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TECHNOLOGY SERVICES

Faster, Better, and Cheaper: BoDs

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"Engineering is behind schedule on this new size again. This happens every time! This is the 3rd size with this problem. How are we ever going to get this product line to the market?"

Have any of these statements or questions been directed to your team in a design review or stage-gate meeting? If you are an engineering leader, you may have to explain schedule delays, reliability issues, and cost overruns. How can you avoid this uncomfortable situation? The answer may be simpler you may think.

To begin with, ask yourself these questions. Do all sizes in this product line share the same configuration, use common parts, and conform with the same industry standard?

If your product line has multiple sizes, and the answer to any of the above is NO, then the product line lacks design consistency. Symptoms include long development time, high manufacturing cost, long manufacturing lead times, assembly errors, and poor reliability.

TRUTH: Inconsistency in design is a hidden cost and has organization-wide impact.

What causes inconsistency in design? One reason is staff turnover (employee mobility, right-sizing, mergers, etc.). When engineers take ownership of a product line without knowing product line history, design focus will vary. Another reason is that Subject Matter Experts (SMEs) leave companies, taking their knowledge with them. Without an SME, less experienced engineers must "learn" the product line while expanding it, which leads to mistakes and project delays.

When a product line is developed, an optimal combination of components, materials, geometry, and other attributes emerge. This is called "the preferred configuration". Its design philosophy and technical aspects must be documented so that all subsequent sizes can be designed with consistency. The resulting document is referred to as a **Basis of Design**, or **BoD**.

TRUTH: The more strategically important the product line, the more critical the BoD.

A BoD reduces development time, manufacturing cost, assembly errors, and promotes higher reliability. Because the BoD provides total design guidance, it enables your engineering team, and especially those who are new to the team, to develop products quicker.

BoDs will also help eliminate those uncomfortable questions regarding schedule delays, reliability issues, and cost overruns.

Integris Technology Services LLC provides Product and System design services. Integris uses a holistic approach in design and will deliver a reliable, high-value product with complete engineering documentation that will get your product to market quickly.

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