

Taking the "Random Walk" Out of New Product Introductions



by David W. Jimenez

Introducing a new product in the semiconductor industry is an extremely painful experience for most organizations. First-generation products have historically been the result of technologists discovering the solution to problems they face on a daily basis. Since the technology is born out of the need directly experienced in the market (by the inventor), the product has a reasonable chance of meeting the market requirements.

But what happens in a company when it looks to introduce the next generation? The technologist who leads the company's development of the first-generation product has been out of the "customer" role for a few years and is tempted to make assumptions about what the customer needs. This ultimately leads to the great debate between sales and engineering philosophies: sell what we make or make what we can sell. This is where a systematic approach to new product introductions can bridge the gap. By planning from the beginning where a product needs to be to meet the market requirements, an organization will make what the customer wants to buy and the sales force will be able to sell what the company makes.

Defining the Product Introduction Process

A systematic approach to new product introductions begins at the concept phase, not the launch phase. No amount of marketing and sales can make up for a product which is not what the customer wants. Successful organizations build an infrastructure that is chartered to listen to, respond to, and anticipate the market. Sales, marketing, applications, field service, customer service, engineering . . . all must be coached to ask strategic questions about where the customer is going and learn to listen objectively to the answer.

It is typically Product Marketing's job to sift through all the ideas to derive a sense of market direction. Since there is seldom a lack of ideas, many of them one-off, a mechanism must be in place to filter out product ideas that appear to have a low probability of meeting the financial goals of the company. The product concepts that remain must be scrutinized by thorough market research from both the features/benefits and financial perspectives.

External questions might include: what will the customers need, when will they need it, how much would they be willing to pay for it? Internal questions include: can we make it to specification, can we deliver within the market window, and can we make a profit given the market size, standard costs and average selling price? If all of these questions can be answered in detail and the financial analysis is positive, then a business plan detailing the road to success should be presented to management for approval. Learning

how to gain management support is critical to the success of the product introduction process.

With the business plan approved and senior management sending a strong message of support throughout the organization, a detailed product definition phase must be implemented. The bitter truth of an organization's cohesiveness will be tested as Marketing and Engineering work toward a mutually acceptable product specification. Marketing will be tempted to tell Engineering how to do its job, and Engineering will look to change specifications it thinks it knows better than the customer. Both groups must work together and focus on being mutually successful. Marketing must define the end result, not the path, and Engineering must put faith in the end target that will be delivered to the customer.

At this point, Engineering will drive the project toward a workable and manufacturable design, weighing alternative approaches to meet the technical, time and financial constraints placed on it by the customer base. Marketing must continue to monitor the market for any changes in direction or competitive threats.

Once the design has been approved, design verification must proceed quickly. A variety of analysis tools and techniques can be employed by Engineering to estimate the likelihood a design will meet specifications, but ultimately, prototypes will need to be built to prove system performance. These Engineering prototypes, or additional Engineering build units, will be required for both alpha and beta testing.

During the prototype build phase, the rest of the organization must begin to prepare itself for the impact of the new product on their departments. Manufacturing must begin to examine the impact on projected build schedules, Field Service must begin to look at training and spare parts requirements, Marketing must begin to assemble the launch plan, including the obsolescence or cannibalization of existing products, Purchasing must locate and contract critical suppliers, Sales must develop sales forecasts. The new product introduction process is in full swing.

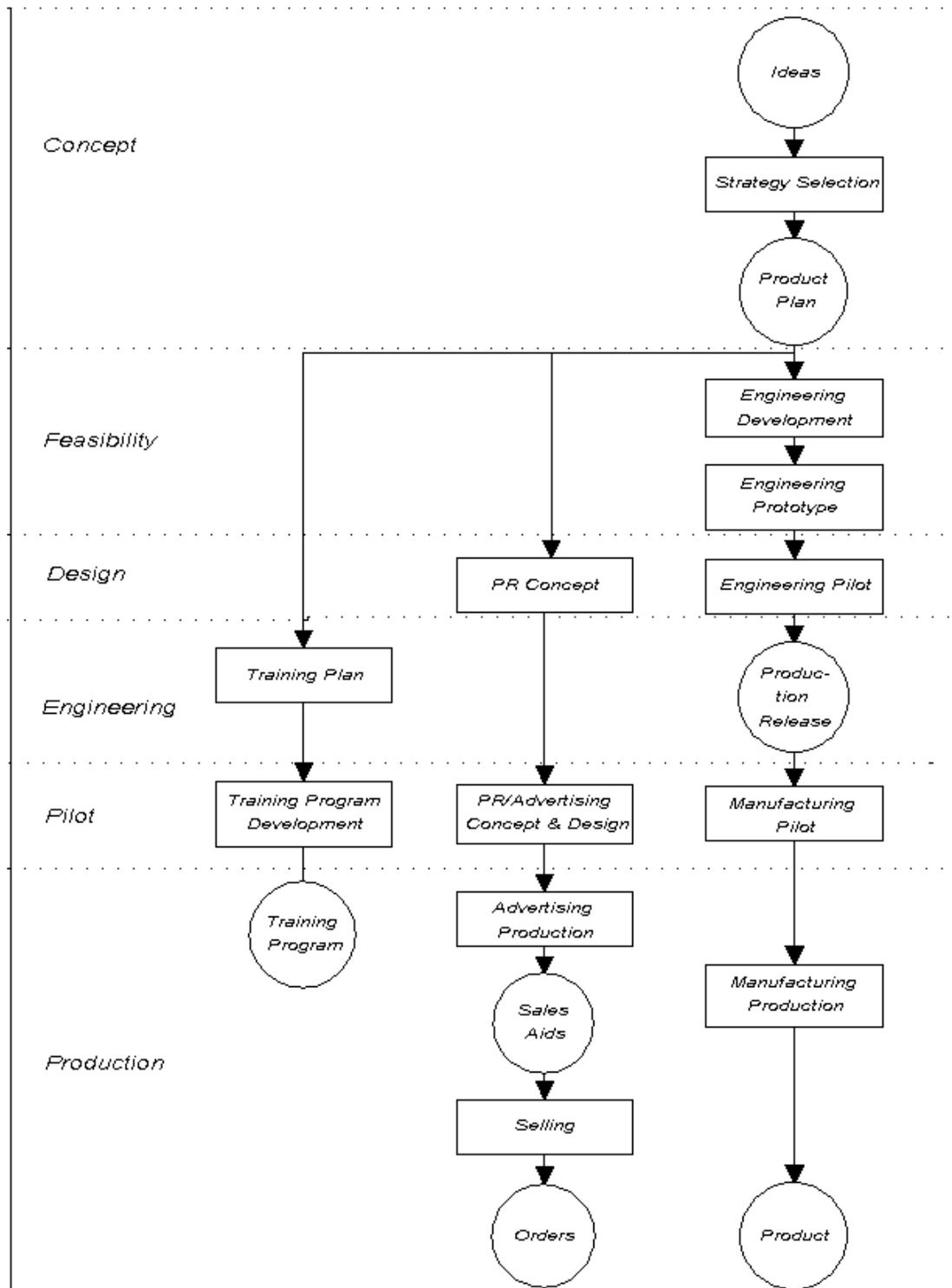
As the prototyping phase moves toward completion, Engineering must develop manufacturing procedures and methodologies. Many companies fail to achieve the financial results they expect because not enough care is taken in making sure the product is manufacturable. It is one thing for an engineer to assemble one or two prototypes. It is quite another to have assembly technicians build 20 a month. It's not their job to re-engineer the product on the manufacturing floor. It is critical that each step of the process be continuously reviewed by a cross-functional team acting as a surrogate for the customer.

As the product moves into the manufacturing environment, many tasks are occurring simultaneously. Sales must be filling the pipeline with orders. This will need to be managed carefully depending on unit availability and the degree of secrecy to be maintained. Customer and internal training programs must be in place. Marketing must

be well into the media/roll-out plan using every available method to enforce the key messages and total product position. Brochures, ads, sales scripts, sales training and presentation materials have been developed, and production of these collateral pieces must be completed. Raw materials must be on order and matched to the sales and shipment forecast.

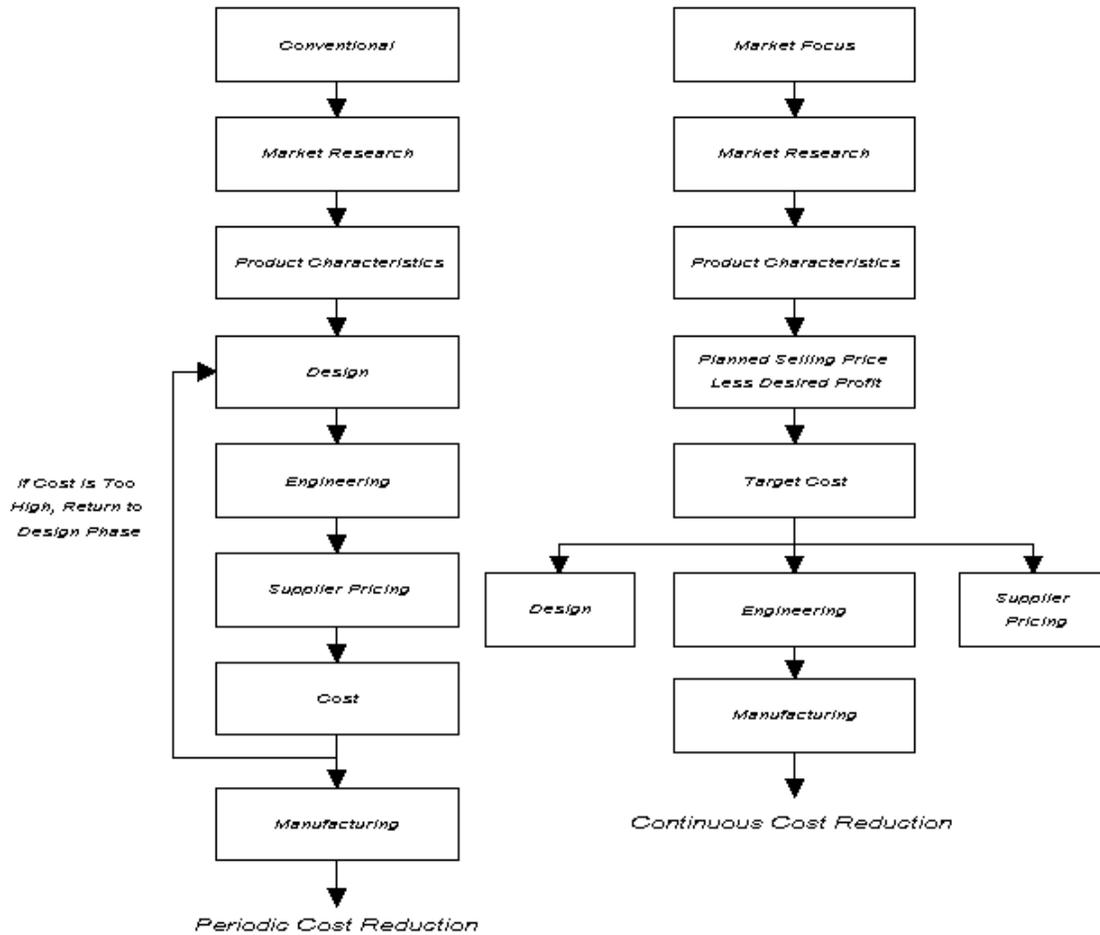
If you are rigorous in your adherence to the new product introduction plan and are bestowed with a little luck along the way, you may be tempted to congratulate yourself on a job well done. Enjoy the moment, but remember that our markets are well served and failure to meet your customer's requirements on a continuous basis is mortal. No company in our industry has ever missed a generational window and survived in its original form.

Product Introduction Cycle



The product introduction cycle is a multi-discipline, parallel process requiring expert coordination across the entire organization

Product Development Philosophies



By understanding the market expectations for pricing, a product development methodology can be employed to maximize the opportunity for success.

About the Author

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