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Equity Research

Americas | U.S. Investment Strategy | February 14, 2001

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Creating Value Through Business Category Evolution

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Source:

- **This report deals with what it takes to evolve a traditional business into a more dynamic, value-creating enterprise. The answer is to migrate from one business category to the next.**
- **Management's prime goal is to increase shareholder value by generating returns on investments in excess of the cost of capital.**
- **We describe three broad business categories—physical, service and knowledge—and highlight the key characteristics of each.**
- **While the business category evolution is easy to understand, it is very hard to implement. We outline the key challenges and measures to watch in considering the likely success of should a shift.**

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Executive Summary

When GE's Jack Welch, perhaps the 20th century's most respected corporate leader, steps down from his post in late 2001, he will leave a company with a *lower* share of its addressable market than when he took the reins 20 years ago. If fact, GE's share of its addressable market is half of what it was in the early 1980s, and stands at less than 10% today.

How could this be? The key is that GE has fundamentally redefined its market opportunity to be much broader, much more valuable for its customers, and much more value creating for GE shareholders. Fundamentally, GE has created huge value through business category evolution. And when you appreciate that GE's share of its addressable market is actually down, you realize that the company's growth opportunities have actually never been better.

This report addresses what it takes to evolve a traditional business into a more dynamic, value creating enterprise. We explore the process in four parts:

1. *The economics of value creation.* Creating shareholder value—earning returns on new investments that exceed the cost of capital—remains management prime goal. Measures like customer satisfaction, manufacturing excellence and employee motivation are means to this end. We emphasize the significance of customer loyalty—a loyal customer base leads to much more value creation than one that churns constantly.

2. *Business category evolution.* We define three business categories—physical, service and knowledge—and show how each has different properties and characteristics. The implications are twofold. First, a company's economic characteristics change as it evolves from one category to the next. Second, the management challenges are different for each category. Both present opportunities and challenges.

3. *The new mindset.* Business category evolution requires a fresh look at some old issues. Companies must be willing to define their businesses differently, treat employees in a new way, and rethink standard investment rules. We find that while most executives intellectually understand business category evolution, their companies are not *organizationally* prepared for the journey. This preparation is largest challenge facing most senior managers.

4. *Measuring improvement.* We enumerate a number of metrics we look for in judging whether or not a company is successfully transitioning. These include customer satisfaction, customer retention, return on invested capital improvement and accelerating growth.

Introduction

Consider where General Electric and 3M were 10 years ago. World class companies. Innovators. Well managed. And while GE's market capitalization was about three times that of MMM in 1990, by the end of 2000 its market cap was 10 times greater. GE's total shareholder returns in the past decade were better than double of those of 3M.

How about Enron and Occidental Petroleum? Ten years ago, Enron's market cap was one-half that of OXY. Today, it market exceeds OXY's 7-to-1. Here again, a decade of massive wealth creation allowed ENE to compound its total shareholder returns at a much faster rate than its competitor.

A decade ago both GE and Enron were well-regarded companies, with quality management and solid businesses. But the stock market wasn't overly impressed, as it bestowed P/E's on both that were at a discount to the overall S&P 500. Not so today—both companies sport tidy market premium valuations.

These stories beg an important question: What does it take to successfully evolve a traditional business into a more dynamic, value-creating enterprise? Investors and companies look at vibrant, wealth-building companies like GE and Enron and want to get some sense of the formula for success. In this report, we lay out what we believe are the key issues to understand and consider.

It's important to note that while there has been a fair amount written about this issue in the management literature, it has not been thoroughly addressed from an investor's prospective. Clearly, there are many parallels. But the ultimate objective of an investor is to buy stocks that are likely to undergo a positive revision in expectations. Most discussions of business evolution miss a key ingredient: the tie-in between the economics of value creation and stock market expectations.

This report has four parts. First, we explore the economics of value creation in some detail. Here, we clearly establish the drivers of shareholder value, which should be the unrelenting focus of managers and investors alike. Second, we discuss business category evolution. The main takeaway here is that various business categories—physical, service and knowledge—have different properties and characteristics. Both managers and investors have to understand the challenges and opportunities of category migration. Third, we discuss what is probably the toughest part of the transition—the required mindset shift. In our discussions with literally dozens of management teams, we find that executives are intellectually prepared to embrace change, but are not *organizationally* prepared to do so. We wrap up with a discussion of how to measure a company's progress.

The Economics of Value Creation

A corporate management team's ultimate goal is to maximize long-term shareholder value. In the context, customer satisfaction, manufacturing excellence, and employee motivation are a means to an end. To be sure, these metrics are important in driving value, yet they are not sufficient in and of themselves.

Notwithstanding all of the talk of "new" valuation paradigms, we believe that the fundamentals of value and value creation are unchanged. Value for any financial asset equals the present value of future free cash flows. Free cash flow is the difference between a company's inflows (sales) and its outflows (operating expenses and investments). It does not matter what accounting standards a company chooses: cash is cash.

Value creation occurs when a company earns a return above the cost of capital on its new investments. These investments may be balance sheet related (working capital growth or capital expenditures) or income statement related (research and development, marketing).

One of the keys to business model evolution is an ability to "scale" a business model, or the capacity to grow sales at a faster rate than costs. When a business model scales, free cash flow expands sharply. We find that there are several important ideas that underlie this strong free cash flow growth:

- It is important to seek opportunities to accelerate top-line growth. We find that the companies that successfully transition their models often redefine the market opportunity. This is certainly true of GE and Enron.
- Scalability is closely linked to a company's business category. Knowledge-based businesses are the most scalable.
- Scalability does not come without a cost: the management skills required to build and sustain a scalable model are much different from the skills required to manage a more traditional, manufacturing-based business. More specifically, the focus must shift away from managing *assets* to managing *people*. Further, cost cutting is rarely the path to long-term riches, although cost management is vital.

Another central dimension of value creation is the sustainability of competitive advantage. We call this "competitive advantage period", or CAP, and define it more formally as the period of time a company can generate excess returns on their new investments. The underlying economic premise, borne out daily in real markets, is that competitive forces drive incremental returns towards the cost of capital. So it is critical for managers to allocate the appropriate financial and human resources today to assure long-term value creation. While most managers are very sensitive to delivering near-term results, we sense that the long-term does not get enough attention.

Extending CAP in a tangible-based world often meant being a low cost producer. It hinged on a company's ability to get the most out of its invested capital and employee productivity. Today, CAP often expands because companies build information-based networks, which become more-and-more valuable (to users and its steward) as more-and-more people use it.

One common theme we find with companies that successfully transition their business models is a relentless focus on the customer or, more accurately, customer *solutions*. Providing customer solutions almost always leads to enhanced customer loyalty. *The Loyalty Effect*, a book by Frederick Reichheld, lays out a powerful framework for thinking through how and why customer loyalty leads directly to higher shareholder value. Reicheld specifies six drivers that define customer loyalty:

- *Acquisition cost*. As part of any net present value calculation, a company has to understand new customer acquisition costs. Generally, companies underestimate the total costs of new customer acquisition. The lower the cost, the better the economics for gaining a new customer, all else equal. As we will explore, successful transition companies often tap the network effect, which exists when the value of a good or service increases as more people use that good or service. In so doing, the leaders actually enjoy declining acquisitions costs as they become more-and-more dominant.
- *Base profit*. These are the basic revenues expected over the lifetime of the customer. It is possible to view these as an annuity with a fixed life. The longer a company can retain a customer, the greater the value of this annuity.
- *Greater sales per customer*. Once a customer is in the fold, one of the best ways to create value is to increase the sales volume with them. Successful transition companies open up a host of additional revenue sources, allowing them to capture a greater share of their customers' wallets. These sources include a greater appreciation of the product line, increased customer buying power and comfort with the purchase format.
- *Cost reduction*. Over time, customers become cheaper to service because they move up the learning curve. This is particularly true of companies that rely on technology to deliver their services. They know how to get what they want and where to go when there is a problem. This saves money for the good or service provider. Constant customer churn means a lot of costly teaching.
- *Referrals*. Happy customers often share their favorable experience with others. This leads to valuable new customers, who on balance tend to better than those who respond to discounts, promotions or advertising.
- *Premium pricing*. Once a customer gets locked in, it is often possible to charge a higher price. This is because the customer perceives that the cost of the price premium is too low to offset the cost of switching to a new company.

Reichheld goes onto show the economic power of customer loyalty. He estimates that a 500 basis point increase in customer retention leads to a near doubling of customer net present values in a number of industries (See Table 1). As we will see, a successful business category transition fosters heightened customer loyalty. And while the loyalty data do not show up in near-term earnings (and perhaps detract from them), they trigger substantial value creation.

Table 1
Impact of Retention Rate Increases on Customer NPVs

Assumes a 5% increase in retention rate

Industry	Increase in Customer Net Present Value
Advertising agency	95%
Auto/home insurance	84
Branch bank deposits	85
Life insurance	90
Credit card	75
Average	86%

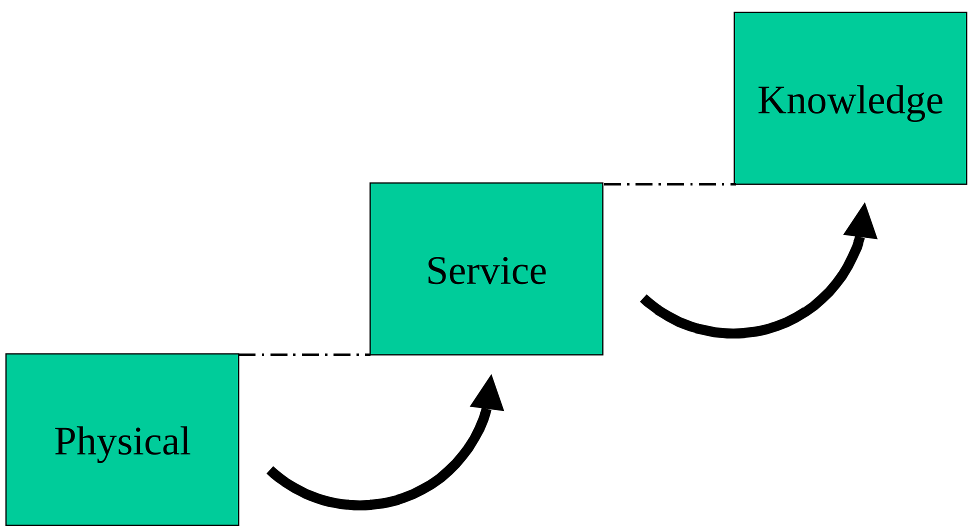
Source: *The Loyalty Effect* by Frederick F. Reichheld.

Business Category Evolution[1]

We now turn to the crux of the analysis, business category evolution. The point of this discussion is straightforward and very relevant for investors: each business category has different characteristics and managers require different skills to operate in each of them. These categories are by no means all encompassing, and all companies have dimensions of each. But the categories provide a powerful way to think about various business activities. We define the categories as follows:

- *Physical*. Tangible assets—manufacturing facilities, stores, inventory—are the prime source of competitive advantage for these businesses. Sales growth is tied closely to asset growth.
- *Service*. People are the main source of competitive advantage for service businesses. Services are generally delivered on a one-to-one basis. So sales growth relies on employee growth and productivity.
- *Knowledge*. Knowledge businesses also rely on people as the main source of competitive advantage. But unlike service businesses, knowledge companies generally create intellectual content once, and replicate it over and over. This severs the link between sales and costs and creates potential for a business model to scale.

Figure 1
Business Category Evolution



Source: CSFB Analysis.

We are now prepared to see how these categories differ (see Table 2):

- *Source of advantage*. While physical companies depend on tangible assets, both service and knowledge businesses rely on people. So as a business makes a transition from physical, it must be able to manage both physical and human capital. Further, the more integral the employees are in the value creation process, the more likely they will want to share in the upside. So compensation schemes and free internal labor markets are critical to success.

- *Investment trigger*. Physical and service businesses typically invest back into their business in order to add capacity. Growth is tied to capacity. For example, a physical business like a retail store must build new stores to generate ongoing sales growth. A consulting firm needs new employees to produce additional sales. In contrast, knowledge businesses generally invest as the result of product obsolescence: there are no effective constraints on selling more of a current product. Yet the rate of change for knowledge industries is high, and there is little or no “residual” value for an outmoded knowledge good. Software is a good example. If a company produces a hot selling program, it only needs to print new disks to satiate demand. But once a better product is out, the old one has little or no value. An established user base mitigates the downside of obsolescence.

- *Scale economies*. Physical and service businesses do benefit from scale economies. Importantly, however, these economies are generally supply side driven—based on a company’s manufacturing or processing capabilities. Once the growth inputs are tapped out (i.e., capital or labor productivity is at its peak) a company has to acquire new resources to grow.

  In contrast, scale economies are often demand-side driven for knowledge businesses. This demand-side function is generally the result of network effects. Network effects exist when the value of a good or service increases as more people use that good or service. One example is GE’s use of remote diagnostics in its medical services business. GE’s ability to capture information from all of its customers and use the information to benefit individual customers is powerful.[2] And the more hospitals that chose GE, the better its information the more value it adds to both current *and prospective* customers. It is much easier to see why GE’s medical service business is gaining, and will continue to gain, market share when you think about it as a network.

  Another illustration is Enron’s broadband trading operation. Enron quite literally brings together buyers and sellers, and creates powerful network effects. Once established, the network becomes dominant. Where should you go to buy or sell bandwidth? Enron. Why? Because that’s where all the buyers and sellers congregate. These companies turn customers into a huge asset.

- *Accounting treatment*. Physical companies capitalize their investments, including inventory, factories, and warehouses. Service and knowledge companies, in contrast, expense most of their investments, like research and development, training and employee compensation. The result is that it is potentially very misleading to compare the *earnings* of the various business categories, because earnings give a potentially distorted view of cash flow.

Table 2
Characteristics of Various Business Categories

	Physical	**Services**	**Knowledge**
Advantage source	Assets	People	People
Investment trigger	Capacity	Capacity	Obsolescence
Scale economics	Supply-side	Supply-side	Demand-side
Scalability	Low	Mixed	High

Source: CSFB Analysis.

We can now describe the value-creating path for a traditional manufacturing business: evolve up the business category scale. GE Medical Services (GEMS) offers an excellent illustration.

GE Medical Services is a $7.4 billion-in-sales business with high-teens operating profit margins and an attractive 30%-plus return on invested capital. The company's products include X-ray, catscan and MRI equipment. Under the tutelage of Chairman-elect Jeff Immelt, GEMS has done an extraordinary job in harnessing the business category evolution in order to create shareholder value. Here are some details:

- *Physical.* GEMS starts with world-class products. Interestingly, the company's market share in 1990 was about 20%, putting it neck-and-neck with rivals Siemens and Philips. In the subsequent decade, GEMS's market share shot up 14 points, making it 50% larger than its next-closest rival. This market share gain is both the source, and contribution, to a virtuous cycle: more scale means higher investment spending, more market share, more scale, more investment spending, etc. The business has benefited mightily from Six Sigma (introduced in 1995), and lead the rollout of the program within GE.

- *Service.* GEMS views its role as providing solutions to its customers. And since only a fraction of a health-care provider's budget is hardware, broadening the company's focus beyond products to services opened up huge market opportunities. For example, only about 10% of a radiology department's budget goes to capital equipment and depreciation, with the other 90% going to operating expenses—the radiologist, technician and consumables.[3] GEMS not only does multi-vendor service, it extends its Six Sigma practice for the benefit of its customers.

  One example is GEMS work with CHC, a three-hospital system in Kentucky. Application of GE's Six Sigma discipline saved CNC $1.6 million over two years in a department with a $4.6 million budget (35%). By creating value of its customers, GEMS creates value for itself as it instills substantial loyalty. In 2000, GEMS completed 1000 Six-Sigma projects with its customers, saving them a collective $100 million in operating income.

- *Knowledge*. GEMS is using its large user base to leverage into the knowledge category. One example is development and distribution of customer-oriented software. In the fourth quarter of 2000, GEMS estimates that it will offer 32 software products leading to 280 customer downloads. By Q4 2001, it expects 150 software products with over 900 downloads. This business category is tremendously scalable: as GE adds new customers, it spreads its development costs over a larger base while its incremental replication and distribution costs (all digital) are basically nil.

  The products GEMS sells, like other GE businesses, also include remote diagnostics. So GEMS can monitor and benchmark the performance of its installed base around the world. This is a key way the company taps network effects.[4] When GEMS tries to lure a new customer, it isn't GE's hardware versus its competitor's hardware, it's GE's *network* versus its versus its competitor's network. And the larger and better GE gets, the more reason customers have to do business with them.

What does a company need to successfully make this transition? First, the company must have operational excellence in its manufacturing. We see cases where companies want to migrate from one business category to the next, but lack a solid manufacturing base. Second, there must be a flexible mindset. We deal with this idea in more detail in the following section. Finally, a company must be able to manage both tangible capital *and* people. Often, managers only develop skills sets suited for one or the other. But business model evolution requires an ability to manage both successfully.

The New Mindset

The prospects of business category evolution are certainly exciting, but very few companies have been able to embark on the journey. The primary barrier is organizational structure. Most large corporations have long histories, substantial pride, and stacks of established procedures. But business category evolution requires a new mindset in at least three key areas: business definition, employee relations and standard investment rules.

Define Business Differently

Before embracing the benefits of category evolution, a company must be willing to define its business in a fundamentally different way. Here are some examples of these mental shifts:

- *From product-centric to service-centric.* Many manufacturing and resource companies grew up with the attitude that if they created a superior product (either because it was cost-effective or differentiated), everything else would take care of itself. What companies realize today is that customers do not just want products, *they want solutions*. And often providing solutions means evolving into service businesses.

  We provided the example at GE Medical Services and a small hospital group. Another illustration is Enron. At the suggestion of then-consultant, now-CEO Jeff Skilling, Enron went beyond just delivering natural gas and created a “gas bank”, allowing its customers to buy products the way they wanted: fixed priced, low fluctuating price, or a price indexed to a benchmark. This expertise laid the groundwork for Enron to become one of the largest energy traders in the world.[5]

- *From asset-centric to knowledge-centric.* For decades, a world-class manufacturing facility was a badge of honor. And having great manufacturing is still critical today. But it is not enough. Companies must realize that the primary source of value creation is shifting from asset based to knowledge based—or more accurately a balance between the two.

  A shift away from an asset-centric view sets off a focus on the economics of knowledge goods. One of the important ideas is the switch in reinvestment trigger from capacity to obsolescence. Management’s focus on optimization becomes balanced with a focus on adaptation. This requires mental agility.

- *From radial to interactive networks.* In a radial network, a central hub—be it a retail store, distribution center or airline base—reaches out to a number of nodes. Network effects exist, but they are muted: one customer doesn’t really care if another customer is using the good or service. In an interactive network, the nodes get to communicate with one another, and the more participants, the more valuable the service. EnronOnline, the leading e-commerce energy exchange, is a great example. Enron has developed a core competence in creating liquidity (read: tapping network effects) for various markets. The company’s very successful foray into broadband trading is but the most recent high-profile example. Building interactive networks requires a different mindset, but allows for demand-side driven growth.

By defining its business differently, GE Medical Services has dramatically increased its growth and profit potential. In 1990, the size of the business’s market opportunity was about $15 billion. By 2000, the company’s extension further into service- and knowledge-based businesses has increase its market opportunity to $70 billion. Notwithstanding the division’s 10% growth over the past decade (which accelerated to a higher rate as the decade progressed), GEMS's market share of its addressable market is actually lower today (11% versus 19% in 1990), signaling strong future growth prospects.

Treat Employees Differently

Think of an old-fashioned production line: one bicep could be easily swapped for another and show would go on. In fact, managers designed production lines to make the tasks so simple that workers could perform them with little training.

The world today is fundamentally different, as people have become the core of the value creation process. Managers can no longer dictate narrow procedures and policies because they no longer understand the whole system. So they must identify the major initiatives, and let the employees figure out how to best implement them. Here are some keys to the new mindset relative to employees:

- *Decentralize decision-making.* We believe that the best way to think about decentralization is to take a page from the complexity theory book. The idea is that too much determinism and command-and-control creates rigidity in a system, so that when circumstances change (which they do at an ever-faster pace), the system collapses. Not enough structure and the system is not cohesive, it's too disorganized to get anything done effectively. The way to achieve the right balance is to set forth some strong decision rules (e.g., act with integrity, work hard, customer focus, profitability, etc.) and let individuals work collectively to achieve its goals.

  So employees must be "empowered" to create value within the band of the decision rules. Senior management is not dictating what to do at every turn, because there is no way managers can know the local circumstances better than the on-the-ground employees.

- *Increase diversity.* We are not referring to ethnic, racial or gender diversity, although that type of diversity is important. We mean a diversity of ideas, no matter where they come from. A 29-year-old gas trader in Europe, Louise Kitchin, launched EnronOnline. She pulled together an informal team of workers to help build on her idea and within three months of launch it was one of the highest volume e-commerce sites in the world.

  Often, large corporations feel that all of the good ideas must come from the senior management team. Given the rate of change in the business world, this notion is no longer valid—if it ever was.

- *Open internal labor markets.* Bright, talented employees look for a challenge. The degree to which a company is willing to provide an open internal labor market, where there is a match between best and brightest employees and the most exciting opportunities, is important. For example, Enron identified 70 seasoned professionals that would be critical to launching their bandwidth trading business, according to strategy consultant Gary Hamel. Within a week, 64 of the 70 had moved across to the business.

- *Reward the stars, prune the underperformers.* Just as it is critical to develop and reward star employees, it is necessary to crop the underperformers. Visit with the senior management teams of GE, Enron or Capital One, and get a sense of how much time they spend on people development. These companies spend a lot more time thinking about employee development than their competitors do.

Rethink Standard Investment Rules

We are big believers in the importance of adhering to sound finance principles. Yet a new mindset requires looking beyond standard net present value calculations in order to understand the true value potential (or risk) of various actions.[6] Here are some examples:

- *Invest in strategies, not projects.* This is an idea that has been around for some time, but its importance is greater than ever. More specifically, sometimes there are high-return opportunities in a dying business. These are attractive projects but support a dead-end strategy. Likewise, there may be projects that do not pass the net present value test, but support value strategies (often these investments are options laden). In capital allocation, managers must focus on where markets are going, not where they've been.

- *Consider real options.* A real option, which is analogous to a financial option, is the right but not the obligation to make a potentially value creating investment. The core of a real options analysis, a net present value calculation, is the net investment outflows versus the net earnings inflows (think strike price versus stock price). But the value in an option is in its *flexibility.* This flexibility is revealed in two ways: the ability to defer a decision and the uncertainty that exists between now and when a company has to make a decision.

  Given the heightened degree of uncertainty in the business world, we believe options thinking is more-and-more relevant in thinking through the capital allocation process. For more details on real options, see our piece "Get Real" (June 23, 1999).

- *Avoid the innovator's dilemma.* Harvard Business School professor Clay Christensen wrote a best-selling book that shows how and why leading companies fail. His case rests on a few points. First, there is a distinction between "sustaining" and "disruptive" technologies. Sustaining technologies foster improvement—sometimes dramatic improvement—but essentially does things they way they've always been done. A disruptive technology seeks to provide a solution in a new way. Importantly, disruptive technologies often start off with ill-defined markets, prospects and profitability but often emerge as superior economic propositions to the incumbent products. Leading companies tend to ignore disruptive technologies until it's too late.

  Second, he notes that technologies often advance faster than the market demands. This creates vulnerability from a cheaper or different competitive offering. Finally, he notes that disruptive technologies rarely screen well on net present value tests, because the technology and prospects are unproven. Since most managers don't consider option value in their assessments of new technologies, they miss out on potentially valuable innovations.

In our experience, the organizational challenges of business category evolution are huge. It is important to carefully assess management's capacity to lead such a transition. As Gary Hamel says, it's a lot like leading a revolution.

The Economist, in its November 11, 2000 survey of E-Management, hit the nail on the head when it laid out the success factors to be an "e-manager." Their top ten list includes the following:

1. **Speed**. Companies need to move fast—bureaucracy is a killer.
2. **Good people**. Need to attract and retain stars.
3. **Openness**. Standards must be open and relationships with suppliers, partners and consumers must be more transparent than ever.
4. **Collaboration skills**. The Internet creates opportunities for previously disparate teams to work together.

5. **Discipline**. The speed of the Internet does not mean that anything goes, there must be clear standards for interfacing with customers and suppliers.
6. **Good communications**. Articulating strategy both inside and outside the company is more important than ever.
7. **Content-management skills**. Technology encourages information dumps (and information overload). It’s important prune the information while communicating clearly.
8. **Customer focus**. This is the crux of the product to service evolution. Happy customers stick around and their loyalty increases their value.
9. **Knowledge management**. It’s important to build and maintain a reservoir of core knowledge that individuals in the firm can leverage.
10. **Leadership by example**. It’s hard for senior managers to be business category champions unless they immerse themselves in the technology. “Do as I say, not as I do” is not a motivator.

Measuring Improvement

So how do we know if a company is on track to successfully evolve from one business category to the next? Here are some metrics we watch:

- *Customer satisfaction.* Customers want solutions to their problems, and nothing increases satisfaction like solving problems for them. This is the core idea of the business category evolution: companies can create lots of growth and value for themselves if they create growth and value for their customers. But customer satisfaction should not be an end in and of itself. It is a means to an end—sustainable shareholder value creation.
- *Customer retention.* A satisfied customer is loyal, which triggers the value creation that Reichheld quantified. For example, rapid net subscriber growth in a business with high churn is often much less valuable than slow subscriber growth with low churn.
- *Return on invested capital (ROIC) improvement.* As we noted at the outset, the economics of a company that succeeds in business category evolution often gets progressively more attractive as it goes. Knowledge businesses, which are solidified by service and physical bases, offer sharp increases in ROICs. Leaders like GE and Enron have seen strong ROIC improvement—and hence P/E multiple—improvement in recent years.
- *Accelerating growth.* Combine the step-up in addressable market (both due to business opportunities and globalization) with the scalability of knowledge businesses, and there is potential for an acceleration in growth rates. In fact, growth rate and ROIC improvement often occur simultaneously, leading to a sharp stock market revision.

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[1] Alfred Rappaport and Michael J. Mauboussin, *Expectations Investing*, forthcoming Harvard Business School Press, 2001.

[2] Here's a quotation from Jack Welch: "You desperately want to have enough technology in your product so that you don't end up being in a commodity situation. We're taking databases of information we have on operating turbines and engines and instruments that we make, and using them offensively. Now people can buy a service that lets them compare on-line the performance of their machines with similar ones around the world. That customer is going to find out exactly how he's doing all the time vis-a-vis his peer group."

[3] Mark. L. Ratner, "Applying the GE Mantra to Medical Systems," *Windhover.com*, October 2000, pp. 41-48.

[4] Michael J. Mauboussin, Alexander Schay and Stephen G. Kawaja, "Network to Net Worth," *Credit Suisse First Boston Equity Research*, May 11, 2000.

[5] Gary Hamel, *Leading the Revolution* (Boston: Harvard Business School Press, 2000), pp. 211-13.

[6] Net present value (NPV) analysis compares the present value of cash inflows (discounted at the cost of capital) from project with the required outflows. When the inflows exceed the outflows, the project is net present value positive (i.e., it creates shareholder value). When the outflows exceed the inflows, it is net present value negative. In some cases, NPV negative projects may have value if the company can defer the decision to invest. In this case, it is best to value the opportunity as a strategic option.