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Turning Smart Ideas into Product Solutions

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Marketing Helping Engineering: Melding The Minds

There are several things that you can be sure of in life – death, taxes, and the risk of discord between Marketing and Engineering!

This probably stems from the fact that both have different interests, goals and ambitions. However, in order for an organization to see above the crowd and ahead of the pack, it behooves them to find ways to meld both of these sub-cultures into one common vision.

Marketers, of course, focus on marketing. Success in a business is success in a market. They have set periodic revenue targets that are monitored. In addition, marketers must support their sales force and distributors with useful and effective information and material to bring in the orders. Marketing provides input to engineering for the design of new products.

"Engineering often has a different subculture within the organization with a different charter. They have the onus of designing and creating products that are feasible, sustainable, and well received in the marketplace"

Engineering often has a different subculture within the organization with a different charter. They have the onus of designing and creating products that are feasible, sustainable, and well received in the marketplace, but can only do this with valuable input from the marketing department. The nuances of production and manufacturing combine with the laws of science and technology and present obstacles along the way. New product designs need technical savvy that will yield high quality products without obstacles.

When Marketing and Engineering collaborate, there is harmony. Such harmony creates strategic advantage for the organization.

Firms are most competitive when both are on the same side of the fence and share common goals. This leads to better results, and productivity. It is especially true in our present day environment, where global competition is fierce, and new products arise every day. Our changing competitive environment brings definite challenges that must not be left unattended.

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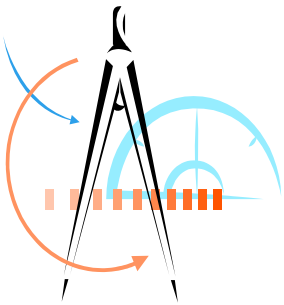

Common goals are the first order of business in melding the efforts of Marketing and Engineering. It is important to work in a team environment that has "same page" common goals; and an engineering firm capable of team playing is invaluable.

In order to have common goals, there needs to be an understanding of each group's strength and abilities. Therefore, communication is key.

For example, the engineering design team has some mastery of 3D graphical

renditions of new product concepts, but they also have intimate knowledge of the technical features and benefits of a product that may not be apparent to a marketer at the outset. They have an ability to depict, animate, and ultimately prototype a new product concept such that it may be sold internally and externally to the organization - even before production begins. A bill of materials and knowledge of the manufacturing standards to produce a product, makes Engineering a valuable resource in estimating the cost of the proposed product.

Marketing, on the other hand, has intimate knowledge of end-user needs, pricing structures, historical efforts, competitive threat, supply chain issues and concerns, the delivery timeline, and the bottom line profitability of the business. They know what it takes to make the cash register ring ...and the hundreds of things that can affect how loud it rings.

In mastering new product development, the ability to mesh all of these skills and abilities from both subcultures into one unified effort is critical, and greatly impacts the success of an organization. Managers and professionals on both sides should engender team-building, open communication, common goals, and a shared vision.

The right engineering-marketing mindset makes all the difference. A clear understanding and attitude regarding this collaboration means good things can happen for the overall organizational strategy.

What has traditionally been a cultural challenge, can suddenly become a powerful asset for the organization.

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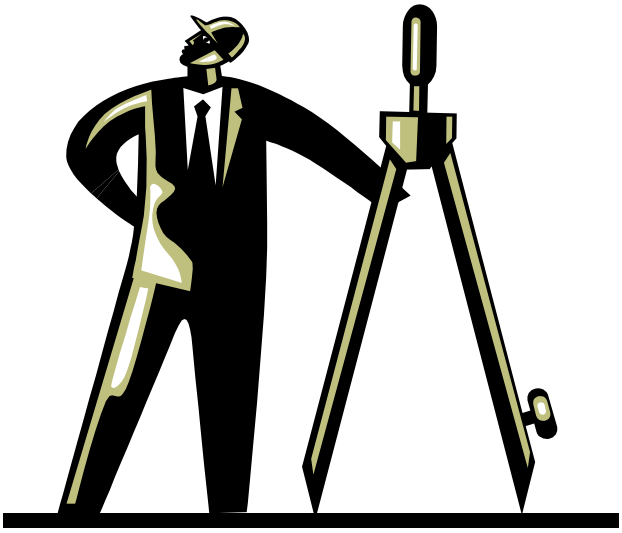

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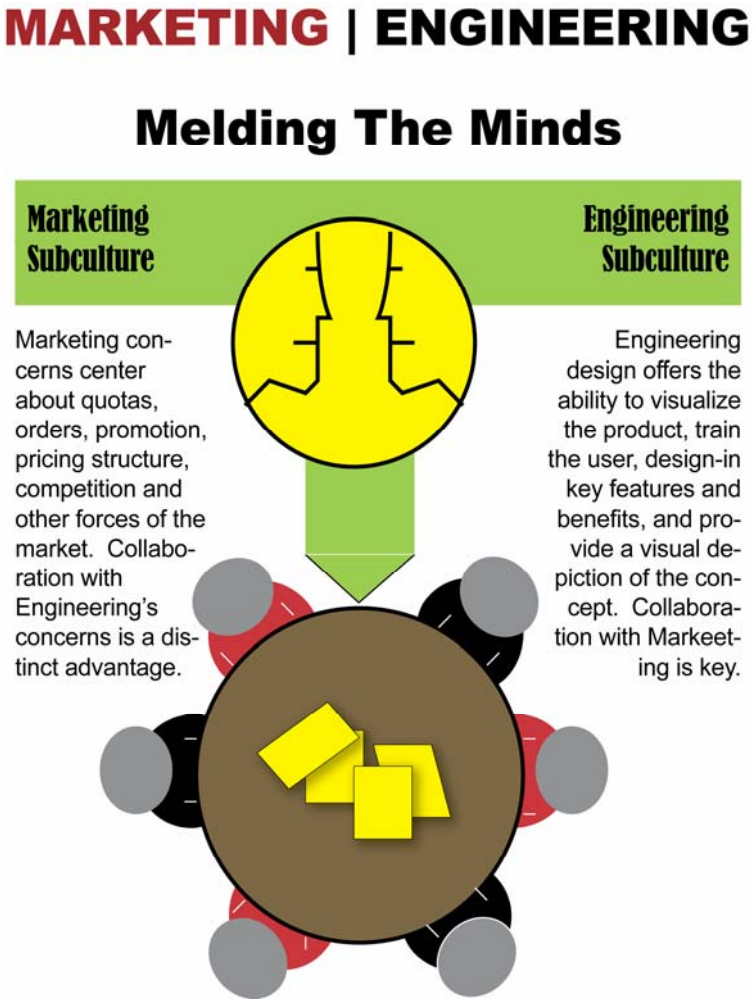


RAPID PROTOTYPING SAVES SCHEDULE TIME AND COST FOR NEW PRODUCT DEVELOPMENT

A prototype is worth more than 1000 words

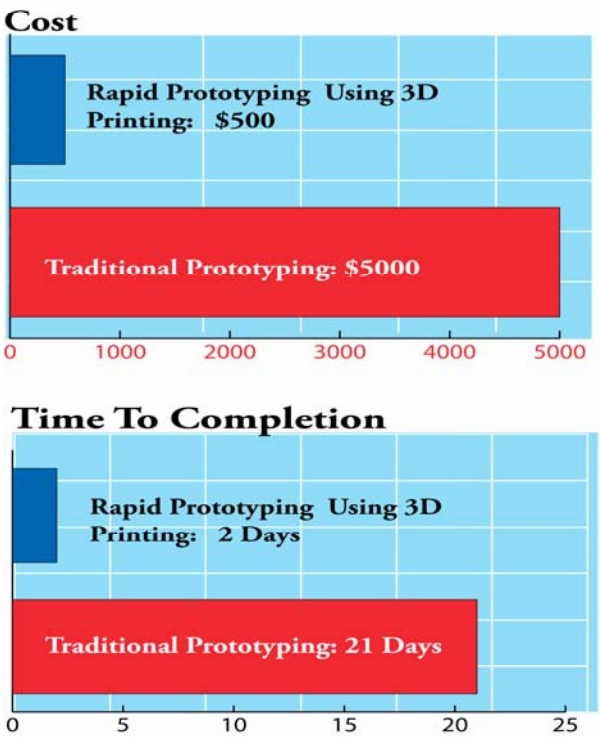
If a picture is worth 1000 words, then a three-dimensional model is worth quite a bit more. Developed by MIT in the late 1980s, 3D printing is fast and produces an actual working prototype of a product at a fraction of the time required before this technology arrived. It is able to do this at a fraction of what it would normally cost to do so.

Such technology is being used by cutting-edge designers to create new products that accelerate product development chain. Early information allows early and wise decisions about further investment in the production effort for a new product.

For example, shoe manufacturers have used such prototyping based on lasers and a footprint from a soccer player. Intricate and careful design detail for a shoe can avoid injuries and allow the player to utilize their skills much better. A German producer of sanitary and water fittings, utilized rapid prototyping to create a flushing system for a client who asked that they develop a product for them.

Sigma Design Company has invested in a Dimension 768 Series 3D dimensional printer to create rapid prototypes for its client. Previously, Sigma had the experience of creating prototypes that required a third party vendor to produce it.

Rapid Prototyping versus Traditional Prototyping



When a client of Sigma Design Company procured a prototype made of Aluminum, it required a lead time of 21 days and cost $5000 to produce. Marketing subsequently rejected the prototype. Had the prototype been produced using Sigma Design's 3D Printer, it may have been produced in 2 days at a cost of $500. Ten iterations of the prototype could have been produced for the same cost.

Source: Sigma Design Company

This took longer and was more expensive. When a client sought a prototype of aluminum, four prototypes were produced at a machine shop. It took 21 days to produce, and cost $5,000. Shortly after it was presented to the product development team only to be rejected by their marketing team.

"The technology that we offer would allow us to have produced a plastic prototype in two days, at a mere cost of $500", says Jerry Lynch, President of Sigma Design Company. " We could have produced ten iterations of that prototype for the same investment and had them available in a fraction of the lead time."

Sigma's recent acquisition of a 3D dimensional printer allows prototypes to be produced from ABS plastic (Acrylonitrile Butadiene Styrene). This is a durable and versatile material, available in white, blue, yellow, black, red, green, and steel gray colors.

The material may be deposited at layers as thin as .010 inches in thickness. This plastic material is used to make everything from the heads of golf clubs and LEGO bricks to fabricated pipefitting.