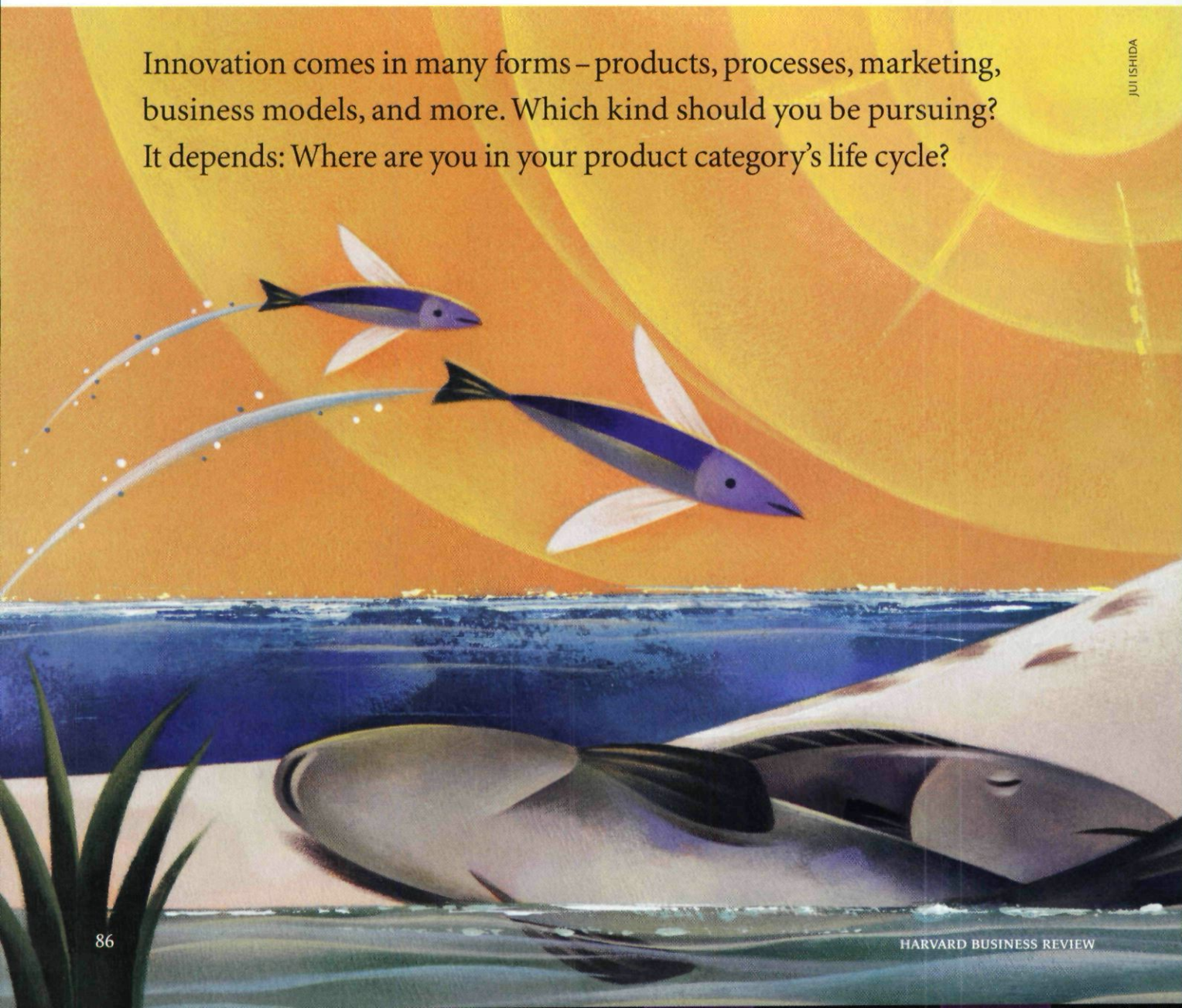
Darwin and the Demon

Innovation comes in many forms – products, processes, marketing, business models, and more. Which kind should you be pursuing? It depends: Where are you in your product category's life cycle?



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by Geoffrey A. Moore

Innovating Within Established Enterprises

As COMMERCIAL PROCESSES commoditize in a developed economy, they are outsourced or transferred offshore or both, leaving onshore companies with unrelenting pressure to come up with the next wave of innovation. Failure to innovate equals failure to differentiate equals failure to garner the profits and revenues needed to attract capital investment. It behooves us all to use our brains to get out in front of this Darwinian process.

For starters, we need to appreciate how broad the domain of innovation really is. Sure, it includes the type everyone knows about: disruptive innovation, the stuff of technology legend and Silicon Valley lore. But we should not be blind to the existence of more mundane forms that are equally effective, as the following taxonomy illustrates:

Disruptive Innovation. Gets a great deal of attention, particularly in the press, because markets appear as if from nowhere, creating massive new sources of wealth. It tends to have its roots in technological discontinuities, such as the one that enabled Motorola's rise to prominence with the first generation of cell phones, or in fast-spreading fads like the collector card game Pokémon.

Application Innovation. Takes existing technologies into new markets to serve new purposes, as when Tandem applied its fault-tolerant computers to the banking market to create ATMs and when OnStar took Global Positioning Systems into the automobile market for roadside assistance.

Product Innovation. Takes established offers in established markets to the next level, as when Intel releases a new processor or Toyota a new car. The focus can be on performance increase (Titleist Pro V1 golf balls), cost reduction (HP inkjet printers), usability improvement (Palm handhelds), or any other product enhancement.

Process Innovation. Makes processes for established offers in established markets more effective or efficient. Examples include Dell's streamlining of its PC supply chain and order fulfillment systems, Charles Schwab's migration to online trading, and Wal-Mart's refinement of vendor-managed inventory processes.

Experiential Innovation. Makes surface modifications that improve customers' experience of established products or processes. These can take the form of delighters ("You've got mail!"), satisfiers (superior line management at Disneyland), or reassurers (package tracking from FedEx).

Marketing Innovation. Improves customer-touching processes, be they marketing communications (use of the Web and trailers for viral marketing of *The Lord of the Rings* movie trilogy) or consumer transactions (Amazon's e-commerce mechanisms and eBay's online auctions).

Business Model Innovation. Reframes an established value proposition to the customer or a company's established role in the value chain or both. Examples include chestnuts like Gillette's move from razors to razor blades, IBM's shift to on-demand computing, and Apple's expansion into consumer retailing.

Structural Innovation. Capitalizes on disruption to restructure industry relationships. Innovators like Fidelity and Citigroup, for example, have used the deregulation of financial services to offer broader arrays of products and services to consumers under one umbrella. Nearly overnight, those companies became sophisticated competitors to old-guard banks and insurance companies.

The implication of the life-cycle model is that enterprises must mutate their core competences over time to sustain attractive returns.

The breadth of this list can be problematic. How are managers and executives to decide where to focus? Which types of innovation should they pursue? There was a time when the notion of core competences was invoked to solve this problem: Pick the things you are best at and focus your resources accordingly. But companies have discovered that being the best at something doesn't guarantee a competitive advantage. A distinctive competence is valuable only if it drives purchase preferences. Customers frequently ignore companies' core competences in favor of products that are good enough and cheaper.

Riding the Life Cycle

A more reliable way to solve the problem of focus is to think of different types of innovation as being privileged at different points in a market's life. The technology sector has provided ample material for studying the early phases of market development, and I've previously described how those phases can be viewed through the lens of the *technology adoption life cycle* (see the left side of the graphic in the exhibit "The Market Development Life Cycle"). By combining graphical representations of that cycle and of what happens later when markets become more established, we can show market development end to end. The market development life cycle includes the following phases (the first four constitute the technology adoption life cycle for emerging markets):

Early Market. When a technology is introduced, it attracts the attention of early adopters – enthusiasts (who see it as cool) and visionaries (who see it as potentially disruptive). Pragmatic buyers are curious but make no commitments. The press, fascinated, writes glowing articles describing the technology as the next big thing.

The Chasm. The technology is caught betwixt and between. Because it has been in the marketplace for some time and has lost its novelty, visionaries are no longer making big bets on it. But its acceptance isn't widespread enough to convince pragmatists that it would be a safe purchase. Adoption is stalled, and typically the only way

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for vendors to move forward is to target a niche market that suffers from a nasty problem for which the technology is the sole solution. The "pragmatists in pain" in such a market are the only customers motivated to help the new technology cross the chasm. Current examples of technologies in the chasm include third-generation wireless, on-demand computing, and fuel cells.

Bowling Alley. The technology is gaining acceptance among pragmatists in one or more niche markets where it enables a solution to a nasty problem (when a niche adopts the technology, adjacent niches become more susceptible – hence the bowling pin metaphor). Within each niche, it is building a loyal following and attracting partners who see a market in the making. Outside the niches, it is still largely unknown.

Tornado. The technology has passed the test of usefulness and is now perceived as necessary and standard for many applications. All the pragmatists who were hanging back from committing are rushing into the market to make sure they don't get left behind. Customers of many types from many fields are making their first purchases of the technology, and revenues are growing at double- or even triple-digit rates. Competition is fierce, with investors bidding up the stock of every company that can participate in the category.

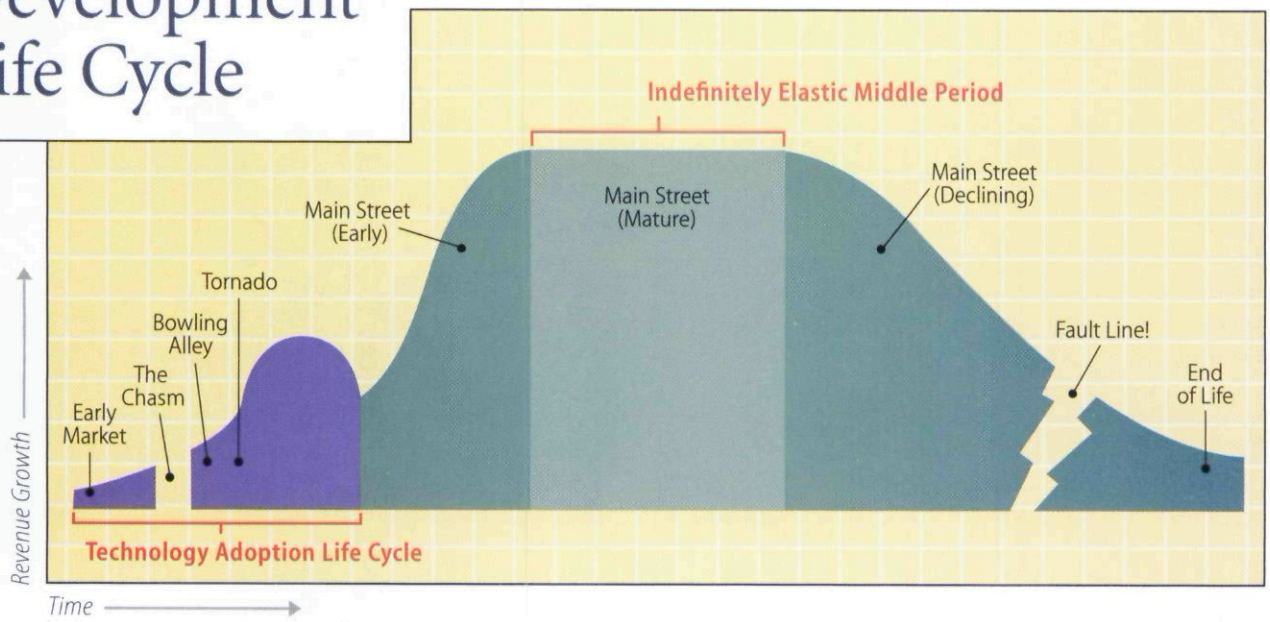
Main Street (Early). The era of hypergrowth has subsided, but the category is still growing nicely. A first wave of consolidation results in a market-share pecking order that is unlikely to change for a long time. Even the companies with small market shares are typically performing well. Customers are focused on seeing systematic improvements in the offering and reward each with an uptick in purchasing.

Main Street (Mature). Category growth has flattened, and commoditization is increasing. A second wave of consolidation thins out the bottom of the pecking order, with market leaders creating top-line growth both organically and through M&A. Customers now take the category for granted, and the press no longer writes about it. On the plus side, however, there are no obsoleting technologies on the horizon, so market risk is at a nadir.

Main Street (Declining). The category has become ossified, and the market dominators are unresponsive to customer needs. Customers are actively looking for relief, a development that is attracting entrepreneurs. The next-generation technologies are on the horizon, although none has gone through the tornado. The market is ripe for some form of disruption, either through an obsoleting technology or a radically innovative business model.

Fault Line and *End of Life.* Technology obsolescence has struck like an earthquake, exposing the fault line between what the company sells and what the market now desires. The next-generation tornado is wreaking havoc on the installed bases of the established vendors. There is no path forward for companies that produce the obsolete technology, and the only question left is how much money existing customers are willing to spend on the category before it vanishes altogether. Leveraged buyouts become an attractive mechanism for monetizing this remaining market opportunity.

The Market Development Life Cycle



Seeing the Whole Picture

If we overlay our catalog of innovation types onto the market life-cycle model, we can see that at each stage, management has different resources to bring to the challenge of competing for revenues and profit margins. (See the exhibit "Aligning Innovation with the Life Cycle.")

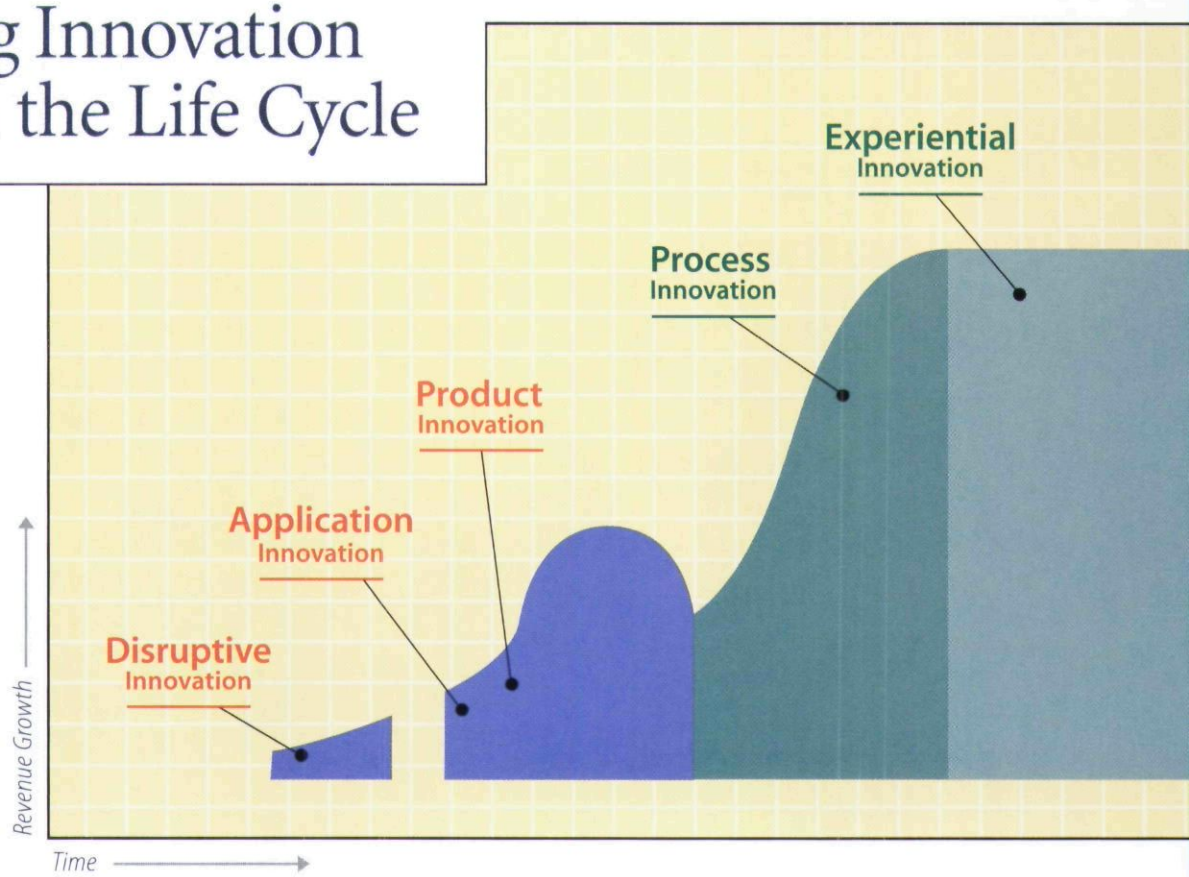
The first three innovation types – disruptive, application, and product – dominate the technology adoption life cycle, interoperating to bring about the creation of the new market category. Until the tornado has blown itself out, no other kind of innovation focus is rewarded.

Once the market moves onto Main Street, however, these forms of innovation lose their leverage. Any delta in competitive advantage they might produce wouldn't be worth the resources required. To put it another way, the marketplace is no longer willing to yield the revenue or margin gains necessary to fund such efforts. (Investments in these types of innovation during the Main Street phases of the market's life have the effect of accelerating commoditization through a process Clay Christensen has called *overshooting.*)

At this point in the market's evolution, a second suite of innovation types comes to the fore – the group consisting of process, experiential, and marketing. Again, the three types can interoperate, and thus they can be used separately or together to create incremental improvements. Sooner or later, even these forms of innovation lose their usefulness and the market moves into an inevitable decline, often with the further threat of an obsoleting technology on the horizon. But companies still have two types of innovation left to exploit: business model and structural.

As markets are commoditizing at one point in the value chain, they are decommoditizing somewhere else (another fine insight from Mr. Christensen). For example, in the automotive industry today, normal maintenance is commoditizing as roadside services are decommoditizing. A nimble enterprise may be able to leverage its reputation with customers to reinvent itself and address their needs in a dramatically different fashion. In its mild form, reinvention grafts a new business model onto the old infrastructure. In its draconian form, it involves a radical restructuring of the enterprise. It's a high-risk endeavor either way, but with the market nearing the fault line, reinvention is the only path forward. The alternative is for executives to call the game over, accept that the market is at the end of its life, and allow the company to be bought by investors who plan to focus on distributing rather than reinvesting the remaining free cash flows.

Aligning Innovation with the Life Cycle



All in all, then, despite the commoditizing pressures of globalization, management has a surprisingly robust set of opportunities to create shareholder value. Yet few CEOs sleep easy, for their dreams of success are haunted by an unnerving specter, the demon of inertia.

Battling Inertia

The implication of the life-cycle model is that enterprises must mutate their core competences over time to sustain attractive returns. Product-innovation skill, which serves a company wonderfully in a market's early stages, will not sustain it on Main Street, where new expertise in process management and marketing is needed. But management's efforts to change direction are thwarted by the inertia that success creates. The deeper the enterprise is into the life cycle and the more successful it has been, the greater its tendency to return to its former course. For most executive teams, battling the inertia demon is the biggest challenge they face. Sad to say, the demon usually wins.

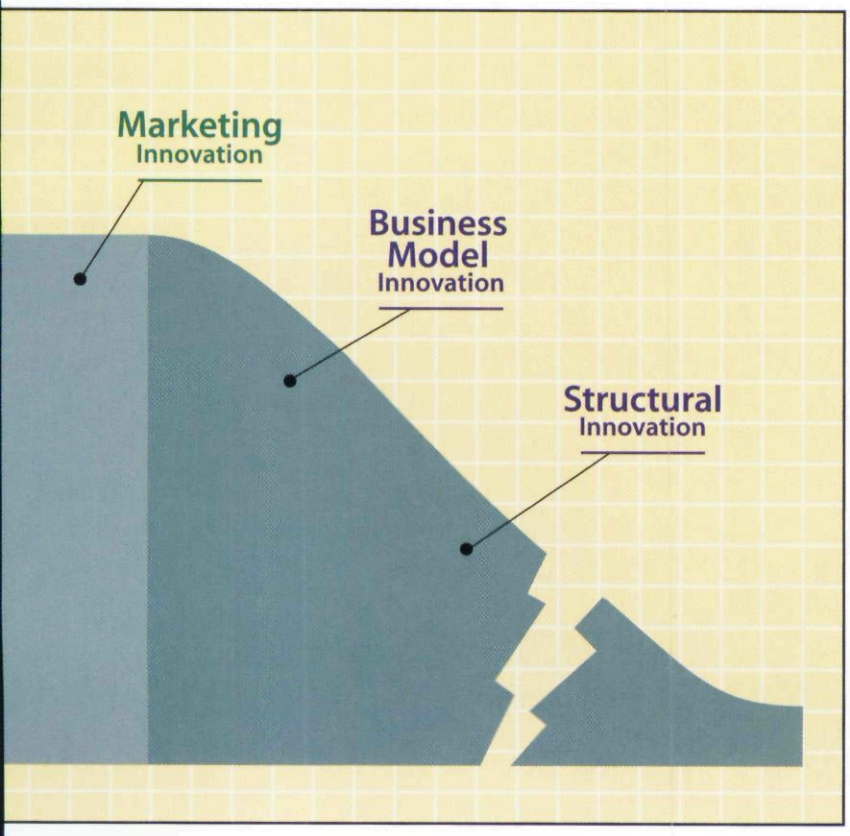
To overcome inertia, management must introduce new types of innovation while deconstructing old processes and organizations. The most common mistake executive teams make when they seek to introduce change is leaving legacy structures untouched. Their hope is that the success of the new will draw resources away from the old and allow change to occur organically and painlessly. This approach has little chance to succeed. The way to move forward is to aggressively extract resources from legacy processes and organizations and repurpose them to serve the new innovation type, or, if that's not possible, take them out of the company altogether.

So management must pursue a twofold path of concurrent construction and deconstruction. For construction, the goal is to create the next generation of competitive advantage, so the focus should be on the innovation team. It should be sponsored by a senior executive and led by someone who is passionate about, and expert in, the new type of innovation. The choice of sponsor and leader will depend on which type of innovation the team is pursuing, as the exhibit "Choosing the Right Leader" illustrates.

Note how executive sponsorship migrates over the life cycle. During the middle part of a category's life, innovation can be sponsored at the VP level. But it needs the attention of the general manager during the early part of the market's development, and the company-transforming innovations of the late stages demand the full support of the CEO. The team leader should probably be recruited from outside the firm, because he or she must be a world-class performer – and the company's best talent is usually associated with its legacy competences. The rest of the team, by contrast, should be made up of high-potential individuals from inside so that the new effort is grounded in the realities of the business and, over the long term, human capital is extracted from the legacy processes.

Choosing the Right Leader

Innovation Type	Team's Executive Sponsor	Best Team Leader
Disruptive	General manager	Entrepreneur (any function)
Application	General manager	Marketing manager
Product	General manager	Engineering manager
Process	VP for operations	Operations manager
Experiential	VP for marketing	Customer service manager
Marketing	VP for marketing	Marketing manager
Business model	CEO	General manager
Structural	CEO	General manager



Defeating the Demon

The challenge of deconstruction is that the legacy work still needs to be done, but because it no longer drives customer purchase preferences, resources deployed in support of it do not improve market results. These resources are merely preventing the downside consequences of underperformance. Legacy deconstruction should therefore be driven by a simple mantra: Productivity, not differentiation. Differentiation that does not drive customer preference is a liability. Once a company's people fully internalize this principle, the path forward is clear:

1. Centralize the function. Legacy processes are typically embedded in each of the enterprise's operating units. Bring them together under a shared-services model, and put an operations-focused manager in charge. This will free resources that are performing duplicate functions.

2. Standardize the process. More often than not, processes pulled together into a shared-services model retain their idiosyncrasies. Invoke the mantra to standardize them into a single process set. Users will scream. Plug your ears. The resources that are no longer needed for maintaining multiple versions will more than pay for your troubles.

3. Simplify the process. Once processes have been standardized, they can be simplified in a leveraged way. Just make sure that during the course of process redesign, people do not try to innovate (it is a powerful human urge, after all). The idea is to take resources out, not put more in.

4. Automate or outsource the process. Make the processes go away, either by embedding them in computer transactions or exporting them to a firm for which they will be a source of revenue instead of a drag on profits. Because you have already centralized, standardized, and simplified, the good news here is that you have reduced both the expense and risk of this step.

It's important to recognize that differentiation-creating innovation and productivity-creating deconstruction must be conducted in tandem. If you try the former without the latter, the inertia demon defeats you. If you try the latter without the former, you do nothing to overcome the forces of commoditization; you are simply able to endure them longer. By running the two efforts in parallel, and migrating resources from legacy processes to innovation wherever possible, you not only improve your returns in the marketplace, you renew and rejuvenate the company. Neither Darwin's forces nor the demon's will defeat you.

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