

# S 2 I NEWS

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*S2I News* is a bi-monthly publication of Strategies 2 Innovate. It aims to present information on topics important to today's business leaders. We hope these articles will help you develop a clear framework useful for guiding your organization's innovation and strategy.

This new series examines the Innovation Pentagon™ framework introduced in the last series discussing challenges organizations will face over the present decade in the area of innovation.

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## The Innovation Pentagon™ & Technology Strategy: Pt2

**W**hen your organization has a clear picture of the different classes of technologies it holds, it stands a greater chance of developing a competitive position in industry. In the last issue, we briefly introduced the class called "enabling technologies." These are essential to operations but infer little, if any, strategic advantage. Now let's look at two other categories of technologies.

### Strategic or Key Technologies

These are proprietary to some degree and organizations seek to control them. They differentiate an organization from its competition by enabling it to provide greater value to its customers. These technologies provide products with their competitive advantages<sup>28</sup>.

[Sometimes called core technologies. Unfortunately, the term "core" here can be confusing in the context of "core" competencies, since core competencies can comprise all types of technologies, not just strategic ones. Therefore, we choose not to use the term "core" technologies.] **Pacing technologies** are those that have the potential to become key technologies in the **future**. Strategic and pacing technologies are the ones that organizations should spend a sizable amount of their effort developing.

A key role of the general manager, then, is to invest significant effort in learning to understand the technologies that are important to their business,

the key strategic questions in relation to technology, and identify reliable and trustworthy sources of technical advice<sup>61</sup>. This brings into light the role and value of audits of innovative capabilities<sup>38</sup>.

Equipped with an understanding of which of its technologies are strategic, pacing and enabling, the organization is ready to develop a clear and explicit technology strategy. The first and perhaps most important component of technology strategy is the decision of whether to be a first-mover (pioneer) or fast-follower.

### First-mover/Pioneering

This refers to being the **first** to introduce a new product or technology to market. It is particularly useful for **niche** strategies, where **distinctive products** are offered to meet **unique market** niches. It is most often (but not always) associated with technology leadership and is among the most widely recognized dimensions of technology strategy.

Both pioneering and fast-follower strategies can be used to advantage, but the first-mover strategy promises to be the most rewarding. Among its advantages are: The creation of new markets, initial market domination, greater profits as measured by gross profit margin, new products being adopted as standard, competitors

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Larry van den Berghe is the Founder and Principal of Strategies 2 Innovate. He has 20 years international experience in the aerospace and information and communications technology industries in England, Australia, Singapore and Canada. He has been an active manager and contributor in R&D and new product development in electronics, VLSI and software. He holds two US patents, one UK patent and has a number of publications. He is a Chartered Engineer (UK) and a Fellow of the Institute of Electrical Engineers.

Larry is also an adjunct professor for the Management of Technology @Distance graduate program at the University of Waterloo and a past faculty member with the Technical University of British Columbia. He has developed courses in new product development, strategic management of innovation and technology, entrepreneurship and knowledge management. His recent research on core competencies examined the adoption of emerging technologies for product innovation within the Canadian information and communication technology industry.

He holds a Ph.D. in Management Sciences (Management of Technology) from the University of Waterloo, an M.Sc. in Microelectronics (with Distinction) from Middlesex University, London, U.K. and a B.Appl.Sc. in Applied Physics from Curtin University, Perth, Western Australia. Larry has served as Chairman, Board of Directors, serves on committee with the Saskatchewan Advanced Technology Association and is a member of a Toastmasters International Club.

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forced to follow the pioneer's rules of competition. An example of this is Intel and the x86 microprocessor used in today's personal computers. Intel's pioneering work forced competitors like AMD and Cypress to follow suit with their own me-too products.

First-mover success, however, can be compromised if the pioneer makes serious business errors. Here are two main risks that the pioneer must manage to avoid<sup>62</sup>:

**Risk #1. Getting the Timing Wrong**

This happens when the company over-invests its efforts beyond the speed at which the market is able to adopt the innovation. It results in an expensive performance gap.

Since the market penetration curve is different for every emerging opportunity, entrepreneurs must pay attention to determining the steepness of this curve, and accordingly adjust the speed at which their organization addresses the opportunity. Smart movers continually review their initial assumptions about the business model and avoid the

premium pricing and narrow market definition that opens the door to latecomers.

**Risk # 2. Overpaying for Market Share**

First-mover advantage can be achieved by acquiring resources at a discount to market prices. This requires first-movers to have unique strategic insight that enables them to secure markets at a low cost before the value of those markets have been realized by competitors.

In our March/April 2005 issue we will look at mechanisms for first-mover advantage and technology leader strategy.

See you then!

*Larry van den Berghe*

For more information and for references to the literature as identified by superscripts notations (e.g. <sup>1</sup>) please visit our innovation strategy knowledge portal [www.strategies2innovate.com](http://www.strategies2innovate.com) and follow the links to "Knowledge References."

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