

# THE 6 ENABLERS OF BUSINESS AGILITY

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*How to Thrive in an Uncertain World*

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BK<sup>®</sup>

Berrett-Koehler Publishers, Inc.

# INTRODUCTION

## About This Book

It's not enough to do your best. You must know what to do, then do your best.

—W. EDWARDS DEMING

### **Business Agility and the Organizational Operating System**

*Business agility* is a term that is used to mean many things. Its true definition is the ability to respond quickly and easily to change in order to maximize the delivery of value to customers in increasingly turbulent business climates. It is about adapting, improving, and innovating quickly enough to stay ahead of a constantly changing curve. It is a trait that increasingly separates the most successful organizations on the planet from all the rest. When organizations achieve this trait, it looks effortless. The rapid evolution, disruption, and continuous reinvention take place with the easy grace of a cheetah twisting and turning on the plains of East Africa. The following is a story about a company that has thrived for two and a half centuries. It has done so only because its forward-thinking leaders have continually evolved the company with the changing markets.

That company is GKN, a British aerospace space company founded in 1759. What is even more remarkable than an organization that is over 260 years old is that aviation pioneers the Wright brothers did not carry out their first successful flight until 1903, a full 144 years after the company was founded. How is this possible? The answer is that GKN was not always in the aerospace business. It began life as a coal mine before becoming Britain's largest producer of iron ore during the Industrial Revolution. By the start of the twentieth

century, it was the world's largest producer of fasteners (bolts, nails, and screws). Soon after that, it began making parts for automobiles, and subsequently airplanes. In 2017, GKN provided services to some of the biggest aerospace companies in the world, generated revenues of \$9.6 billion, and employed 58,000 people.<sup>1</sup>

Many have attempted to achieve similar levels of business agility by replicating particular tools, processes, and frameworks. What few understand is that merely adopting these ways of working without adapting the prevailing structures, policies, and mindsets of the organization is akin to installing an app designed for Android on an iPhone powered by iOS. The chosen practices are incompatible with what I refer to as the organizational operating system.

There are many great books providing details on the various frameworks, processes, and practices for increased agility. I have spent much of my career advising on their adoption. *This book is different.*

This book is less about specific ways of working, and more about how to create the underlying organizational operating system for business agility, a topic that is rarely addressed. In short, it is about creating the right environment for the myriad agile tools and techniques to stand a chance of working effectively, and in doing so, building organizations that are designed to thrive in an uncertain world.

## Why I Wrote This Book

Many people dream of writing a book. I was never one of those people. I chose to study mathematics as my first degree, then became a software engineer largely so I would not have to write words. I continued in that vein, opting for a master's degree in innovation and entrepreneurship. Yet, in many ways, this book has been brewing in my writing-averse mind for more than 10 years. For much of that time I did not know it was going to be a book—but in recent years it became increasingly clear that I was heading down that path. So why, then, have I done the very thing I had spent most of my career avoiding?

Well, I have been on quite a trajectory over the past 20 years. In that time, I have worked with dozens of organizations on some of the

largest transformation programs in the world. I have gotten a lot wrong, I have gotten a lot right, and I have learned more than I imagined possible. I have gone from software engineer turned project manager, working in a rather traditional, 120,000-person organization, to ultimately cofounding and leading my own company, which helps leaders and entire organizations adopt modern, progressive, and often unfamiliar ways of working. I see many organizations struggling to achieve results in their journeys toward agility, and many are making similar mistakes. I therefore wish to share what I have learned with as many people as possible to make an impact. I firmly believe that writing this book is the best way to reach a wider audience, to distill many years of learning and experience, and to help people who are on similar paths.

## My Two Key Drivers

When I spent some time crystallizing what really drives me and identifying the essential problem I am striving to solve, I found that it came down to two things. These two things are why I do what I do, they are why I get out of bed every morning, and they are why I created the 6 Enablers model.

- **Driver 1: Increasing Organizational Agility.** The world is currently more complex, more interconnected, more turbulent, and therefore less predictable than at any point in our history. In order to survive and thrive in such an environment, an organization's ability to adapt quickly, easily, and cheaply becomes its competitive advantage. Most struggle to know where to begin on this front.
- **Driver 2: Increasing People's Engagement.** When it comes to work, large numbers of people feel disempowered, frustrated, and bored. They are unable to make the most of their potential because when it comes to contributing ideas, tapping into their creativity, and truly revealing their passion for what they do, they are stifled. Helping to shape environments where people not only work more effectively but also enjoy what they do is incredibly satisfying.

In short, I am passionate about helping to create high-performing, agile organizations that delight customers with great products and services, and I am passionate about helping to create truly people-centric organizations in which people love to work—organizations to which they can bring all of their capabilities and in which they can realize their potential every day. Everything I do in my professional life is in the service of these drivers. While they may appear different, in practice, the two cannot be separated.

Most organizations, particularly traditional ones, tend not to pay much attention to either. This is, frankly, unsurprising. Surviving and thriving in the twentieth century required efficiency and compliance rather than adaptiveness and creativity. The world has changed a lot since then, and now, in the twenty-first century, we need to reinvent organizations so that they can be effective in a very different business climate.

## How This Book Works

This is not a book of recipes. Many crave such a book, but this is not it. With such diversity in business goals, cultures, capabilities, and strategies, there can be no recipe that is universally applicable. Those who claim to have such a recipe clearly misunderstand the complex and contextual nature of organizational change. Not everyone wants to make the same cake, and they certainly don't have the same ingredients and equipment. Instead, this book focuses on mindset, principles, and general patterns. It is a summary of what I believe are the important factors in increasing organizational agility and why they work. They are things to consider in a so-called *agile transformation*.

The book will provide examples, stories, knowledge, and tools that will help you on your way. Exactly how to apply them in each unique context will be down to those leading the change. On a topic this large, one cannot cover everything. Rather, I seek to highlight the areas that are often ignored but are nonetheless vital to creating high-performing, agile organizations. At the end of each chapter, I have provided a summary, some key practices, and further reading and resources for those who wish to explore the topic in more detail. At

the end of each section within each chapter, I invite the reader to reflect on its particular context. I advise you to take the time to perform these reflections and to note down your answers somewhere safe. Having these reflections all together will be invaluable as you explore the final chapter and begin to consider populating the Business Agility Canvas.

In a way, each chapter is designed to be standalone. You can read any chapter and get a lot out of it. However, given the interconnect- edness of the topics explored here, reading the book as a whole is recommended. Like an athlete pulling together a coherent, coordi- nated program of the right diet, physical training, technique, and tac- tics where all elements work together to achieve their goal, the final chapter shows how the 6 Enablers can be designed in a complemen- tary way to achieve a business goal. My hope is that upon complet- ing the book, people will be inspired to dive deeper into the areas that interest them most. There is no shortage of great material out there with which to continue the learning journey.

The days of agility being confined to IT are long gone. So who is this book aimed at? There are, I believe, two main groups who will benefit most from it. The first is composed of leaders seeking to cre- ate nimbler, more adaptive organizations—those leading agile trans- formations. For that group, this book will open their eyes to the kinds of changes *they* will need to make in how they show up each day as leaders, but it will also illuminate the areas of their business that need to be included and brought along. The second group consists of those who coach leaders through agile transformations—senior coaches and consultants who advise and coach at the organizational level to support these changes. The topics I will be covering are ones on which I very much hope members of this group will educate themselves so that they will be able to coach and advise successfully the leaders with whom they work. Too often I see many of these top- ics being ignored because they are just not on the radar. I hope to go some way toward making them visible.

What I will *not* be doing in this book is promoting any particular agile approach as superior. There is plenty of that in the agile space already. Most of the approaches out there work well in certain con- texts. I will try to identify in which context some approaches *may*

work well, and why. I will also avoid providing prescriptive recipes. Every organization is different, and each will have its own route to agility and high performance. What is important is that we tackle all of the areas that are crucial to creating an environment in which any chosen approach can work.

In chapters 1 and 2, I will start with a description of how the agile movement began and how it moved into the boardroom. I will also provide context around the *why* of agility from a business and leadership perspective. In chapter 3, I will outline the six main areas of focus for any organization seeking to move toward agility. Typically, only one or two of these areas are given attention, and this narrow focus leads to an extremely low success rate. Chapters 4 to 9 will be deep dives into the underlying principles behind the six domains identified in chapter 3. And finally, chapter 10 will pull it all together through the lens of the Business Agility Canvas. This will provide a steer on not only how to get started with a transformation but also how to achieve clarity and alignment around the vision, success criteria, key risks, key stakeholders, and key obstacles, as well as a coordinated set of high-level changes across the 6 Enablers of Business Agility to give your transformation the best chance of success.

I'm confident that this book will prove to be a valuable investment of your precious time.

## CHAPTER 1

# The Changing Business Climate

We are in one of those great historical periods that occur every 200 or 300 years when people don't understand the world anymore, and the past is not sufficient to explain the future.

—PETER DRUCKER

### IN THIS CHAPTER, WE WILL EXPLORE

- the key differences between exploration and exploitation
- the concept of VUCA (volatility, uncertainty, complexity, and ambiguity) and its implication for the business climate
- the main drivers behind the emergence of agile ways of working.

## Exploring and Exploiting: Two Key Organizational Activities

Think of the most commercially successful organizations around today. What makes them so successful? A superior product or service? Great business model? Efficient operations? The ability to continually innovate and create successful *new* products, services, and business models? For the most successful, it's likely to be all of the above. At the highest level, most organizations are undertaking two main types of work—*exploiting* current products and services and *exploring* new ones. Most will be more focused on one than the other, but both will be happening to some degree. The natures of these two activities are fundamentally different. They seek to achieve different outcomes, require different skill sets, and must be approached in different ways.

Traditional organizations tend to be designed to *exploit* known and understood products, services, and business models. Demand for these has been proved, often over many years. The strategy here is to compete based on the delivery of incremental improvements to existing products and services while simultaneously reducing costs and increasing efficiency. Processes are well understood, there is enough data to make accurate forecasts, detailed plans can be made, and performance can be assessed based on revenues, growth, and profit. These activities are largely understood and predictable, and success relies on effective execution toward a known goal. This pursuit is what we have come to expect from established organizations. An example of effective *exploiting* is Amazon's implementation of algorithms to improve the efficiency of picking and shipping items from its fulfillment centers. It offers the same service as before, but more cheaply, which allows Amazon to pass those savings on to customers, giving it a competitive advantage.

While many organizations have mastered the art of *exploiting*, few can claim to be effective at *exploring*. Exploring is the act of seeking out new products, services, customer segments, and even entire business models. The strategy here is to compete through innovation and sometimes the reinvention of the entire organization. It is an uncertain, unpredictable pursuit that tends to involve a lot of trial and error. As such, making predictions and detailed plans is often not possible. To return to our Amazon example, while it sought to *exploit* its core business model of online retailing, it also continuously *explores* new products, services, and business models. One example of this came in the form of the Kindle e-reader, a product innovation that revolutionized the publishing industry. Another example is a business model innovation, a cloud computing platform called Amazon Web Services (AWS). Launched in 2002 and relaunched in 2006, by the end of 2019, AWS had an annual revenue of over \$30 billion.<sup>1</sup>

As we will see, the ability to effectively exploit *and* explore is more important than ever, but it was not always this way. Traditionally, organizations have been able to succeed largely through the mastery of exploitation. In the rest of this chapter, we will take a look at how the imperative to explore has increased over time, and the main reasons for that shift.

### Reflection

What are the key areas in your organization engaged in exploiting existing customer offerings? What are the key areas engaged in exploring new customer offerings? How much focus and investment is spent on each? How does that compare with the most successful in your industry? Remember to keep your answers in a notebook for use in chapter 10.

## The Twentieth-Century Organization: Exploiting with Efficiency

For most of the twentieth century, organizations survived and thrived by being expert exploiters, creating economies of scale, and relentlessly pursuing operational efficiency. Outfits that produced an as-good or superior product more cheaply than their competitors were likely to prevail. Thus, managers constantly sought to achieve the highest possible output, with the least investment of time, money, or effort. This was achieved largely through specialization, standardization, and the division of labor. In short, it was survival of the most efficient. The ability to exploit their existing products and business models effectively was the main concern, and so organizations were designed almost exclusively for this purpose.

The embodiment of the efficiency movement was Henry Ford, founder of the Ford Motor Company. On October 7, 1913, Ford and his team at the then-Ford plant in Highland Park, Michigan, launched what is arguably the greatest innovation ever in the field of manufacturing: the moving assembly line. Inspired by the overhead trolley used by Chicago packers to dress beef, the new process allowed the production time of the Model T to drop from 12 hours to 90 minutes, and for the price to drop from \$850 to \$300. This innovation eventually allowed for the production of a Model T every 24 seconds. By 1927, Ford had gone from just another small automobile manufacturer to selling more than 15 million Model Ts every year—half of all automobiles sold at the time.<sup>2</sup> It had masterfully exploited the Model T and had won at the efficiency game.

The assembly line method of production soon spread to other automobile companies, and then to almost every other consumer goods manufacturer. Meanwhile, Ford's contemporary Frederick Taylor was applying engineering discipline and the scientific method to the factory floor to measure and increase worker productivity. In his groundbreaking 1911 book *The Principles of Scientific Management*, Taylor outlined how to decrease unit costs and maximize efficiency by identifying "the one best way" to perform a task and ensuring that everyone followed that way. Taylor would study each task, breaking it down into small steps, painstakingly optimizing and documenting each step, and thus optimizing the whole task, much as a mechanic would improve the performance of an engine by tuning each component. Taylor summed up his approach: "It is only through enforced standardization of methods, enforced adoption of the best implements and working conditions, and enforced cooperation that this faster work can be assured. And the duty of enforcing the adoption of standards and enforcing this cooperation rests with management alone."<sup>3</sup>

The ideas of Ford and Taylor dramatically increased productivity and led to previously unseen levels of efficiency. The Ford and Taylor model of strict hierarchy and specialization resembled that of a finely tuned machine. The machine concentrated power and decision-making at the top, disseminated orders down the chain, and improved efficiency by eliminating inconsistent outputs. In order to do this, organizations sought to measure, control, and minimize variance. This gave rise to all sorts of initiatives, including what we now know as Six Sigma and Total Quality Management.

Businesses that became master exploiters by embracing the machine model tended to outperform the market throughout the twentieth century, and organizational design and almost all tools of management thus focused largely on this area.

### Reflection

Which parts of your organization are optimized for exploiting with efficiency? Are those areas characterized by stability, predictability, and known outputs? How effective is your organization at exploiting existing products and services?

## The Rise of VUCA: The Game Has Changed

Throughout the fifteenth century, the standard formation of European infantry soldiers was based on their principal weapon, the pike. In the early sixteenth century, the musket was introduced. Over the next 100 years, the pike slowly fell from favor and muskets and bayonets became the default infantry weapons. Rather surprisingly, however, the standard formation of infantry remained unchanged. It took two generations before anyone thought to ask the question, “Is this still the most effective formation for our infantry?” It quickly became apparent that the formation was optimized not for muskets but for pikes and bows. Soon after, the default formation was changed to something more suited to the new context.<sup>4</sup>

This is a phenomenon that can be observed all too often today in various contexts. The dominant paradigm is handed down from generation to generation, and very few take the time to question whether it remains appropriate in the current context. The fact that it was appropriate a century ago or more seems to be sufficient reason for it to remain unquestioned. Anyone who has ever heard, as a justification for a process remaining unchanged, the phrase “But we’ve always done it this way” will be familiar with this concept.

By today’s standards, the twentieth century remained largely static in terms of innovations, which were few and far between. That meant most organizations were able to know in advance exactly the thing on which to be worked, what to exploit. When you know with near certainty that you are working on the “right thing,” efficiency is a good indicator of effectiveness. The problem to be solved was how to produce a known output with the least possible input of resources. The cultures, structures, and policies—that is, the organizational operating systems—of many entities from this period were designed for just that.

As such, most large, traditional organizations are designed, and very well prepared, to solve the challenges of the twentieth century. But like the old aphorism about military generals always fighting the last war, the reality is that many organizations now find themselves in a very different business climate. A climate in which yesterday’s

solutions do not solve today's problems. A climate in which efficiency is rarely the most important goal. A climate in which knowing the "right thing" on which to work has become all but impossible. The organizations that will survive and thrive are the ones that recognize that a fundamentally different problem now exists; the ones that are able to reinvent themselves continually to solve those new problems; the ones that can master the art of *exploring* as well as exploiting.

Today's world can be characterized by the term VUCA. Emerging from the US Army War College in the early 1990s, VUCA described a post-Cold War, multilateral world that was more volatile, uncertain, complex, and ambiguous than ever before.<sup>5</sup> The term caught on in business after the 2008 and 2009 global financial crisis. VUCA, it seems, is the new normal. Here's what it means.

### ***Volatility***

It all started on the streets of Sidi Bouzid, in central Tunisia. A 26-year-old man named Mohamed Bouazizi was struggling to find a job. Refusing to join the "army of unemployed youth," he instead began supporting his family by selling fruit and vegetables.<sup>6</sup> However, he faced constant harassment from the local police, and his cart and goods were eventually seized, ostensibly because he lacked a permit. It turned out that very few street vendors had permits at the time, and it is not clear whether one was even required. This left Bouazizi \$100 in debt and unable to make a living. On December 17, 2010, enraged at police corruption and unable to pay the required bribes, Bouazizi had had enough. He went to the governor's office in Sidi Bouzid and doused himself in gasoline, shouting, "How do you expect me to make a living?"<sup>7</sup>

Then he lit a match, and the world changed forever.

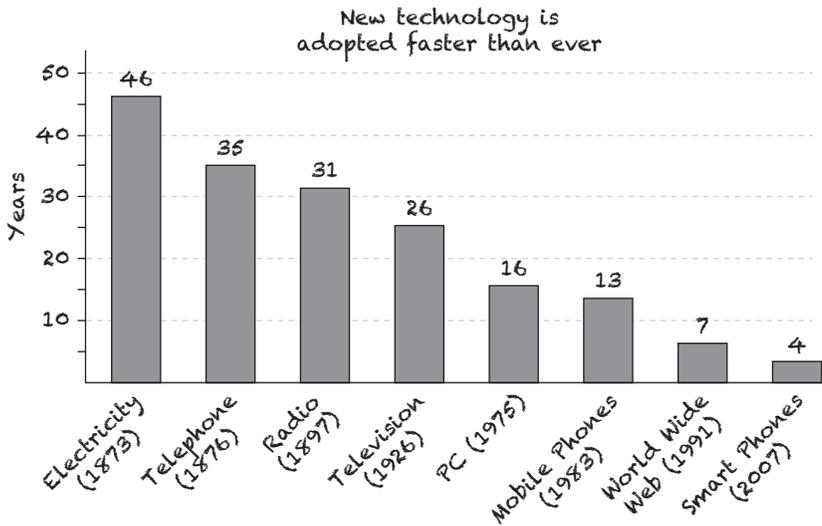
Nobody could have predicted the sheer pace at which events unfolded. Pictures of Bouazizi's immolation quickly appeared online, and within hours, angry crowds began to protest. He had inadvertently tapped into the anger of many people living across the Middle East at the time. Videos of the protest, taken on smartphones, soon went viral across the globe via YouTube and other social media platforms. As the police struggled to maintain order, the protests spread

across Tunisia and into the capital. A mere four weeks later, the president of Tunisia, Zine al-Abidine Ben Ali, resigned and fled to Saudi Arabia, ending his 23-year rule. After another four weeks, the 30-year rule of President Hosni Mubarak of Egypt came to an end, closely followed by the end of the 42-year rule of Muammar Gaddafi in Libya and the 22-year rule of President Ali Abdullah Saleh in Yemen. Ten years on, at the time of writing, Syria remains in a bloody civil war.

Bouazizi's story, and that of the subsequent Arab Spring, demonstrates the volatility of the world in which we now live. Had these events happened just 10 years earlier, the effect would likely have been minimal. The most popular phone at that time, the Nokia 3310, had no video capability, and YouTube would not be founded for another four years. As it was, technology advances and the increased interconnectedness of the world supported the rapid spread of information, images, and videos and allowed the Arab Spring to build unstoppable momentum quickly.

This is just one example of how the pace of change in the world today is unlike anything we've witnessed before. The same phenomenon also plays out in the business environment. The Industrial Revolution of the eighteenth and nineteenth centuries transformed the world forever. The McKinsey Global Institute estimates that the pace of change today is roughly *10 times* what it was during that period, and at roughly *300 times* the scale. That means that the changes going on today have a whopping *3,000 times the impact* of the Industrial Revolution.<sup>8</sup> This all adds up to some startling statistics. If we consider the adoption rates for new technologies, we find that they have risen dramatically in recent years (figure 1). Electricity (invented in 1873) took 46 years to reach 25 percent of the US population. The telephone (1876) and radio (1897) reached the same milestone in 35 and 31 years, respectively. The World Wide Web (1991) took only 7 years, and the smartphone (2007) a mere 4 years.<sup>9</sup> The adoption rates of these last two technologies, it could be argued, led to the downfall of dozens of organizations—Nokia, Blockbuster, and Borders, to name but three. They all had their products, services, or business models rendered obsolete in a matter of a few short years, and they just could not respond quickly enough. Rapid adoption of

**FIGURE 1**  
**Years to reach 25 percent of US population**

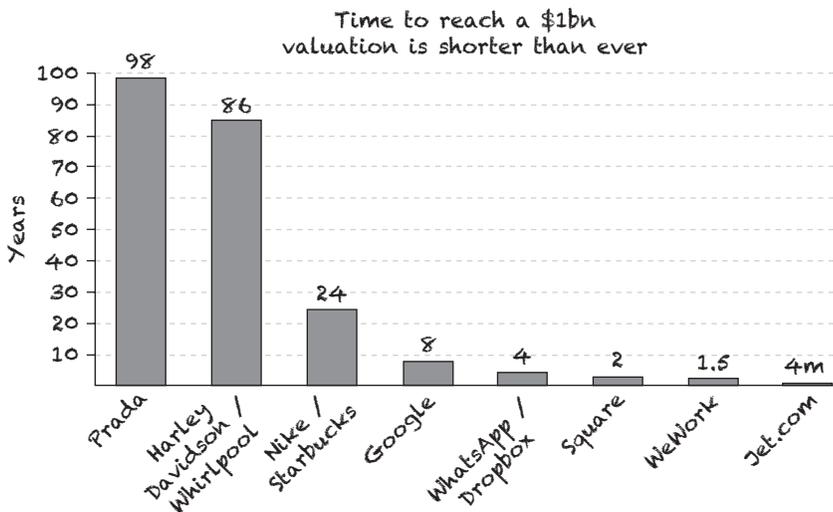


Source: Eric Ries, *The Startup Way: How Modern Companies Use Entrepreneurial Management to Transform Culture and Drive Long-Term Growth* (New York: Currency, 2017). COPYRIGHT: © Eric Ries, reprinted by permission of the author.

technology also led to the rise of nearly all of the most valuable companies today, including Apple, Amazon, Google, and Facebook.

Similarly, organizations once took decades to reach the mystical valuation of \$1 billion or higher. It took Prada 98 years to reach that landmark. Harley Davidson and Whirlpool both took 86 years, with Nike and Starbucks taking 24 years apiece.<sup>10</sup> Even the mighty Google took 8 years. By contrast, however, WhatsApp and Dropbox took just 4 years, Square 2 years, WeWork 18 months, and Jet.com took a mere 4 months<sup>11</sup> (figure 2). All this means that the biggest threat to your organization could be entities that do not yet exist, leveraging a technology that has not yet been invented. In this context, many three-to-five-year strategic plans tend to be out of date before the ink dries. It seems that we now live in an age in which the only thing that remains the same is the relentless pace of change. Whether that change is social, technological, economic, environmental, political, or military, that trend looks set to continue. All this should make for uncomfortable reading for those leading the established market leaders.

**FIGURE 2**  
**Years to reach \$1 billion market capitalization**



### Uncertainty

Right now, we have more information at our disposal than ever before. We have more technology and more computer processing power. And despite this, we have never been less able to make accurate predictions about the future. The faster the landscape changes, and the more interconnectedness there is, the less we are able to predict the future.

To illustrate this point, let us go back to 1961, when an MIT mathematician named Edward Lorenz was simulating two months' worth of weather patterns on the Royal McBee LGP-30, a cutting-edge computer at the time. He was using 12 variables to cover starting conditions related to temperature, wind speed, and so on. Lorenz, keen to examine some interactions in greater detail, set out to rerun one of the simulations. Given that computers in 1961 had a fraction of the processing power available today, he used a set of printouts for the 12 variables and started the simulation from the midpoint to save time. One hour and one cup of coffee later, Lorenz returned to be met with a result that diverged so much from his original that it was unrecognizable.

He was shocked. How could it be? Lorenz suspected a computer hardware issue, something that was not uncommon at the time. The computer, however, was functioning normally. After much investigation, the culprit was discovered. It was the data. The computer stored data to six decimal places, but Lorenz's printout only displayed them to three. Thus, the number 0.506127 was entered as 0.506.<sup>12</sup> This miniscule rounding error on just one of 12 data points should have had very little effect. Indeed, the prevailing belief at the time was that very small influences can be neglected. A tiny error in measuring the position of Halley's Comet in 1986 would cause a tiny error in predicting its arrival in 2061. And yet instead of a small change in the input causing a small change in the result as was expected, in this instance, it caused such divergence that the two weather patterns seemed as if they were chosen at random. Lorenz's subsequent investigation and insights led him, in 1963, to publish a paper called "Deterministic Nonperiodic Flow." This paper laid the foundation for the field of chaos theory.

In 1972 Lorenz delivered a talk titled "Predictability: Does the Flap of a Butterfly's Wings in Brazil Set Off a Tornado in Texas?" It is from here that the phrase "butterfly effect" derives. It is commonly used to describe how small changes in initial conditions can lead to disproportionate changes in outcomes. As we will see (in the *complexity* section next), unpredictable, nonlinear behavior is a hallmark of complex systems. It is the reason we can predict, with high levels of confidence, when my home city of London will see its next lunar eclipse, yet we still struggle to predict whether it will snow on Christmas Day. The former is an example of an ordered, predictable problem, while the latter is an example of a disordered, unpredictable one. As we operate increasingly in this latter, more complex space, the resulting inability to make accurate predictions leads many traditional, deterministic business practices to become less effective by the day.

### ***Complexity***

We all intuitively know that we do different types of work within the parameters of our businesses. We know that we should likely approach different types of work in different ways, but it's not often

that organizations recognize this and use varying context-appropriate leadership approaches in different situations. Consider a team of neuroscientists working in a hospital. They are conducting clinical trials of a new, highly experimental drug. How much can they expect to know up front through analysis? How likely is it that their plan will remain unchanged as they progress—or that they will learn what works and what doesn't as they go? Now consider a team of network engineers laying high-speed cables throughout that same hospital. Would they approach their work in the same way? Would they be able to make, and stick to, more detailed plans? Is their work more predictable than the neuroscientists'?

We hear the words *complicated* and *complex* often in life. Many use them interchangeably, not really considering their deeper meanings. When used to describe the nature of systems, sharing their first five letters is pretty much where the similarity ends. In order to understand how to manage both complicated and complex systems, we must first be clear what each word means in this context.

The human brain is pretty well designed to understand complicated systems. Complicated systems are ordered. There may be many parts to the system, but each part is joined to the next in relatively simple, and understandable, ways. A car engine is a good example of this. Each part can be understood in isolation, and the interactions among the parts can be mapped out reasonably easily. Because of the small number of interactions, the whole can be understood by deterministically breaking it down into discrete parts. The whole is the sum of those parts. This means that, with some analysis, fairly good predictions can be made about the behavior of the system. Cause and effect can be understood in advance. Another hallmark of complicated systems is that behavior is linear. A change in the input will lead to a proportional change in the output. For example, if you deposit \$1,000 in the bank and you receive 5 percent interest, your profit, after a year, will be \$50. If you put in \$2,000, your profit after a year will be \$100. Hence we have a predictable, linear cause and effect that allows us to understand, in advance, the impact of making changes to the system. In short, there are unknowns, but they are *known unknowns*.

Complex systems are not so easily understood by the human brain. These systems are disordered. There are many parts, all interacting with many other parts, often in ways we cannot understand. With this dramatic increase in the number and frequency of interactions, it becomes all but impossible for anyone to understand the system. As we saw with the examples of the Arab Spring and Edward Lorenz, a hallmark of complex systems is the volatility and complete unpredictability of outcomes for a given change. One simply cannot comprehend the sheer number of possible interactions and outcomes. The behavior of the system is nonlinear in that a small change in input could yield a dramatically different output. Consider how differently a game of Scrabble would go if just one or two tiles were changed in one player's starting set. With a different starting word played, after each player took, say, 20 turns, the game would be utterly unrecognizable compared with what it would have been with the original tiles.

Complex systems cannot be understood by breaking them down into their constituent parts. This is because their behavior is not the sum of the system's parts, but a product of the myriad interactions among them. This is why a doctor investigating a patient's blurred vision cannot focus on the eyes in isolation. The root cause could be anything from myopia to high blood pressure to diabetes; diabetes is an inability to produce insulin in the pancreas, which in turn may be caused by a combination of genetic and lifestyle factors. The reductionist approach just does not take into account all the possible interactions leading to any given outcome. The doctor in this case will need to think more holistically.

All of this means that, when working in a complex system, seeking to predict cause and effect in advance, through analysis, is a fool's game. No matter how much one seeks to study a system, it will always yield surprises. Complex systems can only be understood through safe-to-fail experimentation. As economist and author Tim Harford once said, "You show me a successful complex system, and I will show you a system that has evolved through trial and error."

Table 1 gives a summary of the key differences between complicated and complex systems.

**TABLE 1**  
**Summary of complicated and complex systems**

	TYPE OF SYSTEM	
	Complicated	Complex
Typical examples are . . .	Repeatable production and construction work	Creative design, development, and innovation work
The system works toward . . .	Known, stable outputs	Emerging, frequently changing outputs
Behavior is . . .	Largely predictable and linear—a small change in the input leads to a small, predictable change in the output	Largely unpredictable and nonlinear—a small change in the input leads to a large, unpredictable change in output
Risk is best mitigated by . . .	Up-front analysis and detailed planning	Small experiments, quick feedback, and frequent course correction
Competitive advantage is gained through . . .	Efficiency—creating a known output with as little input as possible	Adaptiveness—continuously seeking feedback and course-correcting toward an emerging output
Management processes tend to reward . . .	Conformity to the plan	Value delivery
The whole is . . .	The sum of its parts—the whole can be understood by understanding the constituent parts	The product of the many interactions between the parts—the whole can be understood only by observing the whole
The system contains . . .	Largely <i>known</i> unknowns	Many <i>unknown</i> unknowns

## *Ambiguity*

With so much information at our fingertips, it seems rather counter-intuitive that we have less clarity about reality than ever before. Reality can be hard to understand, and many leaders feel as though they are operating in a fog. Gone are the clear black-and-white views, making way for shades of gray, multiple perspectives, different plausible interpretations, and no clear link between cause and effect. Despite information being available, overall meaning is often unclear. Ambiguity is often confused with vagueness. *Ambiguity* offers many specific, plausible interpretations of a situation—some obvious, some less so. When information is *vague*, however, it is very difficult to formulate any specific interpretations. This makes decision-making extremely difficult. More information is rarely the answer. The chances are that there are multiple good answers.

While a hallmark of ambiguity is an inability to form an accurate picture at the time, what can often be observed is a level of retrospective clarity. This is where a big event was not predicted at the time owing to the many interpretations of the data, but after the event, it appears so obvious that people wonder why it was not picked up. This often occurs with large terrorist attacks or financial crashes. There is so much data that it is difficult to see the forest for the trees in advance, but once the event has happened, people wonder how no one “joined the dots.” Once the dots have been joined up, it seems obvious, but before that happens, it is merely a sea of seemingly unconnected dots.

The four terms that make up VUCA are, in reality, extremely closely related. It is impossible to separate one from the others. The higher the complexity—the more moving, interconnected parts there are—the higher the volatility, uncertainty, and ambiguity tend to be. The key here is that it is vital for leaders to understand the difference between work involving higher levels of VUCA and that involving lower levels. They must also be able to identify the nature of the work being done by teams and to select effective leadership approaches for *that type of work*. This contextual approach can dramatically increase a leader’s effectiveness. As the old saying goes, if you only have a hammer, everything looks like a nail. Today’s leaders

need a whole toolbox, and they need to know which tool to use at which time. Much of the work being done today involves substantially higher levels of VUCA than was the case during the previous century. The business climate has shifted. The biggest mistake leaders can make is to continue to apply yesterday's deterministic thinking to today's complex, unpredictable challenges.

### Reflection

What are some examples of VUCA for your organization? What is the impact of that? Are there some areas that are particularly uncertain and unpredictable? Do you foresee these areas increasing in the coming years?

## The Modern Organization: Exploring with Agility

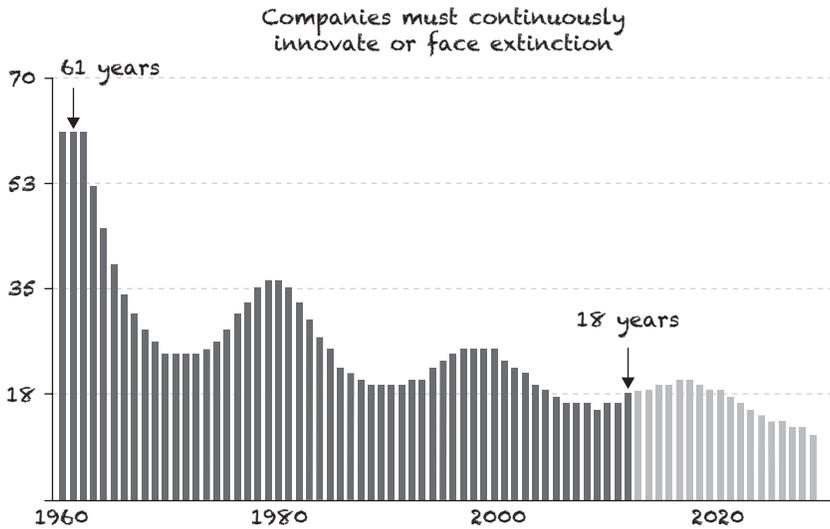
The dawn of the information age changed everything. Technological innovation and deregulation caused barriers to entry to fall dramatically. Suddenly, large sums of start-up capital were not necessary to enter a market. Whole industries could now be disrupted from a garage in Silicon Valley—or anywhere in the world, for that matter. This means that products, services, and even knowledge now very quickly become commodities. As customers are able to switch over to competitors at the click of a button, they must be courted and won over repeatedly with new and exciting products and services—products and services that solve their real-world problems. This hypercompetition leads to ever-diminishing margins and revenues. Thus, merely possessing the ability to exploit your current products expertly will not yield the results it once did. The modern organization must be able to explore new opportunities to delight its current customers and attract new ones, to innovate quickly enough to stay ahead of the curve, and to cultivate the capability to reinvent itself continually *before* crisis hits. Celebrate the successes of today, for sure, but recognize that these are now poor indicators of success tomorrow.

Humans evolved to survive as hunter-gatherers at a time when food was hard to come by. This is no longer the case, at least in the West, and that means that we are now maladapted for the modern world. This is a world in which food is plentiful and exercise is an optional extra. Most people live sedentary lives, sitting behind a desk. Because of that, our health suffers, and our instinct to consume food when the opportunity arises now works against what is best for us. The same has happened in business. Many large entities have leadership styles, cultures, structures, and processes rooted in the Industrial Revolution. They are perfectly adapted for an environment that no longer exists. This means that they are ill equipped to compete in this new business climate—a climate defined by high levels of VUCA, hypercompetition, and an imperative to innovate continually, to explore new opportunities and create new knowledge.

All of this means that the winds of creative destruction are blowing stronger than ever. In the early 1960s, organizations enjoyed an average stay of 61 years on the S&P 500 index of leading US companies. As of 2012, that figure had plummeted to just 18 years (figure 3).<sup>13</sup> Of the original list of *Fortune* 500 companies from 1955, only 60 remained by 2017.<sup>14</sup> That's a mere 12 percent. The rest have disappeared, having gone bankrupt, merged, or been acquired, or they survive but no longer make the *Fortune* 500 cut. In 2016 Pierre Nanterme, CEO of Accenture, noted that “digital is the main reason that just over half the Fortune 500 companies have disappeared since the year 2000.”<sup>15</sup> That is a phenomenal turnover in less than two decades. At that churn rate, 75 percent of the current S&P 500 will have been replaced by 2027.<sup>16</sup> A major contributing factor to these figures is the inherent bias in organizations toward exploit work. In a hangover from an era in which that approach was successful, organizations find themselves optimized only to exploit their current offerings. They tend to be designed to resist change and to move slowly toward new opportunities or away from existential threats.

When you are working toward a known output, efficiency is a great proxy for effectiveness. That's why so many outfits are built, from the ground up, to favor this trait. When operating in a climate so fast-moving and unpredictable, making accurate predictions becomes all

**FIGURE 3**  
**Average company lifespan on S&P 500 Index**



Source: Innosight, *Creative Destruction Whips through Corporate America*, Executive Briefing, Winter 2012, [https://engageinnovate.files.wordpress.com/2012/03/creative-destruction-whips-through-corporate-america\\_final2012.pdf](https://engageinnovate.files.wordpress.com/2012/03/creative-destruction-whips-through-corporate-america_final2012.pdf).

but impossible. Management pioneer Peter Drucker once said, “There is nothing so useless as doing efficiently that which should not be done at all.” Today, the biggest challenge is knowing that you are working on *the right thing*. The organizations that achieve a competitive advantage are the ones that have the ability to respond more quickly, more easily, and more cheaply to *any* challenges that lie around the corner. Always to be working on the right thing, whatever that may be—this is the essence of business agility. With this in mind, leaders need to view their organizations less as efficient machines and more as complex ecosystems of many interacting parts, designed to adapt. To survive and thrive in this new climate, they need to compete every day for the customers they once took for granted. This requires a concerted effort not just to exploit current products but to master the art of exploring new ones, creating new knowledge, and putting the customer at the heart of everything they do. Like the double-faced Roman god Janus, they must be able to look simultaneously back at the past and into the future.

### Reflection

Does your organization benefit from a stable or a turbulent environment? For which is it predominantly optimized? If stable, what might happen if it were forced to operate in a radically different landscape? How easily could it adapt?

## Chapter Summary

- All organizations undertake two basic activities, exploiting their current products and services and exploring new ones.
- In the twentieth century, organizations succeeded by focusing predominantly on efficiently exploiting existing customer offerings. Given the relatively slow pace of change, they could often do this successfully for many decades.
- In the late twentieth century, the world became far more turbulent and unpredictable. Today organizations face far greater VUCA—volatility, uncertainty, complexity, and ambiguity.
- Technological advances, deregulation, and a greater interconnectedness led to lower barriers to entry to many industries. This drove up competition among organizations.
- Today, surviving and thriving is about more than efficient execution and exploiting. Organizations must now balance that equally with exploring the new, innovating, and delivering greater value to customers than ever before. This activity involves focusing not on efficiency but on agility.

## Further Reading and Resources

### Books

- Gary Hamel, *The Future of Management*, with Bill Breen (Boston: Harvard Business School Press, 2007)

- Alex Osterwalder, Yves Pigneur, Frederic Etienne, and Alan Smith, *The Invincible Company: How to Constantly Reinvent Your Organization with Inspiration from the World's Best Business Models* (Hoboken, NJ: Wiley and Sons, 2020)

**Websites, Articles, and Videos**

- Please see [www.6enablers.com/resources](http://www.6enablers.com/resources) for more on this topic, including a downloadable reading list.

# About the Author

**Karim Harbott** is a world-leading business agility and leadership consultant, entrepreneur, author, and international keynote speaker. He has been involved with software development for 20 years with over a decade of experience helping organizations with business agility, working with some of the most complex transformations in the world. Karim's work involves advising on business agility, agile at scale, leadership development, culture change, strategy, and innovation.



Karim has taught, coached, and delivered keynotes to thousands of leaders and practitioners across five continents, from start-ups to *Fortune* 500 companies. He stresses pragmatic, context-appropriate approaches over rigid out-of-the-box solutions. He has held several senior roles in the agile space, including building out the Agile at Scale practice in Europe, the Middle East, and Asia for global strategy consultancy McKinsey. He helped to craft the learning objectives for several leading agile certifications, which have been taken by over a million people globally. He also serves on the board of directors at the Scrum Alliance, the agile industry's leading certifying body.

Karim is one of only a handful of people globally to hold the Certified Agile Leadership Educator, Certified Scrum Trainer, and Certified Enterprise Coach status. He is also a Professional Certified Coach with the International Coach Federation, and Certified Leadership Agility 360 Coach.

In 2016, Karim cofounded Agile Centre ([www.agilecentre.com](http://www.agilecentre.com)), a leading provider of training and consulting based in London. In 2020, he cofounded the Business Agility Academy ([www.business-agility.academy](http://www.business-agility.academy)), the world's leading certification body in the business

agility and innovation space. Find out more about Karim at [www.karimharbott.com](http://www.karimharbott.com), and head over to [www.6enablers.com](http://www.6enablers.com) to download some free resources described in the book.

Karim lives in North London with his wife and two lively daughters.