



## Putting Innovation Portfolio Best Practices to the Test

*By Leo O'Connor, Vice President, Technical Insights, Frost & Sullivan*

### Introduction

Frost & Sullivan invited innovation thought leaders to join a Virtual Think Tank to exchange views on the current state of innovation in their companies. Participants included:

**Matt Morrison**

*Senior Director of Product Development, Medtronic*

**Anonymous**

*Electrical/Electronic Manufacturing Company*

**Mary Goggans**

*General Manager, Encapsys division  
Appvion*

**Anonymous**

*Aerospace and Defense  
Manufacturing Company*

This Virtual Think Tank was one in a series on innovation and portfolio management, featuring highly-interactive discussions around implementing best practices set forth in Frost & Sullivan Best-Practice Guidebooks.

*Despite the quantifiable benefits of portfolio management, relatively few organizations have perfected the practice. Frost & Sullivan's Growth Team Membership group conducted research into this area and created a Best Practice Guidebook, entitled *Innovation Portfolio Management: Balancing Value and Risk*. To discuss and test the best practices described in the Guidebook against innovation portfolio management within a broader set of industries, Frost & Sullivan invited a sample of 'boots on the ground' portfolio management executives.*

More than half of the respondents in a recent PMI survey reported frequent use of portfolio management at their organizations. The survey found that 62 percent of projects at organizations that described themselves as highly effective in portfolio management met or exceeded expected ROI. However, despite the quantifiable benefits of portfolio management, relatively few organizations have perfected the practice.

The Frost & Sullivan *Innovation Portfolio Management: Balancing Value and Risk Guidebook* explored the composition of a real-world, best-practice portfolio management initiative to balance value and risk within "Beta" (code-name for a real firm serving the Information and Communications Technologies markets.)

Beta, similar to many other companies, desired to generate better returns from its product portfolio, which included existing products and those still in development. The company struggled to evaluate and compare the value and risk of all projects.

Beta implemented a six-step portfolio management process to identify and evaluate the most valuable opportunities — screening, evaluation, calibration, balancing the portfolio, adjusting portfolio strategy, and tracking progress. The work yielded significant results: 60 percent increase in ideas screened, 50 percent increase in projects approved for development, 100 percent increase in projects launched, and 100 percent increase in projects terminated.

We were eager to find out how the participant's experiences compared with those described in the Guidebook.

"One of the things I see that's unique about the Best Practice Guidebook is that it describes a thoughtfully designed portfolio process which creates a situation of quality," said David Matheson of SmartOrg\*, a provider of software and services that help customers implement effective innovation processes. "Having a process and the ability to work on it puts it in the culture and helps drive things forward. A lot of people say they have a process, but they don't really work it in a quality way. It's just what's done. A lot of these portfolio processes become political scrums where everybody pitches what they want and then a committee of the great and the good takes a stab at prioritization. That's a fundamentally weak way of doing it. It creates a lot of conflict and problems. The "calibration step" in the Guidebook process addresses this issue."

(The calibration step consists of conducting a peer review of the projects in the portfolio to validate assumptions and refine projects. It is an explicit step to compare knowledge about each project and ensure credibility and comparability.)

## FUNDING BETTER IDEAS

“A portfolio process is fundamentally about saying no to good ideas,” David Matheson said, “so that you can fund better ones. And that creates high standards for credibility and comparability. If you’ve got a project that you love and looks good, and somebody says no to it because somebody else’s project is better, you need to have a good reason to believe that it’s really better and not just a political manipulation. Having a calibration step really helps create transparency and believability and helps establish credibility.”

“David continued, another important best practice element is “Step 5, adjusting the portfolio strategy, which occurs after the evaluations are done. Many companies say, “Well, here’s our strategy.” And they treat the portfolio like a big project management issue. What do we have to do to accomplish this? That’s not all bad, but what happens is that the powerful win and they’re not necessarily the ones who have the right projects. I’m just thinking of one example of a company that’s got a very large business unit that’s in decline. They generate the most revenue, and strategically, they have to support it. This unit is winning all the proposals while the innovators are struggling because they don’t have the power to stand up against the power represented by the most important business unit. When this company evaluated the new opportunities first, what you see is that a lot of them are much better than those in the most strategic business unit, and that insight drove them to reflect on the strategy, not in the abstract but on the basis of the real opportunity in front of them.

I see three things that are really key here. One is having a process and working the process. The second one is the calibration step. And the third one is evaluation before finalizing strategy.”

Medtronic’s Matt Morrison echoed some of these comments.

“Until David said it, I didn’t really think about it that way, because we tend to do a really nice job of generating NPVs and generating data, but at the heart of it is the question, ‘Do you trust the data, and is it really on the mark?’ And the reason that echoed in my mind is because we have a process now where we take a look at our initial estimates, and then we look at it at launch and one year after launch to see if we were on the mark.”

The importance of calibration was emphasized by other participants.

“The Calibration Committee is something new that I’ve not seen before, and I agree that’s an interesting thing to do,” said Mary Goggans of Appvion. “Making the executive team accountable for portfolio mix management is also important...If you’re using strictly NPV and similar measures, you tend to gravitate to ideas with higher value NPV. The issue here is that you could be missing the opportunity to select low-hanging fruit—something that’s important to the customer and that you can do quickly. It doesn’t become an opportunity if you’re relying strictly on NPV.

## MANAGING UNCERTAINTY

“The panelists felt that uncertainty was central to a good portfolio process and the tornado diagram is a powerful tool,” said David Matheson. “One of the things I like here is the centrality of uncertainty. If you force people to make point estimates and commitments to these estimates in an environment of uncertainty, which is typical with innovation, then you can distort the whole thing because people make stuff up. The tornado diagram does sensitivity analysis to uncertainty that builds trust by showing the upside, the downside, and the real range of possibility around each opportunity.”

“And what I've seen is that companies that do that find that they take a whole lot of effort out of their forecasting. Let me give you an example. One company I know had an evaluation that had about 200 inputs. And when they started putting the uncertainty into it, they really boiled it down to 10. They found they were having 10 high-quality conversations about the stuff that mattered, rather than 200 conversations about all this trivial little stuff to make an evaluation model work. That made the calibration much easier. The tornado diagram helped them focus on the uncertainties that really mattered and thereby supported clear decision-making.”

Some panel participants opined that they felt the tornado diagram and sensitivity analysis utilizing uncertainty would be most valuable when companies were operating outside their comfort zones and where projects were more disruptive than incremental—essentially where the level of risk was relatively high. Creating new technologies and products for new markets, selling existing technologies and products into new markets, and creating new technologies and products for sale into existing markets all provide settings for projects where the level of risk can be elevated because of uncertainty.

## ACHIEVING ALIGNMENT ON DECISIONS

According to the marketing manager at a leading aerospace-and-defense company, many of the best practices described in the GGuidebook reflected the way he and his colleagues approach portfolio management.

“We put significant effort into trying to understand customer needs in some detail,” he said. “When you say, ‘Can we win?’ it also means ‘How much do you have to invest to win?’ “Once we've established customer or market needs, we compare them to how well the technologies and products meet those needs, and we evaluate whether we have something unique

“We've been able to find lots of customers. We've been able to match their needs with our capabilities. And we've actually done a lot of work in preparing customers and in going through the introduction and the education phase, only to find out that they don't really have money available to aggressively go after the solution. So we've put together a checklist that follows this process that's in your Guidebook and that really matches well with three criteria described in the Guidebook (Is there a market opportunity; Can we win; Can we make money).”

“The Guidebook provides a unique, elegant way to represent things,” said Medtronic’s Matt Morrison, who also found parallel themes among his company’s processes and those represented in the Guidebook.

“We have five discreet businesses that I call business groupings, and each one of those has a lead person. Each business has certain dedicated resources, but you still need to choreograph and plan shared resources from all five business groupings. The hardest thing is to get alignment (on the overall business) because everybody has his own pet project...if we go with business group one and make their number one project the number one across the entire resource pool, how that does impact the other four business groups and what are the consequences to their projects?”

Matt had just described a significant challenge common to the majority of enterprises with multiple business groups.

“Rigorous evaluation of the impact on multiple business groups of prioritizing a project within a single business group can pose a significant challenge. People make decisions related to project prioritization based on personal experiences or a shared methodology within the company. However, without a broad view and deep understanding of all projects under consideration within the firm, individuals are prone to perceive that implementing change within a personal sphere of experience will not impact other projects. The problem can be significant because resources and capital are mobilized to support change that benefits a limited segment of the enterprise, but does not necessarily benefit the enterprise when viewed in its entirety. Getting alignment on resource allocation in a big company is difficult to do,” Morrison said.

The North American head of product and technology management at a global market leader in consumer and industrial businesses said it sounded like his company addressed dynamic resource planning in a similar fashion to that of Medtronic, at least when it came to primary shared resources.

“If I look at our primary shared resource, it is product development,” he said. Within his company, product development resources consist of chemists developing new technologies and chemistries. Their level of expertise leads to their placement for work within a region or on a technology area most important to a particular project. The company views product development resources as fixed, long term assets. It takes time to bring a new chemist on board and train them in new technology. Although the company’s portfolio allocation is dynamic, a specified number of resources are available to work on various projects. In the short term, the firm closely evaluates the number of projects in progress and the priority of these projects.

“From the Guidebook, where it talks about the market opportunity – is there an opportunity, can we win, can we make money – we do a lot of that as well. One thing that we also take into account is value proposition,” he said. “That is one of the key things that we are always doing because in our case there are typically substitute products that could do a lot of the types of things that we do with our materials. So, what we’re always trying to do is bring added value to our customers, value greater than what our competitors can bring with substitute solutions or competitive solutions.

“In addition, in evaluating whether or not an opportunity is worthwhile, there are multiple ways. But I would say we start first by identifying the markets of interest and then targeting our developments against those markets of interest. So there's an initial decision that's made upfront. Is this a market that's even worthwhile for us to participate in? It's not just an opportunity within a market, but is the market worthwhile for us?”

## CHALLENGES TO BEST PRACTICE IMPLEMENTATION

Given that the panel participants saw value in best practices described in the Frost & Sullivan Guidebook, they went on to explore challenges related to implementing these best practices.

The value of implementing best practices can grow as the enterprise grows, yet the difficulty in implementing them can also increase. “It takes buy-in,” said one participant. “We've tried to look at more formal approaches to portfolio management, but we just haven't been able to get them adopted across the executive leadership team, and as we grow it's becoming more and more forced.”

Another panel participant saw similar obstacles. “We're just starting to select things one at a time to try to morph our current processes,” he said. He tried to introduce the tornado diagram and it was different from the way corporate finance executives liked to analyze projects and portfolios of projects, so he put the idea of introducing the diagram aside and focused instead on introducing the concept and importance of risk.

“We do a fair amount of prioritization,” he said, “and it seems that once we get elements of these tools implemented, we can take out the loudest voice in the room – the self-appointed ‘chief prioritization officer’ – and replace it with more rigorous analysis.”

Matt Morrison posed an important question: “I'm curious in the different implementations that you guys have seen over time with this best practice, where have you seen the best place to start and is there a pathway where you would implement one thing before you'd implement another thing in this whole six-step process?”

“I'll just give you that 30-second answer to that,” said David Matheson. “The key is to start where you are and look at a portfolio process as a journey and to take steps. I have an agile view of change management. That is, when there's a concrete problem – and it may be the loudest voice in the room dominating prioritization – take a step that lets you manage along as many of these dimensions as you can, but make it a modest step and make sure that it adds value to the business. When you're done implementing this step – maybe that takes you three months or six months or more – step back and look at it and say, ‘OK, what's the next step?’ What I'm saying is that getting motion on the path to continuously improve the portfolio process is probably more important than getting it exactly right. Each step needs to add business value. Otherwise, people would try to cut it off.”

The head of product and technology management faced challenges related to implementing projects that were more disruptive than incremental. “Within our own organization we're

looking at accelerating growth as well and focusing more attention on a market of choice that provides better growth. One of the issues we recognized in a recent analysis was that we were spending more time on incremental projects than what we would like. And so, with that, we're now reorganizing our group at a global level. We've put global positions in place along technology and market dimensions as well as new market and market development dimensions. That will allow us to view things at a broader level across all of the various regions. Given the structure that we had, it would have been more difficult to implement these types of best practices. Given the structure we've now implemented, it will be easier. It's about putting more of a market focus on the development as opposed to a technology focus – or as opposed to an incremental sales or opportunistic focus.”

“I think this (Guidebook) is the Nirvana of portfolio management,” said Mary Goggans. “For a small and medium size company like mine, pieces of it may be overkill and won't add value.”

Mary perceived implementing a calibration committee as challenging given time constraints related to innovation role requirements. “It's a good idea,” she said, “but finding a separate group and managing the time it adds would be tough.”

David Matheson recommended a solution. “I've seen people do this not so much as cross checking figures but as participating in a peer-to-peer meeting. You get the project leaders who are originating the assumptions in a room and you say, ‘OK, here are some assumptions that some of you are making about the market size. Different people are making different assumptions.’ Then, you discuss what needs to be adjusted and come to an agreement. It's much more about the standards or the quality of the origination of the input and much less about cross checking the financial numbers.”

“We practice that, and I agree with you,” said Mary Goggans. “One of our practices is to create a hypothesis early on and then go about proving or disapproving that hypothesis. In this way, you don't get caught in analyzing mounds of data.”

“One important thing that we've learned is what I call the product line plan, or understanding the strategies for growth before anything enters the portfolio. It's a critical detail – it's the handshake between you and the business. It doesn't do any good to put things in the portfolio that the business won't want at the end of the day, or that they can't execute on.”

## A NOTEWORTHY DISTINCTION

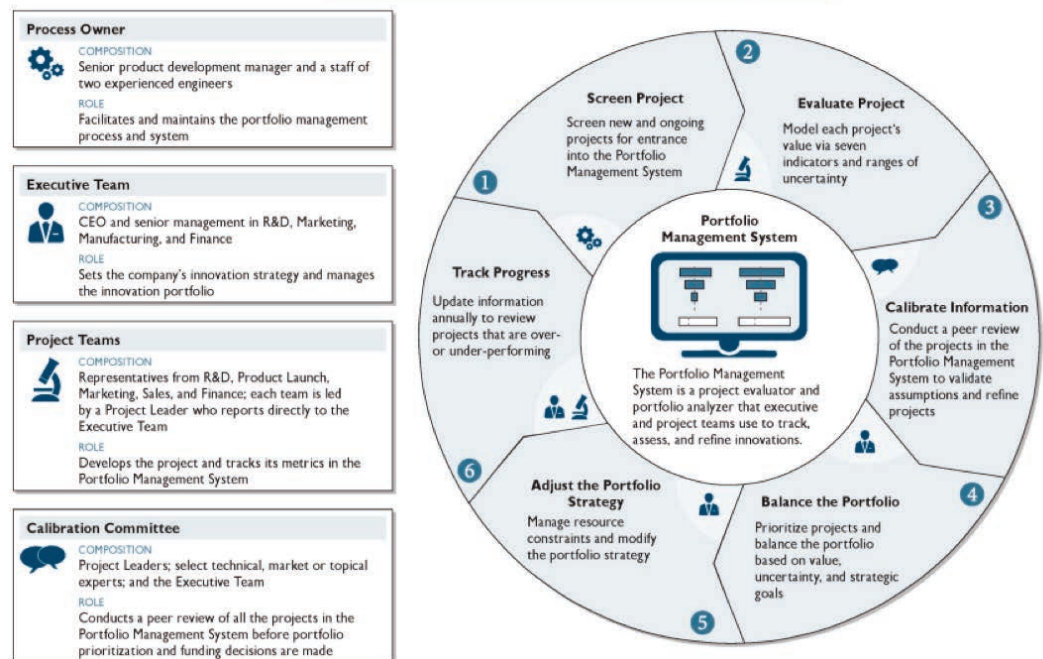
In conclusion David Matheson said he recognized two noteworthy themes. “One is that portfolio management is something that can be confusing to people. Some people understand portfolio management as meaning something that has to do with selection and prioritization. These are fundamentally economic or strategic questions. Other people understand it as essentially project management but larger, where it's about keeping track of milestones and how projects are colliding. These two groups seem to use similar vocabulary, and that creates great confusion. Very different sets of tasks or issues are given a similar label.”



“And one of the things I've seen is that companies who don't distinguish among those different sets of tasks and issues end up in this gigantic model and have great difficulty making progress, because the issues in each of these domains pull you in different directions. So it has to be really clear whether the fundamental elements are economic and strategic (which project should I do?) or they are a project management problem (can I keep all these things together and on time and on task?)”

“The second theme I already alluded to is that you've got to think of this as a journey and make sure you take steps that really add value. So some people come in and say, 'Well, here's the best practice process and I'm going to implement all the best practices. But why? Well, because they're best practices.' Nobody really wants to implement something merely because it's a best practice. They want to implement it because they want to create business results. Companies that lose sight of the business results they're trying to create, have a lot of trouble implementing this kind of process.”

Innovation Portfolio Management Process and System



\*David Matheson and SmartOrg worked with Beta Company to guide its portfolio management activities. He also worked with Frost & Sullivan to develop the Best Practice Guidebook.