When the only constant is change
prepare for the unpredictable.

thoughtworks.com
Digital Transformation
Game Plan

34 Tenets for Masterfully Merging
Technology and Business

This excerpt contains Chapters 1–2 of the book Digital Transformation
Game Plan. The complete book is available at learning.oreilly.com and
through other retailers.

Gary O’Brien, Guo Xiao, and Mike Mason
## Contents

**PART I | Heightened Customer Expectations and Alignment to Customer Outcomes**

1 | The Simplified Business Model | 3
2 | Understanding Customer Value | 11
To dramatically increase the quality of the customer experience using digitization...requires fairly radical organizational surgery.

—Peter Weill, chairman of MIT-CISR

Digital transformation is not just about a technology trend or a business trend, it is a redefinition of both. Not blurring the lines between IT and the business, but completely removing them until you emerge with technology at the core of your business. In this state, you operate comfortably when surrounded by ambiguity and use technology to redefine the value you deliver to customers and how you deliver it. To really thrive in the digital era, businesses need to commit to continuous evolution and strategic innovation, responding rapidly to market changes and opportunities. But not many organizations are actually built to do this.

Success will be determined by your courage to act. Can you simplify your business model—how work flows through the organization—in a way that allows you to identify and measure the value you are delivering to customers? Your organization needs to align itself to this value so that you can increase feedback loops and become more responsive and adaptable to change. Can you create the thin slice through your organization as a way to begin to execute the new model, to expose the antibodies that exist in the current operations that might constrain a sustainable digital transformation? The test will come when you are able to create the transparency and visibility required to capture these weaker leading indi-
cators of change that you need in order to keep up, learning to validate ideas quickly, scaling what works, and stopping what doesn’t.

Start by simplifying the business model; putting the customer value at the center of your business model and strategy.
Before diving into simplifying your business model toward customer value and how digital technology is reshaping it, you must first consider the broader backdrop of the corporate management landscape to understand why customer value should be at the center of tomorrow’s business strategy, instead of other factors like revenue and profitability. In this chapter, we discuss why creating value for customers should be at the center of your business strategy and how focusing on the delivery of value to customers can create a single coherent focus for simplifying your business model.

**Shareholder Value Versus Customer Value**

The most influential management theory of the past three decades has been shareholder value maximization; that is, companies should aim to maximize returns to shareholders above everything else. Although this should in theory better align the management team’s interests with those of the shareholders, it has also resulted in some bizarre and detrimental behaviors. For example, by linking pay to share prices, some corporate executives focus more on manipulating those prices than running a healthy business; as many as 80% of managers are willing to cut R&D spending to hit their numbers. There seems to be a close association between shareholder value maximization and the pursuit of short-term profit.
The Downside of Shareholder Value

Once when we were working with a major financial institution on adopting more technology solutions, we ran into the following situation: the bank was investing in an initiative to build more ATMs in certain branches. When we asked why, a manager explained that the traffic at these branches’ bank teller counters was too high compared with others. Investing in more counter space or adding more people would drive up the operating cost per branch. Operating cost per branch is a main factor behind the profitability of the bank and a critical performance metric for the manager. Building ATMs should drive more traffic to the machines than the tellers and therefore benefit the bank’s bottom line.

We wanted to test this hypothesis, so we conducted some user journey experiments and user research in a few target branches. We found out that despite increased availability of ATMs and more prominent signs for the ATMs, some consumers still preferred to talk to a bank teller in person. It became clear to us that, for this customer segment, the trust and comfort that comes from talking to a real person is more important than the convenience and speed of simple transactions. After taking some time to digest these findings (and probably talk to supervisors), the manager came back with an interesting suggestion: “We should figure out how to design the space better so that they have to walk by the ATMs before getting to the tellers. Maybe this will get them to use the ATM.”

“But why? We already found out that it’s not what the customers want,” we pointed out.

“It’s good for the business; we need to reduce the branch operational cost,” the manager replied.

Interestingly enough, it was the most prominent corporate hero during the age of shareholder value maximization—Jack Welch, CEO of GE from 1981 to 2001—who gave the most stringent rebuttal of the idea. In an interview with the Financial Times in 2009, Welch said, “On the face of it, shareholder value is the dumbest idea in the world.” Welch’s comment is widely quoted in various criticisms of shareholder value. In a question-and-answer session with a journalist (his wife, Suzy Welch), Jack Welch elaborated:
In a wide-ranging interview about the future of capitalism, I was asked what I thought of “shareholder value as a strategy.” My response was that the question on its face was a dumb idea. Shareholder value is an outcome—not a strategy...Shareholder value is a result, not a strategy...Your main constituencies are your employees, your customers, and your products.

We believe the shareholder value maximization principle rose to prominence in the early ‘80s because of the need to deal with growing business model and organizational complexity. There is always a strong need to create a purpose, a unifying focus for an organization. As a business grows bigger and more complex, especially in a time of rapid change, it can be very difficult to make sense of ever-expanding product offerings, geographic boundaries, and partnership models. Shareholder value filled the gap of the purpose of a business, often overshadowing the purpose that should have remained at the center: customer value creation, the very reason an organization exists in the first place. As Peter Drucker said as early as 1973, “The purpose of a business is to create a customer.”

Focusing on delivering value to customers could be the rallying point for a business—the playbook to simplify its business model. Here are a few reasons to shift focus:

- It gives a better and more fulfilling sense of purpose for employees.
- It makes the organization more resilient than an internal-focused and self-centered mindset.
- It results in higher client satisfaction, stronger growth, higher productivity, and higher employee satisfaction.

The digital technology trend is not the fundamental driving force behind this revamp—society and consumers are. Digital technology is simply exacerbating the problems with the current strategy of optimizing around organizational hierarchy and financial models. Digital technology is also accelerating the transition to the new customer-centric business model by providing the necessary tools and capabilities to make it happen. Digital innovation is the perfect storm for the business strategy revamp. Just like the main issues that plagued the industry in
the ‘80s, facing the fast-changing digital world, many businesses found themselves too complicated and bureaucratic to respond quickly enough, let alone to ride the trends and get ahead through innovation.

If we have to name the single most important lesson learned from what we have seen in various digital transformation efforts, we would say that it’s never just about the technology; it’s first and foremost about the business strategy. To speed up and become more responsive and innovative, it won’t be enough to just add more technology to automate the existing process or create a new channel to engage with consumers. It requires a deeper look into the business strategy and model, and how to simplify it by shifting the purpose and the unifying focus from internal goals to customer value.

Creating customer value should be at the center of a business strategy and shape the business model. Profitability, short term or long term, is a result of this strategy. The level of profitability required can also be viewed as guardrails or constraints that investors and creditors put on the business, but it should not be the purpose of the business. Amazon invests most of its profits back into the business to create value for customers and grow sales. Despite a radically different profitability level, it still became the second company to reach a trillion-dollar market capitalization in 2018, just a few months after Apple.

Jeff Bezos, in his founding letter to shareholders in 1997, wrote:

*We believe that a fundamental measure of our success will be a direct result of our ability to extend and solidify our current market leadership position. The stronger our market leadership, the more powerful our economic model. Market leadership can translate directly to higher revenue, higher profitability, greater capital velocity, and correspondingly stronger returns on invested capital.*

He went on to say that Amazon places the customer first, ahead of “short-term profitability considerations or short-term Wall Street reactions.”

**Identifying Your Simplified Model**

Although the prospect of simplified business models is enticing, facing simplified business modeling can be challenging for traditional enterprises built on decades of optimizing around organizational hierarchy and financial models. There are a number of main obstacles:
Customer value can be difficult to define and capture while digital technology continues to reshape it.

Large transformation programs are inherently difficult to execute. A broad transformation effort on both business strategy and technology can be too expensive and complicated to pull off.

An intervention is required on the engine and norms of how value runs through the organization and to the customer—existing structures, budgets, and thinking often get in the way.

Teams are structured around functions and systems, not aligned to customer outcomes.

There is a lack of visibility and transparency to facilitate and encourage real meaningful changes.

It takes courage from leaders in the face of ambiguity to stay the course and make the shifts necessary for sustainable change.

Following are five areas of patterns and ideas for realigning and simplifying the business model to be more customer focused and attempt to address these obstacles. We cover them in brief here and provide you with more in-depth strategies for putting them into practice in Part I.

1. UNDERSTAND CUSTOMER VALUE

The journey to simplification begins with connecting the reason your business exists and the value customers pull from you to your strategy. For a bank, it could be as simple as helping people succeed financially. Translating this purpose into a set of medium-term outcomes that form the guardrails to the organization’s operations helps you focus everyone’s efforts—it’s the wood behind the arrowhead. These outcomes are not many in number; the last few large corporations we have worked with ended up with around 20 high-level customer outcomes in total.

The key is to not just focus on the goods and services the business provides to customers, but also the consequences of these goods and services in customers’ minds—their goals and purposes. Although digital technology gives you more tools to understand the customers’ mindset and what they value most, it is playing an even more critical role in reshaping how customers perceive value. So
as technology changes what is possible, so too will customer value change. We are entering a new era of transient value. Peace of mind, the feeling of control, and ultimate personalization are becoming the new dimensions to gauge customer value, which we look at in Chapter 2.

2. USE A THIN-SLICE APPROACH

Instead of designing a transformation program with a prescriptive road map to change the entire organization in a Big-Bang approach, we strongly suggest an incremental approach to move the needle on outcomes. For each outcome, have those with expertise come together to brainstorm ideas that might make the needle move. This can include the employees doing the work, domain experts, customers, and partners. Some lightweight test-and-learn techniques will help you to refine the ideas into those most likely to succeed.

As you begin to execute these ideas, you will rub up against organizational constraints like investment cycles and structural lines. Going thin but deep exposes these change resistors more readily and allows you to consciously plan to minimize their impact.

The first few thin slices tend to take longer because there’s more learning involved. After three or four thin slices, there should be a good momentum built from small wins and outcomes delivered. Constraints will be visible, with some being addressed, revealing an emerging business and operating architecture that will make it a lot easier to scale the transformation to the rest of the organization.

Chapter 3 explores this concept in more depth and shows you why the thin-slice approach tends to accelerate with each new slice as well as why this method is a great starting point to deep-dive into an organization.

3. HAVE THE CORRECT MEASURES OF SUCCESS

What you measure defines what you care about, and even who you are. If you mainly measure revenue and profit, if not exclusively, it sends a message to the entire organization that this is what you care most about. It will be very difficult to push a customer-centric agenda if you don’t change how you measure success. To simplify, value is what customers get from your organization; it’s the reason they have come to you. Benefits are what you get in return. Revenue and profit are important benefits to the business, but value to the customer should lead to the benefit, not the other way around.

Output measures like the amount of work and activities accomplished can be easily tracked and reported; however, the impact work has on a customer’s outcome and value is much more difficult to measure. But “difficult to measure”
should not be an excuse to focus purely on organizational benefits and quantifiable vanity measures.

Chapter 4 provides you with strategies for putting the appropriate value measurements in place for measuring customer outcomes and organizational improvements. It also shows you how to avoid the pitfalls of more traditional, individual-focused measurements like key performance indicators (KPIs).

4. ALIGN EVERYTHING TO THE WORK

Aligning teams, structures, architecture, decision making, and funding with customer outcomes is easier said than done. It makes perfect sense when designing a small organization from a clean slate. But for a large organization, some of the existing structures and lines of management will actively work against it. Chapter 5 shows you how the cascade model can help break high-level customer outcomes into a backlog of smaller chunks of testable hypotheses that can be implemented by smaller teams.

It also explores how a lightweight governance and prioritization model like EDGE\(^1\) can help connect and align all of the working streams to ensure that you are working on the highest-value items to achieve the outcome while allowing the teams to test, innovate, and deliver in fast cycles.

5. CREATE VISIBILITY AND TRANSPARENCY

Visual elements and indicators make it easy to roll information up and down the system and keep everyone informed. For executives and leaders, a map of all the ongoing work’s clear visible alignment to specific outcomes helps to create a focused mindset for making strategic business decisions. For teams, visual representations of progress, output, and their alignment to business outcomes give the ability to test, learn, and pivot with a clear direction and sense of accomplishment. Chapter 6 examines how visibility and transparency can help create a safe environment in which work is depersonalized, conversation is centered around facts, and decisions are not influenced by personal bias.

These five principles form the most important areas to work on in order to realign and simplify the business strategy to be centered around customer value and customer outcomes. It’s not meant to be a step-by-step road map for a transformation journey. It’s a logical sequence designed to help you understand the connections and dependencies between those areas. We have seen companies

---

1 Jim Highsmith et al., *EDGE: Value-Driven Digital Transformation* (Addison-Wesley).
focus on these areas in various sequences with their own pros and cons due to
the specific challenges and opportunities faced by each business.

In the rest of Part I, we dive deeper into each of these five topics with more
examples and details.

**Key Points**

Following are the key points that we hope you take away from this chapter as well
as two actions for you to take to begin implementing what we’ve discussed:

- Simplifying the business strategy to be centered around customer value
  instead of internal benefits will help improve decision making through
greater transparency and visibility.

- Focus on the following interconnected five areas to gradually realign the
  business architecture and organization to be more customer centric:

  — Define success as customer outcomes
  — Use a thin-slice approach
  — Have a clear view on what to measure and why
  — Align work and teams with customer outcomes
  — Create visibility and transparency

Here are two actions to take:

- Form your team to design your simplified business model—your “road
  map”: Discuss the five areas of a “simplified business model” in Chapter 1
  and what these might look like for your organization.

- Advocate for customer value: Build your business strategy around cus-
tomer value and using customer language.
Understanding Customer Value

Customer value forms the basis for your digital transformation; it is the beginning point. Understanding what value means to your customers is the input to the work you need to do and therefore informs how you need to redesign your organization. However, the definition of customer value is a little more elusive than most would assume.

We once were privileged to listen in on a few call-center calls at a large telecommunications company. A customer asked whether their service had been connected. The operator looked up on the system to see a connection at the exchange and answered in the affirmative. After a pause, the customer repeated themselves in a way that made the value aspect really obvious: “So I am about to drive for four hours to that location. If I cannot connect to the internet when I get there I will need to turn around and drive all the way back and still do my full day’s work. So, is my service connected?” In this case, what the customer valued was not whether a system thinks a connection at the exchange is on: this person valued whether they could access the internet from a particular location given that an eight-hour drive was at stake. The point is to always see value through the eyes of the customer.

There are two different lenses on customer value: the value a business believes they are delivering to the customers (in this case, the ability to know whether an internet connection is established to a premises); the “consequence” the customer desires and perceives, their outcome. Your organization’s ability to orient around these customer outcomes as the definition of value will go a long way toward determining the success of your digital transformation. Value defined this way is a constantly moving target. Digital technologies are playing a prominent role as both a way to better explore and understand value through the
customer’s eyes and also in changing how customers perceive value. This chapter shows you how to hit those targets by focusing on customer outcomes.

**Focusing on Customer Outcomes**

To build the strategy of an entire organization on the concept of a simplified business model based on customer outcomes is never easy. In the Industrial Age, many successful businesses focused on the goods and services—offering more features, better quality, and lower cost.

The need to review, assess, and develop the organization and your strategy around customer value has always been there, with or without the digital technology improvement. Digital changes didn’t create this approach as a new concept, but it is driving the sense of urgency to adopt this approach.

Recently, an online real estate portal announced its acquisition of a mortgage broker. Consumers have become accustomed to online real estate portals to search for homes, sometimes as their primary touch point to the home market, rather than agencies. For some dominant portals in various regions of the world, their registered users and unique visits per month place them among the highest ranked websites. Given the knowledge the portals have gained through the home searching process, it’s easy to see why it makes perfect sense to guide the consumers to the next step of the home ownership journey: getting a mortgage.

It doesn’t need to stop at a mortgage. Home ownership is a long journey that involves many previously separated product and service providers—insurance, gas, electricity, waste management, moving, and so on. Digital technologies make the discovery, contracting, and even integration of these services a lot easier than ever before. With today’s digital capability, a business is more likely to discover new ways of adding value for its customers when it focuses on its higher-level purposes and goals.

These are not just marketing tricks or product promotion techniques. These are real shifts of business models and operational priorities. Sometimes, shifting focus to customer value is driven by internal investment and improvement. Jet engine manufacturer Rolls-Royce and razor producer Gillette have one thing in common: they are both in the parts and maintenance business. Gillette sells its razor at a lower margin—if not sometimes even giving it away for free—and gains most of its business from selling replacement razor blades in a recurring model. Similarly, Rolls-Royce sells jet engines at a much lower margin and recoups the benefit of value creation through maintenance and services contracts.
An engine is very expensive and requires very complex domain expertise to maintain. It’s so expensive and complicated that not many banks are willing to finance jet engine purchases. Although Rolls-Royce was not the first to focus on selling parts and services instead of engines as its core business model, it was the first to push it to another level. What airplane owners or airline companies care most about—besides fundamental safety—is that engines are working smoothly and predictably. Any unexpected down time could cause delays, keep hundreds of passengers waiting, and incur high rerouting or rebooking cost. They don’t want more maintenance time and services; they want less maintenance and services. In fact, as little as possible. They want more hours of smooth operation from the jet engines. So why not align the business model with this value and sell “hours of operation” instead of parts and services? This model is well aligned with the airline company’s interest: predictable fees that are tied to its revenue generation (flying airplanes).

What really made the transition to this business model possible was the emergence of new digital technologies. When it comes to sensors, a jet engine is like a fully decorated Christmas tree. Some of today’s engines have more than 5,000 sensors and generate more than 10 GB of data per second. Improvements in storage and computing power, analytical tools, and algorithms allow Rolls-Royce to analyze this data frequently, predict engine maintenance needs, and schedule them at the proper time. In-flight connectivity and real-time analytical tools even give them the ability to diagnose and detect potential problems in flight so that maintenance crews can prepare a fix even before the aircraft lands, reducing delay and increasing aircraft availability.

Rolls-Royce’s global operations room in Derby, England is full of big-screen monitors displaying dozens of graphs and dashboards, televisions tuned to 24-hour news channels, and swarms of software engineers and technicians. This digital hub is becoming the new center of competitive advantage for Roll-Royce, driving its value creation for customers. Today, 80% of Rolls-Royce jet engines are supplied using this hourly fee model.

For some industries, shifting focus to customer value is driven by more radical external trends. The iconic Ford Motor Company has been one of the most successful companies in modern industry. Instead of seeing automobiles as expensive toys, Henry Ford and others viewed them as a tool for mass transportation in a nation of great distances. Cheaper and higher-quality vehicles made car ownership a real possibility for the majority of the population. “Sell more cars” has since then been at the center of business strategy for Ford and most other car
companies. Most successful business strategies are built around vertical integration and producing affordable cars for individual customers.

The rise of Tesla, an electric vehicle producer, started a countdown to retirement for the internal combustion engine. But the business model and value creation of the entire automobile industry will not be fundamentally challenged by the electric vehicle. Apart from the engineering innovation on batteries and chassis design, there is a more notable difference in Tesla’s approach from traditional car companies. Tesla treats the car not just as a piece of hardware with some software embedded, but rather as if it is a piece of software that happens to have a hardware component. In the modern Digital Age, software upgrades are done frequently and remotely; you shouldn’t need to bring your computer to a shop to get an upgrade on the work-process tool you are using. It’s done through the internet. Tesla took that approach and was the first to upgrade the “operating systems of the car” (the firmware) over the air. This allows the company to release updates much more frequently than a traditional recall approach. Given the digital mindset, Tesla was also the first to offer semi-autonomous driving technology to a commercial vehicle.

Tesla is only one of the companies trying to build the ultimate self-driving car. Apple, Google, Uber, and many other startups have joined the race to the fully autonomous vehicle. This is giving traditional car manufacturers a lot of concerns. One must ask the question: with fully autonomous vehicles, why would consumers still want to own cars? Given the fast-evolving car hailing capability provided by Uber, Didi, Lyft, and other e-hailing companies, the entire transportation value chain is being reshaped. Where do car manufacturers fit in this new digital world? They might be reduced to hardware subcontractors by the digital innovators who own the primary customer interactions and customer relationship.

This is both a challenge and an opportunity for car manufacturers. Major automobile manufacturers have embraced this challenge and adjusted their business strategy. Most are focusing on a higher level of customer goals and purposes than just owning cars. Fundamentally, people use cars to get around. On Daimler’s public website, in the “Our Strategy” section, it says:

*Our goal as one of the leading vehicle manufacturers is to become a leading provider of mobility services.*

Daimler wants to be in the business of moving people around instead of just building cars. To enact the strategy, Daimler began to build more business units
in the mobility sector instead of just focusing their core automobile manufacturing business. Daimler acquired mytaxi, an e-hailing app similar to Uber and Lyft. It invested in car2go, a cars-by-the-minute share service company similar to Zipcar. Daimler also founded Moovel, which provides mobility services to the urban market, suggesting the most optimal transportation option by combining ticket availability, pricing, traffic, and other information the moment users request it. These investments provide new opportunities to deliver value to Daimler’s customers and to grow into new markets. The emergence of new digital technology and platforms are creating these new opportunities, and perhaps also making it the right time for car manufacturers to shift their focus.

Many major car companies are on a similar journey. General Motors started Maven to compete in the car-sharing services sector and also invested in Lyft to get into the e-hailing business. Ford Motors added more acquisitions to its mobility group and realigned the organization to accelerate and expand its activities in 2018 to deliver a broader suite of mobility products and services to its customers—current personal vehicle owners.

Given the root of Ford Motor, the original vision of “seeing cars as a tool for mass transportation in a nation of great distance,” it is perhaps less surprising to see Bill Ford, Jr. embracing the new paradigm with more excitement than gloom and doom.

It’s not just the banking industry and automobile industry. Digital technology is forcing companies in every industry to reexamine this very basic question of customer value. More often than not, the answer is more obvious than you think. The health-care industry in many countries is known to be either overly expensive or less effective, or sometimes both. Digital players are rushing into this market because they know that what people really want is good health, not pills and bills to cure disease. A healthy lifestyle can effectively prevent certain diseases and greatly reduce the need for drugs and hospital visits. This is forcing health-care providers to focus more on the value of staying healthy through preventative products and services than just curative ones.

Digital technology doesn’t just create disruptions; it is also helping companies to better understand how customers appreciate the value they think they are delivering to them. Your holistic strategy needs to orient itself around a good understanding of customer outcomes as the way to measure the value you are delivering. Digital technologies are increasing organizations’ ability to better understand what the outcomes are, and thus they are creating new ways to achieve the outcomes. Toward the end of this chapter, we offer some suggestions on
how to ask questions about your own industry and business in order to design and target the best customer outcomes.

**The Impact of Technology on Value and Expectations**

Traditionally, businesses mostly focused on the value they believed they were delivering to their customers: product/service features, attributes, and performance. What tends to be overlooked is the consequences arising from the use of these products and services in achieving the customer’s outcome; hence, the perception of the value from the customer’s perspective. The latter is more situational and circumstantial than the former. It’s also more personal and difficult to articulate.

Before digital technology became so prevalent in our daily lives, marketing teams relied on focus groups, interviews, and surveys as their primary tools to gather insight on a customer’s needs. Digital concepts like connectivity, mobility, user interfaces, cloud computing, algorithms, and other technology improvements are giving businesses a greater understanding, leading them to broaden the scope of goods and services they provide to consumers in physical and digital channels. New technology-driven startups continue to discover unmet needs and new ways to satisfy the outcomes; existing companies continue to take advantage of technology to expand into adjacent markets or industries, driven by a greater understanding of the consequences of what they are providing to customers.

Digital technology gives us some new ways to gather data and generate insights about the customers and their aspirations:

*It’s possible to build a single, complete customer view.*

Organizations have always had a lot of data about their customers—personal details, transaction details, communications, and interactions with the organization. But the data could be locked in various legacy systems, duplicated, fragmented, and inconsistent. In the past 20 years, many companies have invested in building customer relationship management (CRM) systems to create a single repository of data that provides a complete view of every customer. Having access to this data, as well as the intelligence derived from it, gives product teams, sales agents, and service teams more chances to understand the behavior and needs of a customer.

*It’s possible to access more external data sources.*

More than a billion people are active on Facebook; Twitter has about 330 million active users per month; and Snapchat has about 200 million. An
enormous amount of data is being generated by social media every hour, every minute. There are ongoing debates around the ownership of this data and corresponding privacy concerns; a highly important topic, indeed. That discussion is beyond the scope of this text and has been well articulated in the book *Mining the Social Web* (O’Reilly). We would highly recommend anyone interested in this topic to give that book a read. But social media has become a key new source of customer data. It shines a different light on the behaviors, goals, and aspirations of customers unknown to most business before.

*It’s possible to learn more from the data.*

Cheaper computing power and new algorithms give rise to an entire new family of modern data mining and data analytical tools, some of which are powered by the latest machine learning technology. Machines are much better at finding needles in a haystack than humans. By studying purchasing patterns of customers, a retailer can discern a young woman’s pregnancy more easily than her parents, as one did in Minneapolis (the sudden purchase of unscented lotion and vitamins indicated pregnancy).

*It’s possible to access more real-time data.*

Cheaper and more powerful sensors that consume less power are now being embedded in all kinds of wearable devices, from bracelets to shoes and clothes. Together with the mobile phone, these devices provide a plethora of sensing data including location, voice, movement, temperature, and so on. Combined with other customer data like calendar and social media, good machine learning algorithms can crunch it at real time and infer meaningful context; for example, the activity the person is engaging in, the environment, and the person’s mood and stress levels. This could give us new insights into what consumers want in real time. New services and products are being designed to take advantage of these insights.

We used the phrase “it’s possible” because progress is unevenly distributed across industries and companies. Nevertheless, most companies are building tools and capabilities to learn more about their customers.

Digital technology is also heightening customer expectations and shifting how customers perceive value. The following sections give some examples.
THE VALUE OF PEACE OF MIND

Fred Smith, the founder of FedEx, once remarked, “Early on, we knew the information about a package is as important as the package itself.”¹ In the 1970s, FedEx was the first to put a computer-readable serial number on every package in order to track them and improve their internal package handling. It worked very well. That’s how the tracking number practice was born in the package shipping industry.

What FedEx realized was that the tracking information was not only important to FedEx; it might also be important to the people sending the package, and so it decided to build a system to offer that information to its customers. During those preinternet days, you could call FedEx to ask them where your packages were. It provided visibility and assurance, reducing uncertainty and anxiety in customer’s minds. The customer was less stressed and much happier knowing the progress of their package. That experience, the emotional experience, is of value to the customer. Today, real-time tracking is a standard practice in the package-shipping industry. Consumers would not expect any less from any provider, not just FedEx.

Peace of mind is also important to a customer expecting a college admission decision letter. Is it also important during the 15-minute period when you are waiting for a pizza delivery? Customers said yes. As mobile phones, mobile data, and GPS technology became widely available in developed markets, it became possible for pizza companies to build the digital capability to provide real-time pizza tracking on a customer’s phone with a reasonable amount of investment. Turns out that customers like the tracking app as much as they like their hot and tasty pizza.

In the airline industry, the anxiety and stress of flight connections, delays, cancellations, and missing baggage are familiar ones. Digitization and automation can reduce the time required to rebook a flight to the point that a rebooking resulting from a delay can be complete before the delayed plane lands. Even better, that information can be pushed to a customer’s mobile app so that as soon as the flight is on the ground, the new connection details are available from the moment they turn on their phone. More airlines are now offering travelers the ability to know where their checked bags are in real time, every step of the way from the check-in counter to the baggage claim carousel. All of this is aimed at

putting the customer’s mind at ease and creating a much better travel experience. With digital technology, airlines can achieve that with more than just increased leg room and hot towels.

When customers experience peace of mind waiting for a package from FedEx, they have something with which to compare the wait for other kinds of deliveries. After their expectation is raised, the value of a better delivery experience becomes higher than just the receipt (and consumption) of the product itself. Every industry that ships or delivers products becomes affected.

THE VALUE OF FEELING IN CONTROL

Digging deeper from peace of mind to a potential root cause, psychological research has long argued that a basic human instinct is to exert control over their environment to obtain desired results. The perception of having control is not only desired, it’s a psychological necessity. Giving consumers choices, and therefore control, has always been a focus for product and experience designers, especially in the consumer goods and retail sector.

Digital technologies have escalated giving customers control to the next level. Before buying a product, consumers can now go online to do extensive research on the features, performance, prices, post sales support—essentially everything they need to know—and compare the different brands against one another. They can buy a product online or in the shop; they could also buy online and pick up in the shop, or buy in the shop and have the product sent home. They can find instruction from online videos, discuss questions or issues with a support team through online chats, or use self-servicing diagnostic tools. If they are really not happy with the performance, they can return the products through websites that print you a free shipping label.

The abundance of information, choices, and the ability to make our own decisions make most of us happy consumers. That heightened expectation, the appreciation of feeling in control, is being compared against and extended into other industries.

One industry that is being significantly affected is the health-care industry. Most of us were used to being told what to do in the health-care system until digital technology demonstrated the possibilities in other industries. Many health-care providers, insurers, doctors, and hospitals have started to use digital technology to give patients more information, more choices, and more control. Every patient touch point is being redesigned and reimagined through the technology lens, from making appointments, accessing information, preparing for visits or treatment, to digital self-monitoring tools, remote diagnosis, and virtual
doctors. Wearable technology is going to further empower people to manage their own health so that they don’t even “need to” engage the health-care system at all.

The CIO of a US hospital told us that they had to change their mindset to think about patients almost as consumers. Patients’ experience with the visits, the treatments, the doctors, and the hospital is as important as the actual results. Just having the best doctors and medical equipment is not enough. In the digital world we live in today, people, whether they are acting as consumers or patients at a particular moment, know what good feels like, and are making their choices accordingly. Digital technology is both the reason for and the solution to that shift.

THE VALUE OF PERSONALIZATION

We grew up in the '80s, and we still remember the “old way” of watching TV: getting in front of the TV at the exact time the most popular show was about to start, or flipping through dozens of channels to discover some interesting program when we had extra time to kill. That was the most common way to discover and select content. This one-size-fits-all approach is no longer the case today.

Taking advantage of the internet’s unprecedented ability to organize and search for information across multiple consumers, on-demand streaming services created a bigger disruption to the content discovery and selection process than the delivery of content itself. Netflix and others realized that it was not just the ability to stream content over internet that pleased their customers. More important was the ability to discover the content they liked most—it was not always the most popular shows. This shouldn’t come as a surprise. Even though we are social animals and would like to be able to discuss the latest most popular show with friends, we are also very different individuals after all. It turns out that we have a great variety of subtly different tastes when it comes to content. The ability to discover and select the content we truly enjoy is as important as, if not more than, being able to watch the most popular shows media companies, experts, and reviewers collectively decide for us.

The rest of the media and entertainment industry quickly caught up. Channel discovery and selection become more user friendly, and is increasingly driven by voice or gestures as these technologies mature. But online streaming service providers like Netflix have built yet another advantage. Content recommendation is generally based on broad genres and self-indicated preferences. Netflix has far more nuanced data about customers’ viewing habits: what people watch, what they watch afterward, what they watched before, what they watched a year ago,
what they’ve watched recently, and at what time of day. Netflix can use machine learning algorithms to crunch all of this metadata and find surprising insights about people’s preferences, sometimes contrary to the customers’ own notions. According to Netflix,\(^2\) one in eight people who watch one of Marvel’s movies is new to this kind of comic book–based superhero content. More than 80% of the TV shows people watch on Netflix are discovered through its recommendation system.

Content can be personalized more than ever before, thanks to progress on data analytics and machine learning. Because it believes it knows so much about people’s taste and preferences at a very nuanced and detailed level, Netflix went on from finding the content people want to watch to creating the content people want to watch. Netflix’s original content strategy has produced popular TV series like *House of Cards* and *Orange Is the New Black*. It’s even producing award-winning movies now. According to Netflix during an earnings call, 5 of the 10 shows people searched for most in 2017 were Netflix originals.

Today’s consumers expect a much higher level of personalization than the previous generation. Stitch Fix is a new type of retailer using machine learning to create a personalized styling experience for the mass market. Instead of having customers shop for the clothes they want, Stitch Fix thinks it can learn more about a customer’s personal taste and preferences from crunching data. Stitch Fix sends customers clothes and accessories periodically without the usual “ordering” or “shopping” process. Of course, you can return the items you don’t like after you receive a batch. But Stitch Fix’s success is built on its ability to predict and cater to an individual’s taste and need in a mass market.

**THE VALUE OF LOWER TRANSACTION COSTS**

The increased accessibility of goods and services online and through multiple channels changes the economics of purchasing costs for customers. Digital platform businesses, in particular, have excelled with dramatic reductions in the cost per transaction, whether on the demand side—hailing a ride with Uber or renting a room with Airbnb—or the supply side—selling an app to customers through iTunes, allowing you to capture the long tail of innovation. Platform businesses have existed for decades (credit cards, shopping malls), and maybe even centuries (town marketplaces), but digital advances have lowered the

---

friction of doing business with machine learning filters to effectively connect demand to supply. Customers now regularly expect affordable, quality services at the click of a button on their mobile devices.

The individual, as opposed to the target group, is what defines user experience (UX) in the age of machine learning. Personalization, perception of control, and peace of mind are just a few notable examples. The emotional reward and experience from consuming a product or service is being perceived as more and more valuable from the customer’s perspective. When companies try to make investments or build products based on creating value for the customers, they need to make sure that they focus on the values that matter to the customers.

What do customers value most? As we have shown through some of the examples, there is not a single static answer to it in the Digital Age:

*Value is perceived through different lenses; it could change over time.*

How do we build the business strategy around the multifaceted and ever-evolving customer value?

**Evolving to Customer Outcomes**

At ThoughtWorks’ Paradigm Shift event in 2015, Glenn Morgan, head of digital business transformation at International Airlines Group, talked about the paradox faced by incumbents in the digital era. He talked about both the challenge and the opportunity for corporations, constrained by pace but enabled by scale, and concluded that the best way to move forward was to “think big, act small, learn fast, scale quickly.”

To really thrive in the digital era, traditional businesses need to commit to the attributes of “small” that let them continually develop themselves to keep up with rapid changes of customer expectations. But not many organizations are actually built to do this for the following reasons:

“Think big” tends to result in big plans. For many business leaders, it’s important to think big, be bold, and have a long-term vision. Although that generates ambition and builds confidence, it could also lead developing fully fleshed-out strategic and operational plans that map the vision to several strategic initiatives, with clear road maps to build up the capabilities, platforms, and investment required to support the new initiatives. When a multiyear megaplan is broken down into thousands of small disjointed pieces, there is no simple feedback mechanism. It could be difficult to see the connection between the tasks and customer expectations. Many parts of the organization end up spending too
much time internally navel-gazing without a true understanding of how to connect their actions and outcomes to customer value. More important, after this train of big initiatives has left the station, it becomes challenging to change or stop even when new learnings from customers and the market say you should change your plans.

To be able to “learn fast,” a lot more changes need to happen, the magnitude of which is commonly underestimated. Planning and strategy are just the beginning. Organizational structures need to change. Technology delivery practices need to change. Portfolio management needs to change. Measures of success need to change. This can be overwhelming for even fast-moving organizations. That’s why “act small” is so important. You don’t need to do everything at once.

A senior executive at a bank once asked in frustration, “What is the first step we need to take to transform?” Our reply was to first truly understand what customers want. He gladly replied that they had just spent a whole lot of money on this very topic and the answer from the research was clear, “70% of our customers want a mortgage!” A mortgage!? We don’t think we have met any customer who actually wants a mortgage because it’s such an exciting product or an enjoyable experience. What they really want is a home.

In a “sell more mortgages” traditional banking mindset, you would expect to see measures around how many mortgages are being sold and the dollar value of the mortgage. When you extrapolate, you could imagine the work being something around product bundling, digital mortgage advisors, and so on; you can see the functional allocation of work into teams that build features and complete products.

Now flip that around to customer outcomes and value measures. The customer value is “put people into a home.” See how straight away there is an emotive reaction to the aim? Your employees will feel that too. But what is key here is what happens around it; the increment of the work would not be features, but services like helping customers to know what they can afford and where they could live. The skills you need to bring together in teams would be cross-functional, and of course what you measure as success would change. Imagine employees going home counting how many people they put into a home that day.

**IT TAKES COURAGE TO ACT**

The important thing is to know what value means to a customer. Using that, you can then find ways of capturing the weaker signals of change that will help you to maximize the volume and frequency of the value you deliver. Technology is the key enabler for this, whether it’s the use of machine learning and AI to create
new ways to deliver value, or having a platform architecture using microservices to allow for adaptability and frequent experimentation and change. We are not just talking about doing the same things faster, but rethinking the value you deliver and how you deliver it. The new strategic approach should focus on responsiveness, the ability to act small, learn fast, and scale quickly.

Of course, knowing it and doing it are two different things. Knowing isn’t the difficult part; measuring can be, listening can be, and having the courage certainly is. It takes courage to act on what you learn. Responding might mean stopping something else. It might mean moving people around, reallocating money, or deprioritizing that favorite project. This is where this is where you are really tested—can your executives act as one for the benefit of the customer and the business or are you locked into constant functional showdowns and adversarial behaviors? You need to find that core strength in the company culture to create the impetus for change. We hope it’s not just the threat of extinction driving the transformation; maybe it’s compassion, aspiration to be the best, pursuit of excellence, or commitment to a higher purpose.

It’s really that simple: understand the purpose of your business, align to customer value, and have the courage to act on what the data tells you to do to optimize value delivery. The leap-of-faith assumption is that the more value you deliver and the more aligned every aspect of your business is, the more benefits and profits the business will generate and retain in the long run—and more shareholder value will result from this, too. The University of Michigan conducted a study of companies with high scores on the American Customer Satisfaction Index that shows that between 2000 and 2012 their stock went up 390%, whereas the S&P 500 dropped by 7%. This is just one of many examples that proves the direct link between creating customer loyalty through a focus on value and the long-term benefits for the business itself.

HOW TO GET STARTED

We know that changing the language or taxonomy of your organization is not a trivial task; it takes practice and constant reinforcement. Our experience is that leaders find this a very difficult mental shift to make. It’s not that the information is unavailable or the knowledge absent from the organization, it’s the connection that this information needs to have with strategy rather than simply the facade of customer centricity. Too often, organizations become caught up in using customer data as a marketing tool or for demand generation. Meanwhile, the businesses run their day-to-day based on strategies that focus on productivity and profitability and “coincidently” the work in flight matches the lines of business of
the company, just with the addition of new buzzwords from technology trends like “cloud,” “SaaS,” or “platforms.”

Have a look at this list of multiyear plan items we have collected along the way:

- Drive growth and customer acquisition.
- Extend position in X market.
- Deliver superior customer experience.
- Increase margins by X%.
- Enhance technology capability in X.
- Increase sales in product X.
- Hit revenue objective of X.
- Increase share price by X.
- Achieve Net Promoter Score of X.

These are just a few, but hopefully the point comes through. This could be any company—these goals are not unique and are very internally focused. They describe company benefits, not outcomes for the customer. They are highly likely to be based on each of the lines of business in the organization rather than on what customers actually want and are certainly not reflective of how a customer sees value from you. A senior member of a large organization once complained to us that if the organization’s strategy was accidently left in a McDonald’s restaurant, no one would care because it had nothing unique in it. This has to be your litmus test: if your competitor saw your strategic outcomes would it matter, would they be worried?

There are many approaches to designing the precise outcomes and it is largely dependent on the knowledge and expertise of the leaders to navigate the ship in the correct direction. Here are a few examples of how to help make the mental shift so that you can better represent the customer in the outcomes of the organization:

*Jobs to be done, a theory from Strategyn*

We once witnessed a client use a “Jobs to Be Done” canvas as a really effective tool to help leaders reset their language toward what the customer
would see as value. By knowing how customers measure value, organizations are able to articulate outcomes in the customer’s terms. Strategyn uses a great example on its website describing the use of herbicide: at first the value is thought to be to “kill weeds,” later it’s identified as “prevent weed growth in crops,” which can then be broadened out to a value-add of “growing the best crops.” You can see the varied lens that occurs as you look at these three scenarios and how different the work might be depending on the lens.

Personas
This is an effective tool that has been around for a long time and uses fictional representations of common patterns of customers. The objective is to learn more about the needs, behaviors, and goals of customers as a way to create and orient outcomes.

Segments
These are an organizing construct based on segmentation such as by life cycle stages and designing outcomes based on each stage, outcomes are the entry and exit points of a stage. Other segment examples could be customer type, demographics, or location.

Design thinking
The use of evidence instead of instinct along with design techniques to study customer behaviors. The idea is that you frame the problem in terms of why the customer would need the product (e.g., to improve health) rather than in terms of the benefit to the organization (sell more healthy food).

Scenario planning
Scenario planning is a structured way of getting executives to think differently about the future. It is effective at bridging the gap between the world of facts and the world of perceptions. By exploring the facts and information available today, the process aims to change the perceptions of decision makers. The purpose is to gather and transform information of strategic significance into fresh perceptions.

Using these types of techniques, the multiyear plan begins to take a different shape, perhaps becoming more like this:
• Help me plan for my future with a predictable income.
• Help me grow wealth, protect it, and pass it on later.
• Help me control my money.
• Help me retire comfortably.
• Help me buy a home.
• Make it easy for me to assess my current situation to make better life decisions.
• Make starting and running a business easy.
• Make it easy for me to make a claim so that I can recover quicker.
• Help me improve my health.

A favorite simple example is of a national mail service that redesigned its divisions around how customers interact with the service. The end states of “send mail” and “receive mail” just feel logical and makes it easy to design outcomes that align to the value the customer expects.

The key is to have intimate knowledge of what value customers are coming to you to get, find ways to grow that value, make it easier to get, and look for ways to diversify into value-add areas. These are the outcomes that help the organization be what the market needs and that ultimately lead to profitability.

Now that you have the outcomes your business wants through the lens of customer value, or at least a fresh set of hypothesis about what outcomes your customers want, you need to define how to measure them and align the organization’s work to achieve them or validate and develop them. Before getting to measurement and work alignment, you need to pause for a minute and talk about the approach to manage change and transition. This is the time when changes begin to really happen—organizational structure, budget allocation, governance model, and so on. How should you go about making these changes? Is there an upfront design you can follow? Is there a proven model you can follow from another business? Chapter 3 addresses these questions.
Key Points

Following are the key points that we hope you take away from this chapter as well as two actions for you to take to begin implementing what we’ve discussed:

- Customer outcomes need to be understood and placed at the center of your organization’s strategy and digital transformation.

- Digital technology is a double-edged sword. It improves an organization’s capability to understand customer outcomes and find new ways to meet the needs of these outcomes. However, it is also shifting how customers perceive value, making it even more difficult to maintain alignment between your organization’s strategy and the delivery of value to customers.

- The change required to make this alignment is being underestimated. It requires a new set of capabilities and organizational design to be able to listen and respond to constant change and the courage to act on the data regardless of the implications.

Here are two actions to take:

- Learn what value means for your customers: Using some of the example techniques in this chapter, describe what value means to your customers.

- Let customer value define your outcomes: Rewrite your strategy as outcomes in customer language. Apply a clear single measure of achieving the outcome.
About the Authors

**Gary O’Brien** has over 20 years of experience in helping executives, teams, and individuals adopt and improve techniques to build humanistic organizations more capable of responding to the increasing pace of change. His passion lies in assisting senior leaders to increase business agility and the alignment of strategy to the delivery of value to customers.

**Guo Xiao** serves ThoughtWorks Inc. as the Chief Executive Officer. ThoughtWorks is a global technology consultancy and a community of passionate, purpose-led individuals. Guo Xiao joined ThoughtWorks in 1999 as a software developer and has been providing advisory and delivery services to organizations to leverage digital technology as key competitive advantage and the driver for business transformation. Since 2013, Guo Xiao has been serving as the President and Chief Executive Officer, based in Chicago.

**Mike Mason** is the global head of technology at ThoughtWorks and is passionate about bridging the tech-business divide and helping others understand what applied technology can do for their business. He focuses on technology strategy, leadership, and execution for both ThoughtWorks and its clients, bringing industry and technology trends to life in the context of real business. Mike contributes to the ThoughtWorks Technology Radar, regularly publishes articles, and is the author of three previous technology books.

Colophon

The cover illustration is by Karen Montgomery. The cover fonts are Gilroy Semi-bold and Guardian Sans. The text font is Adobe Minion Pro; the heading font is Adobe Myriad Condensed; and the code font is Dalton Maag’s Ubuntu Mono.