

Make Time-to-Market Technologies a Bottom-Line Issue

Design engineers have a vast assortment of technologies at their disposal to accelerate product development. In this environment, it is easy to get caught up in issues related to speed and lose sight of the fact that profit, not speed, is what really matters

If you focus on the profit objective, the work gets simpler.

Five steps to procuring time-compression technologies keep the bottom line clearly in mind.

It becomes easier to see where new technology, such as rapid prototyping's concept modelers, will really provide value. Plus, decisions on which technology to procure become clearer. What's more, hurdles fade in justifying the technology to management.

Here are five steps to follow in procuring time-compression technologies that keep the bottom line clearly in mind.

■ Know the cost of delay.

We have all heard that getting a new product to market sooner makes more money. But leaving it at this fuzzy level isn't good enough: exactly how many extra dollars do we earn by cutting a month from the development cycle? For major projects in big companies, we have seen it reach \$1 million per day in pretax profit.

It is actually quite straightforward to calculate this cost of delay for your project. Using a spreadsheet, build a profit-and-loss statement for the product over its entire life. Then, ask what would happen to sales if the product were late to market by, say, six months. There would be some lost sales and perhaps a permanent loss of market share. Construct a variation of the basic spreadsheet expressing this. Finally, use the profit loss between the two spreadsheets to calculate the cost of delay, the profit lost over a convenient period of time, such as a month.

The key to success here is

getting marketing, manufacturing, and finance involved in doing it. You will need their input values to build the model. More importantly, without their involvement and buy-in, your model will have no credibility for justifying your technology acquisition.

■ Understand your company strategy.

What is your firm trying to achieve through time to market? Does it want to get to market as fast as possible, or is a specific completion date more important? Does it want to be first to market, accepting the costs and risks associated with this strategy? Or would it rather be a fast follower?

For example, a concept modeler could really help if you are a leader exploring many concepts with potential but uncertain customers. On the other hand, a fast follower could benefit more from a CAD system tightly linked to tooling suppliers, so that it could get into production quickly. Without a sharply focused strategy, you will have difficulty focusing your technology choices, and their benefits are likely to be elusive.

■ Find the bottlenecks in your development process.

Analyze your development cycle to discover where large chunks of time are spent. Then you will know where the opportunities are to compress time through technology.

For example, you may find that there is considerable delay in getting marketing to commit to a specific shape for a housing because it is unsure what customers want. In this case, there could be considerable leverage in a concept modeler that can produce a variety of shapes quickly in response to customer feedback, thereby converging on a housing shape quickly.

However, the delay might really be in pilot production, where your new product keeps getting shunted aside when the factory people cannot figure out

how to build it. Then, the technology solution may be as simple as strapping a pager to the chief designer so that the foreman can contact the designer instantly for answers.

Until you do this homework to know where technology can provide leverage in your development system, you will be at the mercy of technology suppliers, who can show you how their technology is a great solution to somebody else's problem.

■ Focus your shopping on your process needs.

Now you are prepared to take aim at technology solutions with a rifle, not a shotgun, so the shopping itself will be faster and more effective.

Challenge the technology suppliers to show you how their solution will address your cycle-time opportunity. In addition, because you are now shopping for business benefits, getting new technology approved within your organization will be easier and faster.

■ Adjust your process to exploit the technology.

Remember back in the Dark Ages, when we had typewriters instead of word processors? We would write a letter longhand, give it to a secretary for typing, then mark up the first draft. The poor letter might go through several such loops before it got mailed. Some executives still operate in this mode because they refuse to learn keyboarding skills or have a computer in their office.

Once you have your new technology, make sure you change your development process to take full advantage of the technology. This will probably be the hardest step of all, because, just like the executive cited above, we all get stuck in our habitual processes.

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