Innovation Lifecycles

Leveraging market, technology, and organizational S-curves to drive breakthrough growth

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All too often, companies' growth agendas rest upon tried and true strategies, tactics and other best practices that are "proven" to drive results. And why shouldn't they be? They've worked in the past and are often associated with the success of the core business. The problem is that these strategies and tactics can often be misaligned to the unique market, technology, or organizational requirements for realizing future opportunities and breakthrough innovations.

Through understanding innovation lifecycles, it becomes possible to address the following questions:

- Which products, services and technologies are most vulnerable to competitive disruption?

- Where are the greatest opportunities for breakthrough innovation and growth?

- What specific growth strategies are appropriate across the portfolio?

- What organizational strategies – leadership, structure, processes, and metrics – best support businesses, products, and services at different points across their maturity?
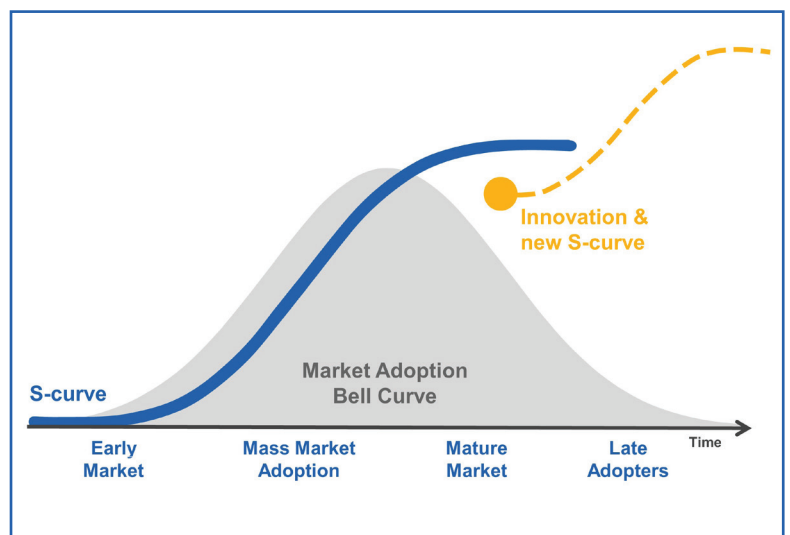
S-curves

S-curves visually depict how a product, service, technology or business progresses and evolves over time. S-curves can be viewed on an incremental level to map product evolutions and opportunities, or on a macro scale to describe the evolution of businesses and industries.

On a product, service, or technology level, S-curves are usually connected to "market adoption" since the beginning of a curve relates to the birth of a new market opportunity, while the end of the curve represents the death, or obsolescence of the product, service, or technology in the market. Usually the end of one S-curve marks the emergence of a new S-curve – the one that displaces it (e.g., video cassette tapes versus DVDs, word processors versus computers, etc.).

Some industries and technologies move along S-curves faster than others. High tech S-curves tend to cycle more quickly while certain consumer products move more slowly.

Lifecycles and Market Adoption

The Lifecycle model suggests that market adoption reflects a bell curve that tracks to customer/consumer adoption of a new technology, product or service. First come the "early adopters" who are interested in testing out and trying something new. After the early adopters come targeted market beachheads that represent segments with specific needs that become reference points for other segments. The technology then moves from custom solutions for specific segments to mass manufacturing and distribution of standardized products for the mass market. From there, the market matures. This is when late adopters who are adverse to "risk" begin purchasing the tried and true solutions. Competitiveness becomes almost entirely based on incremental improvements and economies of scale.

Early Market — Mass Market Adoption — Mature Market — Late Adopters

S-curve / Innovation & new S-curve / Market Adoption Bell Curve / Time

A simple example of these dynamics comes from the "typewriter" industry. The advent of the manual typewriter was a true breakthrough. But then came the IBM Selectric from "outside" the industry, displacing the manual technology and creating a new "electric typewriter" industry. The word processor followed, driving IBM's business into obsolescence. And then of course the computer, Microsoft's Word and desktop printing represents the latest S-curve. This begs the question as to what will come next.

Breakthrough innovations that represent bold new S-curves are rarely created and driven by industry incumbents. For example, of the ten leaders in the semiconductor industry in 1955, only two were left in 1975 - General Electric & RCA. And in 1952 there were 85 US television manufacturers. Today there is one - Zenith.

By understanding where your company, businesses, products, services and technologies fall on the lifecycle, you can work with these patterns to avoid obsolescence and leverage them to your strategic advantage.

Failure Points

So why do organizations fail to identify emerging S-Curve threats and opportunities, let alone transition from one curve to the next? The causes are simple. Getting it right is challenging.

The top reasons for missing S-Curve shifts include:

- Not focusing on or investing in the new technologies or applications
- Not effectively defending an existing business and technology
- Not effectively creating new markets and technologies to recreate the business
- Cultural inertia that hinders the ability to play two games at once (e.g., managing the existing business while investing in and driving the new)
- Lack of Industry Foresight, Customer Insight, or the organizational support and processes (Strategic Alignment) required for superior execution

Lifecycle Innovation Strategies

For mature technologies, products, or services, incremental innovation can help extend life and drive differentiation and growth. Incremental innovation is not a new business creation strategy per se, but a method of sustaining growth in the core business by:

- Adding minor features and functionality to create greater variation and options
- Tweaking existing technology to create the "next iteration" of products

Incremental innovation thrives in structured environments characterized by continuous product and process improvement.

While incremental innovation is important to sustaining revenue growth within an S-Curve, jumping S-Curves involves creating or driving disruptive innovations. Bold and less predictable, these strategies can include:

- Creating new-to-the-world customer value (e.g., cell phones, microwaves, televisions)
- Displacing existing ways of delivering value (digital photography vs. silver halide, inkjet and LaserJet printers vs. typewriters)

As a growth strategy, such disruptive innovation can focus on cannibalizing an existing business or creating new businesses altogether.

By understanding the innovation dynamics within your existing market space, you can:

- Know when incremental vs. discontinuous innovation is required
- Selectively cannibalize existing products and services to avoid obsolescence and enable greater growth
- Consciously manage organizational processes, metrics and alignment to support the kind of innovation that will lead to growth

Organizational Strategies

Leadership within organizations that possess a spectrum of products, services and technologies across the lifecycle can be a formidable challenge. The very structures and processes that drive success in mature businesses (e.g., highly standardized and efficient) are often inflexible and lead to failure in emerging businesses. It is critical to align the right structures, processes, metrics, leadership and people to the maturity level of the respective business unit, function, or team.

Organizations that reside at the beginning and ends of the S-Curve must be managed differently from those squarely in the middle. Mature businesses require optimization. Emerging ventures – and mature businesses in need of reinvention – require a different operating model, one characterized by experimentation, flexibility and learning.

Some of the critical differences in organizational strategy and culture typically include:
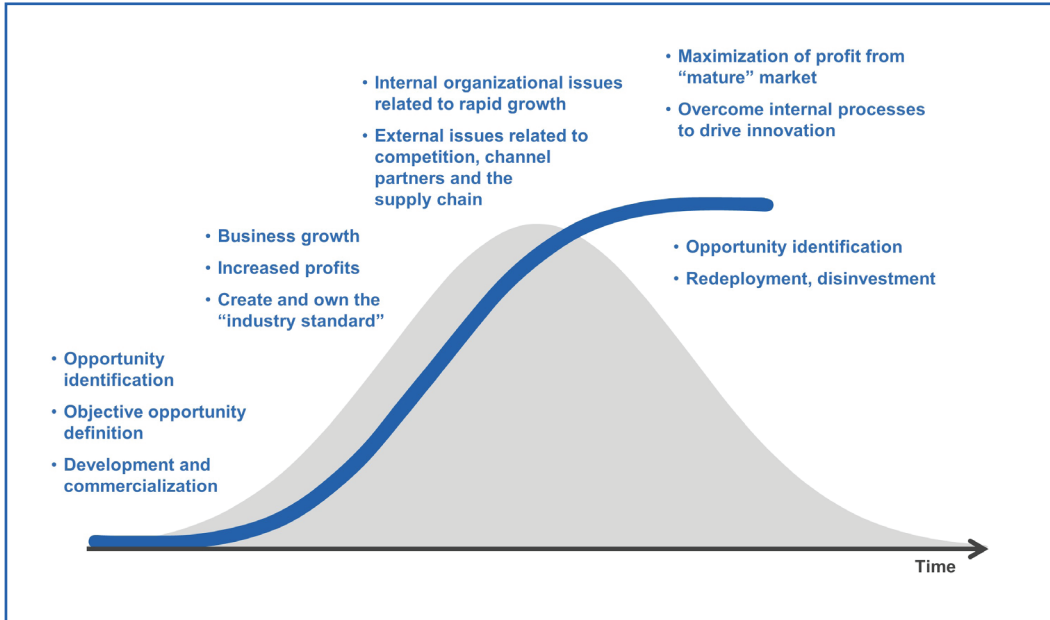
Optimization Focused (Mature Businesses)

- Meet current customer needs
- Exploit what you know
- Analyze and plan
- Stick to your knitting
- Live by process and structure

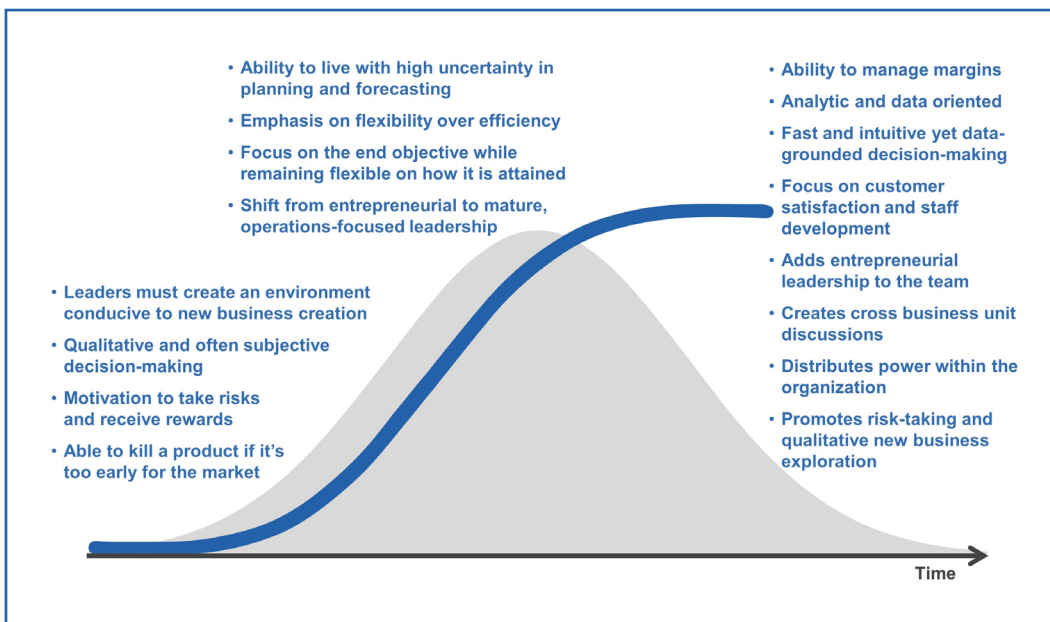**Innovation Focused (Emerging Businesses)**

- Anticipate future customer needs
- Explore what you don't know
- Hypothesize and learn
- Reward experimentation
- Allow freedom and flexibility

The critical message is this: organizational requirements for success differ across each lifecycle phase. With this understanding, it becomes possible to intentionally and strategically design organizations to manage portfolios of businesses (or product lines) in ways that minimize the problems that arise from a "one size fits all" approach. A few examples include:
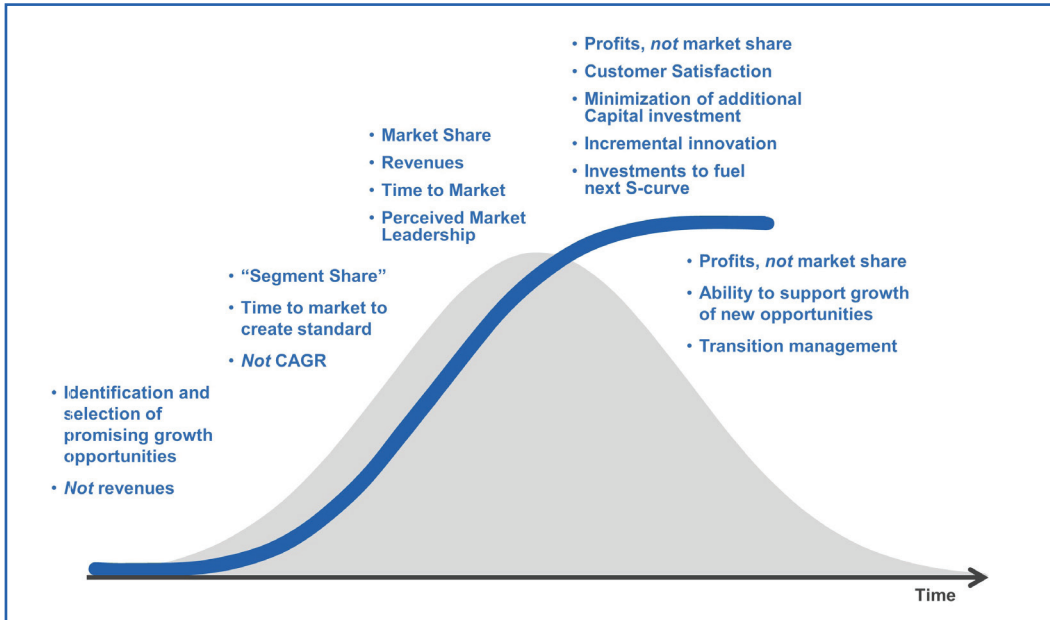
Business challenges across the lifecycle:

- Internal organizational issues related to rapid growth
- External issues related to competition, channel partners and the supply chain

- Maximization of profit from "mature" market
- Overcome internal processes to drive innovation

- Business growth
- Increased profits
- Create and own the "industry standard"

- Opportunity identification
- Redeployment, disinvestment

- Opportunity identification
- Objective opportunity definition
- Development and commercialization

Time

Leadership across the lifecycle:

- Ability to live with high uncertainty in planning and forecasting
- Emphasis on flexibility over efficiency
- Focus on the end objective while remaining flexible on how it is attained
- Shift from entrepreneurial to mature, operations-focused leadership

- Ability to manage margins
- Analytic and data oriented
- Fast and intuitive yet data-grounded decision-making
- Focus on customer satisfaction and staff development
- Adds entrepreneurial leadership to the team
- Creates cross business unit discussions
- Distributes power within the organization
- Promotes risk-taking and qualitative new business exploration

- Leaders must create an environment conducive to new business creation
- Qualitative and often subjective decision-making
- Motivation to take risks and receive rewards
- Able to kill a product if it's too early for the market

Time

Metrics across the lifecycle:

Structures, processes, sales and marketing, supply chain, culture, HR and people development should also evolve and shift according to the maturity of the business. Through taking a lifecycle approach, it becomes possible to define opportunities that balance the innovation portfolio and foster the appropriate organizational strategies to support the business' evolution to its next S-curve.

About InnovationPoint

InnovationPoint is a boutique innovation consulting firm focused on the practice of Strategic Innovation. We blend non-traditional and conventional consulting methodologies to deliver business breakthroughs that grow the topline – through opportunity identification, new business creation, strategy development and new product, service and category innovation. Our clients include Visa, Disney, Cisco, NBCUniversal, Colgate-Palmolive, Ascension Health, Hershey's, Red Bull, Frito-Lay, PepsiCo, Philips, Medtronic and other market leaders.