

How an ASIC Development Company Selects the Right Projects, Manages the Customer, and Always Finishes on Time

Intro: Sound like a pipe dream, to finish on time with such certainty? This case covers how an integrated circuit development company honed their approach to project selection to take on *only* those projects they know they can complete on time and apply "customer management" to neutralize that common source of schedule slip.

The situation:

An ASIC development services company spun out from Intel Corporation faced a market full of peril. Many of their potential customers had very complex, hard technical projects -- with huge revenue potential each, but with huge risks and uncertainty as well.

The challenges:

Developing a sound business based on satisfying customers who want on-time delivery with no mistakes, in a market where the most lucrative projects were also the least likely to result in customers' time and quality goals being met.

What the company chose to do:

- **Understand the source of schedule risk.** The company realized that most of the cost and uncertainty on their projects came from changes in their internal design methodology to respond to very different and complex customer projects.
- **Get creative about their business model and adapt their "project selection" approach to it.** They decided to define the types of projects that should be part of their "portfolio" of customer projects as projects that *could* be completed with high certainty, because their designs were such that the company's development process would be the same time after time, working as-is for every project. Although these projects wouldn't be as lucrative as the large risky ones, the company felt it could develop a reputation for being on time with high quality, and land enough of the smaller contracts to have a great business.
- **Have the people responsible for delivery review and approve the project!** Rather than Sales selling new contracts and presenting the project list to Development, the CEO let the engineering team review every proposal and determine whether it should be accepted.
- **Create and use a definitive checklist for accepting or rejecting new project contracts.** The team spent the time to define meticulously what technical parameters described a project that they could execute with their methodology and tools "as is" and know they'd be successful. They ended up with a 22-item checklist. If the design doesn't meet it, "we ask the prospect to go elsewhere."
- **Use exacting project management that tracks the designs through each step in the standard process.** Since the process was now consistent, tracking each project became much easier for everyone, and any issues in a step visible immediately.
- **Track customer decisions and sign-offs as part of project tracking.** Rather than letting the customer "always be right" when asking for changes, the team realized that this was now their

biggest source of schedule risk. So they made customer change decisions a very visible part of their tracking. Customers must participate in cost-benefit trade-offs. Based on quantitative information provided by the team when the customer makes a new request, the customer must "decide themselves whether a change in requirements is worth the impact on cost and schedule" -- and they often decide a change isn't worth it.

In the end ...

The company has met its goals of 90% of its designs delivered on time and at least 90% working without a second iteration. To do so, the CEO and his team just needed to:

- not automatically accept anyone else's rules about what business is "good business," what customers are "good customers."
- Pinpoint the uncertain areas of their projects and define what a repeatable, predictably-executed methodology would be.
- Invest time and effort into creating their own project selection checklist to definitively identify the right kinds of projects to pursue.
- Have the discipline across the company, including Engineering AND Sales, to ONLY take on those types of projects.
- Be strong about managing the customer, bringing them into the decision process in a way that the *customer* must decide if the project will slip for new features, and thus will either back off on disruptive changes, or accept the consequences consciously such that the project is still considered successful by all parties.

Reference: Based on an article published in *EE Times* magazine, "Open Silicon takes ASICs off the beaten path," March 29, 2004.