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The New Rules for Bringing Innovations to Market

by Bhaskar Chakravorti

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It's tough to get consumers to adopt innovations—and it's getting harder all the time. As more markets take on the characteristics of networks, once-reliable tools for introducing new products and services don't work as well as they used to. The efficacy of advertising, promotions, and the sales force has declined; it is more difficult for innovators to rise above the din of information from competing sources; and only hard-to-manage relationship skills seem to make a difference.

Executives need to rethink the way they bring innovations to market. By using game theory, they can develop new strategies for playing in today's networked world. By understanding how social, commercial, and physical networks behave, innovators can develop new tactics. And by working back from an endgame, they can change markets from foes to allies.

Nature's Way

Markets, by their very nature, resist new ideas and products. Despite the risks involved with

developing and launching new innovations, companies love them because they drive profits, growth, and shareholder value. Innovations reap such handsome rewards because they are risky. Markets, meanwhile, kill most new products and services and accept the rest only grudgingly. For instance, television took more than three decades to become a mass medium in the United States—from the first experimental broadcasts in the late 1920s to widespread acceptance in the 1960s. Likewise, the number of transistors on a semiconductor chip has doubled every 18 to 24 months, as Intel cofounder Gordon Moore predicted, but the productivity gains from the improvements in information technology have come at only half that speed—a rule one might call demi-Moore's law.

Markets are inimical to innovation because they crave equilibrium. Equilibrium, as defined by the beautiful mind of Nobel Prize winner John Nash, is a situation where every player in a market believes that he or she is making the best possible choices and that

every other player is doing the same. Equilibrium in a market lends stability to the players' expectations, validates their choices, and reinforces their behaviors. When an innovation enters the market, it upsets the players' expectations and choices and introduces uncertainty in decision making. For example, the U.S. wireless communications industry had found equilibrium by 2002 with several big players, relatively stable technologies, and steady consumer-switching rates. But the government's decision in November 2003 to let consumers take their telephone numbers with them when they changed carriers seemed likely to disrupt the status quo. Innovations try to change the status quo, which is why markets resist them.

A market's hostility to innovations becomes stronger when players are interconnected. In a networked market, each participant will switch to a new product only when it believes others will do so, too. The players' codependent behavior makes it tougher for companies to dislodge the status quo than if each participant were to act autonomously. When America's first transcontinental railroads were built in the 1860s, for example, factories and businesses that were close to waterways did not immediately relocate near railways. They did so only when they felt their customers and suppliers were making the switch, too.

Virtual connections between players can also affect the adoption of products. For instance, E. Remington and Sons introduced the first typewriter in 1874, a time when penmanship was still a highly respected skill. Most writers (with the exception of Mark Twain) initially shunned the typewriter. The growth of railroads, telephones, and telegraph lines led to the dispersal of companies and the depersonalization of communications. The typewritten document became the standard for written communications in business. Use of the typewriter spread. Thus, the railroads, the telephone, and the telegraph implicitly increased the speed with which consumers accepted the typewriter.

In recent times, more markets have taken on the characteristics of networks—partly because of improved communications technologies and the spread of the Internet and partly because of business's increased reliance on the global market for products, capital, and labor. For instance, many companies design and assemble products at several locations, sell them

in multiple countries via the Internet, and offer customer service from different sites in different countries. Networked markets allow for the rapid diffusion of news, ideas, and, in theory, innovations. But they also erect formidable barriers to the adoption of innovations—primarily because of the interdependencies between players. A bank, for example, cannot shift to a faster transaction-processing system if the change will affect how it communicates with other banks. Several banks have to change their systems around the same time for the innovation to gain acceptance. The mushrooming of virtual networks has made decision making more interconnected than ever before. And as markets become more like networks, it will be tougher than ever for innovations to catch on.

Consider the case of Movielink—a joint venture between MGM, Paramount, Sony, Universal, and Warner Bros. studios—which offers consumers videos on demand. It has assembled a large digital movie library, but that may not be enough for the project to succeed. For Movielink to really get off the ground, streaming-media companies such as RealNetworks, Microsoft, and Apple have to develop technologies to ensure the security of the digital movie files. Other companies must come up with ways to compress video into digital files that can be quickly and easily transmitted. Cable TV operators, like Time Warner and Comcast, must grant Movielink access to their subscribers' homes. Manufacturers of set-top boxes—Philips and Sony, for instance—have to develop devices that will allow consumers to search, download, and watch movies. Some companies will resist the idea, including makers of VCR–DVD players—JVC and Panasonic, for instance—and video rental companies like Blockbuster. The manufacturers of video game consoles and PCs will see Movielink's set-top boxes as a threat to their ambitions to become home entertainment portals. Telephone companies, who were championing video on demand in the early 1990s, will not be happy about other companies taking over their idea. Regulators will be concerned about the anti-trust implications of the consortium the studios have formed. Internet-based upstarts will try to ensure that consumers can freely exchange digital movie files, as Napster and others did with music files. Finally, consumers will have to change the ways in which they buy,

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rent, and watch movies. Clearly, the market will accept Movielink slowly.

Once enough players in a networked market decide to switch to a new product, other players' motivation to do so becomes stronger. Beyond that threshold, the network becomes innovation's ally rather than its foe. Take digital cameras, which have caught on rapidly, although film-based photography has dominated the market for more than 100 years. Back in 1888, Kodak more than lived up to its "You press the button, we do the rest" tagline. By manufacturing cameras and film, as well as developing rolls and making prints, the company limited the product network to two parties: consumers and the Eastman Dry Plate and Film Company (to whom you had to mail your camera so it could be reloaded). In 1891, when Kodak introduced cameras that allowed users to load film themselves, without using a darkroom, it brought retailers into the picture. By developing inexpensive cameras and ensuring the widespread availability of film, Kodak succeeded single-handedly in popularizing photography by the turn of the last century.

By contrast, many players were involved in popularizing digital photography. Several were unlikely new entrants. Among them were printer and PC manufacturers; the makers of software for editing, creating, organizing, and storing images online; broadband communication companies; and the manufacturers of cellular handsets. None of these players dominated the industry, as Kodak had; each had only limited influence. By the time digital photography began to make its debut, there were several groups of well-entrenched players—for instance, emulsion film manufacturers like Kodak and Fuji, camera makers like Nikon and Minolta, specialty retailers that sold cameras and accessories, and retail stores that sold film and developed prints. Rather than confront them head-on, the challengers bypassed them. The challengers' technologies ensured that consumers didn't need to use the old network if they switched to digital cameras. But the challengers still needed to change consumers' habits since people were used to seeing prints, mailing them to friends and family, and storing copies in albums and shoe boxes.

Each of the challengers had its own reasons for supporting digital photography. PC makers, like Apple and Dell, and software compa-

nies, like Microsoft, believed that digital imaging would help reposition the PC as the organizer of digital activities in homes. Printer manufacturers, like Hewlett-Packard, were keen on wresting Kodak's leadership in printing photographs. Software companies, such as Adobe, wanted to broaden the reach of their technologies. Cellular handset manufacturers, like Motorola and Sony Ericsson, saw their development of camera phones as a way to differentiate the product category, which was nearing maturity. Internet companies, like Shutterfly, felt they could offer digital image-processing services that consumers would pay for. Camera makers like Nikon and Minolta, as well as Kodak itself—though on the defensive—wanted to play an integral part in the shift from film photography to digital photography. Ordinarily, players whose objectives are different are reluctant to make big investments without assurances that others in the network will back them. Yet in this case, the companies independently made decisions that collectively allowed the market to shake free of the status quo and move swiftly toward a digital future.

When a new product's adoption by one player depends on its adoption by other participants, there has to be a systemwide switching of behaviors before change can take place. The traditional levers that executives use to launch products—such as targeting unique customer segments or developing compelling value propositions—alone cannot ensure that such a change happens. A group of companies may sometimes make a concerted push, as they did in the case of digital photography, but innovators cannot always count on such spontaneity. They must orchestrate the change of behaviors across the market, so that a sufficiently large number of players adopt their offerings or take actions that encourage others to do so.

Innovators, therefore, have two challenges: First, they have to unravel the status quo systematically. Second, they have to create a new status quo, where many players have adopted the innovation and believe they are better off because of it.

Posing the innovator's challenge as a quest to win over the network has powerful implications, which I'll explore in the following pages. I will outline three important characteristics of networks and will draw on them to create a framework that companies can use to launch

How to Break into Networked Markets

Reason back from a target endgame

Envisage the market equilibrium you want, and implement only those strategies that will create that equilibrium.

Complement the power players

Position your innovation as a complementary product to those of the most influential players in the network. This will give you immediate access to many other players in the network.

Offer coordinated switching incentives

Change the behavior of players that add to the innovation's benefits, channel partners, and would-be adopters by aligning their incentives to switch to your offering.

Preserve flexibility

Design your product and marketing plans so they can be easily modified to adapt to market changes.

innovations successfully. Then I'll describe how Adobe won over a networked market by using a campaign that mirrored the framework.

Network Characteristics

Networks have been a part of our social, business, and technological environment for centuries, but researchers have only recently uncovered many of their characteristics. The following three features of networks are critical to creating campaigns that allow innovations to take off.

Network Externalities or Effects. Every network generates economies of scale. In a product network, there are usually two types of economies. First, products that have large networks around them are often cheaper to use than products that have small networks around them. Windows-compatible PCs are less expensive than Macintoshes, for instance. Second, a product's value to each user increases as the size of the network grows. Sony's PlayStation, for example, becomes more desirable to each consumer as the number of users (who share games) and developers (who create compatible software) rises. These network effects explain why the status quo always benefits incumbents and why companies with superior products often can't topple market leaders.

Computer-networking pioneer Robert Metcalfe captured the essence of network effects in Metcalfe's law: A network's value equals the square of the number of users. The idea took center stage in 1998 when the U.S. Department of Justice brought an antitrust lawsuit against Microsoft. Supporters of the lawsuit argued, among other things, that Microsoft's Windows had locked PC users into that particular operating system. Users' costs of switching to another operating system had become almost prohibitive because of the network externalities generated by Windows.

The concept of externalities focuses companies' attention on the network around their products rather than on the products' features or uses. It forces them to frame the status quo in terms of the players in the network, their choices, and the drivers of those choices. The innovator's success depends on its ability to get enough participants to back its product—but the participants' choices will depend on whether they are, for instance, competitors,

partners, policy makers, retailers, or consumers. To figure out how it can get different players to change their behaviors, the innovator must explore another characteristic of networks: the status quo.

Equilibrium. Like a market, a network also searches for a status quo, or equilibrium. Roger Myerson, the noted game theorist, wrote that "the formulation of Nash equilibrium has had a fundamental and pervasive impact on economics and the social sciences...comparable to that of the discovery of the DNA double helix in the biological sciences" because equilibrium unlocks the hidden structure of social and market interaction.

As I described earlier, a market or network is in equilibrium when every player acts in its best interest while expecting that others will do the same. (To find out whether or not a market is in equilibrium, see the sidebar "The Three Tests of Equilibrium.") The concept is important because it alerts executives to the obvious but frequently overlooked notion that companies must choose their strategies only after systematically considering the decisions that other players will make. As the interconnections between players increase, the payoffs on their choices depend even more on others' decisions.

To ensure the adoption of a new product, the innovator must analyze the causes of the existing equilibrium and carefully deconstruct it. The innovator must then try to create a new status quo by getting a large number of network participants to choose its product as their new "best" choice. Companies often have to strike agreements with other players or make sacrifices if they want to tip the balance in favor of their offerings. That's where a third characteristic of networks comes in handy: hubs.

Network Hubs. As networks become bigger, the interconnections between players tend to cluster around just a few, also known as network hubs. Chicago, Atlanta, and Denver are major railway hubs in the United States, for instance, and Google and Yahoo are two important hubs on the Internet. The simplest way to identify hubs is to map out on paper the relationships between all the players in the market—suppliers, partners, competitors, regulators, consumer groups, and any other influential parties—drawing lines to connect them. The absence of lines between

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two players would indicate that they had no business dealings while, say, five lines would suggest a strong relationship between them. In the picture that emerges, the players with the most lines connecting them to and from other players are hubs.

There is also a distribution of power within networks, and power is mostly concentrated in the hubs because of the efficiencies that come with that concentration. For instance, Yahoo's influence is greater than that of any one online retailer on the Internet. According to one rule of thumb, if every player in a network were ranked according to its connectivity and influence, the power of the n th ranked player would be $1/n$. By tapping the most powerful parties in a network, innovators can reach virtually everyone in the network in a short series of steps. Network analysts call this the "small worlds" phenomenon.

The Framework for a Campaign

During the past 12 years, I have studied large companies and start-ups that have launched innovations in the technology, communications, health care, and consumer care markets. Several of them created blockbusters, some failed, and the jury is still out on the rest. Based on these experiences, I have found that

there are four crucial parts to a successful go-to-market campaign.

Reason back from a target endgame. The consequences of the strategy the innovator chooses will depend on other players' initial responses and counterresponses. It is therefore impossible for executives to identify their best strategies for bringing an innovation to market without first anticipating and analyzing all the potential responses and counterresponses to see where each option might lead the company.

Companies should not choose strategies because of the immediate benefits that might come with them, or be tempted to follow the Napoleonic counsel, "*On s'engage et puis on voit!*" ("Jump in the fray, and find out what happens!"), which is so dear to the entrepreneurial spirit.

Instead, sensible companies think several steps ahead and work back from the endgame they want. The endgame is a plausible but speculative guess about the new equilibrium the network participants will create in response to the innovator's strategy. After identifying the endgame it wants, the innovator should drop those strategies that will not generate the responses it wants from the other players. As the campaign progresses, the innovator should keep pruning its options, and, as far as possible, implement only those strategies that maximize its chances of getting to its desired endgame. For instance, Intel envisaged a scenario in which only brand names would stand in the way of the commoditization of semiconductor chips. Working backward, the company launched the Intel Inside campaign to increase its brand equity by making consumers aware that its chips were at the heart of most PCs. Intel anticipated a similar endgame in the wireless Internet market, and the company has unleashed a campaign around its Centrino brand, staking out its leadership in the market for mobile technology.

It is common for companies to make guesses about where their strategies will lead and to act on those suppositions. But reasoning backward from the endgame suggests that, before deciding how to act, executives must ensure that their guesses about the future are consistent with what they know to be true today. Companies can do that by mentally playing out their strategies to all the possible endgames that can result because of different

The Three Tests of Equilibrium

Executives can ask themselves three simple questions to find out if a market is in equilibrium. If the answers to all three are "yes," companies can conclude that the players' behaviors have locked into a self-reinforcing configuration and that no player will switch to another product on its own.

Is the innovation a "best choice" for consumers?

If so, the behavior of the consumers and companies using the product will be relatively stable. Companies should consider whether the players have made their choices in response to what they know and expect about alternate products; the choices made by other buyers and users in the market; and how both sets of factors will change in future.

Is the innovation a "best choice" for companies that supply competing or complementary products?

When none of the network players has an incentive to change unilaterally; or when a change by any player will be neutralized by a response from another; or when a change in strategy by one company will be too small to have any effect on the others' plans, the behavior of these companies will be relatively stable.

Can the innovator trust the players' behavior?

From the innovator's perspective, network behavior must be plausible given the available data and hypotheses about the factors governing each player's choices.

Sensible companies think several steps ahead and work back from the endgame they want.

reactions by the other players. For each strategy considered, companies must then identify the plausible endgames by anticipating when the other players' choices will be in equilibrium. Finally, the innovator must follow the strategy that yields the most preferred of the plausible endgames.

Complement the power players. To get to the desired endgame, the innovator has to change the behaviors of many players in the market. That can be tough, particularly when the network consists of a large, diverse, and connected group of companies and consumers. Fortunately, a few power players—the network hubs—can help propagate an innovation's benefits because of their ties with many other players. By allying with the hubs, the innovator can gain access to a large number of participants, induce them to change behaviors, and get to the desired endgame. However, most companies do not realize that it is difficult for innovations to gain footholds or develop critical mass without creating benefits for the hubs, too. Remember: Even Microsoft started as a vendor to IBM.

Smart companies get the hubs to back them by positioning their innovations as complements to the power players' products and by giving power players a share of the value created by the innovation. Take, for instance, Research in Motion (RIM), which initially found it difficult to get consumers to use its BlackBerry handheld computer even though the high-tech set adored the device. RIM realized that service providers controlled the wireless communications industry and that they used devices from companies like Nokia, Motorola, and Sony Ericsson. RIM established partnerships with power players in both the service and manufacturing groups. It transformed the BlackBerry from a data device into a mobile telephone and added carrier-specific features in order to strike deals with service providers. RIM also licensed its software to manufacturers of wireless handsets, like Nokia. Through these complementary relationships with the power players, RIM sought to carve out a path to the wider market.

Offer coordinated switching incentives. While the innovator may have a better product or service than those in the market, it has no special powers to untangle the status quo. The innovator has to methodically convince players that their best choices ought to be dif-

ferent because the choices of other participants have changed. Most executives focus on changing the behavior of only the early adopters and then crossing over to mainstream consumers. However, if the innovator does not induce behavior changes among different parties, the market will snap back to the self-reinforcing status quo.

To create momentum for a new product, the innovator must orchestrate changes in three core groups: the players that add to the innovation's benefits, the players that act as channels to adopters, and the adopters themselves. The innovator can do that by understanding how each participant's choice constrains or enables the others. By aligning the players' incentives to switch to the innovation, the challenger can make the adoption of the new product a matter of common interest. This will create a virtuous cycle. For instance, adopters will motivate complementors and channel partners by boosting their revenues, and that, in turn, will induce the complementors and channel partners to keep the innovation attractive and available.

Contrast Apple's strategy to bring the Newton to market in 1993 with the strategy Palm used to roll out the Palm Pilot shortly after. Apple kept the technology proprietary and used specialized channels to sell the Newton. It priced the handheld at \$800 and positioned the Newton as a replacement for the PC. Meanwhile, Palm licensed its operating software to several companies, which created applications for the handheld device. By selling out to U.S. Robotics, Palm gained access to a wide range of channels and buyers. It also positioned the Palm Pilot as a complement to, not a substitute for, the PC. Not surprisingly, the Newton failed while the Palm Pilot was widely adopted.

Preserve flexibility. The innovator bases every potential endgame on its expectations about events that will happen or on the behavior of other players, which creates uncertainty. Hence, the innovator must build flexibility into its plans. Ideally, organizations should establish product and marketing plans that cover a variety of situations.

Sometimes companies must make decisions about innovations that involve high up-front investments and irreversible commitments; they have to make preemptive bets. For instance, GM, Ford, and DaimlerChrysler to-

gether created an auction and exchange platform for businesses in the automobile industry. In 2000, the Big Three set up Covisint (short for cooperation, vision, and integration) on a gigantic scale because they wanted it to serve as proof of their commitment to online markets. That, they hoped, would help the idea gain acceptance quickly and thwart any competition from third-party entrants to the market.

At other times, innovators may find it more prudent to defer decisions until they have more information about the innovation's fate and other players' experiences with it. Take Microsoft. It has rarely taken the lead in introducing new applications. It has deferred commitments and reserved the option to co-opt early movers with decisive bets. For instance, the Windows operating system followed innovations in Apple's Macintosh interface; Internet Explorer came after Netscape's Navigator; ActiveX followed Sun's Java; Windows CE came after the success of the Palm OS; the MSN portal followed Internet pioneers Yahoo and AOL; Windows Media Player followed RealNetworks' RealPlayer; and the Xbox game console followed Sony's PlayStation.

Finally, the innovator must sometimes move early with a big bet but retain some flexibility, too. Consider that Sony has positioned itself to enter the networked home-entertainment market from multiple entry points—through its Vaio laptops; through its investments in General Instruments, the largest maker of set-top boxes; through its dealings with DirecTV, the leading digital satellite system; and through its agreement with WebTV to market Internet terminal devices. Sony has signed deals with Spyglass for browser software and invested in the development of an operating system, AperiOS, that can be used in set-top boxes and game consoles. Sony has also invested in making Internet-ready wireless handsets. All these deals were insurance in case Sony's big bet for control of the networked home-entertainment market—the PlayStation—failed to pay off.

Adobe's Acrobat Campaign

The four-part framework I've outlined above calls for a rather agile strategist. The innovator must imagine the future while reasoning back, complement powerful players while creating change—and remain flexible at all

times. It shouldn't come as a surprise, therefore, that a product called Acrobat provides a good example of such a campaign.

Adobe's Acrobat Portable Document Format software has emerged as the standard for the electronic creation and sharing of documents in their original form. It has succeeded in a market where most content-related software companies have either failed, remained niche players, or been co-opted by giants like Microsoft. Acrobat's early progress displayed the usual fits and starts of a new innovation hitting the market. According to Adobe's co-founder, John Warnock, "It took a long time to catch on." By 2002, however, Adobe had sold 5 million Acrobat "creator" programs, and users had downloaded 300 million Acrobat "reader" programs, making Acrobat one of the world's most widely used software applications. Consider the four moves Adobe made to get to that point.

Begin at the endgame. In the early 1990s, Adobe created Acrobat software largely to ease its intra-office problems. Warnock and his team realized that people created documents with different word-, graphics-, and image-processing programs but that it was not easy to read them electronically. Each document needed a different software application, which had to be compatible with the user's computer system, before users could read it. Adobe developed software that reproduced the image of any document, which any user could read with a related application.

When Adobe tried to break into the market, the company found that the players involved in the creation, distribution, and usage of content (documents, forms, drawings, images, and brochures) had created a stable equilibrium. The status quo reinforced itself because of the players' habits, and those players had little motivation to change. For instance:

- Creators of content for mass audiences (online publishers, universities, and government agencies) believed that most readers liked paper-based content and felt that it was the best way to keep content intact.
- Specialized content creators (corporations and ad agencies) were sensitive to both price and compatibility issues. They preferred using established platforms like Microsoft Office because they were wary of having to purchase new or updated software.
- Consumers were starting to use the Inter-

net but still liked paper-based content. Several factors influenced their behavior, including the price of any alternatives, the format in which most of the content was available, and the relative ease of use of electronic applications.

- Content distribution channels took their cues from the other participants; they were too fragmented to influence the status quo.

- Software developers had no incentive to change the status quo. The larger ones offered substitutes for any online publishing applications that showed signs of interesting consumers; these developers wanted to control the market for content-creation software. The smaller developers were limited to creating products without access to the code in Microsoft's Word application and dependence on Adobe's PostScript programming protocol.

However, Warnock acted as if there were another possible endgame, one where many players in the market had switched to Acrobat, where the software had become the industry standard, and where everyone would be better off for having switched to it. In that scenario, there would be a different configuration of mutually reinforcing behaviors:

- Creators of content for mass audiences would use Acrobat, motivated by the cost-effectiveness of distribution and the security of knowing that the documents would remain in their original form after the end user had received them.

- Specialized content creators would accept Acrobat as the standard for electronic communications and would create the documents on multiple platforms.

- Consumers would find it easy to download the Acrobat reader. They would enjoy access to a variety of documents produced in different formats and would download documents frequently.

- Content distribution channels would prefer to offer content in a standard format like Acrobat. They would not demand compensation for acting as the software's distributors since the wider availability of content would help increase their own sales.

- Small software developers would create tools and capabilities around Acrobat, because it was becoming the accepted standard. And large software developers would not feel compelled to develop substitutes for Acrobat. They would allow it to be compatible with their own systems; supporting a standardized format for

electronic documents would result in the greater overall usage of word-processing applications and graphics software.

Each player's behavior would represent a best choice given the decisions of the other participants and the expectation that Acrobat would be the standard.

At the same time, Adobe could see other endgames. For instance, the company could ask readers to pay for Acrobat. That would generate large revenues for the company, since there are more readers than content creators, although it would slow the software's adoption. Similarly, a different endgame would result if one of the major software developers launched a competing product. That might completely stymie Acrobat's progress.

Adobe made two important choices as if it had reasoned back from the one endgame that guaranteed Acrobat's adoption. The first was to make it virtually impossible for readers to change Acrobat documents. By doing so, the company met content creators' need to preserve text and graphics in their original form. The second was to offer users the reader part of the program for free in an easily downloadable form. Since Adobe would not charge consumers any money and publishers could not use the software to create content, Acrobat became complementary—not competitive—to the software giants' content-creation products.

Complement power players. Acrobat took advantage of multiple hubs, piggybacking on some of their products. For instance, Adobe signed an agreement with Microsoft, whereby the giant agreed to bundle Acrobat with its operating system for PCs. The Acrobat reader complemented—but did not compete with—Microsoft's Word and Internet Explorer because it did not have the ability to create or modify content. Adobe also allied itself with AOL, the largest Internet service provider, which distributed the Acrobat reader to its millions of subscribers; AOL, in turn, was able to offer enhanced service. And the Internet's most popular search engine, Google, agreed to "crawl" Acrobat documents during searches, which gave Acrobat more visibility even as it enhanced Google's reputation for conducting comprehensive searches.

Orchestrate incentives. The path to Acrobat's endgame involved some delicate balancing of three critical groups: the players who

added to the benefits of Acrobat, the players who would distribute it, and the adopters. Adobe aligned incentives around this interconnected group in a mutually reinforcing way. First, the company encouraged software development around Acrobat by making its code available. That benefited all the other parties because of the rapid improvements in features and capabilities. Second, Adobe made a broad push to provide Acrobat reader programs through third-party Web sites and distribution channels. It also created a direct sales force to address the business market. Finally, the innovator offered content creators and readers more robust and user-friendly features by constantly adding new capabilities to Acrobat. For each group, the choice to switch to Acrobat was the best, given its expectations about the choices of the other two groups.

Maintain flexibility. When Adobe launched Acrobat in 1993, it priced the reader software at \$50; its business model bundled revenues from both the creator and reader functions. The product did not sell since most users did not see the benefits of creating Acrobat-based documents. The ability to reproduce content in its original form did appeal to most content creators, but they would not adopt the Acrobat format until a large number of readers

were using the software. Adobe learned from the experience. In 1994, it separated the two functions. Adobe offered the reader program for free, which improved readers' motivation to adopt Acrobat. That, in turn, convinced content creators that they should use Acrobat, too. As more content became available in Acrobat format, more readers were motivated to download the program. The flexibility in Acrobat's product structure and the segmentation in the market allowed the pricing elasticity that resulted in the software's widespread adoption.

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"Think different," one innovative company urged in an advertising campaign. Unfortunately, that may no longer be enough to bring innovations to market successfully. "Think equilibrium" may be more appropriate. It might not make for a great advertising tagline, but the strategy will work better in our increasingly networked world. 

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