

The Thought Column with Marc Meyer, Professor, Author, Consultant



Marc H. Meyer is the Matthews Distinguished University Professor at Northeastern University. Director of the High Technology MBA programs, he runs Executive Education programs for IBM, EMC, and Mars, and serves as chair of the Entrepreneurship and Innovation Group at the University.

His new book, *The Fast Path to Corporate Growth: Leveraging Knowledge and Technologies to New Market Applications*, shows how leading corporations develop new product lines and services. Dr. Meyer is co-author (with Alvin P. Lehnerd) of *The Power of Product Platforms* (The Free Press, NY, NY, 1997), a book widely used throughout the product development community.

Marc was the 2002 recipient of the Maurice Holland Award from the Industrial Research Institute. He also co-founded several software companies in the Boston area and now helps companies venture into new markets. You may reach Marc at mhm@neu.edu. Materials associated with *The Fast Path to Corporate Growth* can be found at www.fastpathmanagement.com.

Interview conducted by Doug Berger, INNOVATE LLC. doug@innovate1st.com

Marc: I would like to talk about my thinking on organic enterprise growth and the ways in which companies generate new streams of revenue from new product lines and services. My thoughts come from the careful study of several dozen companies that hold leadership positions in a range of industries, including consumer products, computer and electronics, various software categories, medical devices and defense/homeland security.

I came to observe a five-step process for fast and effective organic growth. Within each step, there are clear roles for executives as well as specific activities for teams. These five steps are:

1. Segmenting markets for growth
2. Staffing teams to drive insights
3. Platform development with clear points of value added and variety for the user
4. Develop the business case
5. Test marketing and validation

#1 Market Segmentation

Market segmentation defines new users beyond the business unit's core, but still leverages assets in that core. The operational word for the line manager of a business unit, an R&D or sales executive, is to select just a few worthy targets. If a billion-dollar business unit has two or three new product lines or service developments underway, that should be more than enough to produce significant growth. A reasonable degree of focus and concentrated effort is essential. Too many projects lead to scattershot developments and little tangible growth.

Doug: Can you give us some examples?

Marc: The automotive industry is a good forum in which to see executives placing select bets. Toyota and Honda, among others, have identified the Gen Y's as an important yet underserved target market that has its own tastes, preferences, and attitudes for new vehicles and services. A

“Gen Y” is defined as a first-time car buyer between the ages of 20 and 30. This category includes kids still in college, as well as those working in their first professional jobs and perhaps starting families. The Gen Y target has been a very elusive one for car manufacturers that have understood and built great products for older users such as you and me.

Let’s take another example – this is one of my favorites. I have a chapter in my book on Mars Incorporated – the worlds’ leading chocolate and pet food manufacturer. Mars has a brand that lots of us love - Snickers. Several years ago, Mars launched a new product line for the energy bar market called Snickers Marathon. The idea was to leverage the core brand and taste to the energy bar segment. The ingredients are souped up for athletes and weekend warriors but the great taste is still there. Both the Gen Y and the weekend warrior are examples of focused, new, and robust target markets for these respective companies.

High tech companies also show that markets can be newly segmented for growth – primarily by attacking new, emerging applications. Raytheon is one of my favorite examples. Look at what the company has done in homeland security. Entering this space after 9/11, Raytheon now has close to a one billion dollar per year business in homeland security. At the same time, its homeland security applications still leverage sensors, software tools, and workflow processes directly from Raytheon’s defense business. In addition, those defense SBU’s gain revenue sharing from the homeland security deployments using their respective technologies. It’s a win-win scenario.

Doug: What is the role of executives at the front end of organic, enterprise growth?

Marc: Executives need to set up and support win-win approaches like those at Raytheon in order to minimize rivalry and create one-company solutions for customers, both old and new. Executives also need to decide on those limited number of potential new market targets that will be pursued, and staff them with very good people. Then, executives need to give those teams the necessary financial resources to get new products and services to the test market phase. An executive team needs to approach these new market applications with a sense of real urgency - delay the effort, and rest assured that someone else will get there first. In six to nine months a team should be able to present its consumer insight, product concepts, and business plan to executives for the big green light. Again, this should take about six to nine months, not years. This time horizon forces a team to use proven technology from either the company or its partners.

#2 User-centered design

Marc: Here, a multi-functional team works together to understand what makes users tick in the new target market and how to drive those insights into new products. The team also has to understand the most logical way to make money serving those customers. There is a real difference between incremental development for core product lines and creating new product lines. For incremental product line development, you often find teams outsourcing the acquisition of market insight to their market research departments, advertising firms, or consultants. The team members often don’t talk to users themselves. They let others do the talking.

For the new product line developments that I have observed, there has to be a very different approach. These teams have to immerse themselves in the world of the new target user. The teams do in-depth observation of these target users in their situation of use. They look for frustrations, pain points, and sometimes, how one product has to integrate with others within a full use case scenario.

Following that observation, which many call ethnography, good teams then do in depth one-on-one interviews to get to the motivations behind behaviors, or beliefs, or frustrations - the 'why's and wherefore's' behind the expression of interest. From this field observation and these in-depth interviews, concepts begin to emerge. Many of the best new product lines that I observed, do this with less than 10 target users – this is so different from the shallow empirical surveys asking thousands of users for reactions to specific product features and prices.

Industry leaders get passionate about this stuff. For example, a developer of a homeland security application has to put itself into the shoes of terrorists, just as a home health care systems developer mind-melds into the world of a cognitively impaired senior who is trying to manage six or seven meds at the table. I mentioned Honda and Mars earlier. In the Mars' Pet Care division, developers have an uncanny way of getting into the hearts and minds of not only the owners, but the pets as well.

Honda sent a team to the X Games at the turn of the millennium, observing Gen Y users both playing sports activities, as well as bringing all of their gear to the games and partying in their vans. They observed before, during and after uses in the world of the target user. They observed college students moving furniture in and out of dormitories, loading up all their sports gear to go to the beach or out into the mountains. The team was trying to learn how Gen Y's used their vehicles as tools for "party, play, and move." From this emerged the concept for an SUV called the Element - a very flexible, functional and edgy sort of SUV.

Doug: So the Element was a deliberate attempt by Honda to go after the active Gen Y's?

Marc: Yes, and specifically, the Gen Y male who was not well served by Honda's prior SUVs. Honda has always been very proud of serving young women and families with its core brands.

Doug: At what point in this user centric design did Honda say, "We've got something here. We've got the concept."

Marc: That is a very good question. Whether it's Honda, a consumer products or a computer company, teams start prototyping on paper, computers, or in some sort of physical dimension, as soon as possible after talking to their users. Then, they bring sketches and models back to these users for various types of feedback. At Honda, that might take the shape of styling or flexible seating solutions. At Mars, it might take the shape of a pet food, or the taste of an energy bar. At IBM, another great company, it might be software modeling for an improved workflow process in a bank or hospital. What is important here is that while an idea might come from an executive or a team member, the ruling authority for moving forward has to be enthusiasm from a target user – and of course, a good business model that makes the company money.

Getting executives to understand new markets can be a big challenge. Honda brought an executive team to the beach to spend a weekend where Gen Ys were hanging out. Raytheon's homeland security executive went on sales calls to new customers, trying to understand their needs and uncertainties. This is particularly important when your new target user and their uses are different from your core business. The executive team has to get a feel for this, not through PowerPoint, but by being on site, in-situ.

#3 Platform development with clear points of value added and variety for the user

Marc: The next step is to create a plan for building a product line. That means no onesies, but a fully featured, multi-item product line that can be the basis for a self-supporting business. To do this cost-effectively, a team needs to understand and implement modular platforms.

Doug: How do the best companies that you work with define a modular platform?

Marc: Another important question. People often look at platforms in exactly the wrong way for enterprise growth. A platform is a subsystem – a chunk of technology – that can be deployed across multiple products. Honda has the same engine, for example, in certain Acuras, Accords, CRVs, and Elements. The subsystem has to be modular so that it can be coupled easily with other parts of these various products – it has to have good interface design, hence the term ‘modular platforms.’

Companies often crash when they define a platform as a customer might, not as an engineer would. For example, we all view Microsoft Windows or Vista as a platform because we can use it to run other software applications. However, if Microsoft tried to embed all of Windows into Microsoft Excel, Word, or PowerPoint, it would never release new versions, and those that it did release would be incredibly slow and monolithic. Instead, Microsoft developed a new layer of technology, called .NET, which, when plugged into software applications, allows them to work in distributed Internet environments. In this case, .NET is the product platform - plug it into Office or your own applications, and they instantly become Internet enabled - pretty cool.

What I look for first in a product line strategy is the overall architecture, showing all of the major parts of the product and how they connect. Next, I look at which of those parts are common across all products, and which are tuned to specific users or application scenarios. This draws the line between common parts and value added engineering. It forces teams to work smart – to leverage assets – just as Raytheon leverages sensors and software, or Mars leverages ingredients, recipes, and packaging. Lastly, I want to see a fairly robust roadmap that shows anticipated improvements over five years at three levels: 1) changes to the architecture; 2) improvements to the underlying platforms; 3) expansion of the product offerings coming from all of this.

Doug: This sounds relatively basic.

Marc: Yes, it is, but someone must tell the engineers to do this, or else they will work on single products, and then have to fight for resources later, to create follow-ons. That is so dangerous, because immediately after first launch is precisely when a company needs to follow up with a broader and even better offering set.

#4 Develop the Business Case

Doug: What do executives look for to have confidence that sales projections for a new product line or service are reasonable?

Marc: They need to see a granular projection of revenue. First, I would ask the team if its projections are based on estimated market share of a specific product or service category. If they say “Yes” then I know that the numbers might be right but, most likely, they are going to be way wrong. Basing projections on the percentage of market share that you expect to gain over three to five years, and then working backwards, is a bunch of phooey made all too easy with spreadsheets.

Instead, what I look for in a forecast is granularity. Granularity on units sold, sales per sales rep or shelf velocity per store, and customers acquired for large systems such as enterprise software. I want users, not market share. I want to see how the number of users begins to scale from Year 1 to Year 2, and I want to see investment in channels and the manufacturing needed to support that expansion. I would ask a team to show me the P&Ls for one or two existing core product lines so that I can see if their numbers are overly optimistic.

In my study of several dozen-industry leaders, once a new product line had successfully launched and scaled, on average the revenues projected over the first three to five years were about 10% of the revenues of the core businesses. If you had an established product line that was selling 500,000 units per year and a new product line projected at 30,000 that would be believable. If you delivered 50,000, that would be great - 100,000 would be a total delight.

You might sneeze at 10%, but if you had two or three good ones, and they were giving you 30% of your base revenue additive, were leveraging core technology, and were providing an attractive business model – well, it doesn't take too many hits to start seeing a major difference in the business.

#5 Test Marketing and Validation

Marc: The key message for executives here is this - a test market is one in which you put out your beta product to a limited number of targeted users to get reaction to (A) how the product is sold, and (B) to test the product itself - does it meet the users' expectations in terms of performance, price and quality? In some applications, a new channel is needed relative to the core business. It is the channel itself that requires the greatest learning. Then, you might need to test out a new business model.

Doug: Can you give us an example?

Marc: Mars introduced a new product where users can order M&M candies with customized printed messages on each individual piece. Ninety nine percent of the product is taken from the core business – the M&M itself – and the point of value added is the special printing on the shell, and of course, the packaging. Everything else is different, however. The target occasions of use are weddings, bar mitzvahs, corporate events, and so forth, as opposed to snacking after school. The branding message is personalized gifting and celebrations. The channel is direct ship to users and individuals order through the Web. The test market for all of this was a Web launch with hardly any advertising for over a year - bringing in enough orders to learn more about the target, to refine branding, and to get a handle on the new set of logistics – in other words, to make the real business plan. Only then did management invest heavily into scaling the business. Today, this product line is a juggernaut – mass customization for personalized gifting.

Doug: How does a company like Honda or Raytheon go about testing and then refining its design based on test market feedback when a huge capital scale-up is an unavoidable aspect of the business?

Marc: Well, you try to avoid large capital investments at first. A number of large-scale manufacturing companies have explicitly set up capital equipment plans for low volume runs of new product lines. They can flexibly switch from one new line for 12 hours to another new line for 12 hours. Over the course of a month, for example, the capital cost of that flexible manufacturing line is deferred across multiple new concepts or new product lines. A \$50 million plant is amortized across five lines for the first year of production, instead of a single new product line with initially low sales somehow having to meet the requirements of a \$50 million implementation on its own.

Many companies use outside manufacturing partners (co-manufacturers as it's often called) to run the product for test markets, to do the packaging for the products, to ship it to warehouse, and out to retail. This continues until senior management decides that yes, we have a winner in all aspects, let's bring it in-house, and lay in the capital now to scale the business and enjoy the margins from in-house production. There are pitfalls. I've seen companies give away the store to offshore manufacturers over whom they have little effective control, only to see their own new product concepts end up as someone else's brands four or five years down the road. If you do this, have your best legal staff be part of the co-manufacturing discussions.

Doug: What are some other common pitfalls that, while they may be avoidable, you see them continuing to happen?

Marc: Let's limit it to four, beginning with the fact that executives don't spend time with the new target users. They rely on PowerPoint and their own assumptions about what those users want. This leads to all sorts of questionable decisions at the highest level.

Another pitfall is to run new ventures through the company's traditional incremental, and very complex, stage-gate system. This serves to delay progress, turn a six-month first phase into a two-year first phase, and more importantly, impose decisions on a team that do not make sense for the product line. For example, in a classic phase review system, the senior vice president of manufacturing has veto power over where a product is made. The executive may say, "I have excess capacity at a plant over in territory X." So, a team goes over there. It must do that - otherwise they don't get the check-off for the stage-gate. When they get over to that plant however, they get hit with staggering overheads and unit costs. So, even for a small run in a limited test market, the cost per unit is four times what it would be if they had just gone across the street and used a co-manufacturer. The new business is stillborn. It doesn't stand a chance of ever making money.

A third point has to do with teams. Many companies will take a very smart marketing or technology manager from a core product line and say, "Joe, we also want you to explore this new home market." Well, it turns out that people running major product lines, or who have major functional responsibility for a core product line, are very busy people. Asking them to do something on the side just does not work.

A fourth pitfall is the failure to leverage existing company technology. Executives decide to ignore the internal R&D function of the company, and they go off and work with an entirely new set of suppliers and partners. They are inventing a new product line from the ground up. This causes longer lead times, a lot of contractual issues, and resentment among the career technologists in corporate R&D. At some point, many of these new ventures have to move back into the mother ship, and this separatist approach just creates a lot of bad blood and inhibits re-integration.

Doug: In the book, you point to emerging opportunities in a number of companies that originally were not designated as opportunities by executives, but which surfaced through networks in the company. What is it that executives need to do if they want emerging opportunities?

Marc: That takes inputs from both sides, and that is what makes for a great leadership. From the top down, it is the executive's responsibility to understand and allocate resources to investigate major new user, demographic, and technology trends. It is then up to executives to empower teams of people to come up with specific product concepts that might fit that larger strategy opportunity.

Doug: Let me test out a generalization with you: regardless of how the opportunity surfaces, if early on the executives are not immersing themselves in that particular opportunity, I'd probably say to myself, "This is not going anywhere" at the end of the day?

Marc: You can take that one to the bank. We tend to see those wonderfully motivated lower-level employees who have all of these great ideas, simply get frustrated because nothing ever happens. After awhile, they either leave or become non-creative.

Doug: What would you like to say in summary?

Marc: There is not a lot of mystery here. Focus your company's organic growth on two or three new target market applications. Get smart about these applications by investing your own personal time with customers in those new market spaces. If you are convinced that there is a need, then charter a dedicated team to dive deep into each target. After that, it is all about empowering those teams giving them a clear budget as soon as possible ... setting milestones for them ... having the wisdom to either invest heavily to scale a project, or ending it but learning from the experience.

Perhaps most important is to give the internal venture teams a real sense of urgency. Unlike longer tailed R&D projects, the type of organic growth that I focus on in the book needs to be done fast and decisively. In order to do that, for the most part you need to rely on proven, working technologies.