Chapter 2

Innovation as a Competitive Weapon

Near the midpoint of my high-tech career, I became the R&D manager for a small product line within Hewlett-Packard Company's test and measurement business. The main reason I got the job was that the HP[1] managers then responsible for it wanted to shut it down. They saw it as a weak business in a stagnant market, running a distant second to the market leader with no hope of improvement.

A few of us from outside the product line saw it differently. We felt that by taking the business down a different path, HP could win in a promising new market. At the time we ran a different HP business that sold related products into this new market. We were confident that by coordinating the strategies of the two businesses we could turn things around. We were encouraged by the fact that some of their engineers and first-level managers agreed with our vision.

Three of us—my marketing counterpart, our financial analyst, and I—made our case to the R&D and marketing managers of that product line. They were unmoved. These two managers had no experience with this new market and failed to see the potential in it. They had other, more pressing matters to attend to. As far as they were concerned, the only option was to terminate the product line and move all the engineers onto more important projects.

---

[1] "HP" refers to the original Hewlett-Packard Company, not today's computer and printer version of it, HP, Inc.

The three of us spent several months with charts and graphs and customer testimonials trying to persuade them otherwise. Finally, in desperation we asked if we could take over the product line ourselves. Much to our surprise, they said yes. These two managers and their boss were clearly relieved to transfer this albatross to someone else so they wouldn't have to explain to the company CEO why they were shutting it down.

So, we took it over. Within two years, helped by those engineers and first-level managers from that product line who shared our vision, we launched a new product family that took the competition by surprise, vaulted HP into market leadership, and allowed us to capture most of the growth in the new market. Over the next six years this outcast product line—digital sampling oscilloscopes—generated nearly a billion dollars of new revenue for the company.[2] It was one of the most successful growth stories in HP's test and measurement business over that entire decade. It's a story we will explore in detail in the next chapter.

How could capable, respected managers in that business fail to see such an opportunity while a trio of outsiders could realize its potential? It would be easy to say their managers just missed it, but that's not the answer. They had a well-conceived business plan, but our proposal didn't fit within it. Managers must make tradeoffs all the time when deciding which businesses to pursue and which projects to fund. Rarely will they have all the data they wish they had at the time they must act. They make the best decision they can and then move on. In this case these managers put other projects ahead of ours. To their credit, they let the product line move to a new home rather than simply die away.

The problem managers face when dealing with this kind of disruptive change relates to something I call "the curse of the corporate business model."

The Curse of the Corporate Business Model

Throughout history, large corporations have demonstrated one consistent business trait. They are good at pursuing growth in their mainstream businesses but terrible at

---

[2] All non-public company financials have been disguised for business confidentiality, although they remain in the general ballpark.

capitalizing on disruptive changes in their markets. Examples abound. Smith Corona, once a dominant manufacturer of typewriters, missed the emergence of computer word processing. Lockheed failed to respond to the transition of civilian airliners from propeller driven to jet powered until it was too late. Department stores like Sears and JCPenney didn't appreciate the importance of discount retailing led by Walmart and Target. Although each of these companies still exist, they no longer dominate those markets.

There are three main reasons why established companies have difficulty dealing with disruptive changes:

1. **Corporate metrics and reward structures don't encourage investment in new, untried ideas.** In the corporate world, managers are rewarded for delivering continual, predictable growth and profits. This is what Wall Street investors demand, and woe to the senior management team that doesn't do this. Entering a new business comes with considerable uncertainty, and this doesn't align with the need to deliver predictable results. This same logic percolates all the way down the management chain.[3]

2. **Managers don't see the rewards being worth the risk.** If a startup company is wildly successful, its employees can become instant multimillionaires. That incentive can be extremely inspiring even though the chance of it happening is remote. In a large corporation, the manager who guides a new business to spectacular growth may be rewarded with a few hundred stock options or the now popular restricted stock units, and perhaps a promotion. But if it doesn't work out, their career path will likely be permanently derailed. Many managers don't see the reward as being worth the risk, especially since there are rarely any penalties for avoiding it.

---

[3] For those Wall Street types who claim that stockholders do indeed factor a company's long term investment strategy into their decision to buy or hold a stock, note that according to Reuters the average investor today holds a stock for only 5.5 months—just long enough to care about reaping a return from short-term profits.

3. **Managers in large corporations are inherently more conservative than their counterparts in startups.** The people most comfortable taking risks aren't at the large companies, they are at the startups. Even if those people began their careers in large corporations, they soon fled what they felt was a risk-averse, overly bureaucratic culture. Managers at large companies got there in part because they liked the idea of a regular paycheck and predictable job hours. While they might be willing to take calculated risks within their present businesses, stretching outside this comfort zone becomes difficult.

   Some managers in the corporate world may object to this categorization and claim they are not shy of taking risks. If so, ask them whether they are ready to lose their job if their next risky decision doesn't work out. If their response is "how do you expect me to take risks if I may lose my job for a decision that doesn't work out?" simply point out that's what happens all the time in the world of startups.

This is why even when CEOs try to encourage their management teams to accept more risk, they usually aren't all that successful. Risk-averse attitudes are so ingrained in a typical corporate culture it is virtually impossible to change them. Rather than trying to do so, the better approach is to develop ways to be successful within these constraints.

In the example at the beginning of this chapter, here's how it worked. The financial analysis we put together showed that by going after this new market, we might grow the digital sampling oscilloscope business to $20 million/year within a few years. This wasn't attractive to the current managers, whose existing business was already delivering over $200 million/year. In their eyes, there were less risky alternatives that could return that much or more within businesses they already understood.

For my team, the picture was very different. Ours was a $5 million/year product line, so adding $20 million/year in revenue would quintuple our business. There was no question that this was by far our most attractive opportunity. Transferring the product line to us was the right answer for both teams, a fact underscored by its eventual success far beyond our initial projections.

The fact that our business even existed within a company the size of HP might seem surprising. A $5 million/year business is well below the threshold most large multinational corporations would consider to be a viable minimum. At the time, HP divisions were designed for a minimum business size of $100 million/year, and some were five times that size.

Fortunately, Dick Anderson, the HP vice president then in charge of test and measurement, understood the curse of the corporate business model. Three years earlier he had explicitly created our organization as an “in-house startup” to capitalize on a new market opportunity. Although we initially focused on a different market, he gave us the freedom to explore other ideas. Without his support for this atypical business structure, it is doubtful HP could have figured out how to make it work.

Today, as more corporate executives read books on innovation and recognize the curse of the corporate business model, things can sometimes swing too far the other way. Now you’ll occasionally encounter an executive who says, “Why do we keep spending money inventing new products that just replace our old ones? That’s not a recipe for growth. I want our investments to be in new products for new markets. That’s how we will grow.”

That logic seems reasonable until you think about it for more than a millisecond. Sure, you want growth, and sure, you can’t get that just by refreshing your current product line. Growth in new markets certainly should be part of your strategy. But the only part? The largest part? Probably not. The opposite of growth is decline, and that’s what you’ll get if you don’t maintain your current customer base. Imagine what would happen if Toyota said “Well, we’ve already invented the passenger car, so we don’t need to do that anymore. Let’s turn all our attention to spacecraft now. That’s where the growth is.”

This dichotomy lands squarely in the lap of the business unit’s leadership team. They must craft a strategy that balances the need to serve existing customers with the need to grow new ones. Knowing how to do this is key to making innovation a competitive weapon.

At this point it may be tempting to think innovation is the domain of the R&D department, but that’s a dangerous thought. While R&D needs to be an innovation

engine, they can't do it alone. Marketing, manufacturing, and finance all have key roles to play. When developing a business strategy, all four bring important insights to the table and should be equal partners. Unfortunately, this is seldom the case. Companies seem to fall into one of two categories: marketing-driven or R&D-driven. In either case, the other function ends up playing a subordinate role. Manufacturing tends to be subordinate in any case, and these days finance frequently perceives its role to be adversarial rather than collaborative. For innovation to be a competitive weapon, this silo mentality has to be broken. Rather than being either R&D-driven or marketing-driven, the business needs to be *market-driven*. A market-driven company breaks down the silos and puts the needs of the customer first. Every function in the business has a role to play. We will spend a good deal of this book exploring ways to do this.

What Corporations Do Well

If large corporations depended exclusively on new markets for growth, there would be a lot fewer of them around. Fortunately, most growth derives from within their existing markets. The latest sedan from Subaru or smartphone from Samsung doesn't open a new market, it sells to the existing customer base.

Where large corporations excel is in understanding their current customers, using that knowledge to create appealing new products for those customers, and cranking up their marketing and manufacturing engines to generate the demand and deliver the products more efficiently than their competitors. Some corporations have largely given up on the idea of funding new business creation internally. Instead, they focus their internal teams on their current markets and keep an eye on the world of startups for new markets. When they spot a small company that has already done the initial legwork, they make an acquisition. Google, Disney, and Salesforce are three companies that have been successful with a strategy of acquisitions. The trick is to figure out the right time to buy. If you do it too early, you might later discover the exciting new technology you bought doesn't really work or the market hasn't materialized as you expected. If you wait too long, you'll pay a hefty premium.

This outsourcing of new business creation to the venture capital world doesn't usually sit too well with in-house R&D teams. "Why spend all that money to buy a small startup when our team could invent a better product at a lower overall cost?" It doesn't

help that they imagine the startup's founders—ordinary engineers just like them—getting rich in the deal. (This happens far less often than imagined.)

I used to feel the same way, but over the years I've come to realize acquisitions have a place. While there are many important reasons a large company should fund new business creation in house, there are also good reasons to do some of it through acquisitions. We will explore this topic in detail, including an example acquisition I made during my own career, in Chapter 8.

Incremental vs. Disruptive Innovation

As explained in Chapter 1, incremental innovation refers to innovation that improves existing products or services for current customers. The introduction of the latest Apple iPad is a good example. It may be faster and flashier than the previous model, but it doesn't create a new market; it sells to existing customers.

Disruptive innovation delivers new products or services to customers previously served by a less capable alternative. It can throw markets into turmoil and completely rearrange the structure of the marketplace. Market leaders can be knocked off their pedestals and new leaders anointed in this new market. That first Apple iPad introduced back in 2010 was a disruptive innovation. Suddenly, a whole class of users discovered they no longer needed laptop computers; the simplicity and ease of use of the iPad better met their needs.

To be successful with disruptive innovation, you need to know how to deal with the curse of the corporate business model. As we will learn in Chapter 7, disruptive innovations almost always need to be nurtured in an environment separate from the company's core business units.[4] Too often, managers of existing businesses will see disruptive innovations as running far afield from their core businesses. They will conclude such innovations are more likely to reduce rather than improve near term profitability, so they will want nothing to do with them. If you depend on those managers

---

[4] I use the term "business unit" to describe an organization within a large company that is responsible for its own financial performance. Companies often use terms such as "division," "group," or "operation" to define their business units.

to successfully launch a disruptive innovation, you are likely to be severely disappointed. To avoid this obstacle, you must create an environment reasonably insulated from short-term financial requirements.

Incremental innovation is different. The driving factors behind incremental innovation are to either improve the experience for current customers, improve the profitability of the product line, or both. These align precisely with the priorities those business leaders should have. As we will learn in Chapter 5, such innovations should nearly always be managed from within the product line they will benefit.

At this point you may ask, “How do I know whether an innovative idea is incremental or disruptive?” First, you should understand you can’t use the size of the project as the determining factor. Not every disruptive innovation is make-or-break for a company. This is especially true for a large multi-national corporation with multiple product lines in a variety of markets—a disruptive innovation in one market may not have a major impact on overall company results. Nor is every incremental innovation a small project. A key question is whether the leaders of the existing business have the commitment, knowledge, and resources to launch the innovation successfully. To make that assessment, answer the following four questions and use them in the decision tree of Fig. 2.1:

1. Does the innovative idea address a need for the existing customer base, or does it serve a new class of customers?
2. Is it an enhancement to an existing product or will it replace that product?
3. If it will replace the existing product, will the leaders of that business see it as a welcome addition or as a threat to their business?
4. Are the leaders of the existing business willing and able to apply sufficient resources (staff, money, time) to the innovative idea without compromising their ability to deliver their expected business results?

Once you have determined which type of innovation you have, follow the processes defined in Chapter 5 for incremental innovation and Chapter 7 for disruptive innovation.

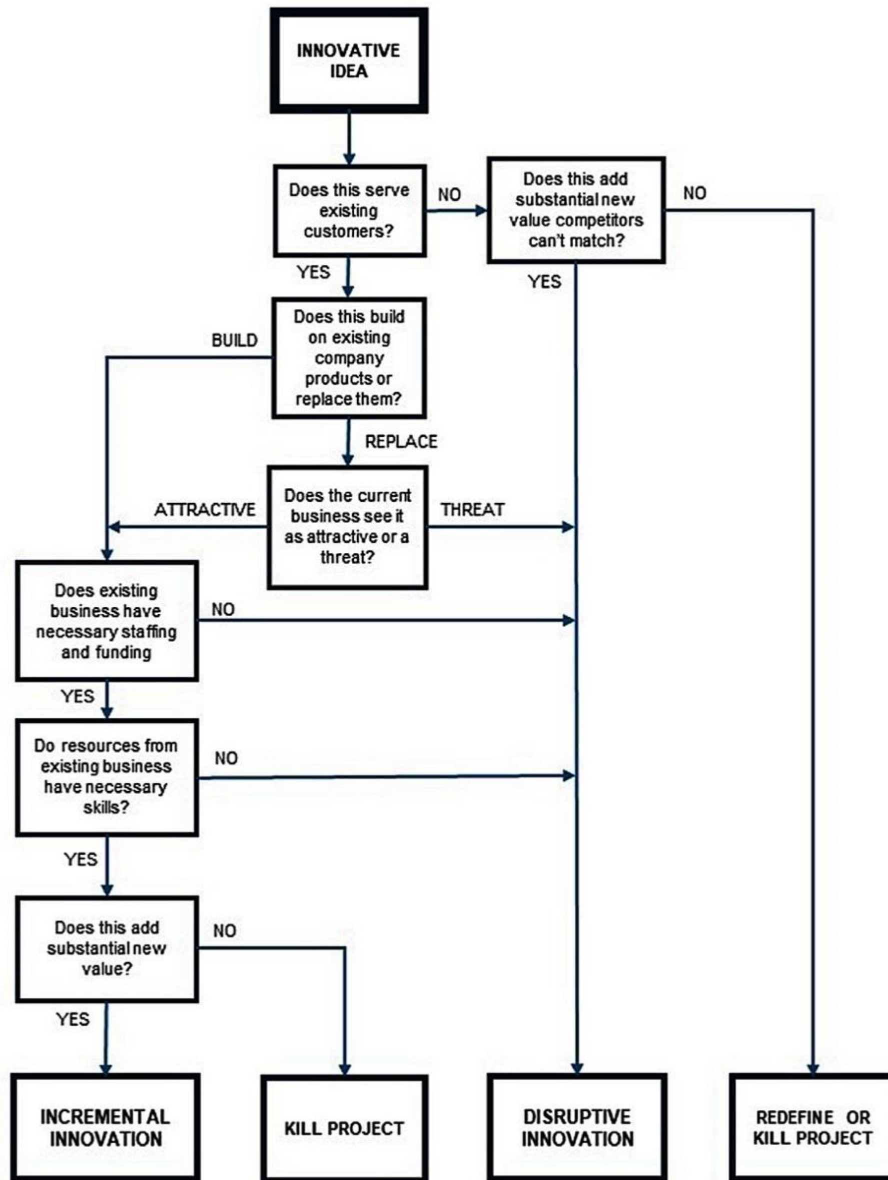

Figure 2.1 Decision tree to assess whether an innovation is incremental or disruptive.

Turning Innovation into a Competitive Weapon

What does it take to make innovation a truly competitive weapon for your organization? First, go back to the definition of innovation—the ability to see opportunity in places others don't and turn that vision into profitable reality. Many people imagine innovation to be the province of a few super-smart PhDs who spend all their time walled off in quiet rooms thinking profound thoughts. It brings to mind the classic picture of the mad scientist with a brilliant idea represented by a light bulb flashing on over their head.

While it's true that innovation requires a certain amount of the "light bulb" flash of inspiration, it is not the domain of a few mad scientists. You can do many things to foster a culture of innovation throughout an organization. In the right environment, everyone from the administrative assistant to the sales associate to the research scientist can exercise creativity and contribute innovative ideas. This will be the subject of Chapter 5.

Innovative ideas are only the first step. In business, innovation is not complete until the best of those ideas are turned into profitable reality. This requires excellence in execution: selecting which of the many ideas to pursue, designing the right organization to go after them, managing the development process, connecting with customers, and measuring success. Many more businesses have failed due to poor execution than from lack of good ideas.

END OF CHAPTER SAMPLE