DIGITAL MANIFESTO

Principles and Practices for Orchestrating an IT Value Chain

FRANÇOIS ZIELEMANS

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To Jamie, my wife

To Hendrik, my friend and mentor

PREFACE

The journey resulting in this book started in 2009 when Hendrik Wester and I decided to start a boutique consulting firm that specialized in advising CIOs on the impact of digitalization on their operating models. We thought that the worst of the financial crisis from 2007 was behind us and that we would be able to catch the next wave of economic growth. It turned out that fortune telling was not our forte. In 2011, we decided to close the firm; and we joined two different IT service providers in executive positions.

This book is the sole survivor of our short but extraordinary period as entrepreneurs. I started working on it in July 2011, and over a period of more than five years, and several rewrites, it eventually resulted in the book you are holding in your hand.

WHY THIS BOOK?

Sustainable success in digital markets requires more than adopting agile Scrum or replacing the business IT alignment paradigm with business IT fusion. These are point solutions, while digitalization starts with the business and IT reframing their current belief set and operating model. A successful transformation of an analog business model into a hybrid or digital equivalent touches on companies' leadership style, culture, skill sets, strategy, business model, sourcing strategy, and process model. Technology-rich markets are too dynamic and competitive for half-measures.

The same forces also translate into a need for flexibility. Companies are too diverse to be captured in one universal management framework. For this reason, this book is structured around six principles, each supported by several models and practical examples. The principles are concrete enough to translate into actionable improvement initiatives, but leave enough room for company-specific adaptations.

This book is written for business-savvy technologists and business executives who are leading digitalization initiatives—professionals who understand that business and IT have to stand side-by-side to be successful in new, and often digital market spaces, and realize value from disruptive technologies.

Due to the broad scope of this book, it is not possible to cover all of the topics in the detail they deserve. For that same reason, it would be helpful for readers to be already familiar with concepts like agile, waterfall, the Information Technology Infrastructure Library, the business model, and enterprise architecture—or at least don't mind doing a few internet searches regarding the concepts here and there while reading this book.

In case you want to know more about the topics covered in this book, feel free to visit my website at www.digital-manifesto.org.

François Zielemans

ABOUT THE AUTHOR

François Zielemans has 20 years of IT management and international consulting experience. He is currently an IT executive who is responsible for the solution engineering business unit of the Centric organization located in the Netherlands and Romania. Centric is a European IT provider that delivers infrastructure and software solutions for a variety of markets such as financial services, supply chain, healthcare, construction, and government in the Netherlands, Germany, Switzerland, Norway, and Sweden. It also provides business process outsourcing and staffing services.

Mr. Zielemans' business unit applies both emerging and mature technologies to solve complex business challenges in the areas of digitalization, big data, advanced automation, the cloud, and the Internet of Things. While planning and executing these projects, Mr. Zielemans applies the principles and practices covered in this book—reshaping and further refining them in the process.

Prior to joining the Centric organization, François advised numerous large multi-national organizations regarding the digitalization of their business models, leading several organizational transformations in complex and dynamic environments. He worked abroad for extensive periods in the United States, Singapore, India, and Malaysia.

A few of his other areas of experience and expertise include defining and executing (sourcing) strategies, and defining and launching new value propositions to help organizations realize sustainable operational excellence. Early in his career, he gained experience leading successful IT support and operations teams using performance management frameworks and Information Technology Infrastructure Library best practices.

François Zielemans has a bachelor's degree in mechanical engineering and a master of science degree in business administration, along with being a well-published author in the IT-related Dutch media. His current area of focus is the impact of digitalization on companies and society and, more specifically, the fact that the accelerating impact of technology is forcing companies to boost their capability to sense more quickly and act more decisively than ever before in history; they must disrupt or be disrupted.

François has had a popular blog for several years and recently developed a new website and blog called *The Digital Manifesto* (www.digital-manifesto.org) where you can find valuable information.

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Downloads for *The Digital Manifesto* include IT business model canvases for foundation and entrepreneurial IT, and an Excel template to calculate net present value of an outsourcing deal, with and without real options.

1

THRIVING IN DIGITAL MARKETS

> We tend to underestimate the future, demonstrated by this internal memo from Western Union (1876): "*This* '*telephone*' *has too many shortcomings to be seriously considered as a means of communication*."

The telegraph was invented in 1792. It took almost 100 years for its successor, the telephone, to arrive. Today, the pace of one technology being replaced by another is exponentially getting faster, dramatically impacting both our working and private lives. Food and clothes are only two examples of what may be next in line to be transformed by the miniaturization of sensors and the internet. The transformation that many traditional or *analog* products go through is well demonstrated by observing the automobile.

Since the introduction of the anti-lock braking system (or ABS) in 1978 by Mercedes-Benz, the car has slowly become less automotive and more *IT-motive*—including motor management systems, cameras, lasers, radars, heads-up displays, and other high-tech equipment. Many systems are dedicated to improving the safety of both the driver and others who are using the roads, while increasingly complex motor management software is used to comply with (or even circumvent) stringent pollution laws and their requirements. In the near future, cars will be equipped with car-to-car communication allowing them to react to each other's behavior and interact with a larger traffic control infrastructure. After that, the next logical step of riding in fully autonomous cars could be just around the corner.

For farmers, IT holds the promise of sleeping in instead of getting up at 5 a.m. to milk and feed the cows. The newest generation of milk robots allow cows to be milked whenever they feel like it—a cow just has to walk up to the machines. They recognize each individual cow by the tag she is wearing before feeding her and disinfecting her udders prior to milking her. Data regarding her health and the quantity and quality of milk she produces is stored and is accessible to the farmer whenever and wherever he wants. Business intelligence tools transform the data into actionable information, such as the producible number of cheese wheels or cartons of milk from an individual farm's milk production, for both the farmer and the downstream factory. As a result, the farmer can spend his time on exceptions, like calling the vet, and initiatives to further improve productivity and quality.

Movie and game rental company Blockbuster is on the other side of the equation. It was unable to compete effectively with the disruptive business model of Netflix. The latter streams movies over the internet, removing the cost of renting local floor space and employees. Unable to transform itself in time, the former rental giant had to file for Chapter 11 bankruptcy protection with a debt of $1.46 billion.

IT used to be a utility—today it is a game changer. More specifically, closed customer data[1] and software are the jokers stacked in an IT team's deck. The former is relatively scarce in a world that is dominated by a small number of ecosystems—for example, Apple, Google, Amazon, and Microsoft—while the latter has become so powerful that it is reshaping the job market even now. However, there are a few snags. For starters, technology itself is abundant and has to be combined with business capabilities to become a strategic differentiator. This in turn requires the IT team to act less as a faithful servant (*business, tell me what to do*) and more as a business partner (*business, this is what I suggest we should do*). In native digital and hybrid markets, business and IT domains may even have to fuse to create a frictionless operating model.

Equally important is not to get carried away by technology-related buzzwords. The Internet of Things (IoT), social media, big data, and the cloud are all very important trends, but they are no reason to forget everything from the past. Agile Scrum is taking the development world by storm, but there are still plenty of cases where waterfall development is preferable. Similarly, the business IT alignment paradigm from Henderson and Venkatraman remains the best choice to collaborate with the business for the stable, efficiency-driven part of the IT portfolio.[i]

The need to differentiate can also be observed at company and industry levels. A manufacturer of roof tiles relies far less on IT for its financial success than Google. Or, consider a start-up company versus an established company: the first starts with a clean sheet while the century-old company has a mountain of legacy to consider.

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[1] Closed data refers to data that companies don't want to share due to commercial reasons (e.g., competitive advantage) or regulatory compliance (e.g., personal data of customers).

The world is too complex and diverse to think only in black and white. It consists of many shades of grey, too. The digitalization of markets and business models requires companies to execute certain things less, and others more. These practices are embodied by the following six principles:

- Less defensive, more offensive
- Less inside, more outside
- Less uniform, more differentiated
- Less static, more flow
- Less isolation, more cohesion
- Less cost, more value

The similarity to the Agile Manifesto is obvious, as is the following concept applicable in this book: "*while there is value in the items on the left, we value the items on the right more.*"[ii] Every year, product life cycles become shorter, products more complex, and markets more uncertain. This requires companies, regardless of their industry and age, to invest in capabilities embodied by the items on the right.

The remainder of this chapter is dedicated to the concise introduction of the six principles and a map to guide the reader through this book.

To stimulate the mind, every chapter includes statements like the ones in Table 1.1. These invite the reader to form an opinion before and after reading the chapter. They cover both the book as a whole and the six principles. Some may seem cryptic now, but I will help you decode them as we go along (see Table 1.1).

Table 1.1 Statements to think about when reading this chapter

Statements
Processes, role descriptions, and reward systems cannot change an introvert into an extrovert.
The protective shield between the market and IT provided by the business has evaporated.
Technology by itself is a non-distinctive asset; a business-technology concept is a moderately distinctive asset; and closed customer data is a distinctive asset.
A one-size-fits-all IT operating model forces the business to invest in shadow IT.
The hottest technology today is the legacy of tomorrow.
The mainframe and the IoT can and should coexist.

1.1 CAPABILITIES TO LEAD IN A DIGITAL WORLD

The environment in which we live and work today is more uncertain and complex than ever before. To survive, let alone thrive, companies have to boost their capability to sense and act on both foreseen and unforeseen events quickly and decisively. According to Rita McGrath,[iii] the downfall of Sony, BlackBerry, Blockbuster, Circuit City, and even the New York Stock Exchange can be attributed to failing to do so:

> *"Their downfall is a predictable outcome of practices that are designed around the concept of sustainable competitive advantage. The fundamental problem is that deeply ingrained structures and systems designed to extract maximum value from a competitive advantage become a liability when the environment requires instead the capacity to surf through waves of short-lived opportunities. To compete in these more volatile and uncertain environments, you need to do things differently."*

Of the 500 largest companies in 1957, less than eighty were still part of the S&P 500 forty years later. Some were taken over by other companies, but most shrunk or simply went bankrupt.

Even today, Facebook, Twitter, LinkedIn, and other young multi-billion-dollar companies aren't exempted from these economic forces. Yahoo was one of the pioneers that turned the internet into a billion-dollar business. Today, it is no longer an independent company—Verizon bought it in 2016 after a months-long bidding process. Facebook had attracted a huge teen following, an important demographic group for marketeers, at its inception. However, privacy concerns in combination with Mom, Dad, Aunt Edna, Uncle Jim, and the rest of the uncool lot joining Facebook are affecting engagement with this age group. Consequently, they move on to apps like WhatsApp, Snapchat, or others to communicate with their peers. *For now*, between today and a couple of years from now, a start-up introduces a new value proposition, starting a new cycle. Technology is therefore both a key enabler of new business models, and at the same time, a major source of strategic risk.

Data follows a similar path. The continued miniaturization of sensors, CPUs, and other components turns *dumb* products into *smart* ones. This, too, is a potential source of billions of dollars in revenue for both IT service providers and the companies that are using their solutions. Downsides include bankruptcy for companies ignoring the IoT and big data altogether, and waste for companies that are unable to effectively realize the potential value represented by these buzzwords. Combine data with advanced algorithms and you have a tool to automate knowledge-intensive work, create robots maintaining other robots, and autonomous driving trucks, cars, and airplanes. However, until artificial intelligence becomes mature enough to dynamically solve myriad situations, both foreseen and unforeseen, weaknesses in either data set or algorithm could result in dramatic distortions in the value chain or in a car ending up in the ditch.

It is important to note that the changing role of technology does *not* equal asking the CFO to double the IT budget or adopt every new technology entering the market. The success of Apple's iPad doesn't come from any introduction of a new disruptive technology—it is a winner because Apple combined easy access to a wide variety of books, music, games, and movies with a good looking, high quality device. Additionally, the iPad actually provided so much more functionality than the average e-reader that it created a new market. Consumers did not know they had the need until Apple launched the product. As a result, the iPad sold more than three million units in its first 80 days, making it the fastest selling electronic device at the time. Coming in at number two, a considerable distance back, was the DVD player with 350,000 units in its first year.

In their book *Blue Ocean Strategy*, Kim and Mauborgne describe the creation of new (uncontested) market spaces as a means to break away from traditional competition models. They argue that the traditional fighting for competitive advantage, battling over market share, and struggling for differentiation has resulted in a bloody *red ocean* of rivals fighting over a shrinking profit pool. The authors argue that tomorrow's leading companies will succeed not by competing head-to-head with competitors, but by fulfilling a new demand in an uncontested market space, creating a *blue ocean*—an ocean that will, in most cases, be full of technology and data.

The need for technology and business departments to act quickly and decisively is amplified by the infusion of IT into our day-to-day lives. Today, there are four billion people using mobile phones—approximately 450 million of them have internet on their mobile phones, and that number is expected to grow rapidly. We can consume information 24 hours a day, purchase a book at 3:00 a.m., and read a memo from a colleague at the breakfast table. IT is not only changing business models, but also the way we spend our free time (e.g., checking our Facebook account, playing mobile games).

Technology overcomes many boundaries, enabling companies to tap into new markets and enriching the private lives of billions of people. We are part of a global ecosystem—with all of its opportunities and challenges. To thrive as a company in this world, companies need to invest in the capabilities reflected by the six principles described in the following sections.

1.1.1 Less Defensive, More Offensive

The lack of scarcity inhibits technology from being a sustainable strategic differentiator by itself. It requires a specific mix of business and technological capabilities to create value propositions that are both attractive to customers and difficult to copy by the competition. Entrepreneurs show the way by launching a constant stream of new business models that leverage advances in sensor technology, powerful but energy efficient processors, and clever software to enter or even create new markets like e-health and smart homes. While market dynamics ensure that most of these companies will vanish before ever reaching maturity, Google, Facebook, Twitter, Box, and Salesforce demonstrate the inherent *business* potential of technology.

Some digital or hybrid start-ups create completely new markets while others disrupt existing ones. For instance, the introduction of fitness tracking devices from companies like Fitbit and Garmin did not replace any analog substitute. This is very different from the impact that 3-D printing has on the manufacturing industry. Here, the commoditization of 3-D printing is democratizing the production of physical products. Customization and build-to-order take on a whole new dimension now that printers and materials have become cheap and durable enough for individuals to design and produce their own products.

The longer the history of a company and its stability in the market, the wider and deeper the canyon that has to be bridged when game-changing technologies turn up on the horizon. To make matters worse, adopting a new strategy and the associated operating IT model takes time. Depending on the industry or market, there is little or no time when nimble start-ups enter the market with their new and disruptive business models. The first principle is therefore primarily about the right mindset. To be more than a mere utility provider, the IT team of established companies has to be open minded, curious, proactive, and constantly ready to adapt to change. *Less defensive, more offensive represents the attitude and skills required to lead in digital markets*. The performance management framework, IT business model, and concepts from the other principles are instrumental in nature. By themselves, they cannot change a shy introvert into a confident extrovert.

1.1.2 Less Inside, More Outside

The one thing that did not change between 1950 and 1989—the year that the worldwide web was invented by English scientist Tim Berners-Lee—was the number of customer segments IT had to service. While the business consisted of multiple functions, the demand profile was homogeneous, stable, and moderately complex. Technological breakthroughs including the internet, wireless networks, and ongoing transistor miniaturization dramatically changed both the number and diversity of IT's customer segments. They enabled the business customers to become IT customers.

Digital and hybrid markets elevate technology to the heart of the business model. To be considered a business partner, the IT team has to do more than supply customer relationship management or e-commerce applications—this is something any external vendor can do. Only by adding tangible value (e.g., smoothing a cross-channel experience, turning a *dumb* product into a *smart* one) will the business refrain from removing the internal IT team from the equation.

The fun does not stop here, however, as the value chain, as a whole, digitalizes. The complexity and diversity of today's products require companies to specialize. Only as part of an interdependent network of business partners can a company produce and service an end-to-end value proposition from a customer perspective. Due to the strategic impact of these so-called *key partners*, the business expects effective collaboration tools, end-to-end actionable business intelligence, and flawless data exchange between devices (e.g., machine to machine, IoT). This effectively turns the key partners of the business into a VIP customer segment for IT.

Today's customer segments of IT are both internal and external, along with being heterogeneous, dynamic, and highly complex. With both the upstream and downstream parts of the digital value chain crossing company boundaries, *less inside, more outside represents the ability to manage multiple heterogeneous customer segments*. Only when IT embraces the fact that it happens *out there* instead of within the four company walls, indistinct technology can be turned into a company asset. No more hiding behind the business's skirt, but embracing the marketing and business concepts required to thrive in hybrid and digital markets—markets that all have their own demand profile affecting the positioning of IT and its value propositions.

1.1.3 Less Uniform, More Differentiated

Google and Apple dominate the mobile market using different approaches. Apple's success is based on a centralized, designer-centric corporate culture, while Google relies on distributed teams consisting of highly skilled individuals to make the right decisions. The product portfolio of Google is very broad, with a constant flow of new entrants and (premature) exits. In comparison, Apple's portfolio is narrow, but more stable.

FedEx and UPS also dominate their markets, again using slightly different value propositions. Compared to UPS, FedEx offers its customers more flexibility at slightly higher price points. More price-sensitive customers opt for UPS and the more standardized value proposition that comes with it. Even more pronounced is the difference between Walmart and Amazon. The first has its roots in physical retail outlets while the second started as a native digital business model.

Differentiation can also be observed at an operational level. Marketeers want to try new things on a daily basis, while the controllers and bookkeepers of the finance and administration department prefer stability and predictability.

Marketeers enjoy rally and off-road racing, while controllers tend to take the train for its excellent safety record. When it comes to IT, the marketeers want to be behind the steering wheel with IT as the co-driver, knowing that only as a team can they win. For the controller, a commercial off-the-shelf software-as-a-service (SaaS) solution will do just fine.

The higher the technology density of the market, the more important it becomes for IT to sense and act on the relative importance of co-creation, speed-to-market, flexibility, robustness, efficiency, or other sources of contextual value. In hybrid and native digital markets, this value can be equal to or even surpass the base value represented by the functional requirements. *Less uniform, more differentiated represents the ability to deliver contextual IT solutions.* At the company level, think of effectively positioning IT as either a faithful servant, business partner, Average Joe, or prima donna. At an operational level, the two key archetypes are entrepreneurial IT and foundation IT, as seen in Figure 1.1. The first is also known as *strategic IT* or *enabling IT*; but in hybrid and digital markets it is entrepreneurship that is required from IT. Being an entrepreneur means *one who undertakes an endeavor* or an *enterpriser*,[2] a far better term when business and IT are together in pursuit of more revenue, profit, or less strategic risk.

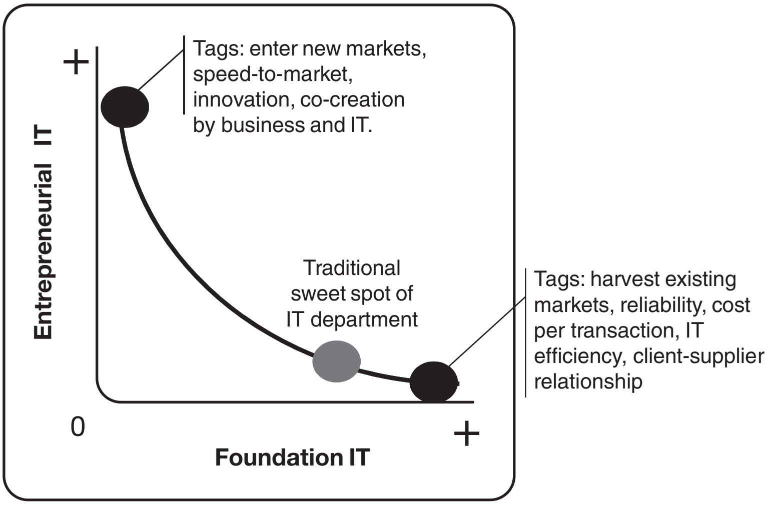
Entrepreneurial IT
+
Tags: enter new markets, speed-to-market, innovation, co-creation by business and IT.
Traditional sweet spot of IT department
Tags: harvest existing markets, reliability, cost per transaction, IT efficiency, client-supplier relationship
0
+
Foundation IT

Figure 1.1 The continuum between entrepreneurial IT and foundation IT

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[2] Technically, the term should be intrapreneur as IT would be acting as an entrepreneur within the company. As this term is not widely used, this book will use the more common term.

Foundation IT, also known as *transactional IT* or *factory IT*, is the traditional sweet spot of the IT department. Even though most consider it less sexy than entrepreneurial IT, the majority of companies' revenue and margin are generated by business processes that are enabled by this part of the IT portfolio. Entrepreneurial IT is, in most cases, a source of expected *future* cash flows funded by *current* cash flows that are enabled by foundation IT. The latter's portfolio also contains the capabilities required to *glue* IT systems together—like the enterprise service bus and the platform required by lean and business process management initiatives. As such, it acts as the solid foundation required by other initiatives to succeed.

To survive, companies need both flavors, differing only in the relative amount. Besides the usual suspects—such as specific industries, business strategies, and business models—one more factor drives the mix of entrepreneurial IT and foundation IT: time. Nothing ever stays static; everything flows.

1.1.4 Less Static, More Flow

Several years ago, I supported the CIO of a media company to clean up the mess left behind by an uncoordinated technological investment spree. This story will be all too familiar for many.

The IT department had gone through the classic evolution of mainframe to client-server solutions. The service portfolio consisted of core business applications that were required in order to edit, print, and distribute printed magazines and newspapers; the applications required by the shared support functions (e.g., HR, finance, accounting); and office automation. None of these applications provided the business with any strategic advantage and, consequently, IT was treated as a utility—not any more or less important than the quality of food served by the cafeteria for lunch.

When the internet and mobile platforms disrupted the company's business model, the CIO was barely consulted by the business on how to move forward. The IT team was not considered capable of driving the transition from printed to digital media. Caught off guard and fearing that they were going to be left behind by the competition, the heads of the business units did what they thought was best for their own team—they bought several start-up companies at the top of their valuation curve and embraced a wide variety of new technologies and platforms.

The results were underwhelming to say the least. Three years later, a new CEO was appointed to stop the bleeding. On the IT side, the lack of orchestration had resulted in a heterogeneous archipelago of shadow IT teams and technologies. To make matters worse, the hodgepodge made it impossible to quickly scale those few initiatives that were successful.

Looking back, it was easy to identify the root cause of the problem. Both business and IT were too focused on maximizing the revenue and margin of the existing business model to sense and act on the imminent disruption. They forgot that, even after decades of relative stability, every status quo eventually ends. Quoting Nike's CEO Mark Parker: "*Business models are not meant to be static. In the world we live in today, you have to adapt and change. One of my fears is being this big, slow, constipated, bureaucratic company that's happy with its success. That will wind up being your death in the end.*"[iv]

Nothing can escape time. Business models, technologies, and individual value propositions are all conceived, grow, mature, and decline. Many don't even make it to the mature phase. In 2007, everybody talked about the virtual world known as Second Life. Businesses opened virtual shops and some colleges organized virtual lectures. By 2015, Second Life had become a ghost town. Other hyped initiatives that flopped include the satellite network Iridium, WebTV, 3-D televisions, the mini disk, BetaMax, HD DVD, and the Zune MP3 player. The jury is still out on Windows 10 Mobile, smart watches, and virtual and augmented reality—turning them into risky bets for now.

As risk and return go hand in hand, unproven business models and technologies should not always be avoided. Entrepreneurship is equivalent to risk taking. What they do require is proactive decision making and effective portfolio management. The previously mentioned media company was neither proactive nor in control—ending up with their back against the wall.

In hybrid and digital markets, regularly evaluating if and when to invest in or divest a business model or technology only gets you halfway. The close interdependence between business and technology life cycles requires an integrated approach. For companies like Amazon, Apple, Google, and other tech companies, this comes naturally. Facebook was launched in 2004 and captured market share while the underpinning technology platform was still under construction. Ten years later, both their business model and platform entered the mature phase, which enabled the company to spend more time on diversification like virtual reality (through the buyout of Oculus Rift, the leader of the industry at the time), and augmenting core parts of its business mode, such as online video advertising (through the purchase and integration of LiveRail).

The capability to closely integrate multiple life cycles is new to companies that are in the process of transforming their analog business model into a hybrid or digital one. It is nevertheless a crucial ability if they are to become successful players in their respective markets. *Less static, more flow represents the ability to integrate multiple, interdependent life cycles*—life cycles that become shorter, more complex, and more dynamic with each passing year. It is a complex challenge that cannot be solved by one isolated initiative.

1.1.5 Less Isolation, More Coherence

When a train that is loaded with chemicals derails near a village, all emergency response teams within a 50-mile radius scramble to get to the site. Depending on their role, they need critical information to be readily available: the fire chief wants to know the type and scale of the spill; ambulance crews need information regarding the expected number of victims; the local council has to determine whether to evacuate the nearby school; and the police need to know which roads should be closed. However, reviews of urban disasters show that these isolated efforts are not enough to minimize the impact on people, the environment, and the assets. A truly effective response requires all parties to collaborate and exchange information in a structured and prearranged manner. The more they collaborate, the less they lose their individual strengths and, consequently, more lives are saved.

Companies face a different, but not necessarily less difficult, challenge. The time where customers were happy with any color for their car as long as it was black has come and gone. Today, both choice and supply are abundant, shifting the power balance toward the customer.[3] Only through a complex network of interdependent external stakeholders (e.g., external business partners, government agencies) and internal stakeholders (e.g., division heads, IT director, CFO), can a company hope to produce a successful value proposition.

The larger and heterogeneous the network, the more difficult to realize the desired end-to-end flexibility, predictability, and efficiency. To overcome this challenge, companies implement both *vertical* and *horizontal* governance and management practices. The first represents the hierarchical line and accompanying distribution of authority. It divides the company in three layers[4]—strategic, tactical, and operational. Respectively, they focus on direction setting, control, and execution. Porter's value chain and Osterwalder's business model are popular models to structure the horizontal axis, supplemented with three types of integration capabilities.

A business model describes the rationale of how an organization creates, delivers, and captures value: economic, social, or other forms of value.[v] Coincidently, the IT department has the same objective. Also similar are the presence of customer segments, channels, customer relationships, value propositions, key activities, key partners, key resources, revenue streams, and cost structures.

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[3] There are still (digital) value propositions that enjoy relative high switching cost for customers and barrier of entry for competitors, but their numbers are dwindling. See also Chapter 8.

[4] The three layers can be condensed to two by combining control with direction setting. In general, the larger, more stable, and more diversified the company, the more layers there will be.

Only minor adjustments, such as changing revenue streams into value streams, are therefore required to turn Osterwalder's business model canvas into an IT business model canvas, as seen in Figure 1.2. It is easy to explain to any business executive, and it can be applied to analog, hybrid, and digital markets by varying the level of forward integration and convergence of both domains.

The vertical axis has to be equally flexible, as entering a new market requires fast and decisive decision making—achieved either by delegating mandates to the managers who are operating at the front lines or leveraging on advances in business intelligence tools. The latter allows senior executives control that is broader and more effective than previously possible. For mature and declining markets, the usual key objective of speed-to-market is replaced by efficiency and asset recovery, translating into a different design of both the vertical and horizontal axis.

In short, to prevent value leakage from investments in technology, the business and IT have to be organized in a way they can get close-distant, informal-formal, fluid-robust, or any other property related to the entrepreneurial IT and foundation IT dichotomy. *Less isolation, more cohesion reflects the ability to operate multiple IT business models simultaneously*. To achieve this, the business models used by the business and IT have to be flexible, comparable, and coherent enough to drive joint value propositions throughout their life cycle. Simply stated, the shift from entrepreneurial IT by a value proposition to foundation IT should not take a year and cost three times the original investment.

At the strategic level, the name of the game is *positioning*, and includes the capability to act as a business partner and prima donna simultaneously or to

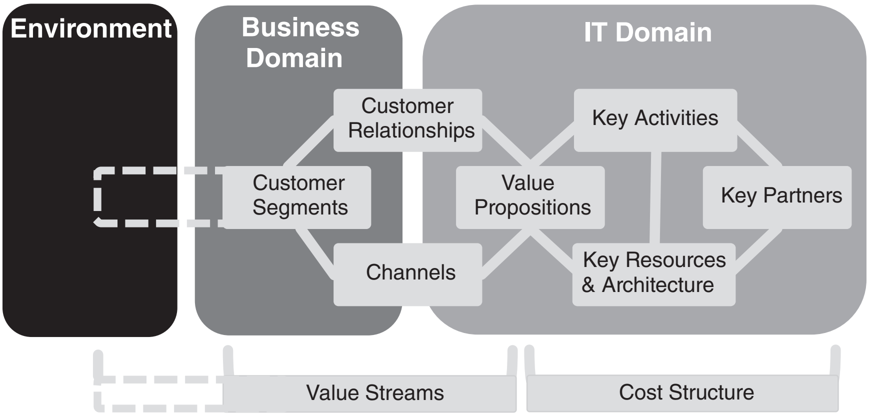

Figure 1.2 The IT business model (adapted from Osterwalder 2010)

quickly evolve from faithful servant to business partner when an analog market digitalizes.

This fifth principle therefore represents the tools and practices required to translate the previous principles into a working organization. Digital leadership, differentiated value propositions, and life-cycle management need an adaptable and scalable organizational *landing platform*. Only when all of the building blocks of the IT business model work in tune with each other can the gap between potential and realized value be closed. Ideally, the end result of all the hard work will be value.

1.1.6 Less Cost, More Value

For the first 40 years since its inception, IT was solely used to automate internal business processes in order to reduce cost. The association with cost was further reinforced by the soft relationship between company revenue and money spent on IT. The difficulty of tying IT capital expenditure and IT operational expenditure to business benefits in combination with large sums of money resulted in many IT managers reporting to the CFO. Even today, it is still common for the CIO of a company with an analog business model to be treated as a *junior* board member.

There is good news though—digitalization removes many of the layers that cause the dilution between $1 invested in IT and $1 in additional business revenue. Pandora, LinkedIn, and Facebook have no analog or even hybrid value proposition or channel—their business models only exist in cyberspace. It is therefore relatively easy to foresee and measure the return of increased investments in IT (e.g., one extra server can support x users, averaging y dollars in additional advertisement revenue). This does not make IT costs any less significant, but with digitalization, its relative importance changes.

For starters, in hybrid and digital business models, the business expects IT to report its contribution in business terms. The objectives of the business are increasing revenue, margins, flexibility, and customer satisfaction, while decreasing competitive risk, unexpected fluctuations in customer demand, and other challenges. These are very different objectives compared to the IT classic *monthly server availability* or an initiative whereby IT signs a rigid, long-term outsourcing contract to negate its own costs and any effects that that decision might have on the business domain (e.g., investments in shadow IT by the business, foregone revenue).

Less cost, more value represents the ability to realize value from a business perspective. The principle reflects IT's capability to define, measure, report, and optimize the performance of the end-to-end information value chain. When done well, it leads to quotes like this one from H&R Block's CIO Marc West:[vi] "*It's* *way beyond alignment, it's when a president of a retail tax business unit stands up and says 'here's the top five things my IT team is doing for me, (. . .) those guys in IT understand how we make money.'*" In order to get more quotes like this one, Chapter 7 introduces a new way to calculate the business value of IT, supplemented by practical tools like (joint) benefit and risk universes and differentiated value trees.

1.2 INTERDEPENDENT CHAPTERS

The sequence in which the principles are listed is no coincidence. There is a rationale, depicted in Figure 1.3. It starts with embracing at personal, team, and department levels that the raison d'être of IT is adding value to customers. In hybrid and digital markets, this requires an eagerness, focus, soft skills,

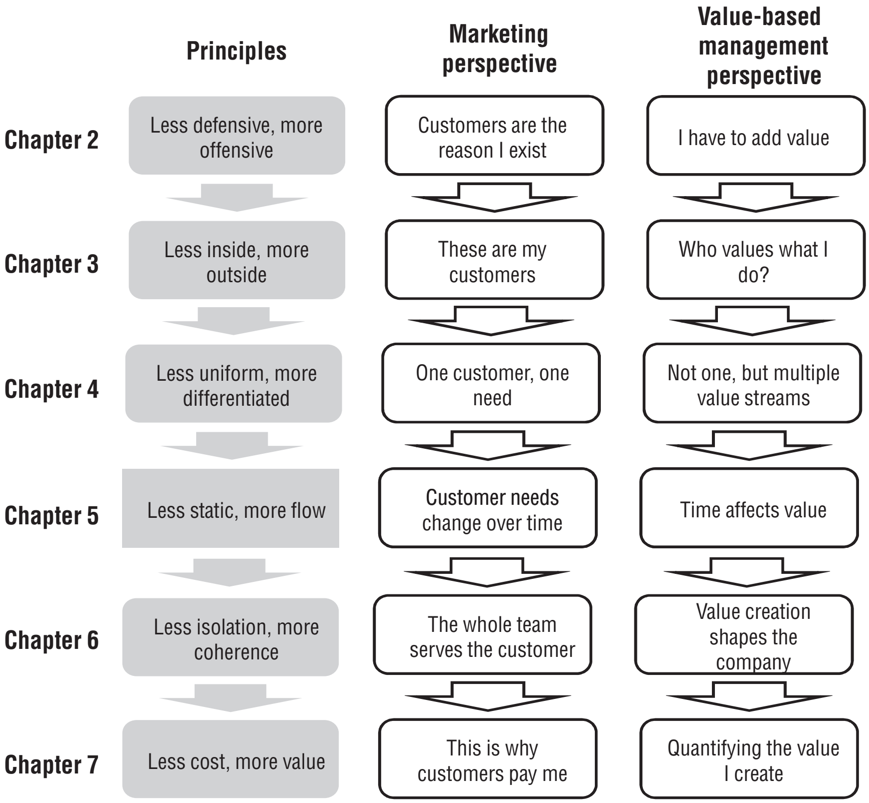
Principles
Marketing perspective
Value-based management perspective
Chapter 2
Less defensive, more offensive
Customers are the reason I exist
I have to add value
Chapter 3
Less inside, more outside
These are my customers
Who values what I do?
Chapter 4
Less uniform, more differentiated
One customer, one need
Not one, but multiple value streams
Chapter 5
Less static, more flow
Customer needs change over time
Time affects value
Chapter 6
Less isolation, more coherence
The whole team serves the customer
Value creation shapes the company
Chapter 7
Less cost, more value
This is why customers pay me
Quantifying the value I create

Figure 1.3 The structure of this book

and expertise untypical for an IT department that has been spoiled by decades of forced sourcing by the business. A business that was liberated by the commoditization of web applications and SaaS delivery models left the internal IT department no choice but to shape up or ship out.

With the notion that IT has to be run as a business and regarding the soft and hard skills that come with it as a solid foundation, the next step is identifying the customer segments. With digitalization, both the number (e.g., business-to-business customers, business-to-consumer customers, key partners of the business) and complexity (e.g., focus on user experience, business wants, virtual reality pilot) of the segments increases. Besides an increase in scope breadth, IT also has to deal with an increase in depth. Marketing demands a top-notch user experience for visitors of the website that offers a virtual reality experience for the product they plan to launch in the next quarter. The production department wants to further converge their industrial IT systems with the enterprise resource planning suite and start an IoT pilot project. In other words, one customer equals one need: or less uniform, more differentiated.

Translated to value-based management lingo, IT has to generate multiple value streams. Lowering the cost-per-business transaction through automation gets you almost all the way in an analog market, but it would get you barely beyond the starting line when the business model digitalizes. Increasing the challenge further is the fact that the demand of those multiple heterogeneous customer segments is not static. One person can be a teenager interested in getting insurance for his first car and later, a young parent looking for insurance to protect the financial future of the family and even later, an elderly person worried about the cost of healthcare insurance. In other words, the needs of a customer evolve, driven by the inevitable flow of time.

Chapter 6 provides the necessary paper, pencils, and glue to turn everything into a coherent and effective functioning organization. The marketeer may say something along the line of *the whole team serves the customer*, while the finance specialist argues that the *all management processes should be geared toward value creation*. The intangible and tangible value streams from the customer are the outcome of doing the *right things* through effectiveness and doing them the *right way* through efficiency. The accompanying performance management framework is part of the last principle—less cost, more value.

The last chapter of this book covers the Digital Manifesto itself. The Digital Manifesto is a growth path, consisting of six *interdependent* principles that *together* generate business value.

1.3 INDEPENDENT THINKING

Before continuing on with the following chapters, there are two more points to remember—the first being that paradigms, models, and best practices allow us to simplify and structure complexity. That is the reason we all love them so much. However, simplification inevitably results in omitting potentially relevant context and other information. Hence, one should never allow simplification to replace critical thinking and pragmatism—there are already enough demagogues out there who reject anything that does not fit their favorite paradigm, model, or best practice.

The second point is related to the fact that the principles become irrelevant when the market is fundamentally disrupted. Uber and Airbnb completely ignored the existing business models and the teaching of academic gurus. Taleb[vii] described the extreme impact of random events with a very low likelihood on our private lives and companies in his book *The Black Swan*. It refers to a bird that nobody believed existed until the discovery of Australia—requiring all ornithologists to adjust their statement that only white swans existed. Only by regularly challenging the fundamental beliefs underpinning the existing business model can a company hope to reduce this strategic risk—although, it can never be completely mitigated.

Hence, always be ready to disrupt your beliefs.

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