



How to optimize your visibility throughout the Product Development Cycle

In today's fast paced digital world, visibility provides the needed clarity to make key decisions in a timely manner. The connected digital world, with its never ending streams of data need to be coordinated, organized and managed in order to provide the needed clarity to synthesize this data into information. The visibility needed comes from four main areas throughout the product development process. These four areas are:

Design Evolution

The product design and its evolution from concept to final product goes through many iterations and decision points in the product development lifecycle. Some of the key aspects in terms of visibility to optimize both design decisions and the context of the design maturity revolve around the visibility of the phase in which the design is in, as well as, the iteration/revision of the design and the explanation of the design iterations and the rationale for those decisions. Typically we see phases in the design cycle such as "Ideation", "Concept", "Design" and "Design Validation". The number of iterations throughout each phase in the design evolution, can be a leading indicator of design complexity and/or the multiple options considered throughout the ideation phase that are typically accompanied with a trade off analysis/study.

Design Validation

Once a design is selected and needs to be validated to ensure it meets the product requirements, the visibility of the progress of the product, system, sub-system or component's validation is key to shortening the iteration cycles between design and validation. The idea of connecting the key characteristics of the design to the testing laboratory equipment that is validating the performance of the product, system, sub-system or component and making these results visible throughout the validation cycles, allows engineers early and consistent visibility to how the design is meeting the expected performance. This reduces the typical cycle of:

DESIGN => TEST REQUEST => TEST EXECUTION => TEST RESULTS => DESIGN ITERATION

Supplier Development

Today, product development includes the inclusion of development partners. With this comes the need to enhance the visibility of what is occurring through the extended supply chain delivery system for systems, sub-systems or components. Historically, this area is one that lacks visibility to any great extent throughout the supply base. The key here is to replicate the connectivity and visibility in your extended supply chain just as it designed within your internal product development environment. Supplier visibility is one aspect that can exponentially improve your product development throughput, timing and quality.

Process Validation

Transition from design validation to process validation and product readiness, is the final step prior to launching production. Visibility through connected manufacturing operations to validate production operations operate in a manner that meet product requirements, will strengthen not only your company's ability to ensure great quality from the start of production, it also drives the cohesiveness to ensure a seamless transition from design validation to process validation. Including key elements such as driving digital work instruction from design assets with the right configuration as needed within the process, ensures consistent dataflow and visibility from design to production.

Speed to market, as well as, clarity and visibility throughout the development process are key to optimizing your company's product development process. If you'd like to know more about how to architect, develop, and implement these capabilities in your organization, give us a call.

Next Month: The inclusion of technology ecosystems within your product offering