

# *Platform Leadership: How Intel, Microsoft and Cisco Drive Industry Innovation*

Annabelle Gawer and Michael Cusumano, Harvard Business School Press, 2002.

**Ralph Katz**

*Northeastern University*

**Book Review**

As you walk through one of the largest rooms of Philadelphia's Franklin Institute, you can't help but notice a rather large bold phrase dramatically centered on one of the Institute's main walls. It is the now famous quote of Alan Kay, arguably one of the most important architects and visionary leaders of what has become today's personal computing technology: "The Best Way to Predict the Future is to Invent It." After reading the recent book, *Platform Leadership: How Intel, Microsoft, and Cisco Drive Industry Innovation* by Annabelle Gawer and Michael Cusumano, I think these two authors would probably be comfortable amending Kay's phrase to read more along the lines of: "The Best Way to Predict the Future is to become a Platform Leader."

What probably sparked the ideas and findings reported in this carefully written book was Professor Gawer's doctoral research under the guidance of her thesis advisor, Michael Cusumano, a professor of strategy at MIT's Sloan School of Management. These two researchers were initially interested in how Intel Corporation drove innovation and influenced the new product developments in other organizations in order to promote their use of Intel's component products. They then compared Intel's use of platform technologies with snapshots of other platform players, namely, Palm, DoCoMo, Cisco, and Linux. What makes for a platform leader? An organization becomes a platform leader when its' product or service offerings become the foundation on which other companies build their new products or market their new services. Of course, when this is done well, as in the case of Intel's microprocessors, Microsoft's windows operating systems or even Searle's Nutrisweet, the platform leader's offerings become an integral if not dominant part of the designs within the industry's "complementary" product lines thereby bringing the platform leader large amounts of predictable revenues. According to the authors, more and more companies want their products to become the component foundation upon which other industry firms build their integrative products or services.

The good news is that companies that become platform leaders are able to benefit from the sales of other firms' product innovations. The bad news, on the other hand, is that they are also dependent on the success and continued success of these other firms' innovative product lines. Intel's success in microprocessors, for example, is vulnerable when organizations substitute comparable Advanced

Micro Devices products. Similarly, Microsoft Windows is threatened by Linux while Nutrisweet is being threatened by Splenda, an alternative sugar-based non-caloric sweetener based on Johnson and Johnson's patented discovery of sucralose. A platform leader, of course, might rest more comfortably if it could rely on a technical strategy that would allow it to develop and design all of the subsystems and components that are built into all of the products that it wants to commercialize worldwide. But according to the authors, this kind of total self-reliance is very dangerous in today's hypercompetitive world – a world in which it is virtually impossible for any single organization to have all of the innovative capabilities – to keep current with all the technical knowledge, experience, and tools necessary to create and sustain competitive technological products. While vertical integration may have been a viable technical strategy in the past for companies like General Motors, IBM or Boeing, today's technological world is too complex, technological developments are too widespread globally, and customers are becoming too demanding and too informed to permit such a simple singular position.

The main assumption underlying this book on platform leadership is that in the past, the more vertically integrated companies were significantly more powerful than their suppliers. As a result, these large companies were well positioned to pressure suppliers to build the kinds of components that they wanted and at the costs at which they wanted them. In this set of interdependent relationships, the balance of power simply resided with the main producer of the product. And under these conditions, companies trying to develop and commercialize successful new products simply did not feel that they had to rely upon or be concerned with capturing those innovations and creative ideas that might stem from their dependent suppliers. For the most part, the "core" firms expected suppliers to design and manufacture the specified components upon which they had agreed.

In their book, Gawer and Cusumano contend that in many of today's industries, and especially in the high tech arena, there has been a major shift away from this balance of power paradigm. In an increasing number of today's industries, the interdependence of product components and the widespread ability of many companies to develop key technologies require companies to take into account the developments of nearly every other company or supplier that may be coming up with key parts from which design and architectural choices can be made. As a result, the fundamental problem facing Intel, in particular, and other companies, in general, is the emergence of the platform concept in the development of today's new products. Put simply, the platform is an evolving system of interdependent parts and modules that can each be innovated upon. While there are many important management questions surrounding the mechanisms by which these platforms evolve and are maintained, it is the strategic issue of platform leadership that is of most concern to Gawer and Cusumano. How can a company achieve and preserve its market leadership in a

platform product environment, an environment in which positions of technical and market leadership are in a constant state of challenge?

In answering this question, the authors illustrate how all of the platform leaders they either studied or observed worked closely with other critical industrial firms to produce and commercialize the products or services that emphasized the platform leader's component designs or products. More importantly, rather than resting on the success of this initial application, a true platform leader then has to find ways to work with these firms, as well as others, to continue to come up with new generations of complementary products such that their combined cooperative efforts will continue to lead to even further revenue growth and additional new product or service introductions. Just think of all the products and services that Intel has helped others to develop in order to foster greater use of microprocessors as well as the need for greater speed in microprocessor technology. In a similar manner, Microsoft has licensed or made available many different versions of its Windows operating systems to a wide range of firms selling many different kinds of high tech gadgets, products, and services. Even Searle wanted end users to know about and ask for Nutrisweet rather than any generic version of aspartame.

According to the authors, it is the availability of a large number of complementary products that allows a potential platform leader's core product to add real value. Put simply, the value of a platform module or component increases significantly as more complementary products enter the marketplace based on it. And as more people buy and use these complementary products, firms become increasingly encouraged and comfortable in introducing even more complementary products which results in greater volume demand for the platform thereby stimulating even more innovation in the platform which helps repeat the cycle and so on. The critical message in all of this is that for a company to build and sustain its platform leadership, it must concentrate its strategy on finding ways to promote and channel innovation on complementary products.

Within this book, the centerpiece for demonstrating this strategic approach is Intel's Architecture Lab. The first four chapters provide a detailed description of how this part of Intel directs its activities and focuses its efforts toward the implementation of this strategy as well as some of the complex questions, issues, and tradeoffs that needed to be addressed and resolved by Intel as it went about implementing this strategy. Chapters five and six provide additional insights into platform leadership by discussing some alternative approaches used by other purported platform leaders including, Microsoft, Cisco, Palm, NTT, DoCoMo, and Linux. Such successes are nicely contrasted with some well-known companies that failed to build comparable leadership with their new product innovation platforms, including Sony's introduction of Betamax, Apple's introduction of the Mac; and DEC's introduction of its highly touted Alpha Chip. For whatever reasons, these companies did not strategize to help with, work with, or get enough firms to *keep* building complementary innovations that would

continue to take advantage of the core platform product which therefore limited the core product's overall market growth and success.

This book is a “*must*” read for any individual who wants to know more about how to achieve and preserve market and technological leadership in platform environments. The key insights will come from the valuable framework the authors have developed for describing the four levers that organizations can utilize for influencing their platform leadership:

1. Scope of the Firm: This lever addresses what the firm needs to consider for deciding what it wants to do inside and what it wants to encourage others to do outside.
2. Product Technology: This lever deals with decisions that platform leaders need to make with regard to the architecture of their product and the broader platform. How much modularization should there be in the design? How much information should they disclose about interfaces or subsystem interdependencies? Should they make licenses easily available or is patent and intellectual protection necessary?
3. Relationships with External Complementors: This lever focuses on how collaborative and how open platform leaders need to be with other key players and/or potential competitors within the industry.
4. Internal Organization: This lever is important for helping platform leaders decide how to use their internal organizational structures and processes to manage external and internal conflicts of interest and priorities more effectively.

In their discussions and examples of these four levers, Gawer and Cusumano clearly show how strong an influence an organization can have in orchestrating innovation not only within their own industry but also in the industries of firms that develop, produce, and use complementary products. Practitioners, consultants, academics, managers, students, and entrepreneurs should all find this book incredibly beneficial. The work sheds much light on how competition evolves in many high tech settings. It is full of ideas and insights on how firms can and should drive technological and business innovation, help shape their market environments, and strive to influence the critical partnerships and relationships that will be needed for continued success. The question is not whether platform leadership and complementary innovation will occur; they will eventually take place. The key issue is whether an organization is willing to let it happen or whether it wants to help make it happen. Those focusing on the latter will find this book useful for helping to learn what to do and how to do it.