



Product Design Standards Produce Valuable Outputs & Increase Operational Efficiencies



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Developing A Gold Standard in Product Design

Executive Summary:

If your company lacks a 'gold standard' for its product design practices you are inevitably wasting time, resources and funds. Implementing and running a gold standards program is essential to operating at peak performance. Start by developing a best in practice plan. From there setup a review plan to provide feedback on all work performed. Once the infrastructure of your new gold standard system is established you'll want to assess the skills of your team and develop a training program which can be offered to both new and existing employees.

Approaches May Vary

We know from years of experience there is more than one way to design a product. One persons' approach in the creative development process can be quite different from the person sitting next to them yet it's possible for both people to arrive at the same destination. Or so we think.

While outcomes are important in product design the journey to get to the end is just as important as the finished good itself. Companies vary greatly from one to the other in how they approach their design process, in particular the process of product design and engineering. In fact, it can vary so greatly people working within the same company, same department, can often times use varied and different design approaches in order to get to their final destination. A lack of standards in how we approach our product design process can make for a mess in the end.

Example: you are tasked with designing a next generation product. Your approach gets you across

the finish line checking the proverbial box allowing you to move on to the next assignment. While the work may have technically been completed, it was done lacking proper documentation and didn't take into consideration legacy technology. A month later, unrelated to your last project, you get promoted and relocated for the company. A new person steps in and picks up your project discovering it needs to totally be redone because your design can't be produced commercially with the limited information on had.

While the above example is over simplified, real world examples like this play out daily.

Recognizing The Importance of Standards

The reason why companies experience product design challenges like above is because they don't follow a formal and documented 'gold standard' for their design practices. Simply put, they lack discipline within their design fundamentals. Lack of design discipline more often than not is a learned behavior which was picked up as a result of inadequate training in proper design techniques. It can also be caused by several other factors, including relaxed company standards, poor management oversight, poor training, and lazy work ethic by employees.

Regardless of the cause, when a lack of standards exists employees are left to decide for themselves how to complete a task which may get them to the finish line but their approach, process and details along the way can have wild variances and interpretations.

The reality is the actual practice of designing a product with repeatable standards is anything but common sense or consistent in the workplace.



When our design approach is fast and loose, with little organization or discipline we experience the following:

- Design intent isn't captured
- Formatting and documentation inconsistencies
- Future efforts to utilize the design for other applications can't be leverage causing rework
- Models can't be adjusted or revised easily because the initial designer didn't put enough thought into their work to think ahead about future changes which may need to take place; the design is static rather than being parametrically driven
- Confidence in the model and the overall design is tarnished
- The company losses time and market opportunity which translates into lost revenue
- Employees get frustrated about inconsistent project leadership and having to spend time doing rework

When these issues show up it causes companies to reinvest dollars and resources into their work in order to move the project forward getting it to a point of where it can be salvaged and properly advanced along the development cycle.

Creating Your Own Design 'Gold Standard'

For these reasons its vital to implement a gold standard which your employees and suppliers follow to ensure the work each party is facilitating makes it to the finish line in the same format, intent and approach. This unification of process increases the likelihood design work is done correctly while also ensuring future usage of said designs doesn't require additional or unnecessary iterations.

If you need to implement a gold standard for your design and product development practices, consider the following:

- Documented processes with consistent templates and forms
- A systematic way to capture tribal/ legacy knowledge
- Development and maintenance of a centralized database for product data storage (tools like UpChain, Arena and Windchill)
- Developing consistent design techniques via training (sketches constrained, DFM, simplified features which are in systematic order, building relations to create predictability, organizing feature tree, design intent)
- Driving dimension (model dimensions) used in drawing (ease in updating documentation)
- Implementing a system of checks and balances to ensure work is done properly and in accordance with company processes and policies
- Consistent discussion, training and guidance focused on designing with the future in mind