compliance analysis, structural analysis, manufacturing analysis, etc.)

In return, organizations will realize gains in these three important areas:

Business Value

- Improved customer satisfaction
- Reduced product costs/ improved margins
- Quick response to market opportunities and demands
- Reduced warranty costs
- Reduced operational costs

Operational Value

- Reduce the time required to process a change order (ECO cycle time)
- Improved understanding of the complete extent and impact of the change
- Execute a more effective change with less risk of additional change orders

Productivity Value

- Reduce time spent in research at each stage of the workflow
- More robust research and investigation of impact of change
- Reduced risk of mistakes and missed opportunities

By conducting impact analysis, communicating accurate understandings, managing the change process across all impacted domains, and supporting complete traceability, Engineering Workbench by IHS Markit helps organizations improve customer satisfaction, reduce product costs, improve knowledge discovery, and reduce the product/process lifecycle times of manmade innovations.

About IHS Markit

IHS Markit (Nasdaq: INFO) is a world leader in critical information, analytics and solutions for the major industries and markets that drive economies worldwide. The company delivers next-generation information, analytics and solutions to customers in business, finance and government, improving their operational efficiency and providing deep insights that lead to well-informed, confident decisions. IHS Markit has more than 50,000 key business and government customers, including 85 percent of the Fortune Global 500 and the world's leading financial institutions. Headquartered in London, IHS Markit is committed to sustainable, profitable growth.

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CUSTOMER CARE

NORTH AND SOUTH AMERICA
T +1 800 447 2273
    +1 303 858 6187 (Outside US/Canada)

EUROPE, MIDDLE EAST AND AFRICA
T +44 1344 328 300

ASIA PACIFIC
T +604 291 3600

E CustomerCare@ihsmarkit.com