



DESIGN REVIEWS THE RIGHT WAY

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Design reviews are proven approaches that will help improve the "product development hygiene" in your company and reduce time-to-market. They also result in higher quality products.

Design reviews are perhaps one of the oldest known techniques for debugging designs to keep errors from getting downstream. At the same time, they are also one of the most misapplied tools commonly utilized by development professionals.

One major area of misapplication results from confusing project and/or program reviews with design reviews. Design reviews focus exclusively on the design of the product. The purpose of design reviews is to review the overall design, or a specific aspect of a design, during any point in the development of a new or existing product. Discussions about project schedule, development cost, staffing, and other project-related issues should not be discussed in design review meetings....only design.

Design review techniques are also misapplied when the team members get together and review the design of the product they are currently working on, without external reviewers. Robust design review processes will always involve independent teams of reviewers meeting with the members of the team designing the product.

Further, design reviews often occur after the fact. Models, breadboards, and prototypes are built and the design is then reviewed. Design reviews should be "reviews of design," and not "reviews of as-built." The whole idea is to get the bugs out on paper before building the physical product.

Finally, there is the multifaceted nature of the technique. Best practices typically involve several flavors of design reviews. The population of formal reviews for a given development effort will contain early requirements, specification and architecture reviews, focused serviceability, manufacturability and reliability reviews, and comprehensive feature-function-performance reviews. Numerous informal reviews will take place. Depending on the complexity of the product, these review techniques may be applied at a component, subassembly, subsystem, and/or system level. Design review processes at many companies are often monolithic and are not well constructed and positioned to add value.

The proper application of design review techniques can pay significant benefits. In addition to producing higher quality products, some companies believe that design reviews alone have reduced time-to-market by 50%.