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Lynda M. Applegate, Series Editor

READING + VIDEO

Becoming an Entrepreneurial Leader

LYNDA M. APPLEGATE
Harvard Business School

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Table of Contents

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Lynda M. Applegate, Baker Foundation Professor and Sarofim-Rock Professor of Business Administration, Emerita, Harvard Business School, developed this Core Reading with the assistance of writer Carole Carlson.

1 INTRODUCTION

> *At one extreme is what we might call the promoter . . . , who feels confident of his or her ability to seize opportunity . . . expects surprises and expects not only to adjust to change but also to capitalize on it and make things happen. At the other extreme is the trustee . . . , who feels threatened by change and the unknown and whose inclination is to rely on the status quo. To the trustee . . . , predictability fosters effective management of existing resources while unpredictability endangers them. Most people, of course, fall somewhere between the extremes.*
>
> —Howard H. Stevenson and David E. Gumpert, "The Heart of Entrepreneurship," 1985

In 1983 Harvard Business School professor Howard Stevenson, a pioneer in the field of entrepreneurship research, defined the work of the entrepreneur as the relentless pursuit of opportunity without regard to the resources currently controlled.[1] Traditional managers of large, established firms often play trustee roles, safeguarding current resources, whereas the entrepreneur, Stevenson explained, is more of a promoter, who focuses on identifying and pursuing opportunities.

Many of us hear the word *entrepreneur* and think of the brave individual who forgoes a career in an established organization to pursue a new and potentially risky venture. But as Stevenson suggests, entrepreneurship can also be thought of more broadly as a distinctive style of business leadership. Indeed, Stevenson's definition of entrepreneurial leadership, with its focus on creating and seizing opportunity, can be a foundation for understanding how to build, organize, and lead successful, innovative businesses of any age or size.[2]

As Stevenson shows us, and as we see throughout the *Core Curriculum in Entrepreneurship* series, entrepreneurship is a way of thinking, reasoning, and leading. Successful entrepreneurs look ahead and identify a creative way to address a marketplace problem or need. They formulate a focused entry strategy and an even more focused set of experiments to test it. Once the business model has been refined and the business gains traction in the marketplace, successful entrepreneurial leaders know how to identify the resources (capital, people, partners, and expertise) needed to grow their business and exploit the full potential of the opportunity. Moreover, they recognize that the best approach to growth might be an acquisition by an established firm and that the growth phase might best be led by different individuals. While Stevenson's original focus was on entrepreneurial leaders who are launching independent new ventures,

entrepreneurial leaders are needed in all types of organizations, including large, established firms, nonprofit organizations, and family-owned businesses.

What kind of person is best suited to entrepreneurship? There's no easy answer to that question. In fact, research aimed at describing the traits of entrepreneurs has failed to define a single personality profile. In a comprehensive review of that literature, Professor Jeffry Timmons found that "there is no evidence of an ideal entrepreneurial personality. Great entrepreneurs can be gregarious or low-key, analytical or intuitive, charismatic or boring, good with details or terrible, delegators or control freaks. What you need is a capacity to execute innovation."[3] It's important to note that evidence shows that entrepreneurial activities and the entrepreneurial mindset can be learned.[4] Apprenticeships, as Timmons adds, often help. Aspiring entrepreneurs, he wrote, "do not leave acquisition of experience to accident or osmosis."[5] Instead, to develop their entrepreneurial capabilities, they actively seek experiences, education, and mentors, advisers, cofounders, and other partners. To learn more, see "Designing an Entrepreneurial Apprenticeship" in *Core Reading: Recognizing and Shaping Opportunities* (HBP No. 8056).

Decades of research suggest that it is more important to study what entrepreneurs do than attempt to identify common characteristics or personality types. But we will see in this reading that different types of entrepreneurial leadership are needed at different times in the life cycle of a business and that particular types of entrepreneurs are often best suited to pursue specific types of opportunities. For example, some entrepreneurs thrive in situations of high uncertainty and chaos while launching a new venture, but they choose to leave to launch another business when the startup shifts to growth. Some scientists or engineers enjoy being part of the team that commercializes their inventions but are then eager to move on to the next discovery. Other entrepreneurs—and their families—look for a more stable employment situation because they are unable to deal with the constant "two steps forward, one step back" nature of the entrepreneurial process and the uncertainty about when—and if—the next paycheck will appear. Still other entrepreneurs found a company so they can be their own boss or work in a profession they love, but they have no desire to grow their venture into a large business. Finally, some entrepreneurs, a rare breed, continue to lead their companies as they grow—and even after they have become Fortune 100 firms.

We focus in this reading on entrepreneurs who found their own firms. The lessons they teach us, however, can be valuable for leaders in many organizational settings. These lessons can help managers in established organizations who want to become promoters, identifying and exploiting new opportunities while remaining mindful of their trustee responsibilities.

We begin by discussing the behaviors, decisions, and roles of entrepreneurial leaders as they pursue opportunities. As we explore what entrepreneurs do, we'll consider both the activities and leadership skills required in the life cycle of an innovative business and those called for in pursuing different kinds of entrepreneurial opportunities. Along the way, we'll meet several entrepreneurs whose relentless pursuit of opportunity offers many valuable lessons. We end by considering founder CEOs, such as Amazon's Jeff Bezos, who continue to run their businesses even after those ventures have become large, established companies, and we'll look at the teams they build, which can both promote innovation and ensure the disciplined execution needed to scale a *high-growth business*.

This reading includes two supplements. Supplement 3.1, Creative Destruction in the Computer Industry, provides an overview of the process through which entrepreneurs disrupt established industries and organizations and examines the disruption of the computer industry. The first disruption was the introduction of the personal computer (PC), which disrupted the dominant mainframe computer industry of the 1960s and 1970s. The second was the introduction of mobile devices, which disrupted the disrupter, the PC industry. The third was the introduction of the global internet. This not only provided a common platform for connecting people and businesses to global information and analytics, it also connected them to the communication and collaboration tools that enabled entrepreneurial leaders to create platform ecosystems—further disrupting established industries and organizations.

Supplement 3.2, An Entrepreneur's Toolkit, provides links to a set of tools that can guide entrepreneurs as they identify and pursue entrepreneurial opportunities.

2 ESSENTIAL READING

2.1 Leading the Innovation Life Cycle

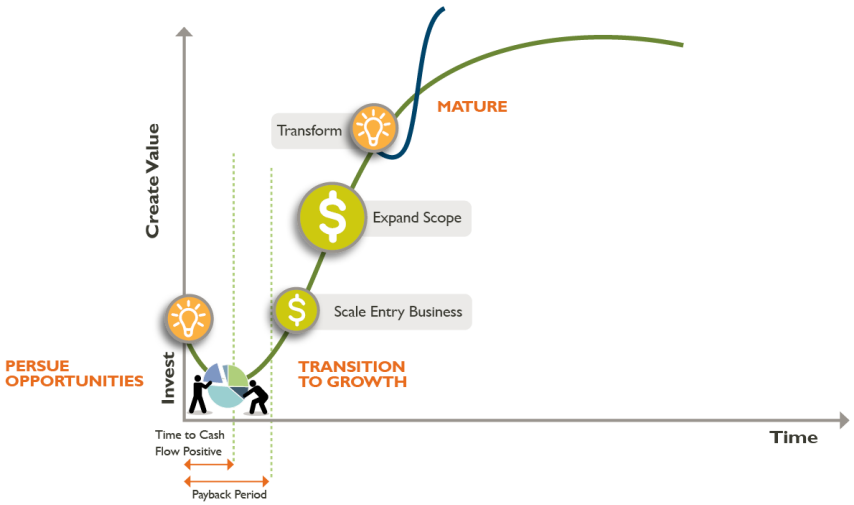
> *Many successful entrepreneurs match their colleagues' initiative and take-charge attitude, determination to persevere, resiliency and adaptability; importantly, it is what they do that matters most.*
>
> —Stephen Spinelli Jr. and Robert Adams, *New Venture Creation*, 2012[6]

In his book *The Founder's Dilemmas*, Noam Wasserman explains, "Founding a startup can seem like a fragmented, even chaotic, way of life. Perhaps no business pursuit is messier than creating an organization from scratch."[7] Yet many valuable lessons can arise from studying these messy details.

2.1.1 Mapping the Innovation Life Cycle

One way to think about what entrepreneurs do is to consider the life cycle of an innovative new business, which includes two key phases of entrepreneurial activity. In this section, we discuss each phase in turn, but in practice, they do not occur sequentially. Instead, entrepreneurs move back and forth within and between them. **Exhibit 1** maps these phases on the cash flow curve of a typical successful venture.

EXHIBIT 1 Leading the Innovation Life Cycle



Source: Adapted from Lynda M. Applegate, "Jumpstarting Entrepreneurial Innovation," HBS No. 1841C (Boston: Harvard Business School, 2008).

During the first phase, Pursue Opportunities, entrepreneurs explore their motivations for becoming an entrepreneur; identify opportunities they wish to pursue; and experiment to clarify assumptions, reduce uncertainty, and refine the business model. During the *Transition to Growth* phase, entrepreneurs ensure that their businesses gain traction in the marketplace initially by scaling the entry business and then expanding the scope by entering new products or markets as growth options. As they make decisions and take action, entrepreneurs test their hypotheses and assumptions about the opportunities they are pursuing. They then use what they learn to adapt and refine their venture and to define the next set of experiments and activities they must perform and decisions they must make to turn their venture into a sustainable business or to transform the venture in a way that begins the cycle anew. **Exhibit 2** shows the key activities and decisions associated with each phase of the innovation life cycle.

EXHIBIT 2 Key Entrepreneurial Activities and Decisions

PURSUE OPPORTUNITIES

EXPLORE

Key Activities

- Analyze personal motivations and capabilities as an entrepreneurial leader.
- Scan the environment for disruptors and trends that signal potential opportunities.
- Conduct a back-of-the-envelope assessment to select an opportunity to pursue and build a founding team.
- Craft the business model and cash flow forecasts.
- Clarify key assumptions, uncertainty, and risk.
- Design early experiments to reduce uncertainty.
- Develop a business plan and a compelling pitch.

Key Decisions

- Do I want to be an entrepreneur?
- Is this the right opportunity to pursue?
- Can I gain commitments and assemble resources?
- Can I define testable hypotheses and experiments that will help me reduce uncertainty and manage risk as I engage early customers?

EXPERIMENT

Key Activities

- Develop market-entry solutions using a minimum viable product approach, if possible.
- Assemble resources, engage early adopter customers and partners, and launch experiments
- Assess progress, refine the business model, and manage risk.

Key Decisions

- Have I reduced key areas of uncertainty and risk and refined the entry business model?
- Am I gaining traction with early adopters? If not, should I continue experimentation or stop the project?
- Is this a sustainable, independent business, or is it best incorporated within an existing business?
- Can I gain commitments of key stakeholders, investors, and resources needed to transition to growth?
- Are changes in leadership, organization, and governance models needed to transition to growth?

TRANSITION TO GROWTH

SCALE THE ENTRY BUSINESS

Key Activities

- Achieve traction and momentum with early adopters and early mainstream customers.
- Define a sustainable growth strategy; secure commitments and resources; and invest in building the operating platform, organization, and governance needed to transition to growth.

Key Decisions

- Is the market adopting at a price and volume that is generating profits as the business scales?
- Are my margins improving as my revenues increase?

EXPAND SCOPE

Key Activities

- Continue scale the entry product/market position as you also exploit growth options while ensuring operating platform scalability.
- Expand into new markets with the same product, new products to the same market.

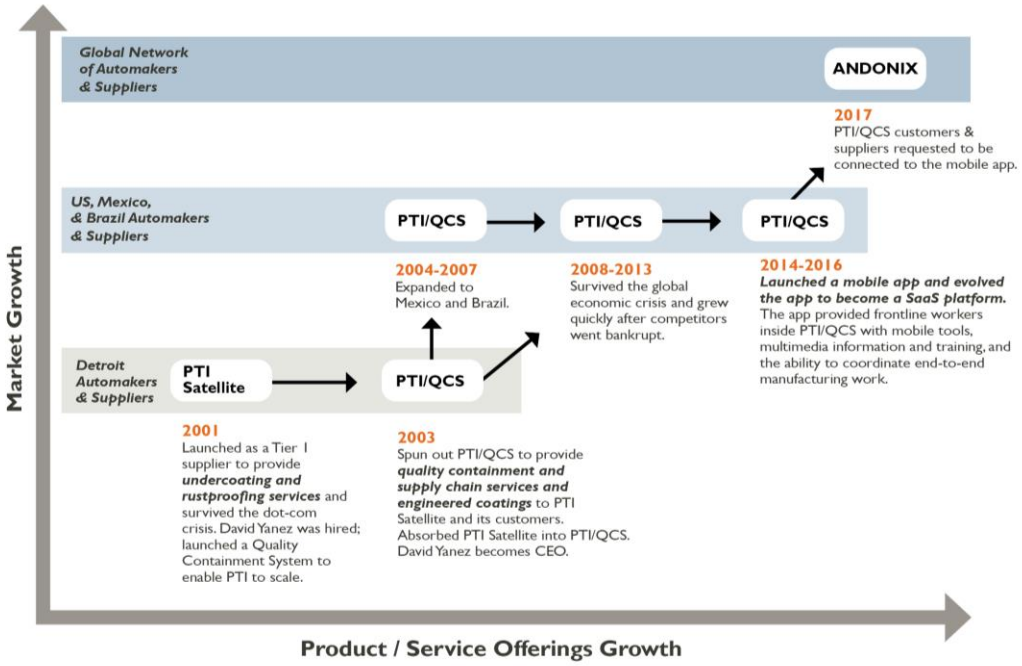
Key Decisions

- Do I have the leadership, resources, capabilities, and controls needed to balance innovation and manage complexity as the company grows?
- Are my margins improving as launch multiple "Lines of Business"?
- Have I embedded the innovation process into our strategic planning and execution systems so that I can pursue new opportunities to transform before the business matures?

Source: Adapted from Lynda M. Applegate, "Jumpstarting Entrepreneurial Innovation," No. 1841C (Boston: Harvard Business School, 2008).

As mentioned, progress through these phases is not a straight path. Instead, the key activities and decisions are often interconnected, and the insights gained in one phase prompt refinements in others. Along the way, entrepreneurs may discover fatal flaws in the business model and decide to modify or abandon the project. These activities and decisions build a strong learning base for the entrepreneur. The entrepreneurial journey of David Yanez provides an excellent example of the opportunities that he pursued between 2001, when he graduated from college in Mexico City, and the launch of his new venture, Andonix, in Detroit in 2017 (see **Exhibit 3**).

EXHIBIT 3 David Yanez's Entrepreneurial Journey: 2001–2017



Adapted from Lynda M. Applegate and Ankita Panda, "Andonix: Building Businesses in Turbulent Times," HBS No. 822-130 (Boston: Harvard Business School, 2022).

The career trajectory of Jeff Bezos also provides a very familiar story of an entrepreneurial journey. From the launch of Amazon on July 5, 1994, until Bezos stepped down as CEO on July 5, 2021, this iconic entrepreneur built one of the most successful companies of the early 21st century. The Amazon story enables us to examine the series of actions and decisions Bezos took as he led the innovation life cycle.

2.1.2 Jeff Bezos: Building Amazon

In 1986 Jeff Bezos graduated summa cum laude from Princeton University with a bachelor's degree in computer science and electrical engineering.[8] A love of engineering ran in the family—Bezos's father was an engineer at Exxon, and his grandfather was a regional director of the US Atomic Energy Commission. It is reported that Bezos showed his engineering aptitude, creativity, and determination early when he attempted to dismantle his crib as a toddler to force his parents to get rid of it. He later took over the family garage as a laboratory for building gadgets, and he rigged an alarm on his bedroom door to alert him if his siblings tried to enter.[9] In high school, Bezos launched his first entrepreneurial venture, the Dream Institute, a summer camp where elementary school children could learn to love computers and engineering as much as he did.

After graduation, Bezos went to work in New York City as an analyst for the Wall Street investment firm D. E. Shaw and quickly became its youngest vice president. It was his work at D. E. Shaw that led to the idea that eventually became Amazon. His role at the firm was to identify investment opportunities in the technology industry. As he cast about for the next big thing that would signal the emergence of a hot market opportunity, Bezos spotted several converging technology, regulatory, and social trends. First, during the early 1990s, he saw that PCs were migrating from the workplace to the home and that home PC users were increasingly subscribing to proprietary online information services, such as AOL and Prodigy, where they could access information, communicate with family and friends, and even shop. In addition, he noticed several important technologies that had been developed in research labs around the world were being commercialized. For example, the Internet, which was invented and initially developed for use by the US Department of Defense, was being privatized. The World Wide Web, invented by Tim Berners-Lee and colleagues at CERN, a research lab in Switzerland near the French border, had been made available for commercial and personal use. Mosaic, one of the first graphical web browsers, was being commercialized in a newly launched company called Netscape by some of the researchers who originally invented it at the University of Illinois at Urbana-Champaign.

Using the entrepreneurial skills he had begun to hone as a child and in school, Bezos recognized that these trends signaled a potentially significant change in the way people could use computers to buy and sell online. This sparked the idea for an e-commerce marketplace, which Bezos named Amazon.com. His position as a technology analyst afforded Bezos the opportunity to network with people developing new technologies, and his analytical prowess enabled him to develop insights about potential new businesses. As he examined different categories of products that could be sold over the Internet, Bezos determined

that selling books allowed him to build what later theorists would call an ideal ***minimum viable product (MVP)*** for testing his concept. An *MVP* is a version of a product or service that offers just enough functionality to test it with users in the marketplace, clarifying an entrepreneur's assumptions about users' needs and solutions that can meet those needs. (Learn more about the benefits of using an MVP during the launch of an innovation in *Core Reading: Experimenting in the Entrepreneurial Venture* [HBP No. 8077].)

Amazon's MVP was an online bookstore that was launched in 1995 as an experiment to test Bezos's idea for an e-commerce site that would eventually grow to become a place where people could buy and sell online. Bezos attracted the attention of Netscape, which had recently launched its browser and was looking for interesting sites to which its users could link. Amazon's early success reaching customers also attracted an investment from John Doerr, the legendary venture capitalist partner at Kleiner Perkins Caufield & Byers, who had been an early investor in Netscape and had recently taken the company public. Lacking retail expertise and flush with cash and connections from Kleiner Perkins's investment in Amazon, Bezos quickly recruited a team of the best and brightest from industry. Richard Dalzell, the vice president of information systems at Walmart, joined Amazon as chief information officer (CIO) in August 1997, and Jimmy Wright, the vice president of distribution at Walmart, joined in July 1998 as chief logistics officer. A software executive who had built successful Internet businesses for Microsoft and a brand management executive from Black & Decker also came on board.[10] In January 1999, Walmart sued Amazon. *BusinessWeek* reported this at the time:

> When giant retailer Wal-Mart Stores Inc. sued upstart Internet bookseller Amazon.com Inc . . . jaws dropped. Wal-Mart accused Amazon of raiding its executives to steal its computerized merchandising and distribution trade secrets. The amazing part: Wal-Mart said tiny, money-losing Amazon had caused it "economic damage" and continues to do so. Amazon Chief Executive Jeffrey P. Bezos isn't talking about the suit—except for this calculation: "Even if all our employees came from Wal-Mart, it would be less than two-tenths of 1% of their workforce."[11]

Even as Bezos was building a state-of-the-art operating platform for online commerce, he began scaling his offering. Initially, he added music and video to his online bookstore and rapidly expanded those three product categories. After a successful initial public offering (IPO) in 1997, he began using his rapidly increasing stock price as capital to buy equity stakes in several dot-com aggregators (e.g., Drugstore.com, Living.com, Pets.com, eToys.com), which allowed him to experiment with providing fulfillment services for a wide range of product categories. Those experiments also revealed a flaw in Amazon's

original retail business model: It did not work as well for product types that were not as easy and cost-effective to pick, pack, and ship as books, music, and videos.

As a result, by the fall of 1999, Bezos had begun selling his equity stakes in unprofitable categories at the height of the irrational exuberance that had caused dot-com stocks to soar. A year later, with the dot-com sector in a free fall, many believed that the fledgling company would not survive. But Bezos and his team had embedded the same approach to pursuing opportunities that he had used when launching Amazon into the process the company used to transform itself: Bezos exited unprofitable categories and sold his equity positions in dot-com companies with flawed business models while partnering with established retailers, including Toys "R" Us, Borders, Virgin, and Circuit City, to enable them to sell their products on Amazon's website and use Amazon's state-of-the-art fulfillment centers to ensure timely delivery. Indeed, in 2000 Wall Street analysts reported that Bezos's careful analysis and quick entrepreneurial response had saved the company from bankruptcy.

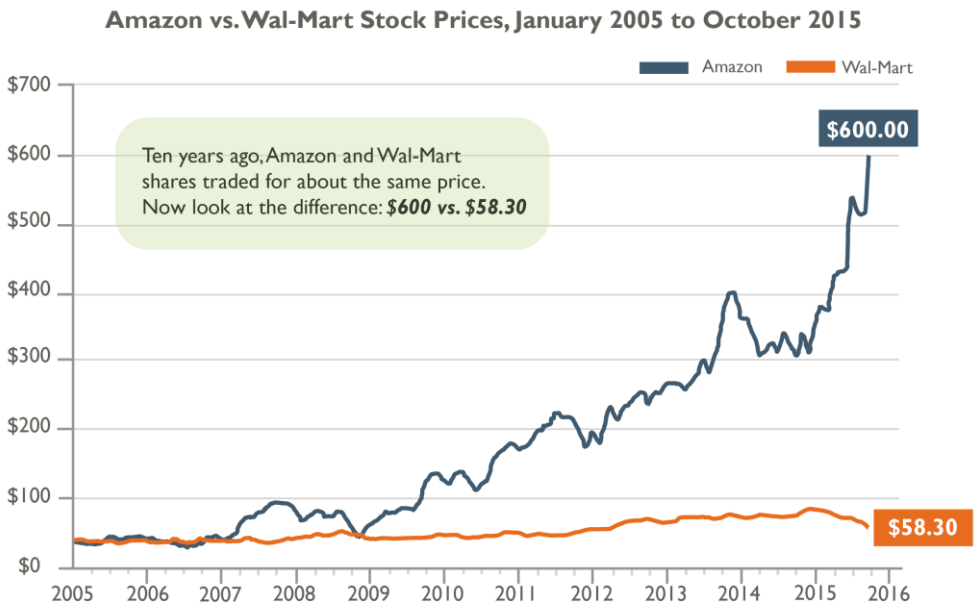
> If Amazon.com had not generated $318 million in cash from options exercises [in 1999] and had paid its suppliers in the same quarter as it sold its goods, its cash balance would have been down to $115 million, which would have proceeded to put the company in the poorhouse. . . . With the buttressed cash level of $706 million showing up on the balance sheet as of the end of [1999], the company borrowed another $680 million in February of [2000]. If the company had not been able to borrow the money, the Amazon.com story might already have been over.[12]

Bezos displayed his trademark confidence and conviction in 2000 as he reassured Amazon's stakeholders that he had plans to continue leveraging the company's position with more than 20 million consumers and its proprietary online/offline retail and fulfillment platform to return the company to growth and achieve profitability by the end of 2001. "While there are no foregone conclusions, and we still have much to prove," he said, "Amazon.com today is a unique asset. We have the brand, the customer relationships, the technology, the fulfillment infrastructure, the financial strength, the people, and the determination to extend our leadership in this infant industry and to build an important and lasting company."[13] And survive it did. By 2012, Amazon was generating more than $61 billion in global online commerce revenues. The retail giant Walmart came in a distant second, with online revenues of $9 billion.[14]

By 2014, nearly 20 years after the company's launch, Amazon's business model had changed dramatically. While Bezos's initial vision was to be an online retailer, he realized by the late 1990s that the retail model had its limitations, so

he began launching new ventures to test the feasibility of offering hosted web stores and fulfillment services for large retailers, media content development and online distribution, and IT and cloud infrastructure services. As each new business transitioned to growth, Bezos hired a team to lead its expansion and continual innovation; he also hired teams to explore new opportunities.[15] **Exhibit 4** provides a comparison of the stock prices of Amazon (AMZN) and Walmart (WMT) between 2005 and 2015.

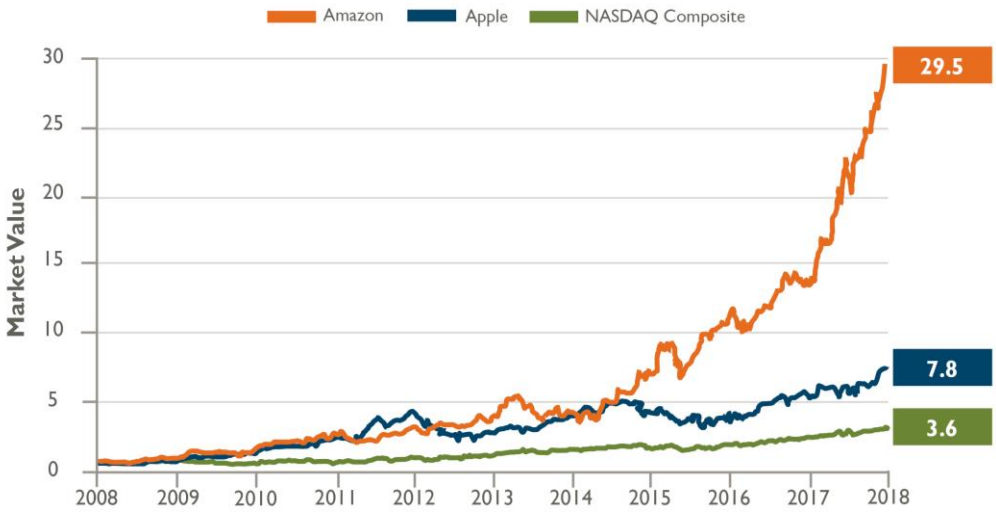
EXHIBIT 4 Amazon and Walmart Stock Price Comparisons, January 2005–October 2015



Source: Mark J. Perry, "Chart of the Day: Amazon vs. Wal-Mart and the Triumph of Online Shopping," aei.org (AEIdeas), October 25, 2015, https://www.aei.org/carpe-diem/chart-of-the-day-amazon-vs-wal-mart-and-the-triumph-of-online-shopping/, accessed August 2023.

Exhibit 5 provides a comparison of Amazon's market value, which increased about 30 times between 2008 and 2018, with Apple's market value, which increased about eight times, and the Nasdaq Index, which increased about four times.

EXHIBIT 5 Market Value Comparisons of Media and IT Services Competitors



Source: Rachel Lerman, "Amazon Touches $1,000,000,000,000. How It Rocketed Toward the Market Value Milestone," *Seattle Times*, September 4, 2018, https://www.seattletimes.com/business/amazon/amazon-becomes-nations-second-public-trillion-dollar-company/, accessed August 2023.

Jeff Bezos's journey demonstrates the evolution of the entrepreneurial leader's role in the innovation life cycle. When Bezos left New York City to pursue entrepreneurship in 1993, he had a big dream—to create a company where people could buy and sell online—but he did not attempt to implement this vision right away. Instead, he created an online bookstore as his MVP experiment, entered the market, engaged its customers, and transitioned the online bookstore to high growth. As the bookstore grew, he continued refining his concept while beginning to build the technical, operational, and organizational infrastructure and capabilities to scale the retail business and exploit other business opportunities in fulfillment services, online media and content distribution, and web services and cloud computing. To do this, Bezos needed to bring on new leaders with relevant capabilities. As the company continued to grow, Bezos's role as a leader changed from running a single business to leading a portfolio of businesses at different stages in the innovation life cycle. In addition, he expanded his leadership team to include people who were responsible for pursuing new opportunities; people who were responsible for leading high-growth businesses; and, as some businesses matured, people who were responsible for transforming them.

Two of Bezos's communications demonstrate his breadth as an entrepreneurial leader. In his first letter to Amazon's shareholders after the company went public in 1997, he explained his goals for 1998, revealing ambitions far beyond selling books online.

> We are still in the early stages of learning how to bring new value to our customers through Internet commerce and merchandising. Our goal remains to continue to solidify and extend our brand and customer base. This requires sustained investment in systems and infrastructure to support outstanding customer convenience, selection, and service while we grow. We are planning to add music to our product offering, and over time we believe that other products may be prudent investments. We also believe there are significant opportunities to better serve our customers overseas, such as reducing delivery times and better tailoring the customer experience. To be certain, a big part of the challenge for us will lie not in finding new ways to expand our business, but in prioritizing our investments.[16]

Over a decade later, when the company had grown into a complex enterprise, Bezos explained his approach to leading Amazon's portfolio of businesses in response to a question at the company's 2011 shareholder meeting:

> Ninety-plus percent of the innovation at Amazon is incremental and critical and much less risky. We know how to open new product categories. We know how to open new geographies. That doesn't mean that these things are guaranteed to work, but we have a lot of expertise and a lot of knowledge. We know how to open new fulfillment centers, whether to open one, where to locate it, how big to make it. All of these things based on our operating history are things that we can analyze quantitatively rather than to have to make intuitive judgments. . . .
>
> [W]hen we started working on Kindle almost seven years ago . . . [t]here you just have to place a bet. If you place enough of those bets, and if you place them early enough, none of them are ever betting the company. By the time you are betting the company, it means you haven't invented for too long.[17]

Bezos is one of the most famous entrepreneurial leaders who has both led a startup through its first forays into the marketplace and led a large multibusiness enterprise, one that must simultaneously explore new opportunities and protect the assets of existing businesses. As he placed many of his early "bets" (as he described them in 2011) in his pursuit of opportunity, he took on the role of promoter. In his care not to "bet the company," however, he also was a trustee, intent on protecting the interests of his current stakeholders. Bezos continued to manage these dual roles as he scaled Amazon's original online retail business and then expanded the scope—launching a media company, its Kindle technology device business, and the Amazon Web Services

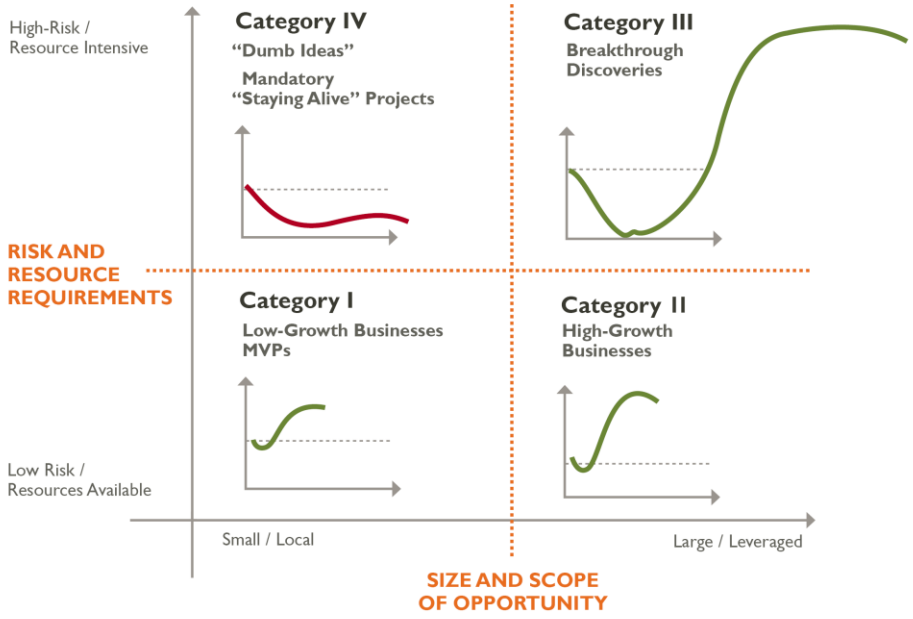
online platform—demonstrating the shift from competing within traditional industries to competing across industries through the launch of ecosystems platforms.

2.2 Leading Different Types of Entrepreneurial Opportunities

Looking at the activities and decisions throughout the innovation life cycle is one approach to studying what entrepreneurial leaders do; another approach is to consider the various kinds of opportunities they pursue. Different types of opportunities require different implementation and risk management approaches and often attract different types of entrepreneurial leaders. **Exhibit 6** frames entrepreneurial opportunities on two dimensions—the size and scope of the opportunity and the risk and resource requirements. This gives us four kinds of opportunities to consider, each of which is shown with what might be a typical cash flow curve.

We begin by describing each category and some classic examples of entrepreneurial leaders who founded ventures in each. We then discuss the issues that arise when ventures make the transition from one category to another.

EXHIBIT 6 Categories of Entrepreneurial Opportunity



Source: Adapted from Lynda M. Applegate, "Jumpstarting Entrepreneurial Innovation," HBS No. 1841C (Boston: Harvard Business School, 2008).

2.2.1 Category I: Low-Growth Businesses and MVP Experiments

In Category I, the entrepreneur is able to launch a new venture fairly quickly using resources already available—often from personal sources, family members and friends, or lines of credit—but chooses to grow slowly. This category includes ventures launched by sole proprietors or small teams of partners whose motivation for becoming entrepreneurs is to build a business that they can continue to run but without creating a large, complex venture that may attract competitors or unwanted attention from investors.

Category I also includes ventures started out of necessity in situations where there are few other options to generate an income. ***Lifestyle businesses*** and ***necessity-driven businesses***—founded and grown at a modest scale either because of capital limitations or to suit the founder's aspirations—are an important engine of economic growth, particularly in emerging markets.

This category also includes the MVP experiments that some entrepreneurs conduct as the first step in building what they hope will become a high-growth business. Bezos's launch of Amazon's online bookstore is a good example. MVP experiments often have very low resource requirements and can be financed through bootstrapping or angel investors. As a result, entrepreneurs may pursue this low-cost, low-risk approach before seeking the more substantial financing they need to transition to high growth.[18]

But even when an entrepreneur plans to stay small, circumstances can require a shift from one category to another. In fact, the key risk in launching a Category I venture is that incremental thinking can keep the entrepreneur from identifying the full size and scope of the opportunity—and the need to shift categories—until it is too late.

An MVP may not initially succeed, but there are many stories of these MVPs becoming the foundation for a new and successful venture. The growth of Bluemercury—founded by Marla Malcolm, who studied the Amazon case during her own classes at Harvard Business School in the late 1990s—is one such case. Upon graduation, Malcolm launched an online high-end beauty retailer. She soon learned that high-end beauty product suppliers were reluctant to sell online, however, so she pivoted and purchased a brick-and-mortar beauty store near her home in Washington, DC. As new retail sites became available in nearby neighborhoods, she purchased them, added new stores, and used her original online store as an alternative for customers to purchase products once they had set up a profile in a physical store.

In 2015, as established retailers began using technology to launch online stores in an expansion into omnichannel retail, Bluemercury was sold to Macy's.

Marla Malcolm (CEO) and her husband, Barry Beck (COO), were able to continue to lead Bluemercury and shift to a separate, high-growth subsidiary with access to the resources provided by an established retail giant.[19]

2.2.2 Category II: High-Growth Businesses

Ventures that are founded as ***high-growth businesses*** are designed from the start to pursue rapid growth and high-impact opportunities. While capital, talent, and other resources will be needed to scale the business, the hallmark of these opportunities is that the entrepreneur can leverage the entry strategic position and platform to scale quickly.

Facebook, Google, and Amazon represent opportunities in this category. Although they may have started in Category I with the launch of an MVP, they were designed as high-growth businesses from the start and, by leveraging the Internet, shifted to Category II early in their development. In this category, venture capital (VC) financing is often used to provide the resources needed to scale the business quickly.

2.2.3 Category III: Breakthrough Discoveries

Ventures in this category are designed to pursue scientific and other discoveries that have the potential to transform industries and lives. But they require significant capital over long periods to engineer the product and prove the business model prior to transitioning to a high-growth business (Category II). Examples of opportunities in this category include many clean energy innovations and new drugs and medical devices. The key risk involved in these ventures is the ability to access resources—including initial capital, follow-on rounds of financing, and human resources such as scientists, engineers, and advisers. In addition, the entrepreneur faces tremendous uncertainty in the technology and in the market. It can take seven to ten years, or more, to prove the business model for a Category III business, which means that these ventures are often not well suited to VC financing during the early stages. Instead, entrepreneurs often seek strategic investors (corporations that invest in startups for strategic reasons), financing from academic or corporate research labs, or government funding.

The founding of the Swiss pharmaceutical company Actelion is a good example of how a team of scientists launched a new venture to commercialize a scientific discovery that they believed represented a breakthrough and then transitioned to high growth once the business model was proven.[20] The company was founded in late 1997 by a team of four research colleagues and their future chief financial officer (CFO) who had worked together at Roche, a

large European pharmaceutical company. One of the cofounders, Walter Fischli, recounted that when the team members left Roche to found their own drug discovery company, "we had neither a product nor an investor. Yet we really believed we could set up a powerful small research-driven organization and succeed. We were experienced drug hunters with a clear vision for a new company that would rapidly discover and develop new products. For that kind of opportunity, it was worth taking risks."[21]

The new company's first breakthrough drug involved licensing two compounds that the team members had worked on at Roche. Indeed, Roche had funded the years of research that had gone into discovering these compounds and learning about the mechanisms through which they could be used to treat disease. Actelion's role was to commercialize these two promising compounds as a first test of the new venture's business model. While Roche financed the early drug discovery, the team raised additional financing from private investors to purchase the licenses from Roche and begin testing the compounds for their first commercial use as a treatment for heart failure.[22] Although the clinical trials failed, the team discovered that one of the compounds was effective for treating an early indication of heart failure—pulmonary arterial hypertension. The Actelion team and its investors were so confident that they set up marketing and sales subsidiaries in five countries even before gaining final regulatory approval. Once the US Food and Drug Administration (FDA) approved the drug in 2001, the company quickly transitioned to high growth as the Actelion team scaled the company and gained market acceptance. By 2004, Actelion was cash flow positive. Twelve years after its founding, Actelion had become one of Europe's largest biotech companies, with nearly 2,500 employees and annualized revenue of more than $2 billion.

Entrepreneurs like Actelion's founders who are able to turn breakthrough discoveries into thriving businesses (that is, shift their venture from Category III to Category II) think big and adopt a longer time horizon for generating returns. Category III ventures generally need founders who have the deep expertise on which the breakthrough is based. But that expertise is often not enough: Having a team of people who also know how to commercialize innovation is necessary to make the transition from a breakthrough discovery to a commercially viable Category II growth company.

2.2.4 Category IV: Dumb Ideas and Mandatory Projects

This category includes two kinds of ventures. The first involves projects that executives in established firms may be required to pursue in order to comply with regulatory changes or to respond to a competitive threat. For example, many companies were forced to launch costly, innovative, high-risk information

technology projects to comply with the Sarbanes-Oxley Act of 2002, which forced many US firms to implement more stringent financial reporting practices. These ***mandatory projects*** require high levels of innovation and resources and involve considerable risk. Yet the firms implementing them reap no proprietary benefits.

The other type of Category IV venture is the kind that no entrepreneur willingly chooses. These so-called dumb ideas are often the result of the failure to identify a critical uncertainty in a Category II or III project. For example, an entrepreneur may think that there is a significant market opportunity for a new product but discovers, after spending significant amounts of money, that the market is not prepared or willing to adopt it. Or an entrepreneur may believe that they have identified a new, cost-effective solution for generating alternative energy, but the technology never works as planned.

Jeff Bezos originally intended to offer a wide variety of product categories through his online retail superstore, but he soon found that the cost and difficulty of warehousing bulky, costly-to-ship, and seasonal products—like toys, gas grills, and living room furniture—pushed these categories of his online retail business into the dumb idea quadrant. He learned this lesson quickly, however, and, in this early phase, was able to exit all areas except the profitable book, music, and video categories. Amazon then partnered with established retailers to continue to sell a wide variety of products on its website by fulfilling those orders in Amazon warehouses as a fulfillment services provider. The fulfillment services business model enabled Bezos to generate fee-for-service revenues while avoiding the risks of owning the inventory sold through his warehouse.

Steven Carpenter's experiences with Cake Financial, a financial services startup launched in 2006, provides another example of how a venture intended to be in Category II can end up in Category IV and can also build entrepreneurial experience for future ventures. Like Bezos, Carpenter was able to recognize the problems early; he unwound the venture in a way that preserved value for stakeholders and offered some important lessons.

Carpenter's early years provided an excellent apprenticeship for a budding entrepreneur. After graduating with a BA from Tufts University, Carpenter found a job as a paralegal in a law firm that worked with entrepreneurs who were launching new businesses.[23] The experience inspired Carpenter to move to Silicon Valley and join Snapfish, an online photography startup, as head of business development. One year later, in 2001, he became the head of business development at myCFO, an online wealth management firm that had been started by serial technology entrepreneur Jim Clark (cofounder of Silicon Graphics, Netscape, and Healtheon).

These experiences strengthened Carpenter's resolve to found his own company, but first he decided to go to Harvard Business School to learn the business analytics and skills that he believed he needed. After graduating with his MBA in 2004, Carpenter accepted a position at RealNetworks to launch a new subscription entertainment service. He explained,

> I wanted more product and general management experience and knew I would get that at RealNetworks. . . . But after 18 months I was working on my own business plan. Facebook was gaining momentum, and I looked systematically at applications of social networking for adult consumers. On a whiteboard, I listed major verticals, for example, health, investing, and dating, and asked how social networking was applicable to each. I focused on applications relating to my own age cohort and gravitated to ideas related to love, money, health, and family.[24]

The original business idea that Carpenter decided to pursue was to provide financial portfolio tracking for Gen Y and Gen X users (then ages 18 to 40) who wanted some expert advice but were skeptical of using full-service wealth management advisers. Carpenter's initial plan called for signing up consumers in his target demographic (an estimated 40 million in the United States) and then, with their permission, "scraping" information from their online brokerage account websites. His company, Cake Financial, would provide members with portfolio tracking tools and, through social media, peer and expert recommendations.

Launched in 2006, Cake Financial quickly raised $9 million in VC financing, and Carpenter used his expertise, connections, and capital to enter the market and attempt to scale quickly and grow. But despite Carpenter's extensive entrepreneurial experience, strong connections in the industry, and sophisticated investors with deep pockets, Cake Financial was unable to achieve market traction. Recognizing the problem early, Carpenter scaled back development, reduced personnel costs, and attempted to rework the revenue model to offer subscriptions instead of membership. But this did not work either. In 2010 the company was shut down, and Carpenter sold the assets to E*TRADE, thus recouping some of his investors' losses.

Why would a company with such a large potential market, a proven ability to raise capital, and a seemingly strong value proposition stumble? It would be easy for Carpenter to blame the market crash of 2008. But he readily admitted that, despite his experience, he made a number of execution errors.

A key error stemmed from Carpenter's motivation for becoming an entrepreneur, which was to build a high-growth venture (Category II). Fueled by

that motivation, he made large investments too quickly, before conducting the market-based experiments needed to refine and test his business model. He invested a significant amount of the money he raised in building back-end systems to access, store, and analyze information from users' brokerage accounts and in developing the sophisticated analytical models and tools that would enable users to manage their investment portfolios. He also made sizable investments in social media and peer-sharing capabilities and in the product development and sales and marketing organizations that would be needed to scale quickly. By the time Carpenter launched Cake Financial's entry product, he had spent most of his financing—only to learn that his assumptions about what the market wanted were wrong. For example, Carpenter incorrectly assumed that men would be the primary users, that they would want to give Cake Financial access to all their brokerage accounts, and that they would share investment decisions with peers. Carpenter's assumptions about the organizational capabilities and financing needed to launch the product were also off the mark.[25]

Carpenter acted quickly in response to what he was learning, but he was unable to attract the follow-on financing he needed to fix the business model. After shuttering Cake Financial, Carpenter worked as an entrepreneur-in-residence for Accel Partners, a Silicon Valley VC firm that had invested in Cake. In November 2010 he launched a new venture—Endorse.com, which was acquired by Dropbox.com in July 2013—and eventually went on to found a third company, Thematic.

Successful serial entrepreneurs advise that experimenting and testing assumptions early—before too much is invested in what turns out to be a dumb idea—are tremendously important skills. So, too, is the ability to learn quickly when something is not working, determine why it is not working, and decide whether it can be fixed. **Exhibit 7** summarizes the different categories of entrepreneurial opportunities.

EXHIBIT 7 Categories of Entrepreneurial Opportunity: Features and Profiles

	I. Low-Growth, Lifestyle or Necessity Businesses and MVP Experiments	II. High-Growth Businesses	III. Breakthrough Discoveries	IV. Dumb Ideas and Mandatory Projects
Goals	Build a small business that suits personal interests and passion or need for income. Conduct market experiments to test assumptions prior to transitioning to a high-growth business.	Leverage a commercially available platform (e.g., the Internet) to launch a new business rapidly or purchase a small business and use it as a platform for growth. Leverage positioning and platform to scale quickly and expand into new products and markets.	Identify breakthrough engineering or scientific discoveries to address a large market opportunity that could not have been addressed before. Identify significant shifts in customer needs or demographic trends that highlight new problems or opportunities.	Identify and kill or refine an innovation project with faulty assumptions. Embark on a project that will not provide proprietary benefits or competitive advantage, but is necessary to comply with a government regulation or to defend against a competitive threat.
Risk Profile	Missed opportunities Incremental thinking	Strategic positioning or platform/standards risk Sustainability risk	Uncertainty risk Financial risk	Uncertainty risk Financial risk
Risk management approach	Scan regularly for industry trends, disruptors, and technologies. Clarify assumptions and design market tests. Use lean startup methods and approaches.	Leverage commercially available platforms or platforms built and tested during Category I experiments. Identify growth options and assemble resources needed to transition to high growth.	Put scientists and engineers in touch with the market. Invest in broad research streams with a portfolio of different teams addressing the same opportunity or problem space. Syndicate risk by partnering with strategic and government investors.	If a project is mandatory, ensure that you have excellent project management skills on the team to manage the high levels of risk. Syndicate risk through partnerships if appropriate. If possible, use lean startup approaches to conduct market-based experiments to refine business models to avoid dumb ideas.
Investment options	Personal or bank financing Early-stage seed funds Accelerators and incubators Angel investors Crowdfunding	Venture capital and angel networks Crowdfunding may continue through multiple rounds Later-stage mezzanine financing as venture nears exit through IPO or acquisition	Strategic investors (e.g., big pharmaceutical or energy companies) Government financing	Financing through cash flow or lines of credit Government financing, if available, to comply with regulations
Entrepreneurial leadership teams	Professionals or local service providers who wish to meet the needs of local customers Entrepreneurs familiar with lean startup methodologies Customer-focused teams working with product designers and early customers to refine the business model	Experienced high-growth entrepreneurs Networks and relationships with key players needed to build ecosystem partnerships	Deep expertise in a technical field, extensive networks within scientific and technical communities Ongoing contact with customer markets	Excellent project management skills Deep technical and business expertise needed to implement the project

Source: Adapted from Lynda M. Applegate and Bruce Harreld, "Don't Just Survive—Thrive: Leading Innovation in Good Times and Bad," Harvard Business School Working Paper No. 09-127 (2009).

2.2.5 Shifting Between Categories

As we have seen, as a venture evolves, it can move from one category to another. Sometimes these shifts take the founders by surprise—especially if the venture ends up as a dumb idea. But some entrepreneurs anticipate that their venture will change categories as it evolves and grows. Indeed, when Bezos launched Amazon in 1995, his ultimate goal was to build a high-growth business, but he knew that he could start small, with what could be considered a Category I startup, simply by building a website to launch an online bookstore. This allowed him to experiment with the concept, test his assumptions, and

demonstrate the feasibility and potential size of the opportunity before raising his first round of VC financing. By starting small and minimizing the investment, he minimized the risk.

Once he had developed his proof-of-concept online bookstore, he raised financing from the prominent Silicon Valley VC firm Kleiner Perkins Caufield & Byers and, shortly thereafter, from an IPO. The financing enabled Bezos to attract the top talent he needed and to invest $429 million in building a state-of-the-art online/offline commerce infrastructure and operations that linked nine fulfillment centers and six customer service centers across the United States and in Europe and Asia. Built with rapid growth in mind, this fulfillment infrastructure provided roughly 70–80 percent overcapacity in late 1999.[26] Thus, while Bezos's online book, music, and video retail stores transitioned to high growth (Category II), the digital business infrastructure that supported his fulfillment centers was a breakthrough discovery (Category III). This formed the foundation for three new high-growth ventures—fulfillment services, online media and content distribution, and IT infrastructure services—all of which started as a combination of Category I MVP innovations and Category III breakthroughs.

What actions did Bezos take to position Amazon to avoid bankruptcy in 2000? As the momentum buying that fueled the meteoric rise in stock market valuations in the late 1990s turned to momentum selling in late 2000, Amazon's stock price, like that of most other dot-com businesses that had yet to achieve profitability, fell precipitously, from a high of $113 on December 9, 1999, to around $15 by the end of 2000, and its market value declined from over $35 billion to less than $5 billion.[27] Given that Amazon had a net loss of $1.4 billion in 2000, many believed it would not survive. But Bezos recognized that the number of customers had continued to rise, increasing from 14 million in 1999 to more than 20 million in 2000. More important, these customers were not just browsing—they were buying. Revenue increased from roughly $610 million in 1998 to $1.6 billion in 1999 and to $2.8 billion in 2000.[28] By year-end 2000, more than 75 percent of US consumers recognized the Amazon brand, and Interbrand ranked the company as the forty-eighth most valuable brand worldwide, just above Motorola (number 49) and Colgate (number 50) and well above Hilton (number 68) and Pampers (number 71). Indeed, even as the stock price fell, analysts estimated that the value of the Amazon brand had risen from $1.4 billion in 1999 to $4.5 billion in 2000.[29]

The Category III proprietary digital business infrastructure that Bezos built, along with his positioning as an online retailer with over 20 million consumers in a global market, enabled him to conduct an MVP experiment of a new fulfillment services opportunity with Toys "R" Us, the leading US toy retailer in 2000. Rather than serve as an online retailer, Amazon offered the complete

catalog of Toys "R" Us products for sale in Amazon's online toy store and managed Toys "R" Us inventory in Amazon's state-of-the-art warehouses. Toys "R" Us owned the inventory and brought its decades of experience in children's toy retailing and merchandising to the partnership. Toys "R" Us also assumed the inventory risk if merchandise did not sell.

Launched in August 2000 as an MVP experiment (Category I), Amazon's fulfillment services business quickly transitioned to high growth (Category II) in 2001 and, when coupled with the rapid launch of other fulfillment services partnerships, saved Amazon from the brink of bankruptcy while also serving as a platform for launching two other disruptive breakthroughs (Category III): Amazon Web Services (AWS) and the Kindle e-reader. Launched in 2006, AWS transitioned quickly to high growth, and by 2012, Gartner Research reported that it was the "market share leader in public cloud Infrastructure-as-a-Service offerings."[30] Introduced in 2007, the Kindle e-reader also quickly transitioned to high growth as it leveraged Amazon's vast online media and content. On August 8, 2013, Morgan Stanley analysts valued Amazon's retail businesses—primarily its Fulfillment by Amazon—at $108 billion, its Kindle business at $23 billion, and its AWS business at $25 billion.[31] **Exhibits 8** and **9** summarize the evolution of Amazon.

Few entrepreneurial leaders are able to evolve their businesses through the transitions that we see above. Next we discuss two key insights that provide guidance to entrepreneurial leaders who wish to follow in the footsteps of Jeff Bezos and a small number of other entrepreneurs and continue leading their firms through the transitions from startup to high growth and industry transformation. The first is that these founder CEOs deploy a special set of discovery skills that they continue to use as their firms grow and evolve. The second is that they instill these skills in the people who surround them. In this reading we've focused on the individual entrepreneur, but in practice, entrepreneurship is a team sport. Indeed, one of the key insights that come from studying entrepreneurial leaders is that it takes a high-performing entrepreneurial team to lead high-impact innovation.

EXHIBIT 8 Building Amazon: Key Events from 1994 to 2000

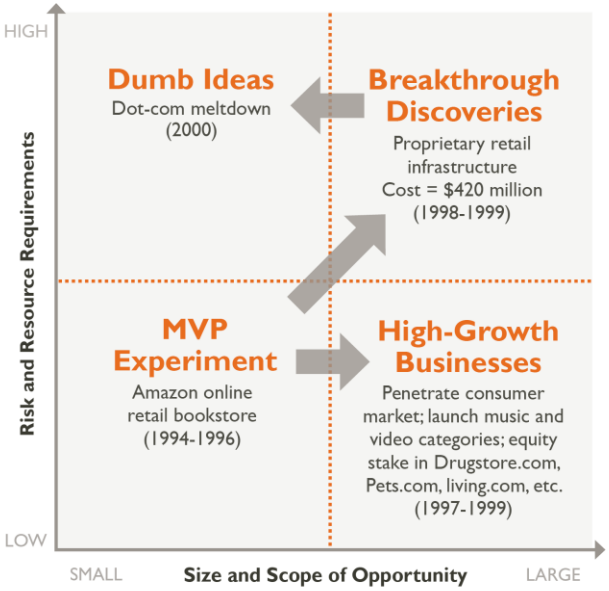
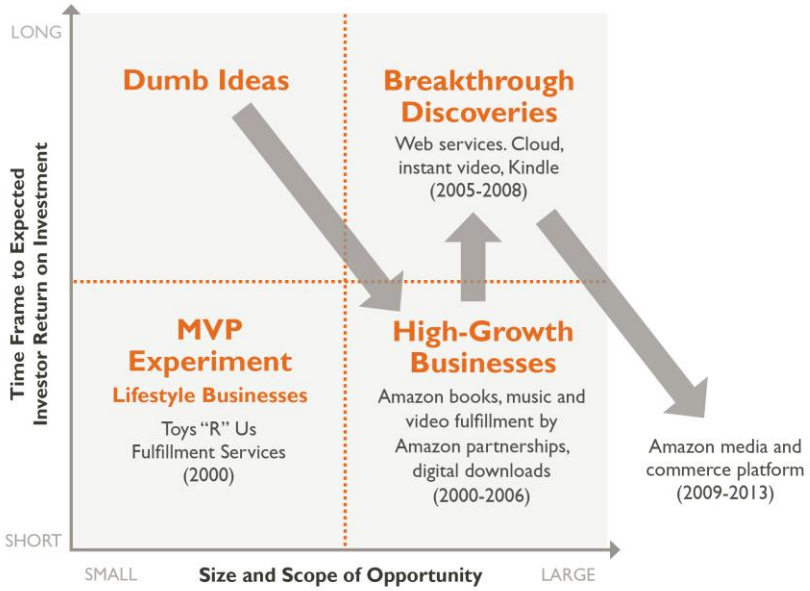


EXHIBIT 9 Building Amazon: Key Events from 2000 to 2013



2.3 Lessons from Founder CEOs

Though numerous studies have failed to uncover specific personality traits that characterize successful entrepreneurs, research does suggest that these entrepreneurs develop certain capabilities while pursuing an entrepreneurial career. In 2009 Jeff Dyer, Hal Gregersen, and Clayton Christensen studied highly innovative firms, many with leaders who had guided their businesses from startup through the shift to high growth and continued to lead their companies as they disrupted powerful players in one or more industries.[32] The results of the study shed light on the capabilities of founder CEOs. In addition to Bezos, consider Oprah Winfrey, who turned a successful career as a TV personality into a multimedia conglomerate called the Oprah Winfrey Network (OWN); Scott Cook, who founded Intuit and built it into a leading individual and business software and services firm; and Steve Jobs, who left Apple but was then brought back by the board to lead the company from the brink of bankruptcy and eventually spearheaded the disruption of the computer, communications, and media industries.

Dyer and his colleagues studied founder CEOs and more than 3,000 nonfounder executives and CEOs of established firms. In-depth analysis revealed five skills that appear to be critical in transitioning a firm successfully from startup to high growth and industry transformation. The authors call them discovery skills. The organizations that institutionalize these skills in the way everyone makes decisions and takes action have what the authors call an innovator's DNA. These skills include associating, questioning, observing, experimenting, and networking (see **Exhibit 10**).

EXHIBIT 10 Discovery Skills of Successful Founder CEOs

Discovery Skill	How to Develop it	What Jeff Bezos Did
ASSOCIATING Develop the ability to connect seemingly unrelated questions, problems, or ideas from different fields	Exercise your mental muscles by developing approaches to identify, understand, categorize, and store new knowledge. Learn new disciplines and gain a variety of experiences. Spend time with others who view the world differently; ask questions to understand how they view the phenomena you are studying.	Assembled a founding team of people with strong business skills and experience in retail, brand management, logistics, publishing, and online commerce to complement his technology and engineering skills. Exploited his experience as an investment banker and a technology analyst to develop skills in scanning for new opportunities, associating trends from different disciplines, and categorizing new knowledge.
QUESTIONING Ask questions that challenge conventional wisdom and the status quo	Ask "Why?" "Why not?" and "What if?" Imagine multiple scenarios to explain things. Impose constraints that challenge the status quo.	Held meetings with people with widely divergent backgrounds to ask challenging questions to get at the root of a problem and assumptions underlying forecasts and plans. Encouraged debate, dialog, and effective conflict management Avoided relying on presentations at meetings; each meeting started with silently reading two-page memos each participant wrote explaining his or her project and providing background for decisions; the remainder was spent debating, discussing, and deciding. Embedded an analytical approach to problem finding and problem solving into long-term planning and short-term tactical execution.
OBSERVING Scrutinize common phenomena, particularly customer behavior	Develop the skills of anthropologists and social scientists. Look for behavioral details in how people do things; question why they do things and what would happen if they could do them differently.	Collected data from users as they interacted with Amazon's online retail store; used data to improve the shopping experience. Made "obsessing over customers" a core value that enabled deep immersion in customer experience and the ability to "invent on behalf of the customer."
EXPERIMENTING Reduce uncertainty by designing focused experiments to test assumptions and learn by doing	Identify assumptions and key areas of uncertainty. Break long-term goals into medium-term entry strategies and short-term projects. Identify milestones and metrics to test assumptions. Refine based on what you learn. Kill projects—not people—and create a learning culture.	Scaled back his vision of becoming "the place where people bought and sold online;" instead developed a simple website where people could buy books. Each day, Bezos obtained books from a local distributor, which he packed himself and shipped by UPS. Used this MVP approach to test market adoption before raising the funds to build warehouses and back-end infrastructure. Continued designing experiments for other transformational innovations, such as the Kindle, Amazon Web Services, and Prime Air (drone service to deliver local packages).
NETWORKING Cultivate a network with diverse perspectives, expertise, experiences, and access to others	Don't just network to access resources; network to access and test different perspectives, ideas, and approaches. Work with people and organizations that provide access to dense networks, such as incubators and accelerators, angel networks, and VCs. Attend idea conferences such as Davos, TED, and Aspen Institute, and entrepreneurial interest groups such as hackathons.	Attracted Netscape in 1994 as a partner to host a link to the new Amazon online bookstore; then sought financing from John Doerr, a Kleiner Perkins partner and Netscape's lead investor. Used this network to reach early adopter Internet users and Silicon Valley technology industry experts, and to attract experienced executives who could build the early teams needed to develop and launch Amazon's online retail superstore business and its sophisticated retail and logistics infrastructure. Used insights gained from running an online retail business and analyzing other dot-coms to sell equity stakes in dot-com partners prior to their bankruptcy; used cash and business contacts to attract established retailers like Toys "R" Us to sell on the Amazon platform; avoided bankruptcy and redefined the business model to transform multiple industries.

Source: Based on research conducted and presented by Jeffrey H. Dyer, Hal B. Gregersen, and Clayton M. Christensen, "The Innovator's DNA," *Harvard Business Review* 87 (December 2009): 60–67.

The discovery skills seem to play a crucial role in an entrepreneur's ability to transition to growth with their new ventures. The entrepreneurs in the study used these skills in founding their companies and continued to use them even as their firms grew to become large industry leaders. While most executives and CEOs of established firms reported that their role was to facilitate innovation

within their organizations, the founder CEOs used discovery skills to innovate and grow their businesses, spending 50 percent more time actively engaged in innovation activities than CEOs who were appointed to run established businesses. Indeed, rather than delegating innovation leadership and work to others, founder CEOs tended to remain actively involved in the innovation activities of the firm—especially those activities considered either highly strategic or critical for building the core capabilities required to execute innovative strategies. These founder CEOs also embedded the discovery skills in their organizations, enabling even large, complex, established firms to maintain both promoter and trustee roles at all levels. This enabled the innovator's DNA to become part of the organizational DNA. Exhibit 10 provides a summary of the discovery skills and suggestions for how to develop them. We also offer some examples from Jeff Bezos's career as an entrepreneurial leader.

2.3.1 Building Innovative High-Growth Businesses Is a Team Sport

Studying founder CEOs reveals not only their discovery skills but also their reliance on high-performance teams. When envisioning an entrepreneur, many picture a solitary individual toiling away in a lab or garage. But as we have noted, Bezos wasn't the only leader at Amazon. From the beginning, he surrounded himself with others who had the expertise, perspective, resources, and connections needed to launch the company and build it into a dominant player. The discovery skills discussed above became embedded in the approach used by the executive teams that ran Amazon's core businesses and within the project teams that continued to innovate and execute as the company grew.

Indeed, one of the keys to Amazon's early success was Bezos's ability to recruit and retain executives with strong skills and experience in business, retailing, and logistics. These executives made important hires and put in place the approaches needed to lead innovation (as promoters) yet execute with discipline (as trustees) throughout the innovation life cycle. The teams leading these businesses honed their discovery skills and passed them down to new teams that were brought in to lead new businesses and projects over the years. Bezos's 2014 letter to Amazon's shareholders demonstrates that one discovery skill in particular, experimenting, is embedded deep in the company's operations:

> We have our own internal experimentation platform called "Weblab" that we use to evaluate improvements to our websites and products. In 2013, we ran 1,976 Weblabs worldwide, up from 1,092 in 2012, and 546 in 2011. One recent success is our new feature called "Ask an owner." It was many years ago that

> we pioneered the idea of online customer reviews—customers sharing their opinion on a product to help other customers make an informed purchase decision. "Ask" is in that same tradition. From a product page, customers can ask any question related to the product. *Is the product compatible with my TV/Stereo/PC? Is it easy to assemble? How long does the battery last?* We then route these questions to *owners* of the product. As is the case with reviews, customers are happy to share their knowledge to directly help other customers. Millions of questions have already been asked and answered.[33]

In *The Founder's Dilemmas*, Wasserman cautions that entrepreneurs should think carefully about the roles various people will play on an entrepreneurial team, even in the early stages.[34] (See *Core Reading: Attracting Talent and Building Ecosystems* [HBP No. 8068] for more information on the challenges of building a founding team and how it must evolve as an entrepreneurial venture enters the market and transitions to growth.) It is important to note that entrepreneurial teams must focus not just on leading innovation but also on managing disciplined execution. This begins with executing the experiments through which entrepreneurs test their assumptions—recall Steven Carpenter's failure to execute an MVP experiment to test his assumptions about Cake Financial. But the need for both innovation leadership and execution management does not stop once a new venture gains traction with consumers. Instead, as we see at Amazon, these capabilities must become embedded in the approach used by teams throughout the company.

In 1977 Professor Abraham Zaleznik of Harvard Business School argued that the focus on the supremacy of the hierarchical organizational model had created a one-dimensional view of the corporate executive's role, omitting the essential characteristics of leadership, including vision, creativity, inspiration, and passion—all traits he believed were critical to long-term business success.[35] John Kotter, an expert on leadership and change, built on Zaleznik's ideas, further refining and clarifying the distinction between leadership and management. He also points out that both are required at any level of a company, including the general manager, for whom three tasks are key.[36]

- Setting direction—scanning the environment to identify external opportunities and threats; making strategic choices; identifying and allocating resources; and focusing attention on projects, targets, and milestones.
- Executing—defining activities that need to be accomplished and developing and engaging the required talent; designing and aligning organizational structures and processes to enable people within work units and across organizational boundaries to achieve shared goals; and

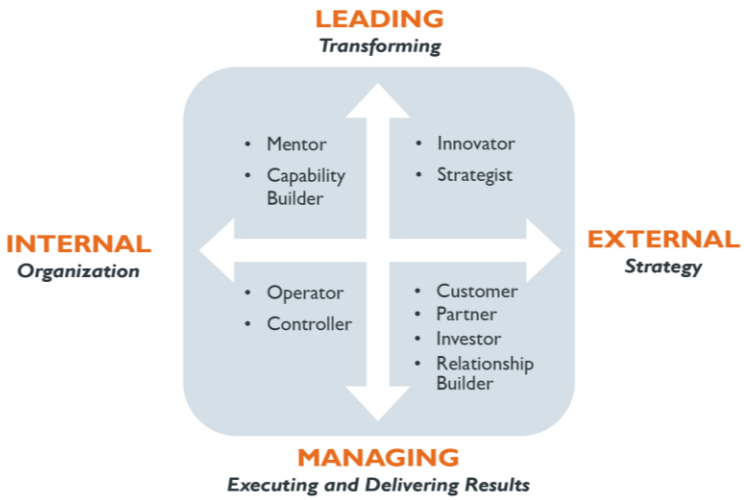
ensuring accountability, monitoring performance, and learning and responding in real time.

- Delivering results—protecting the interests of and creating value for all stakeholders; making tough trade-offs when setting strategy and resolving conflicts; and balancing short-term and long-term priorities.

Exhibit 11 identifies the roles that founding teams and the teams in innovative high-growth businesses must fill. The vertical axis differentiates between leading (transforming) and managing (executing and delivering results). The horizontal axis defines whether the focus of attention is inside or outside the organization. **Exhibit 12** provides a short description of activities performed by team members filling each role. As you review the leadership and management roles, think about how they correspond to the promoter and trustee roles described by Stevenson. As we have seen, entrepreneurial teams must play both roles as they launch and grow sustainable and successful businesses.

Keep in mind that building a high-performing entrepreneurial team is not just a matter of filling key roles. For the team to function, all members must respect, trust, and listen to one another. In addition, the team must be able to debate controversial issues prior to making and implementing important decisions and then debate new issues and insights that emerge.

EXHIBIT 11 Entrepreneurial Team Roles



Source: Based on research by John Kotter and Abraham Zaleznik. See John Kotter, "What Leaders Really Do," *Harvard Business Review* 79 (December 2001): 85–96; and Abraham Zaleznik, "Real Work," *Harvard Business Review* 75 (November–December 1997): 53–62.

EXHIBIT 12 Roles Played by Team Members

LEADERSHIP ROLES

Mentor / Capability Builder

- Identify the resources (e.g., internal talent, partners, advisers, investors) needed to achieve long-term strategic goals and execute short-term tactical projects and initiatives.
- Attract strategic resources and develop the talent, leadership, and organizational capabilities that will be required today and in the future.
- Build and maintain high-performance teams and a mission-driven culture.
- Identify and mentor high-potential employees and ensure succession plans for key roles and positions.
- Evaluate, compensate, and reward employees to ensure that they are motivated to work toward strategic goals.

Innovator / Strategist

- Scan the environment to identify trends and potential opportunities and threats.
- Use discovery skills (associating, questioning, observing, experimenting, and networking) to identify and shape opportunities.
- Communicate opportunities and assemble resources effectively.
- As the business grows, work with leadership teams and partners to ensure that the innovator's DNA is embedded in the organization.

MANAGEMENT ROLES

Operator / Controller

- Define short-term tactical strategies and operating processes.
- Set operating targets and project milestones.
- Define metrics and measure performance.
- Design and manage control systems.

Ecosystem / Relationship Builder

- Build ecosystems and ensure strong relationships with current customers, suppliers, partners, etc.
- Nurture partners.
- Build and maintain brand.

2.4 Conclusion

We've seen in this reading that successful entrepreneurs—especially those who remain with their ventures after they've become established companies—can be defined not by their personality traits but by their skills and capabilities, which are honed as they pursue their entrepreneurial careers. They must be both promoters and trustees, both leaders and managers; they must be focused on both vision and disciplined execution. The experienced entrepreneur and startup investor John Hamm offered this perspective:

> The reasons that executives fail to "scale"—that is, adapt their leadership capabilities to their growing businesses' needs—remain fuzzy. It's simply assumed that there's an entrepreneurial personality and an executive personality—and never the twain

> shall meet. I don't think that's true. . . . Leaders who scale [are] willing to shift their outlook. They deal honestly with problems and quickly weed out nonperformers. They see past distractions and establish strategic priorities. They make concerted, sometimes uncomfortable efforts to do what doesn't come naturally to them for the team's sake. And they learn to work with and communicate to diverse employees, customers, and external constituencies. Most important, they make the company's continuing health and welfare their top concern.[37]

We hope you enjoy your journey.

3 SUPPLEMENTAL READING

3.1 Creative Destruction in the Computer Industry

> *Every act of creation is first an act of destruction.*
>
> —Pablo Picasso

We generally think of entrepreneurs in terms of their creative output—often in the form of value-generating businesses. But the creative process often involves destruction. The two forces can be thought of as two sides of the same coin. In his seminal 1942 book *Capitalism, Socialism and Democracy*, Joseph Schumpeter described how economic growth occurs through periods of ***creative destruction*** during which innovative young firms, led by opportunity-seeking entrepreneurs, introduce new products, create new markets, and disrupt existing industries by taking advantage of technological advances and pioneering novel business models.[38] In Schumpeter's view, economic markets are in a constant state of evolution and adaptation as the continual search for opportunity revolutionizes them from within, destroying the old and creating the new. We see this cycle today as entrepreneurs launch ventures that eventually serve as the force that sustains economic growth, even as it destroys value in established organizations that are not able—or willing—to respond.

In his classic book *The Innovator's Dilemma*, Harvard Business School professor Clayton Christensen expanded on Schumpeter's theory of *creative destruction*, noting that some new products and services, which he called disruptive innovations, have the power to transform industry structure and

power dynamics.[39] New products and services, he argued, are often developed for new markets, and so they do not initially meet the needs of mainstream users. But the pace of development of potentially disruptive innovations often exceeds that of the established offerings; in time, these innovations enter mainstream markets, forcing out established business models and the organizations and industries structured around them.

The well-known story of the disruption of the mainframe computer industry by the PC—which shifted industry power and economic dominance from large corporate data centers to individual users—is an excellent example of the process of creative destruction and the role entrepreneurs play in leading it. Established firms of the day had difficulty finding the right balance between the trustee and promoter roles when responding to the threat of the PC.

The first commercially available PC was launched in the late 1960s; the technology for the now-familiar graphical user interface and mouse point-and-click input device was originally developed in the 1960s at the Stanford Research Institute (SRI) and later at the Xerox Palo Alto Research Center (PARC), located in what would become the heart of California's Silicon Valley. Xerox PARC researchers initially had no plans to commercialize their PC prototype. But a chance demonstration to Steve Jobs, who visited Xerox PARC in 1979, provided the creative spark for the Apple Macintosh (launched in 1984).[40] The Macintosh would later spark another entrepreneur, Bill Gates, cofounder of Microsoft, to create the Windows operating system software, launched in 1985, which fueled the growth of the PC clone industry and ultimately disrupted the mainframe computer industry and its dominant player, IBM.[41]

Initially, however, it appeared that IBM would extend its domination of the computer industry to the PC industry segment. In 1981 it launched the IBM 8088, its first PC product, and played a major role in legitimizing the PC industry and encouraging its shift from early adopter, technology-savvy hobbyists to mainstream business customers. But a series of decisions caused IBM to lose ground quickly to smaller and more nimble players.

These decisions arose from a monopoly mindset that framed how IBM executives made decisions in the 1960s and 1970s and from the firm's efforts to ensure that it fulfilled its trustee role by protecting IBM's monopoly. As a monopoly player in the mainframe industry, with over 70 percent market share in 1969,[42] IBM was the subject of US Department of Justice antitrust lawsuits from 1968 through 1982.[43] To avoid government action, IBM agreed to open the technical specifications and design of its best-selling System/360 mainframe computers to its competitors so that IBM customers could purchase off-the-shelf components and smaller competitors could develop and market S/360 clones. But during the 1960s and 1970s, few serious competitive challenges to its

mainframe dominance arose—even though several entrepreneurs nibbled at the edges of the market. For instance, Ken Olsen, founder of Digital Equipment Corporation (DEC), launched the PDP and VAX minicomputers, which were sold directly to business unit managers and began to erode the lower end of the mainframe market. Likewise, Seymour Cray, founder of Cray Computers, was able to commercialize a supercomputer that chipped away at the high-end mainframe market. But the high price tag of mainframe computers and the low volume of new computers sold each year, coupled with the fact that IBM leased the majority of its mainframes to customers, ensured that competitive intensity remained low.

Given this dominance, IBM executives believed that they could enter the PC market and use their position and power to control it, just as they had the mainframe market. In doing so, they hoped to prevent further erosion of their low-end mainframe and minicomputer market. To get to market quickly and to avoid further antitrust challenges, IBM developed its entry PC product, the IBM Personal Computer (IBM 5150), using widely available industry-standard components (including an Intel 8088 microprocessor)[44] and hired a newly launched software company, Microsoft, to build the IBM 5150 industry-compatible operating system. In addition to opening its technical specifications to the hardware and software development community, IBM also allowed Microsoft to retain ownership of the PC DOS operating system license and to sell it to the numerous entrepreneurs who piggybacked on the success of the IBM PC by launching IBM clones. These clones began appearing almost immediately and, by 1987, had dramatically altered the competitive PC landscape.

At the time of launch, however, the IBM 5150 was positioned to replace one of the company's less powerful word processing terminals, the IBM 8086 Display Writer. The IBM 5150 personal computer was sold as a stand-alone device with strong word processing software provided by Microsoft; a spreadsheet program, VisiCalc, provided by an entrepreneurial startup cofounded by the inventor of the electronic spreadsheet, Dan Bricklin;[45] and even a video game, Adventure, to help it compete against the Atari game computer. It was priced at $1,585—a price that was competitive with other PCs on the market, including the Apple II, Atari 8-bit, Commodore PET, and Tandy TRS 80.[46] Given IBM's strong sales presence in the IT departments of large companies and its positioning and pricing, the IBM 5150 was one of the most successful product launches of its time. By the end of 1982, the company was selling one PC every minute of the business day.[47] By 1984, IBM had $4 billion in annual PC revenue, more than twice that of Apple and as much as the total sales of Apple, Commodore, HP, and Sperry combined.[48] A *Fortune* survey found that, by 1984, 56 percent of US companies with personal computers used IBM PCs. Just 16 percent used the Apple II PC.[49]

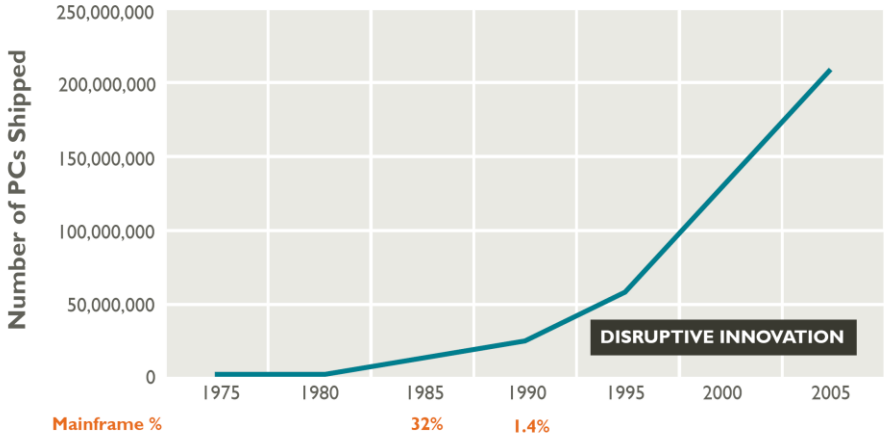
But as mentioned above, despite the strong launch, rumors of look-alike compatible computers, created without IBM's approval and using Microsoft's PC DOS operating system, appeared almost immediately after the release of the IBM PC. The first IBM PC-compatible computer was launched in June 1982 by Columbia Data Products; the first portable IBM PC-compatible computer—the Compaq Portable—appeared in January 1983.[50] In addition, Microsoft continued to innovate the PC operating system, and with the 1985 launch of its Windows operating system, the PC revolution kicked into high gear.

But even as the PC industry took off, IBM's continued innovation of its PC slowed down. Indeed, many believe that the failures to continually innovate on the PC platform and to effectively market and sell the PC after launch were ultimately the most important factors causing IBM to quickly lose its initial dominance of the PC market despite its strong start. In retrospect, executives at IBM reported that they had been blinded by "mainframe thinking" and didn't recognize until too late that the real value of the PC was not as a stand-alone machine for word processing and calculations but as a gateway to an information processing network—a model that was ushered in during the late 1980s by John Gage, chief scientist at Sun Microsystems, and quickly became that company's tagline, The Network is the Computer.[51]

During an interview for a case study on IBM's turnaround and transformation, Nick Donofrio, senior vice president of technology and manufacturing at IBM in the early 1990s, explained that, during the late 1980s, most executives and employees at IBM were "very much in denial around client/server and network computing."[52] And even when IBM product developers resolved to combat the threat from smaller machines, the products often missed the mark—not because of problems with the technology but because of the pricing, marketing, and selling approach used by IBM's established sales and marketing organizations. The CEO of one of IBM's customers in the early 1990s explained, "Just about every vendor [did] a better job of marketing PCs than IBM [did]. . . . No one ever looked at the IBM PC as being inferior, but IBM [did] nothing to sell it. Meanwhile, in the early '90s, Compaq stole IBM's PC market with the right price and the right message. Now it's Dell. IBM [was] a sleeping giant losing its golden egg."[53] IBM employees reported that turf battles inside IBM between autonomous divisions often absorbed more energy than external marketplace battles. According to Fran O'Sullivan, general manager of IBM's Personal Computing division, "At first, the PC group wanted nothing to do with the rest of IBM. We were the mavericks. We saw them as outdated and irrelevant. Then as our business matured, we got into trouble. We couldn't leverage the sales and global services strengths of the company. We came hat in hand for help, but they viewed us as if our ten minutes of fame were up."[54]

Exhibits 13 and **14** trace some of the key moments of the computer industry. (See the sidebar "The Shift to Personal Computing: A Glimpse into the Early PC Industry.") As you review the graph in Exhibit 13, keep in mind that, in 1969, IBM mainframe computers had over 70 percent market share in the computer industry. By 1985, the total mainframe computer market share had shrunk to 32 percent and by 1990 to less than 1.4 percent. While IBM controlled roughly 76 percent of the PC-compatible market in 1983, its share had slipped to 26 percent by 1986.[55]

EXHIBIT 13 Creative Destruction in the Computer Industry, 1975–2005



Note: The market size information is for the total size of the computer industry in USD.

The Shift to Personal Computing: A Glimpse into the Early PC Industry

The historical record of computing is a rich one; collections around the world give a unique glimpse into the evolution of an industry. Images and artifacts from early computing innovations trace the formative history that led to advances in the evolution from business computing to the personal computer.

IBM's online archives trace the history leading up to, and after, the release of the IBM PC. For example, **Video 1** shows Doug Engelbart demonstrating the graphical user interface and mouse developed by his team at the SRI Human Computer Interface Laboratory. This demonstration took place on December 8, 1968. The technology was further developed in the late 1960s and early 1970s at Xerox PARC into a personal computer prototype, the Xerox Alto I (see the commercial in **Video 2**). Initially developed for research purposes, the Alto prototype was demonstrated to Steve Jobs in 1979 and served as the vision for the technology interface in the Apple Macintosh, which was launched in 1984.

VIDEO 1 1968: Doug Engelbart Demonstrates the Graphical User Interface

Source: Courtesy of SRI International.
To access the video, click the icon or use this link. To access the video transcript, use this link.

VIDEO 2 1979: Xerox PARC Office Alto I Commercial

Source: Computer History Museum; courtesy of Xerox Corporation.
To access the video, click on the icon or use this link. To access the video transcript, use this link.

News of IBM's entry into the PC industry caused Xerox to build a commercial version of the Alto, and the Xerox 8010 Star computer was launched in 1981, the same year that IBM launched the IBM PC. At prices between $50,000 and $100,000, the Xerox Star failed in the market, and Xerox shut down its computer business in the 1990s.

Early IBM and Apple ads contrast the positioning in the PC market—the 1977 IBM ads launching its early "portable computer," the IBM 5100, show its computer at work in small firms, office cubicles, and family businesses,[a] while Apple's now-classic "1984" ads launching the Apple Macintosh were a pointed challenge to the computing industry establishment.[a] While this first release of the Apple Macintosh failed to gain commercial success, it provided the creative genius that Microsoft used to reposition the IBM PC and IBM PC clones for use—not just by business users but by home computer users as well.

By the mid-1990s, IBM PCs and PC clones running Windows had penetrated the home computer market and had crossed the chasm from business to mainstream consumer markets.

Highlights of key events in the evolution of the computer industry to the point of Apple's debut of the Mac are presented in Exhibit 14.

EXHIBIT 14 Key Events in the Evolution of the Personal Computer, 1944–1984

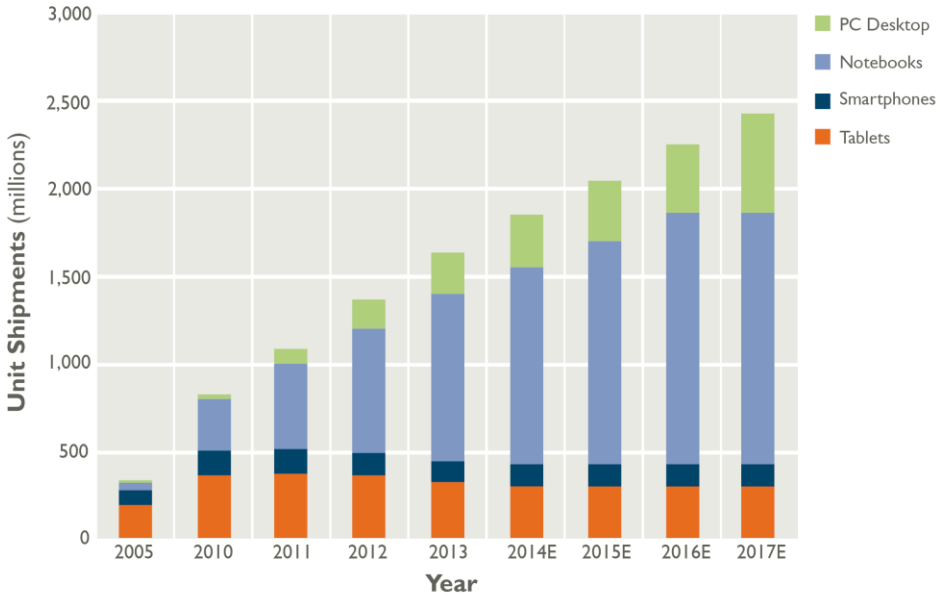
Date	Event	Units Sold	Cost
1944	Harvard Mark I Computer built by IBM.	0	
1950	Engineering Research Associates ERA 1101 (first customer is US Navy).	NA	NA
1951	First commercial computer built by Lyons Tea Co. in England to solve daily production and delivery scheduling of cakes in their tea stores.	NA	NA
1951	Univac I built by Remington Rand (first customer is US Census Bureau).	46	$1 million or more
1953	IBM 701 introduced (first commercial computer by IBM).	19	NA
1961	IBM 1400 introduced (IBM market share of total computer industry is 81.2%).	12,000	NA
1964	IBM S/360 series launched. System was typically rented at $1,250 per month (basic) to $115,000 per month (typical).	1,000/month by 1966	$1,250–$115,000/month
1976	Seymour Cray founds Cray Computer and launches the first supercomputer. The first system was installed at Los Alamos. The Cray-2 was introduced in 1985.	NA	$8.8 million (1976)
MINICOMPUTER EVOLUTION			
1960	Digital Equipment Corp (DEC) PDP 1 launched.	50	$120,000
1965	DEC PDP-8 launched at one-fifth the price of IBM's smallest S/360.	50,000	$18,000
1968	Data General introduces Nova (simple architecture influenced Apple I).	NA	$8,000
1978	VAX 11/780 introduced by DEC.	NA	NA
1984	MicroVAX II introduced as a super PC to compete against Sun.	NA	$4,000
PERSONAL COMPUTER (PC) EVOLUTION			
1971	Kenbach 1 advertised in Scientific American (Kenbach closed in 1973).	40,000	$750
1975	Altair 8800 PC kit launched by Micro Instrumentation and Telemetry Systems (MITS) and advertised in Popular Mechanics (MITS co-founder Ed Roberts coined the term personal computer; Paul Allen and Bill Gates licensed BASIC for software development, which became Microsoft's first product).	5,000 (August 2005)	$439 (kit) or $621 (assembled)
1976	Apple I computer developed by Steve Wozniak; Steve Jobs sold order for 100 at $500 each to BYTE shop in Palo Alto. Apple Computer launched.	200	$666.66 (retail)
1977	Commodore PET launched as one of first assembled PCs. Commodore International was a Canadian electronics company that sold calculators prior to launching the PET. The PET quickly gained over 62% share of Canadian education market in 1980 but quickly lost share to Apple in the 1980s. The Commodore 64 was launched in 1982.	Approximately 650,000 (in 1980)	$795 (1977)
1977	Apple II first sold in June 1977, and the series continued through 1993.	5–6 million by 1993	$1,298 (1977)
1977	Tandy Radio Shack TRS 80 introduced in November 1977 and retailed through Radio Shack's 3,000 electronics stores.	250,000 (in 1980)	$600 (1977)

1979	Atari Model 400-800 introduced with video games available as a major differentiator. Sold until 1992.	Approximately 2 million (1980–1984)	$999 (1979) $599 (1985)
1981	IBM PC introduced. Between its launch in 1981 and 1984, the IBM PC spurred tremendous innovation in the PC industry and spurred a shift in adoption by large enterprises. (VisiCalc, the first electronic spreadsheet, was introduced in 1979.)	More than 3 million (1981–1984)	$1,595 (1981)
1981	Xerox launched the Xerox 8010 (Star), the first computer to provide a graphical user interface and mouse input device. The Xerox 8010 failed. After repeated attempts to revive the computer, in the mid-1990s, Xerox exited the computer business in the mid-1990s.	25,000	$50,000–$100,000
1982	SUN Microsystems founded and launched the first UNIX workstation. Adopted the tagline "The Network Is the Computer."	NA	$29,300 (1986)
1983	Compaq Computer introduces first IBM-compatible PC—the Compaq Portable.	More than 1 million (by 1991)	$3,590
1984	Dell introduces its first IBM-compatible PC—Turbo PC.	205,000 (in 1990)	$795
1984	Building on technology first viewed at Xerox PARC, Apple launched the Macintosh in 1984 after the failed launch of the Lisa (launched in 1983 at a price tag of $10,000).	Approximately 250,000 per year by 1987	$2,495

Source: The timeline for this exhibit was adapted from Computer History Museum, "Timeline of Computer History," https://www.computerhistory.org/timeline/computers/, accessed June 2023. The sales and cost data have been compiled from a number of public sources.

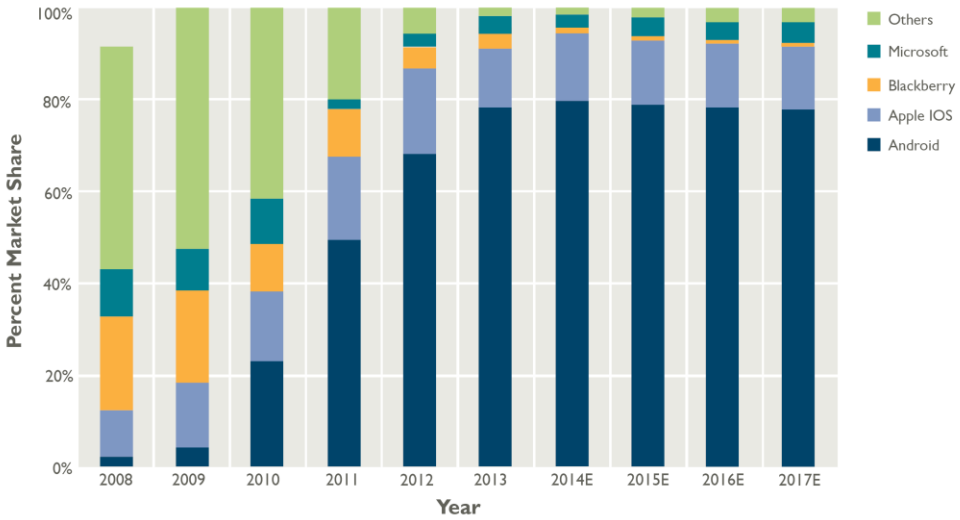
In the 2010s the computer industry began experiencing a second wave of creative destruction triggered by mobile broadband devices—smartphones, tablets, and ultrathin laptops—connected to cloud-based information and applications (see **Exhibits 15** and **16**). In this case, an established player, Apple, is playing a leading role. This has much to do with its legendary founder, Steve Jobs, who helped launch the PC in the late 1970s, left the firm at the request of the board as the PC began to disrupt the mainframe, and then returned to Apple in the mid-1990s where he would play a leading role in the disruption of the PC by mobile broadband. Jobs is often lauded as one of the truly great IT visionaries and entrepreneurs of our day, and he is identified as an example of a strong founder CEO who embedded the "innovator's DNA" in Apple.

EXHIBIT 15 PC and Mobile Device Shipments, 2005–2017



Source: Based on data obtained from the following IDC reports: "Worldwide PC 2014–2018 Forecast Update" and "Worldwide Consumer Market Model, 2010–2017, Version 1."

EXHIBIT 16 Market Share Percentages for Smartphone and Tablet Operating Systems, 2008–2017



Source: Based on data primarily obtained from the following IDC reports: "Worldwide Smartphone 2014–2018 Forecast Update: June 2014" and "Worldwide Smartphone Mobile OS 2012–2016 Forecast and Analysis."

3.2 An Entrepreneur's Toolkit

The set of resources (see the links below) provides insights into the steps that entrepreneurs take as they recognize and shape an opportunity. Each title links to a resource that can be used as a guide in the early stages of an entrepreneurial journey. Many of these tools include forms that you can fill out and save for future reference and reuse as you can anticipate returning to these steps many times—even after the new venture is launched.

"Identifying and Prioritizing Opportunities" offers a step-by-step approach, guided by worksheets, for assessing opportunities for new ventures.

"Analyzing Business Models" provides a structured approach for developing a strong business model.

"Pitching Opportunities" guides you through developing some of the pitches you will need to introduce your venture to investors and partners.

"Online Research Guide" provides guidance for using the information resources widely available online and in many libraries for analyzing a business model. These tools include analyzing an industry, conducting market research, identifying trends and disruptors, financing new ventures, analyzing country context, and many more.

4 KEY TERMS

creative destruction A process through which a newly created product or service replaces its predecessors.

high-growth business A business that exhibits significant growth or growth potential.

lifestyle business A business in which the primary motivation of the founder or owner is not to build a high-growth business but to have personal autonomy, do work they love, or build personal wealth.

mandatory project A project that must be pursued, not to achieve proprietary benefits or strategic advantage but as a response to a competitive threat or for institutional or regulatory reasons.

minimum viable product (MVP) A version of a product or service that offers just enough functionality to test with actual customers, often enabling an entrepreneur to refine a product or service concept with limited investment.

necessity-driven business A business that is launched to provide the income needed to live.

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7 INDEX

Note: Page numbers followed by *f* refer to figures. Page numbers followed by *i* refer to interactive illustrations. Page numbers followed by *t* refer to tables.