

feature



Q&A:

Dr. Irene Petrick

With over 25 years in new technology planning, management and product development, Irene Petrick has become one of the World's most renowned roadmapping experts. Irene holds a PhD in Engineering Science and Technology Management, is a Professor at Pennsylvania State University, and has authored/co-authored over 95 publications. In addition to her academic work, Dr. Petrick advises companies on technological strategies, product and system development, collaborative supply chain management and strategic roadmapping. More than 65 companies have benefited from her expertise and knowledge, including Boeing, Intel and Motorola. Recently, Irene sat down with **Gerard Ryan**, Managing Director of Prodex Systems, to discuss the upcoming Masterclass events and provide some clarity on the roadmapping methodology.

GR Irene, thanks for taking the time to speak with us today to discuss and explore the topic of Strategic Roadmapping. I'd like to begin by discussing the distinction between technology roadmapping and strategic roadmapping. Why do you use the term 'strategic'? And what's the difference between a strategic roadmap and a technology roadmap?

IP Well, there are quite a few differences. First off, let me start with the historical evolution of where roadmaps come from. Roadmaps became very popular when there was a lot of uncertainty around the technology itself. What we were trying to do was figure out where in the supply chain various pieces had come together. Most roadmaps were about taking technology off the critical path. Unfortunately, in today's world, technology is usually the source of least uncertainty. Companies are more likely to face uncertainty around end users as well as a great deal of uncertainty concerning ecosystems and supplier networks. As a result, the way in which strategic roadmaps are used now is more about the external market, the external environment, and linking these elements with technology evolution. Ideally, roadmaps operate in sets as opposed to being a single technology view.

GR The concept of roadmaps as "sets" leads us into the topic of composite roadmaps. Traditionally, the fundamental approach to roadmapping was to bring a group of people together to collaboratively create a roadmap at a particular point in time. However, the modular architecture of products and services is such that the evolution of those roadmaps over time becomes an important consideration. In terms of there being multiple roadmaps, could you delve further into the concept of composite roadmaps and the different types of roadmaps that might roll into that.

IP In terms of the different types of roadmaps, I'll start with the assessment roadmap. For most companies, completing a really robust environmental assessment is a critical first step to developing multiple composite roadmaps around different strategic initiatives. I think that a deep understanding of the external environment is typically what makes this a strategic initiative, as opposed to drawing a typical composite roadmap. Basically, the composite roadmap is an output, but the most important focus is identifying whether strategic play really adds value to the company.

GR In terms of the roadmapping process, who should be involved? I have suggested it should be a cross functional process, but which functions within the business are most important for a company to ensure roadmapping is a value-added activity?

IP The most critical functions are certainly those that touch the customer most closely, so typically, we see leaders in marketing being heavily involved in the roadmapping process. Strategic business leaders who have a view of the company's vision and who can relate this to intentions concerning end-user interaction should also be involved in the process.

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Technologists should also most definitely be involved in considering what is possible in terms of technologies. What companies really want to be doing is creating a combined influence of technology and market that really fuses some new thinking.

GR For businesses who are engaged in the strategic roadmapping process there is a very clear and very strong link between their strategic planning activity and strategic roadmapping activity. Is there a distinction that should be drawn between the two and how do they connect? Is strategic roadmapping an input to and driver of the strategic planning process?

IP Strategic roadmapping is a definite input into the strategic planning process. What links the two together is the development of trends that we see in both the external market place and external environment, and the creation of possible scenarios that help to envision what the future market place may look like and how, as a company, we might create products and services to fulfil needs identified in the anticipated future view. Essentially, a strategic plan evolves from an assessment of future opportunities.

GR The connection between your upcoming roadmapping workshops and some of the other workshops Prodex has conducted in recent times is quite important. As you are aware, in March this year we had Dr. Robert Cooper deliver an Australian workshop series on Stage Gate, Portfolio Management and Best Practice Ideation methods. One of our clients recently indicated that, for them, while the gating and portfolio management processes were critically important, their biggest decisions lay in the evaluation of potential projects to determine their strategic fit. Given the absence of a well articulated long term strategy, they found this to be an extremely difficult activity. In light of this, I am interested to better understand how strategic roadmapping can be used as a methodology to drive effective product innovation, particularly when used in conjunction with the other best practice methods that I previously mentioned.

IP Firstly, when a company considers undertaking an external assessment, they really need to be thinking two to five years beyond that of a normal planned horizon. Ideally, what a company wants to have are trends just over the horizon that will influence strategic decisions. One thing that is

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interesting is this: a Stage-Gate process, while very good from an execution perspective, does not typically help individual functional units to understand how to balance long term strategic initiative activities and the short term, “my hair is on fire”, daily activities. In my opinion, roadmapping really helps with individual activities within a functional area.

GR Data collated by Dr. Robert Cooper identifies that best performing companies are twice as likely to use roadmaps than other companies. Do you agree with that? Is there additional data to suggest that companies who are most successful in their product innovation space can attribute their success to the incorporation of strategic roadmapping methods?

IP Yes, that is what we are finding. Most best practice studies indicate that roadmapping is a very powerful tool. Major companies are recognising this and are seeing roadmapping as a value-added activity. The primary value of adopting roadmapping practices is a greater understanding of the external world and a much deeper appreciation of how technology can solve problems. Companies like Intel, who I am here (in Portland) working with at the moment, are recognising this and are implementing practices that will facilitate this understanding and will allow them to strategically plan ahead.

GR Irene, I recall that when I first met you to discuss and plan the upcoming workshop series, you expressed your passion and interest in working with small and medium sized companies. Your experience includes working alongside a range of small to medium sized companies in addition to much larger companies like Boeing, Intel and Motorola. Is it just as important for smaller companies to be aware of and appropriately utilise strategic roadmapping as it is for larger companies?

IP As much as the giants of Intel, Motorola, Boeing and Proctor and Gamble are specifying what small to medium sized companies are providing to them within their supply networks, I think it is very important that small to medium sized companies have an appreciation for the kinds of activities to which they may add value. What is really interesting is that so much of innovation is being pushed backwards into the supply chain, in the supply network, so that small to medium sized companies are often a major source of the real novelty that is producing new products and services. So often I think that the role that smaller companies play is very, very important and the adoption of roadmapping methodologies helps them to understand and anticipate their value add in a larger market space.

GR Irene, thank you so much for your time today. We really do appreciate your input and we look forward to seeing you here in Australia in October.

IP Thank you for talking with me Gerard. I'm looking forward to being in Australia soon!