# Creating and Jumping the S-Curve

***A Strategic Objective of Enterprise Innovation***

*Market-leaders know how to build new businesses better than all others. They are masters at creating the next "S-Curve" using innovation as the core enabler, and consistently transition their companies to new successful businesses before draining the potential out of the existing business.*

*Strategic leaders must understand the S-Curve and use it to anticipate market decline and innovate their way to new growth.*

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Most organizations know how to affect incremental innovation by leveraging the company's core products and services. This approach appears less risky; it assures positive revenue growth as opposed to the discontinuous and radical approach of breakthrough innovation.

In today's world, the lifespan of a product, service, or technology shrinks rapidly, resulting in a loss of competitive power and top-line growth potency. Markets for products, services, and technologies have a saturation point, beyond which the combination of substitutes and peak customer demand results in market stagnation and declining growth. The S-Curve describes how and when management must act to anticipate market decline and innovate their way to new growth.

## TATA

The origins of now famous Tata Group of India can be traced back to 1868. Mr. Jamsetji N. Tata — then a 29-year-old who had learned the ropes of business while working in his father's banking firm — established a trading company in Bombay in the textile industry by converting a bankrupt mill into a cotton mill.

Today The Tata Group comprises over 90 operating companies in seven business sectors: communications and information technology; engineering; materials; services; energy; consumer products and chemicals. The group has operations in more than 80 countries across six continents, and its companies export products and services to 85 countries. It has almost $70 billion in revenue combined. Tata companies have always believed in returning wealth to the society they serve. Two-thirds of the equity of Tata Sons, the Tata promoter company, is held by philanthropic trusts that have created national institutions for science and technology, medical research, social studies and the performing arts. Going forward, Tata is focusing on new technologies and innovation to drive its business in India and internationally. The Nano car is one example, as is the Eka supercomputer, which in 2008 was ranked the world's fourth fastest.

## Sumitomo

Many companies might be fortunate enough to launch one successful venture, but the vast majority will stumble badly when that business begins to mature. In fact, one of the main reasons why so many companies — even large corporations — are here today and gone tomorrow is because they couldn't make the jump to a new, growing business from an existing, slowing one *before* revenues from that core market stalled.

Indeed, past research has repeatedly shown that, once a company's revenues have flattened, the chances for recovery are anything but promising. In one study, two-thirds of stalled companies ended up being acquired, taken private, or forced into bankruptcy. Moreover, once a business has stumbled badly (annual sales growth slowing to less than 2%), it has less than a 10% chance of ever fully recovering.[1] Such sobering statistics raise the crucial question of how companies can avoid such growth stalls in the first place.

Tata started in the pre-industrial period and enjoyed decades of prosperity from its core business before having to branch out. Instead today, in the world of quick imitations, life span of products and services are quickly shrinking.

In most of the 1990s, Sony had dominated the portable music player with its Walkman products and owned one of the top music labels in the world – Sony Music. Did they see Apple, a computer company, swiftly pulling the carpet out underneath?

The average lifespan of companies on the S&P 500 has shrunk drastically, from 75 years in the 1930s to just 15 years in the 2000s.[2]

So what are senior leaders to do?

Industry innovators have figured out how to create, climb and jump to the next S-Curve for sustainable growth. They have a ***Strategy-Driven Innovation mindset.***

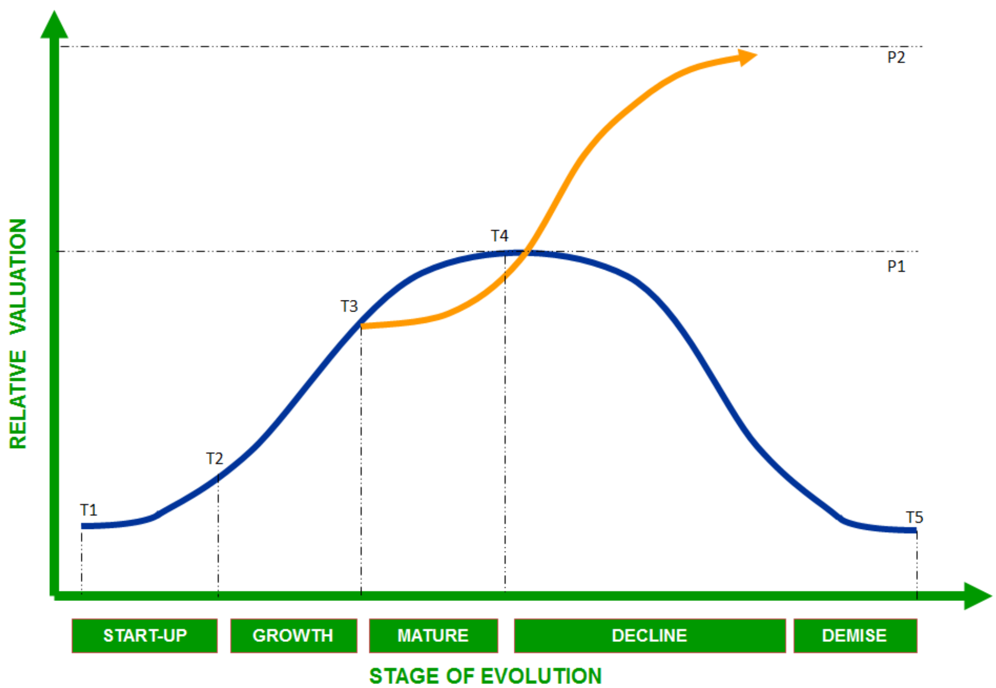


Figure 1 - The S-Curve

## The S-Curve

So what is this S-Curve? Essentially, it is the pattern of revenue growth and eventual valuation growth for all successful companies. They start small with an 'experimentation mindset' (T1-T2) with a good product and a small, but eager client base. In the next phase (T2-T3), revenues grow rapidly as demand swells, eventually starts to peak (T3-T4), and levels off as the market matures (T4). At this point, most businesses enter the next period (T4-T5) and close the doors.

So how do companies avoid death? The answer is by strategically innovating their next S-Curve and jumping on it at the optimal time.

For a typical company, the very last point to begin to define the next S-Curve is at T3.

During the time between T3-T4, margins are declining, customers might be leaving, the market is flattening, and everyone is landing on Commodity Island (competing on price alone). Here, management does not have the tolerance to experiment and apply capital towards new and novel ideas. Risk tolerance is very low and the operating model demands short-term valuation focus. The leadership mindset is *protection* of the current business.

During the T2-T3 period, the mindset required is of 'growth and expansion'. The goal during this period is to invest heavily to capture the biggest share of the market before the competition. A strong and new player might emerge during this time as the dominant market leader by watching the strategic business design and failures of the early adopters in T1-T2. The leadership mindset required for success at this stage is *execution*.

During T1-T2, the company must employ a 'constant *experimentation* mindset'. Here, lots of pilots are underway and daily alterations are made to strategies. The goal of this phase is to stabilize the business model and establish a highly satisfied base of early customers. A tremendous amount of entrepreneurial energy is required from the leaders, as well as a high regard of risk tolerance. It can be very difficult to allocate time to these types of activities as the company grows older and matures.

P1 is the physical limit for every technology, product, brand, business and technology. **Our research shows that the best innovators have figured out their business's physical limit, have mastered the skill to maximize returns while climbing the growth curve, and jump onto the next S-Curve before reaching T4.**

World-class innovators jump the S-Curve by focusing on new customers and markets. They consistently make the leap to another successful business before draining the potential out of the existing business. What this amounts to is not simple greatness, but recurring greatness – the ability to achieve growth repeatedly. These companies are able to create whole new value-platforms and in many cases redefine the sector itself.

This may sound very simple, yet our research shows the majority of companies since 1930s continue to *fail* to jump the S-Curve. Why is that?

One of the secrets lies in understanding factors that create uncertainty in today's market. There are hidden gravitational forces permeating every part of the organization:

*a)* Market pressures: competition, financial performance, government policies, consumer social economic factors
*b)* Technological change: new technologies, lack of standards, change in suppliers and partners
*c)* Leadership irregularities: changing leaders, changing financial performance, changing priorities, changing organizational structure
*d)* Capability and talent erosion: employee maturity and decline is a leading indicator of a company's financial performance and serves as an early warning system, signaling the time to prepare for the jump to the next S-Curve.

High-performance businesses manage multiple S-Curves simultaneously. They accomplish this by making strategy an evolving process, rather than a one-off event. These companies also refresh their leadership well before it is necessary. They make themselves incubators of talent, ensuring they have the entrepreneurial capability needed to climb the next S-Curve.

It is important to note that T3 is the last point in time that you should be building the next S-Curve. After this point, it is highly improbable that you will be successful at launching a new organic S-Curve business. Generally, companies (or products) which reach T3 have only a ten percent chance of survival beyond T4. About ninety percent of such companies (or products) do not survive once they are between T3 and T4.

### Qualities of S-Curve Hiker

TATA, and many others, have demonstrated mastery in hiking the S-Curve successfully. What may not be so obvious is what the high performers do before and during that climb.

These world-class innovators seem to have clarity about "Big Market Opportunities" (BMOs) and tend to limit chasing small opportunities that might create waste. They are precise in limiting time and resource allocation on small or uncertain opportunities. Instead, they focus on identifying large market insights. Novo Nordisk, for example, was able to create a huge portfolio of opportunities by rightly recognizing that the growing affluence in China and other developing regions would result in a dramatic long-term increase in the global incidence of diabetes.

A key here is that the insight must be "big enough" for a particular organization. Consider how two companies — Samsung and Ovideon Inc. — acted on the advancements in plasma and liquid crystal display (LCD) technologies. These enabled the development of flat-panel TVs with crystal-clear pictures that would entice viewers to replace their conventional sets. Samsung, the Korean consumer electronics giant, had to win big, so it bet big. It manufactured its own TVs in order to control both quality and costs for its high-volume operations and, so far, the huge investment has paid off. In 2009, the company controlled about 17 percent of the total market, shipping more than 27 million LCD models and more than three million plasma sets. In comparison, Ovideon's share of the market is minuscule, but that's just fine with the start-up from Aurora, Illinois. Ovideon doesn't need to move huge volumes because it outsources its manufacturing and concentrates on small market niches, such as applications in offices and public spaces like airports. So, for both Samsung and Ovideon, flat-panel TVs have been a BMO in their own unique ways.

Sometimes a BMO arises simply from a company's redefining a mature market. In developing the Wii, a popular videogame console, Nintendo wisely foresaw that the potential market could be far larger than just adolescent boys and young men who were buying Microsoft's Xbox and Sony's PlayStation. Instead, Nintendo re-imagined the market to include almost everyone, including senior citizens. So, instead of concentrating on flashy graphics and snazzy features to compete against Microsoft and Sony, it focused on ease of use and good, old-fashioned, fun. One of the company's hits is a Bowling simulator in which the user rolls a virtual Bowling Ball on the screen by swinging the Wii controller. Thanks to such products, the videogame market has exploded across demographic lines: 40% of users are now adult women, and a quarter of U.S. consumers over the age of 50 play.

### Endurance Management

After identifying a particular BMO, world-class innovators master the pace and timing of hiking their S-curve. Instead of rushing to market to be first, they spend the necessary time to build essential capabilities before scaling their operations, and they plan for success from the start, often focusing on details such as delivery, production and channel strategy early on. The key here is that they understand exactly how they must be distinctive in order to create the value that the market demands. They know the ideal level of improvement (Endurance Management) that the market requires in order to get customers to purchase the new product or service year after year. Additionally they know how to optimize business operations just enough to meet the new demands - just in time. Average- and low-performance companies, on the other hand, completely underestimate that balance.

Consider People Express, which built a powerful business model by doing almost everything differently – all seats on a flight were the same price; pilots helped load baggage; and flight attendants checked in passengers. But as People Express grew rapidly, it started to lose that distinctiveness when it began competing directly on routes with established carriers (leading to destructive fare wars) and hiring faster than it could train (resulting in such bad customer service that disgruntled consumers tagged it with the derisive nickname “People Distress”). Eventually, worker morale took a hit, and the airline could no longer manage the huge debt that it had assumed in order to expand so quickly. Sadly, People Express was sold just six years after its promising launch.

In contrast, high performers remain committed to maintaining their distinctive capabilities. They steadfastly refuse to scale too quickly; they replicate their business in a repeatable way; and from the start they remain focused on mastering access to customer and market channels. Like People Express, Southwest Airlines was also founded as a discount airline, but Southwest has grown its business in a decidedly different manner. It has, for example, maintained its point-to-point route system (eschewing the traditional hub-and-spoke model of the legacy airlines), relying more on secondary airports like Fort Lauderdale-Hollywood International Airport rather than primary hubs like Miami International Airport. And Southwest has never wavered from its high standards of hiring only those employees with certain qualities, such as a commitment to customer service and a fundamental belief that everyone should be treated with dignity and respect.

### Intrapreneurs

Of course, the right employees are at the core of any winning organization, and world-class innovators focus on attracting and retaining a certain type of individual who is a natural innovator and entrepreneur (we call them intrapreneurs). These highly talented individuals are at the top of their professions (the best designers, analysts, or programmers in the software industry, for example). These intrapreneurs are naturally inquisitive, students of life, and take their careers very seriously. For them, work is a playground as well as source of personal pride. Through such intrapreneurial employees, these companies have built a climate and culture of relentless improvement throughout the workforce. This has resulted in the creation of successful new businesses, especially during low economic periods.

## Jumping an S-Curve

Operating between T3-T4 means the company is enjoying its greatest success. It is during this stage that the company must find its next S-curve and begin the jump while harvesting maximum value from the current S-Curve.

How does the company do that? There are two important elements that enable that process: leadership courage and fluid and flawless strategy.

### Fluid and Flawless Strategy

Global innovators know that you can’t build a five or a ten year strategic plan any longer. Such traditional planning processes do not work in today fluid markets. Strategy development is a fluid process, not dependent on the internal forces of the status quo that might game the system. Instead, they have fine-tuned the process to be more and, paradoxically, episodic based on dynamic conditions of the markets as they change year-after-year. This doesn't mean they ignore the discipline of using an annual process, but rather are driven by a permanent commitment to more fluid strategy development and execution.

One often repeated practice used by world-class innovators during the strategy development process is to identify deep insights about unmet needs and, more importantly, emerging needs of their current and potential customers. For example, when 3M was investigating how to decrease the infection rate for surgical patients, it didn't interview doctors and nurses at a typical hospital but at mobile army surgical hospital (MASH) units.

### Leadership Courage

World-class innovators have an uncanny ability to evolve their top teams early and often to ensure that their leaders at the top are always qualified for the challenges ahead. After only seven years at the helm of Adobe Systems, CEO Bruce Chizen, who was just 52 years old at the time, handed the reins to his long-time deputy to navigate the challenges of becoming a major force in digital media, a transformation that Chizen had guided. The important thing here is that high performers do not change up their top teams when their core business has slowed, but way before that, when the distinctiveness of the company's capabilities has begun to wane.

Intel, the semiconductor manufacturer, has seen its CEO mantle pass through five executives – Robert Noyce (1968 to 1975), Gordon Moore (1975 to 1987), Andy Grove (1987 to 1998), Craig Barrett (1998 to 2005), and Paul Otellini (2005 to present). None of those transitions were needed because the company was in dire straits. In fact, when Grove stepped down from the top spot, the company's stock was soaring and he was arguably at the top of his game. But he made way for Barrett, who then implemented a strategy for growing Intel's business through product extensions. That strategy ultimately had mixed results, but the point is that Barrett was trying to evolve Intel's business in ways that Grove hadn't. Grove, himself, had successfully orchestrated Intel's move away from memory chips to focus on microprocessors, a shift that established the company as a global high-tech leader.

Like Intel, many other global innovators have done a wonderful job at flawless succession planning. They have made the necessary investments to groom new managerial talent so that they always have the right balance of managerial and entrepreneurial skill needed to jump S-curves. At General Electric, the executive succession process begins at the business unit level, with board directors regularly tracking top 100 employees to ensure a deep bench for top positions.

Additionally, these companies understand they need a plethora of talented people and great intrapreneurs in order to jump S-curves. For normal operations, they have developed an adequate supply of managers, designers, engineers, salespeople, and marketers. On top of this, they add the talent necessary to start and grow new businesses and initiatives.

There is one final observation worthy of mention about the world-class innovators. These successful companies are highly discontent during the peak periods. They know that past success does not guarantee future glory. They know they can become the next Kodak, Digital Equipment, or Novell - companies that enjoyed huge success for decades but easily stumbled and died. How today's darlings such as Google, Apple, Reliance, and Facebook will fare in the future remains to be seen, but what is known is that the fundamentals of business – the climbing and jumping of S-curves — will continue separating those businesses that lead their industries from those that lag.

## Discussion Questions

- *Where do your senior leaders perceive the company is on the growth curve? What insights can be gained from the differing perspectives?*
- *What business lines are actively jumping the S-Curve?  What can be learned from their experience?*
- *What capabilities need to be developed to trigger S-Curve transformation in other business lines?  How will you develop that innovation leadership capability?*

***The DeSai Group*** is an *Innovation Management* consulting firm, helping clients build sustainable innovation capabilities for continuous growth. *Using our Strategy Driven Innovation*[SM] *(SDI) Execution Methodology* we help clients build and sustain innovative organizational climates and cultures. For more information, log onto www.desai.com/resources and download our white paper "Mastering Innovation – Roadmap to Sustainable Value Creation" along with many other articles.

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