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Foreword

At this new stage in the development of the IT industry, AXELOS is delighted to present ITIL 4, the latest step in the evolution of IT best practice. By building on our experience and bringing fresh and forward-looking thinking to the marketplace, ITIL 4 equips your business to deal with the challenges currently faced by the industry.

The adoption of ITIL as the most widely used guidance in the world on IT and service management will continue with ITIL 4. It ensures continuity with existing ways of working (where service management is already successful) by integrating modern and emerging practices with established and proven know-how. ITIL 4 also provides guidance on these new methods to help individuals and organizations to see their benefits and move towards using them with confidence, focus, and minimal disruption.

ITIL 4's holistic approach raises the profile of service management in organizations and industries, setting it within a more strategic context. Its focus tends to be on end-to-end product and service management, from demand to value.

ITIL 4 is the result of a great deal of global research and development work across the IT and service management industries; this work has involved active practitioners, trainers, consultants, vendors, technicians, and business customers. The architect team has collaborated with the wider stakeholders and users of ITIL to ensure that the content meets the modern requirements of continuity, innovation, flexibility, and value.

ITIL training provides individuals with a structured approach for developing their competencies in the current and future workplace. The accompanying guidance also helps organizations to take advantage of the new and upcoming technologies, succeed in making their digital transformations, and create value as needed for themselves and their customers.

ITIL®4: Digital and IT Strategy focuses on the alignment of digital business strategy with IT strategy, adding a new perspective to the ITIL suite and elevating the discussion around ITIL concepts to a strategic level among business leaders and those aspiring to lead. It also covers how disruption from new technologies is impacting organizations in every industry and how business leaders are responding.

Welcome to the new generation of IT best practice!

Mark Basham

CEO, AXELOS Global Best Practice

Preface

Digital technology has ushered in a new age of business, society, and economy. Things work differently today than they did just 20 years ago, and they will continue to change at unprecedented rates.

But as different as the world is, many things have not changed. The best and worst of human nature finds expression through digital technology. The principles of business and commerce remain very much the same as they have for decades, if not centuries. An organization that embraces the changes brought by digital technology will be even more successful if it remembers that it exists for the benefit of the humans it serves and gainfully employs, and the environment in which it operates.

While digital technology creates new opportunities and capabilities, many of the principles and practices that have been learned over decades are just as important as ever, if not more so. Governance, leadership, service, and quality are not uniquely digital issues. Simply putting the word 'digital' in front of them will not absolve any organization or leader from having to define and implement them.

Digital technologies may make that task easier, but experience has shown that they also introduce more levels of complexity, volatility, and uncertainty. In most cases, the best way to achieve excellence is to rely on those things that will last beyond the most recent wave of technology innovation, and not to assume that new technology, having solved its own problems, will be able to solve yours.

Digital and IT strategy is a means for real-world organizations to find better ways of meeting the needs of real-life communities using a combination of existing and emerging technologies. Some of these will require new practices and changes to the prevailing culture, but many will rely on existing practices and approaches.

Strategy is not just about introducing innovation, but about building a future using a combination of new and existing methods. Some readers may expect this publication to be a revelation of the 'next big thing' in strategy; however, research for this guide has shown that successful organizations have been doing many things right, and that they should continue to do them. Often we know those things that we should be doing, but aren't, and *ITIL®4: Digital and IT Strategy* can serve as a guide to get you back on track. Our hope is that it will help your teams to explore new ways of working, view emerging technologies and innovation through a new lens, have more meaningful conversations, and ultimately provide better products and services for everyone in society.

David Cannon and Erika Flora

Lead editors, ITIL®4: Digital and IT Strategy

About the ITIL 4 publications

ITIL®4: Digital and IT Strategy provides detailed guidance on leading service organizations through digital transformation programmes. These programmes may include analysing internal and external ecosystems, developing business and operating models, managing organizational change, and cultivating a more agile and resilient organization. It is one of five ITIL 4 publications, which build on the concepts introduced in *ITIL® Foundation: ITIL 4 Edition.* Each of these publications focuses on a different aspect of service management.

ITIL®4: Create, Deliver and Support addresses the cultural and team management aspects of product and service management; provides an overview of the tools and technologies which support service management; and demonstrates how to integrate management practices into end-to-end value streams.

ITIL®4: Direct, Plan and Improve helps to align product and service management with modern business requirements; drive successful organizational transformation; and embed continual improvement into an organization's behaviour at every level.

ITIL®4: Drive Stakeholder Value provides guidance on establishing, maintaining, and developing effective service relationships at appropriate levels. It leads organizations on a service journey in their service provider and consumer roles, supporting effective interaction and communication.

ITIL®4: High-velocity IT addresses the specifics of digital transformation and helps organizations to evolve towards a convergence of business and technology, or to establish a new digital organization.

The ITIL 4 publications are supported by the ITIL management practice guides, which contain pragmatic, hands-on guidance that can be applied in the context of all ITIL 4 publications. Practices that are particularly relevant to *ITIL®4: Digital and IT Strategy* include architecture management, measurement and reporting, portfolio management, risk management, service financial management, strategy management, and workforce and talent management. The practice guides can be accessed online at www.axelos.com/my-axelos/my-itil.

About the ITIL story

The guidance provided in this publication can be adopted and adapted for all types of organization and service. To show how the concepts of ITIL can be practically applied to an organization's activities, *ITIL®4: Digital and IT Strategy* follows the exploits of a fictional company on its ITIL journey.

This company, Axle Car Hire, is undergoing a transformation to modernize its services and improve its customer satisfaction and retention levels, and is using ITIL to do this. In each chapter of the text, the employees of Axle will describe how the company is improving its services, and explain how they are using ITIL best practice to do this.

ITIL storyline sections appear throughout the text, separated by a distinct border.

The story so far

Axle Car Hire is undergoing a digital transformation.

Axle is headquartered in Seattle, with branches across Europe, the US, and Asia-Pacific. Before its transformation, Axle faced a downturn in business and a decrease in customer satisfaction. It lost customers to disruptive enterprises offering innovative services, including car-sharing and driverless cars, through online platforms and mobile apps.

Consequently, Axle hired a new CIO, Henri, who was chosen for his experience in large-scale IT transformations, balancing approaches such as design thinking, DevOps, and Agile with management frameworks such as ITIL, ISO, COBIT, and IT4IT. He understands the importance of embracing IT and digital innovation in modern business. He was tasked with increasing customer satisfaction, attracting and retaining customers, and improving the company's bottom line.

Henri prioritized the digital transformation of Axle and used ITIL as a foundational source of best practice on which to build other approaches. This enabled the change he knew the business needed. The adoption and adaptation of ITIL helped Henri to deliver the high-quality services that co-created value for Axle and its customers. He examined the ways that Axle could manage the four dimensions of service management, adopt the service value chain, and utilize the seven ITIL guiding principles in the continual improvement of its services.

Under Henri's direction, new services were introduced, such as the advanced driver assistance system and biometric access to vehicles. These new services were widely adopted by Axle's customers. As a result, the company gained a reputation for fast and reliable service. Customer loyalty improved and repeat bookings increased. The Axle Green improvement initiative was also introduced to help Axle achieve its vision to be an environmentally friendly organization. Many of the company's environmentally friendly targets have already been achieved, with plans for new developments underway. A project to ensure that half the Axle fleet runs on sustainably generated electricity is making progress.

After a period of strong growth, Axle is experimenting with new service models in response to the changing business climate. In different locations around the world, Axle is looking for solutions to the new challenges it faces. If the new service models are successful, they can be deployed in Axle's branches worldwide.

As Axle has progressed through its digital transformation initiative, an opportunity has been identified to launch a food delivery service. Food delivery is a high-volume, low-margin business that thrives in densely populated urban centres and suburbs. Food delivery agents normally use their own vehicles, paying for their own fuel and insurance. Personal vehicles tend to be older, less reliable, and lacking in capacity to store multiple delivery packages, leading drivers to make several single delivery trips, thus wasting time and fuel. Diners could use Axle Car Hire to order food, and Axle could then connect them with delivery agents who will use Axle's fleet to

deliver food efficiently. This opportunity could allow Axle to leverage its existing products and services, and its network of retail locations, enabling it to move into a new line of business.

It has been agreed that a trial of the new food delivery service will be run. Axle's Bay Area branch in California has been chosen as the location of this trial, with the support of Luna, the regional manager for that area.

Meet the Axle employees

Here are five key employees of Axle Car Hire:

Henri is the new CIO of Axle Car Hire. He is a successful business executive who's prepared to shake things up. He believes in an integrated approach to IT and service management.

Anya is the CEO of Axle Car Hire. She is a seasoned business executive who was headhunted for the CEO role two years ago. She is skilled at empathizing with her employees and partners, and balancing their needs with trends in the wider industry. At the same time, she is not afraid to take risks or make tough decisions when needed, relying on solid data and evidence as a starting point. She is genuinely interested in bringing out the best in the people she works with.

Dave is the chief operating officer of Axle Car Hire. He started his career in supply chain management, but over time has managed other business operations functions such as legal, and risk and compliance. He is cautious by nature, preferring to take the time to analyse a situation before providing definitive recommendations or decisions. He feels that the quality of Axle's products and services is paramount, as is Axle's reputation and standing.

Luna is the Axle regional manager for the Bay Area in California. She has been a rising star at Axle Car Hire for the past three years, having succeeded at branch level by improving staff retention rates by 30%. Luna relishes change but needs to stay grounded to work through processes in the right order. Luna is based in the Sausalito office but travels around the Bay Area.

Su is the Axle Car Hire product manager for travel experience, and has worked for Axle for the past five years. Su is smart, meticulous, and passionate about the environment.

CHAPTER 1

INTRODUCTION

1 Introduction

1.1 About this guide

This guide examines the role of strategy in a digitally enabled organization. It provides an overview of the capabilities needed to compete in a digital world, and suggestions for how organizations can evaluate new technology and its potential for competitive differentiation. This guide offers a perspective about innovation, which will help organizations prepare for and successfully utilize successive waves of disruptive technology. Although it does not mention specific technologies or other future disruptive factors, it equips leaders to face and navigate the disruption to benefit their organizations and stakeholders.

The publication has three parts, each with a different purpose and structure:

- **Part I: What is digital and IT strategy?** This part introduces the key concepts of digital and IT strategy, digital disruption, and transformation.
- **Part II: The strategy journey** This part guides you through a digital and IT strategy journey in alignment with the continual improvement model illustrated in Figure 1.1. Its chapters are organized as follows:
  - **Chapter 3: What is the vision?** This chapter details the types of digital disruptions and factors that impact organizations, examples of digital maturity and positioning models, and guidance on how to craft a compelling digital vision.
  - **Chapter 4: Where are we now?** This chapter gives an overview of how to assess an organization's digital readiness, and assess internal and external environments and their impact.
  - **Chapter 5: Where do we want to be and how do we get there?** This chapter presents specifics about strategy cycles and horizons, structuring a business case for change, selecting the appropriate business model, planning a strategy that meets the organization's objectives relative to its customers and internal and external environments, and how to frame discussions and obtain buy-in from key stakeholders.
  - **Chapter 6: Take action!** This chapter details how to implement a digital and IT strategy, including digital transformation at all levels of an organization. It also explains how to structure, lead, and communicate as part of several different types of strategic change initiatives.
  - **Chapter 7: Did we get there?** This chapter provides an overview of how to measure the progress and effectiveness of a strategy, including an overview of OKRs, CSFs, and KPIs. It also provides guidance on how to change an existing strategy accordingly.
  - **Chapter 8: How do we keep the momentum going?** This chapter gives recommendations on parallel operating models, surviving and thriving in a volatile, uncertain, complex, and ambiguous (VUCA) environment, and continual improvement of the organization's digital transformation efforts.
- **Part III: Strategic capabilities** This part describes four strategic capabilities that are used through all stages of the digital and IT strategy journey:
  - **Chapter 9: Digital leadership** This chapter details the role of today's digital leader, and provides an overview of skills to be developed, for both existing and aspiring leaders.

- **Chapter 10: Managing innovation and emerging technologies** This chapter describes how organizations manage innovation, adopt emerging technologies, and create an environment that fosters innovation.
- **Chapter 11: Managing strategic risk** This chapter details potential risks that must be considered when initiating a digital transformation.
- **Chapter 12: Structuring for digital business** This chapter provides a variety of options for how a digital organization can be structured to support a digital transformation.

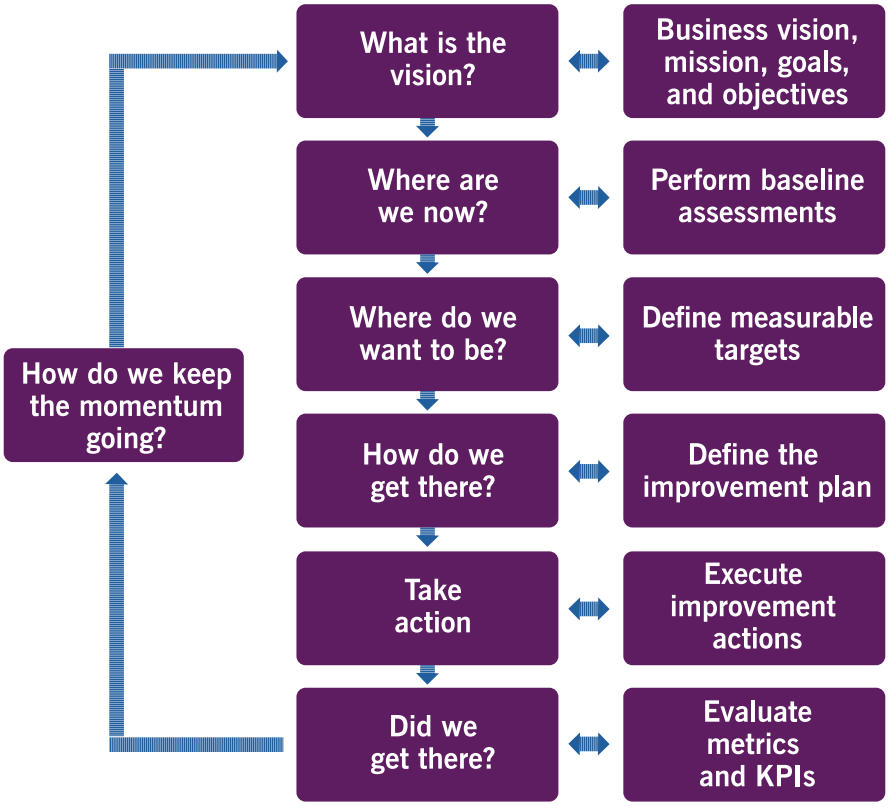


Figure 1.1 The continual improvement model

1.2 ITIL practices

This publication interacts with a number of ITIL practice guides. The key practices covered as part of this publication are included in Table 1.1 (see the appropriate practice guide for additional information).

Table 1.1 ITIL practice guides that interact with this publication

Architecture management	Project management
Continual improvement	Relationship management
Knowledge management	Risk management
Measurement and reporting	Service financial management
Organizational change management	Strategy management
Portfolio management	Workforce and talent management

1.3 The digital and IT strategy context

1.3.1 Digital and information technology has changed the world

Technological innovations have changed the world, making it faster, easier, and cheaper to perform many tasks. Some technology can even perform tasks that had never been performed before. Over time, technology becomes commodified, and higher-order technology either creates a new ecosystem or disrupts the existing one.

Technological changes often occur in waves. Each wave starts with an innovation that changes the existing way of working and generates a surge of development. Some innovations simply provide an alternative way of performing a task. Others cause such a fundamental change that it is impossible to revert to the previous method. Moore (2014) calls this 'discontinuous innovation'. Examples of discontinuous innovation include the following:

- The introduction of the printing press in medieval Europe made information more readily available. This created opportunities for unprecedented collaboration, leading to a shift in philosophical and scientific thinking.
- The steam engine revolutionized transport, agriculture, and warfare.
- The assembly line changed manufacturing, and made commodities available that elevated societies to an unprecedented quality of life.
- Information technology provides a means to store, access, process, and communicate data, enabling the development of high-speed analysis, automation, communication, and collaboration.

The most recent wave of innovation, labelled 'digital technology', is a combination of information technology and operations technology. It is augmented by powerful tools that use the capacity and processing power of machines to emulate the cognitive and physical abilities of humans. Each successive wave of innovation is quicker than the previous one, as technology becomes smaller, faster, and cheaper, while simultaneously delivering greater processing power, communication capabilities, and storage capacity.

Although technological innovation advances business, it does so at the expense of some earlier norms. For example, the Industrial Revolution changed fundamental aspects of the rural environment. Many trades became obsolete, and the skills involved in those trades are now rare. However, the recent resurgence of artisanal skills does not signify a shift back to traditional manufacturing methods. As innovations and adaptations of digital technology evolve, so too will the effects of reducing face-to-face interaction and automating cognitive activities.

Digital technology is increasingly changing the way individuals and organizations function, radically changing society. Consumers have more choice and control over suppliers, product lifespans have been reduced, and humans interact in physical and virtual realms. Citizens demand that those changes are reflected in the way governments are elected, govern, and provide services.

Digital technology has also changed the way people are managed and expect to be managed. It has also changed the way we live and work, leading to a demand for new products and services, which are often fundamentally different to those previously offered. An example of this new type of working can be seen in digital nomads: knowledge workers who hire out their skills and utilize technology. Unlike previous generations, they are not based in offices in long-term employment, and can move freely around companies and the globe.

Another opportunity presented by digital technology is that traditional IT service providers can change their role and become a strategic part of the business. They can achieve this in several ways. For instance, digital technology displaces older technology, and disrupts the way a market or industry works. It provides a new set of tools that enable organizations to operate differently. Products and services are designed, produced, and delivered more quickly and efficiently.

Digital technology transforms how an organization operates. It requires organizations to develop new, more agile business models to compete in a fast-moving market. Emerging technologies enable organizations to work more quickly and efficiently, such as by using automation, which creates opportunities for improvement. An example of how digital technology is changing the demands of technology managers is shown in Figure 1.2. This figure illustrates the shifts in thinking and management style that digital technology requires across all four dimensions of service management.

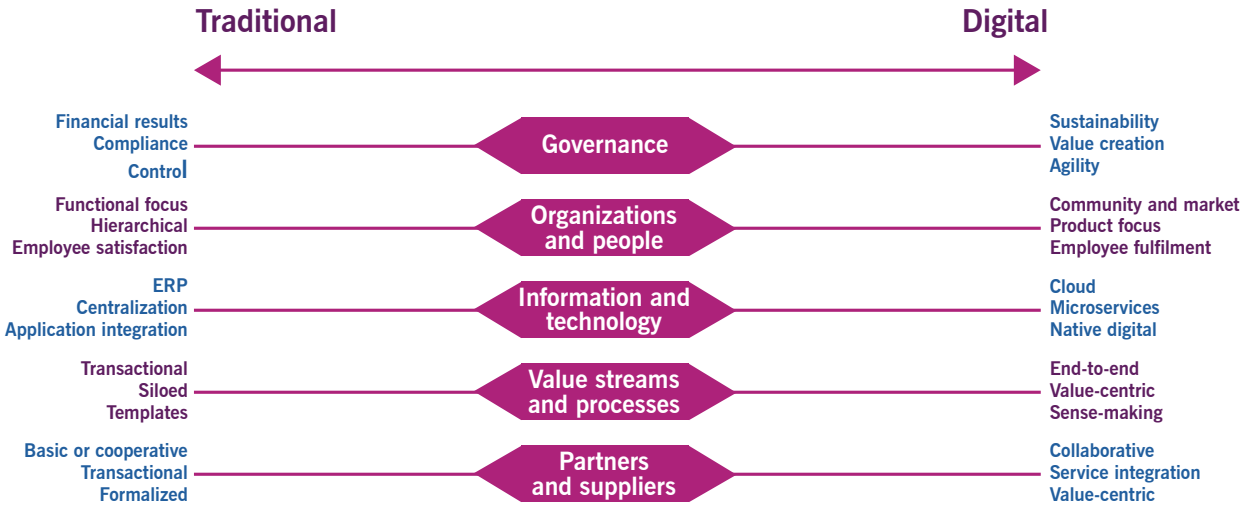


Figure 1.2 Governance and management shift from traditional to digital organizations

1.3.2 Business models are changing

The changes created by digital technology require organizations to work differently. New business models replace slower, older, and more expensive ways of working, by changing the go-to-market approach; how the organization engages with customers; and the products, services, and delivery platforms. These models result in a demand for further innovation.

Digital technology facilitates communication and engagement between service providers and service consumers, reducing the need for intermediaries and system integrators. For example, some organizations sell easy-to-install products directly to customers online, without the need for local service providers or technical support teams.

Smaller organizations can compete with larger corporations by utilizing technology. Over time, the proliferation of smaller competitors leads to acquisitions and mergers, resulting in a mixture of old and new corporate entities, some of which may consolidate several previous services or goods.

In large enterprises, business units can use technology services that they get directly from external service providers, often without the assistance or knowledge of central IT departments. Many components of the traditional IT department are being incorporated into business units, leaving the central IT unit to manage legacy systems and commoditized infrastructure and software components.

Small businesses can use technology to create an online presence and use commoditized production, marketing, and distribution providers. They can now have access to enterprise-grade technology that was previously only available to large organizations with IT investments.

Business-to-business (B2B) functionality, products, and services are increasingly available to individual consumers. This has introduced more channels to the market and repositioned organizations. Organizations are also using industry-disrupting platforms, even when the platform is offered by a competitor. Due to the rate of

innovation and the huge selection of providers and products available to consumers, organizations must rapidly develop and deliver new or improved products.

Older business models are becoming less relevant because they depend on established relationships, unchanging processes, consistent availability of resources, and loyal customers and employees. These qualities can be constraining when competing against agile and innovative organizations.

Until recently, the relationship between an organization and its customers was that the customer revolved around the products and services. However, today the most successful organizations are those that revolve around and align with the changing needs of the consumer (Denning, 2013). This new paradigm implies that larger enterprises are at risk when competing against smaller, innovative ones, but the reverse is also true. A large enterprise that successfully utilizes technology can become a threat to smaller companies that serve niche markets that were previously out of the larger company's reach.

1.3.3 The role of technology leader is changing

As technology becomes more complex, it also becomes easier to access and use. Consequently, the role of the technology leader, as someone who unlocks the value of technology through specialized technical expertise, is changing. Although there will always be a role for technical experts, it is increasingly regarded as a back-office role. The new technology leader is a business executive who understands technology, rather than a technology expert who understands the business.

This poses challenges for both business leaders and technology experts. To become leaders, technology experts need to do more than just understand business principles. They need to become experts in the business they are a part of. For example, they need to know how to manage technical debt while operating and understanding the technology, and committing to the expense of making it manageable and secure. Business leaders must also understand the limits of technology, and have a basic understanding of best-practice frameworks and ways of working.

There are many examples where technology experts and business leaders have failed to appreciate each other's domain. Recently, cloud technology promised to reduce costs and provide flexibility. This led to strategies where applications and data were uploaded into the cloud, sometimes without due diligence. Although this might have been the best solution in some instances, occasionally it has led to higher costs, service duplication, solution/vendor lock-in, and reduced control of and insight into key assets.

1.3.4 Accelerated innovation has brought greater urgency to business change

The latest wave of innovation has led to terms such as 'digital transformation' and 'organizational agility'. But what does this mean in practice?

Firstly, emerging technology, which builds on the capabilities of merged information and operations technologies, has introduced opportunities that have disrupted industries. The ability to achieve and maintain a position requires an organization to think differently about its business and operating models.

Secondly, the speed of innovation has accelerated significantly. Technology is cheaper, faster, and easier to implement. Innovation adds greater functionality, making it faster and easier to enter new markets. Organizations need to change quickly to harness the power of rapidly evolving digital technology.

This situation is illustrated in Figure 1.3.

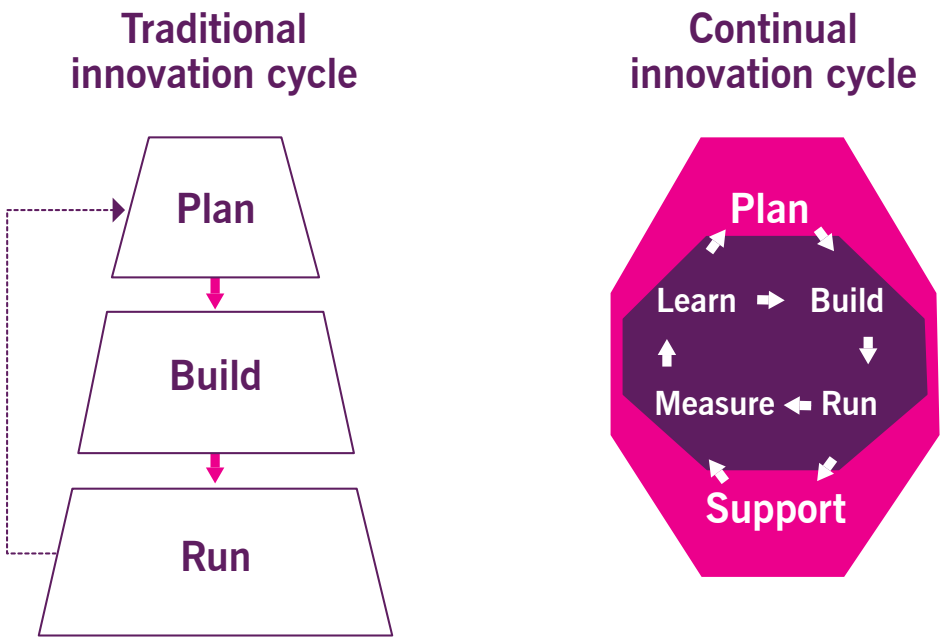


Figure 1.3 Traditional vs continual innovation cycle

In the early years of computerized automation and digitization, organizations managed technology using a relatively simple plan-build-run model, as illustrated by the left-hand diagram in Figure 1.3. Innovation changed organizations, but the rate of change was in months and years.

This model was effective in implementing and managing more centralized computing environments. Many organizations used it to introduce levels of innovation that revolutionized the way they worked and guaranteed their competitive advantage. However, this model is inadequate when managing the increased pace of innovation, the accelerated speed in bringing new products and services to market, and the ever-changing demand of a mobile consumer base. Organizations relying on the plan-build-run model find themselves at a disadvantage.

Figure 1.4 illustrates how accelerated innovation demands a shorter time to mature products and practices. It also emphasizes the use of sourcing as a strategic capability. Examples of this progression include the following:

- Server technology was diverse and competitive. Today, servers are a commodity that can be virtualized and made available in the cloud.
- GPS was limited to a few specialized devices, and was only accurate to several hundred metres. Today, it is a standard feature in all mobile devices and applications offering context-sensitive functionality, at no additional charge.
- Enterprise resource management (ERM) tools were expensive to buy, implement, and maintain. Two leading toolsets revolutionized manufacturing and organizational management approaches and gave organizations an advantage. Today, ERM is a standard component of most organizations, and tools are also available as solutions or platforms in the cloud.

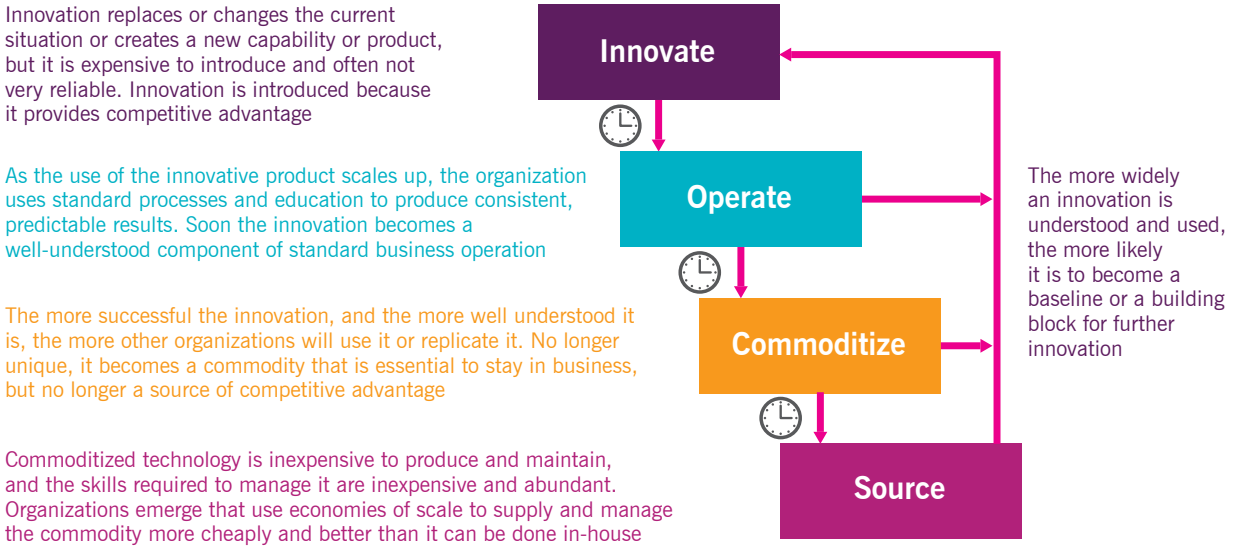


Figure 1.4 What happens when innovation accelerates

Accelerated innovation demands that organizations change the way they adopt and use technology. They must move faster and be prepared to change direction midstream, as newer technologies or industry trends emerge. Figure 1.4 is an example of how organizations adapt to an environment of accelerated innovation.

For example, they integrate the build and run cycles. This includes applying Agile methods to the development cycle, and understanding that every component of the business operation can change. So, both operational and development teams are part of the same cycle of innovation and management.

Also, in this model, the business operation evolves. It uses an iterative improvement cycle to cause or adapt to changes in the organization's environment. Tight links between planning and business operation result in a shorter strategic planning cycle, linking components in both the project and operational stages to strategic outcomes.

A commoditized support layer consists of generic capabilities and essential components of the business operation. These activities have been automated, and are primary candidates for outsourcing. Many of the traditional roles of IT operations are being moved into this layer and into the cloud (e.g. servers, storage, and application management). A digital organization will aim to move items into the commoditized support layer as quickly as possible, to focus attention on areas that bring greater differentiation.

Most organizations find themselves somewhere between their legacy business operations environment and an emerging digital environment. This requires a complex hybrid of management styles and cultures.

PART I

WHAT IS DIGITAL AND IT STRATEGY?

CHAPTER 2

KEY CONCEPTS

2 Key concepts

This chapter presents key concepts that will help leaders navigate successive waves of technological innovation.

2.1 Digital, information, operational, and communication technology

Digital technology is any technology that digitizes something or processes digital data. It encompasses information technology (IT) and the parts of operational technology (OT) that have been digitized. It also depends on the use of communication technology. Thus, the term 'digital technology' refers to the merging of IT, OT, and communication technology to achieve levels of functionality and automation that are not possible with any of these alone (Figure 2.1).

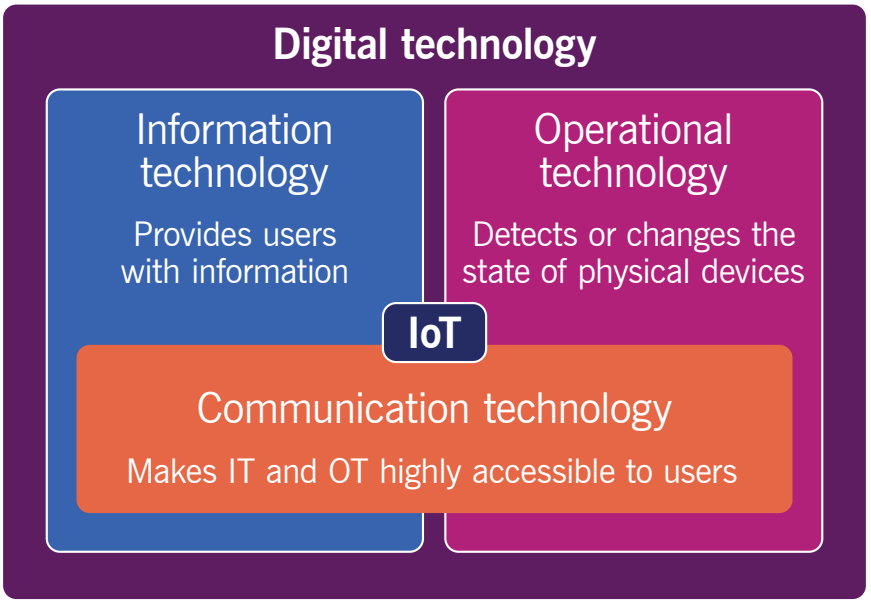


Figure 2.1 Digital technology

2.1.1 Information technology

Information technology is the application of digital technology to store, retrieve, transmit, and manipulate data, often in the context of a business or other kind of organization. IT exists as information systems that consist of hardware, system software, data, and applications that are used for the purpose of data processing. Information is data that is useful in context. The objective of IT is to make information available to end users.

2.1.2 Operational technology

Operational technology is the application of digital technology for detecting or causing changes in physical devices through monitoring and/or control.

The objective of OT is to use digitized data to act. OT devices are supported by information and communication technologies, which connect them to one another and to information systems. Resulting solutions comprise what is known as the Internet of Things (see section 2.1.4).

2.1.3 Communication technology

Communication technology, which is sometimes seen as a component of either IT or OT, enables IT and OT to be highly mobile and accessible to organizations, consumers, and other stakeholders. Functionality that was previously only available on large computer systems and specific equipment is now accessible on mobile devices anywhere in the world, regardless of where the data is stored and physically located.

The proliferation of bandwidth and throughput has resulted in consumer-grade video-conferencing that was previously too expensive for all but the largest organizations. Today, affordable video-conferencing saves time and money that would have been spent on travel, and ensures communications and business operations when travelling is not possible.

2.1.4 Internet of Things

The Internet of Things (IoT) is a system of interrelated computing devices and mechanical and digital machines that are interconnected via the internet, enabling them to send and receive data without human interaction. The IoT has evolved from the combination of several technologies, including machine learning, sensors, embedded systems, and real-time analytics. It has been applied within consumer, commercial, industrial, infrastructure, and military-industrial environments.

The ITIL story: Digital technology

Henri: *The meaning of the term 'digital technology' is a hotly discussed topic. Here at Axle Car Hire, we are clear in how we use it. Our digital technology is broken down into two aspects: information technology and operational technology.*

Information technology includes tools used by our engineers: the platforms we use to track our activities, vehicle inventory, bookings, or even cash flow, to our customer-facing websites and apps. It also includes the tools and infrastructure we use to communicate and collaborate with other people, or with the vehicles and other equipment or components.

Our operational technology is made up of the tools we use to monitor parts of our service; for example, the sensors we place in our vehicles to track their location and performance.

2.2 Digital organization

A digital organization is an organization that is enabled by digital technology to do business significantly differently, or to do a significantly different business.

Most organizations have been adopting some form of digital technology for decades. What differentiates a digital organization is the extent to which it uses digital technology as a basis to differentiate itself. Digital organizations rely on digital technology as a fundamental component of their business and operating models. Their products and services often have a digital component (such as a mobile app to order services), or may be entirely digital (such as an online stock trading service).

Yet an entirely digital organization is not feasible for many. Most organizations will rely on a combination of digital, analogue, and manual systems and activities. An organization needs to decide which parts of the business to digitize and to what extent, so that it can achieve and maintain a competitive advantage.

2.3 Digital business

The term 'digital business' is widely used in the industry to refer to different things, for example:

- an organization that uses digital technology as a basis for conducting its operations
- an organization that provides digital products and/or services
- the core business activities that have been digitized in an organization
- the technology used to interact virtually with consumers
- a methodology or framework for adopting or using new technologies
- a business model template containing pre-populated alternative digital technologies
- the activities that an organization performs digitally, which are distinct from the organization itself.

In this guide, 'digital business' refers to activities that use digital technology, enabling an organization to fulfil its purpose. The term 'digital organization' is used throughout to indicate an organization that is using digital technology as a basis for conducting the activities necessary to achieve its purpose.

2.4 Digitization

Digitization is the process of transforming something (e.g. text, sound, or images) from analogue to digital form by expressing the information in binary digits.

The term 'digitalization' is sometimes used to refer to the use of digital technology to automate or transform some aspect of the organization. However, in ITIL, this is described as a digital transformation. Because of the potential confusion with digitization, use of the term 'digitalization' is not recommended.

2.5 Digital transformation

'Digital transformation' has different potential meanings, depending on the individual and the context.

Different interpretations of 'digital transformation' by various roles

Chief executive officer: *It is a hype, which is only relevant to the CIO and the IT division.*

Chief information officer: *It is the emerging technology that provides innovative methods for performing business activities.*

Chief marketing officer: *It is a method for better engaging with current and potential consumers.*

Chief financial officer: *It describes an opportunity to significantly reduce costs with cloud technology.*

Chief operations officer: *It is a method for optimizing and automating operations.*

IT manager: *It is used to describe the implementation of a new ERP (enterprise resource planning) system.*

None of the various interpretations is wrong, but they are too narrow. Also, leaders cannot define a digital or IT strategy if stakeholders are not aligned.

In *ITIL®4: High-velocity IT,* the following definition of digital transformation was introduced.

Definition: Digital transformation

The use of digital technology to enable a significant improvement in the realization of an organization's objectives that could not feasibly have been achieved by non-digital means.

Digital transformation is achieved by digitizing, robotizing, and other forms of automation that enable organizations to do things differently, or to do different things.

Executives should view digital transformation as an organization's ability to identify innovative uses of both emerging and current technologies. The organization should then respond by transforming its strategy and operations to maintain and grow its market position. Many approaches limit digital transformation to technologies, such as data, automation, and virtualization. However, transformations impact all areas of an organization. This is illustrated in Figure 2.2.

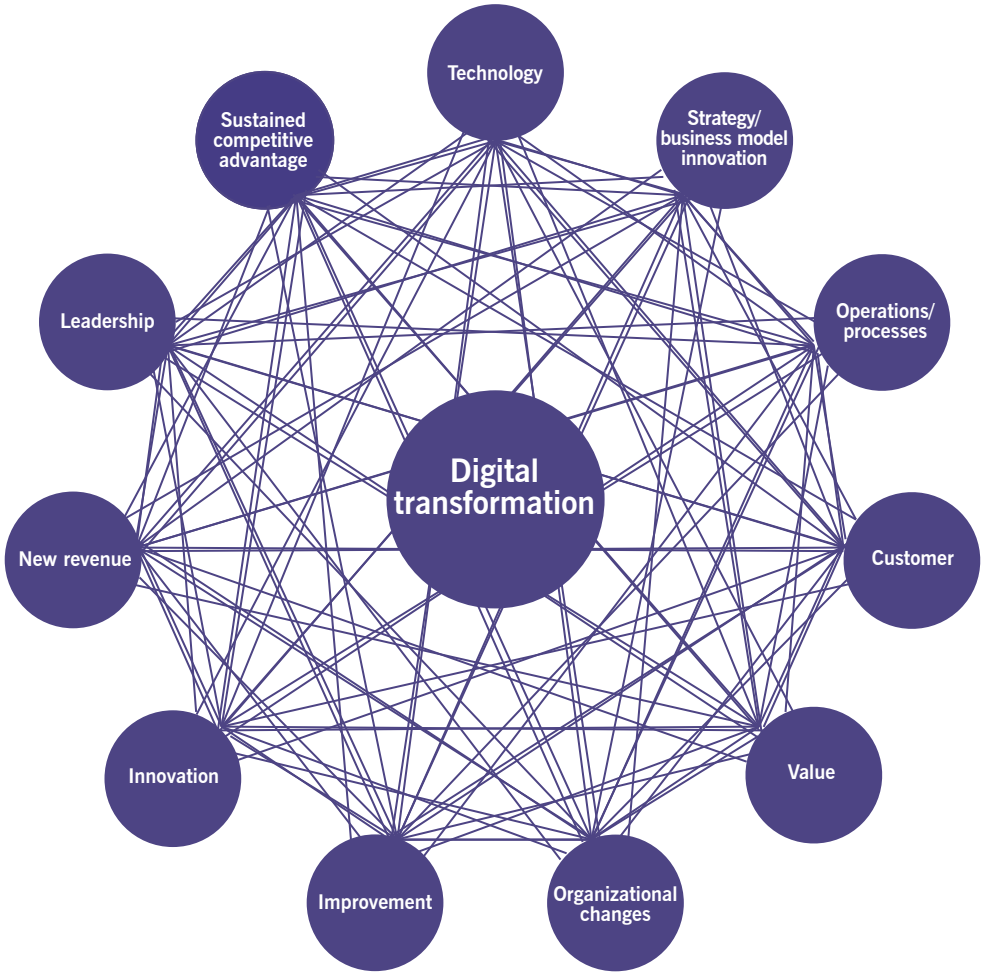


Figure 2.2 Modified list of key digital transformation themes

The ITIL story: Digital transformation

Anya: *A digital transformation programme is not just about transforming IT. To achieve that goal, we also need to change how we set budgets and fund work, how we recruit and develop skills in our staff, how we manage risks, etc.*

Henri: *In other words, digital transformation requires a transformation in just about every part of Axle Car Hire! Some of those changes might be small, but some might be significant.*

Anya: *As we look to move into the home food delivery business, we need to expand our use of digital technology. For example, we may need to use AI to predict the optimal route from a restaurant to a diner, or to generate coupons and offers based on trends we see in the market.*

Henri: *Our digital transformation approach helps us work more efficiently and effectively, while allowing us to capture and fulfil opportunities that will expand our lines of business. At some point we may find ourselves making more revenue from digital offerings rather than our physical ones, and have to reassess our approach to digital technology. For now, we are only undergoing a level of digital transformation that makes sense for our current situation.*

2.6 Products and services

The products and services that an organization offers are central to its strategy, as this is how it realizes its purpose and co-creates value. The relationship between products and services is the basis for business decisions and which operating model it chooses to use; see *ITIL®4: High-velocity IT* and *ITIL®4: Drive Stakeholder Value* where the relationship is discussed in more detail.

Definitions

- **Product** A configuration of an organization's resources, designed to offer value for a consumer.
- **Resource** A person or other entity that is required for executing an activity or achieving an objective. Resources may be owned or employed by an organization, or contracted from a third party.
- **Service** A means of enabling value co-creation by facilitating outcomes that customers want to achieve, without the customer having to manage specific costs and risks.

Key message

Each of the services that an organization provides is based on one or more of its products. Organizations own or have access to a variety of resources, including organizations and people; information and technology; value streams and processes; and partners and suppliers. Products are configurations of these resources, created by the organization, that will potentially be valuable for its customers.

Products are typically complex and not fully visible to the consumer. The portion of a product that the consumer actually sees does not always represent all of the components that comprise the product and support its delivery. Organizations define which product components their consumers see, and tailor them to suit their target consumer groups.

Service providers present their services to consumers in the form of service offerings, which describe one or more services based on one or more products. Service offerings might include goods, access to resources, and service actions. Different offerings can be created based on the same product, allowing it to be used in multiple ways to address the needs of different consumer groups.

A method known as 'Wardley mapping' (Wardley, 2016) is used to understand how services and products are created and delivered and their competitive advantages. This is a visual method for making strategic decisions. It includes the strategy cycle, which considers the following five factors, based on Sun Tzu's five factors in *The Art of War:**

*http://classics.mit.edu/Tzu/artwar.html#:~:text=The%20art%20of%20war%2C%20then,(5)%20Method%20and%20discipline [accessed 30 July 2020]

- **Purpose** The scope of what the organization is doing and why.
- **Landscape** The environment in which the organization is competing.
- **Climate** The forces acting on the environment.
- **Doctrine** The set of guiding principles within the organization.
- **Leadership** The context-specific strategy chosen after considering the above factors.

These factors can inform an organization's iterative strategy cycle, as shown in Figure 2.3.

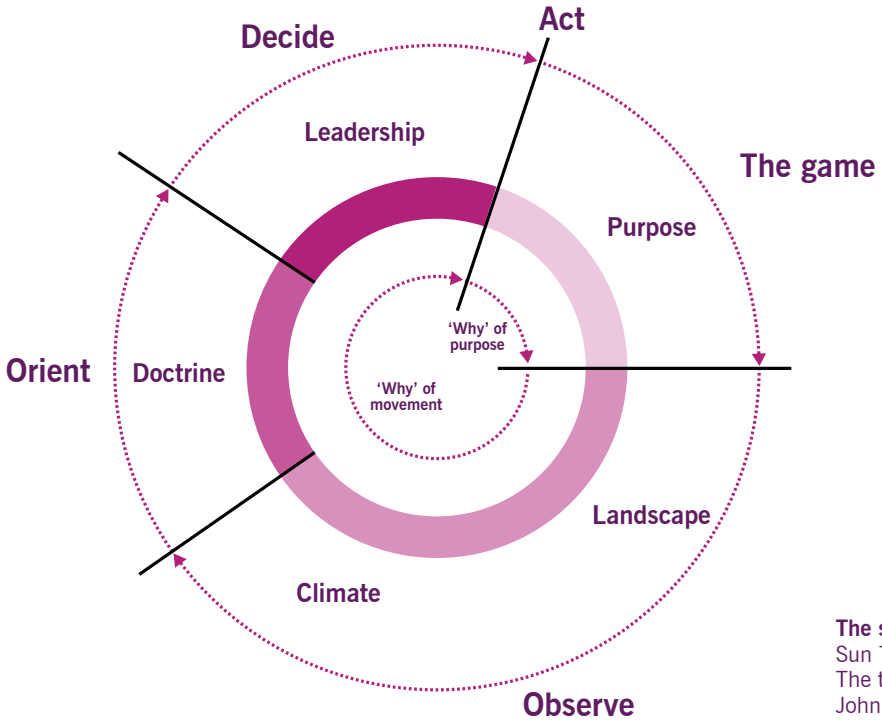


Figure 2.3 Wardley's strategy cycle

Reproduced under Creative Commons from Wardley (2017)

The strategy cycle helps an organization to better understand its situational awareness. The 'where' and 'why' inform action, which then defines the 'who', 'how', 'what', and 'when', to prevent impulsive actions, as shown in Figure 2.4. This information can then be used to provide the organization with a strategic map.

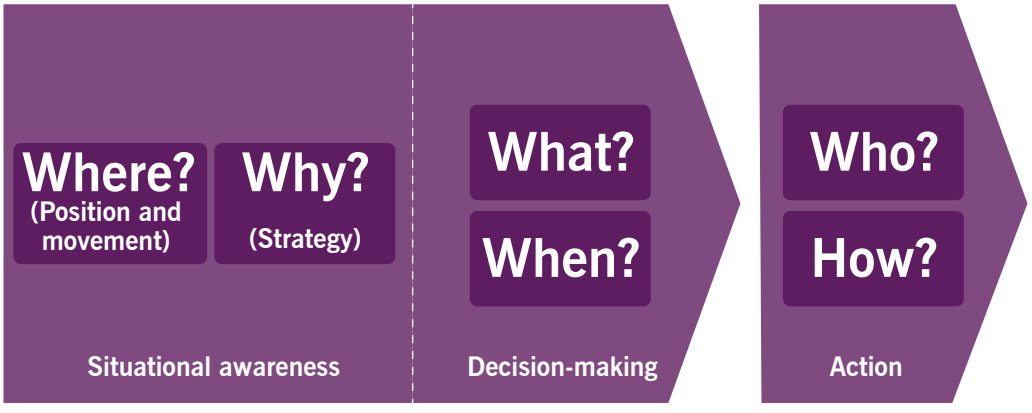


Figure 2.4 Situational awareness vs action

A common error organizations make when implementing a strategy is to ignore the old components and focus on those that are to be introduced. The assumption behind this is that business as usual should be left untouched when the new components are introduced. As a result, there are multiple implemented IT architectures, each from a previous strategy and rarely updated. Signs that this has happened include:

- duplication of functionality between IT systems
- multiple technology architectures, each emerging from its own strategic initiatives
- outdated technology and management practices
- lack of cost transparency.

The business and operating models link current organizational aspects to the strategy. The organization is better able to understand the impact of its strategic decisions when combined with an understanding of where products and services are in relation to its maturity in the marketplace. It can also predict the impact of change on the organization's practices.

The ITIL story: Products and services

Anya: *Axle Car Hire's business model is designed around the concept of services. We create value with and for our customers by enabling them to travel from place to place without having to take ownership of a vehicle, or pay for maintenance, insurance etc.*

Henri*: Our new food delivery business is also a service that creates value through the use of our products, such as our billing and payment system, the app our customers use to make a reservation, or even the retail branches where delivery agents can pick up and drop off vehicles. Digital transformation means transforming the services we offer to our customers, and that will lead to transforming many aspects of the business, not just the customer-facing aspects.*

2.7 Tiers of strategy

An organization's governing body defines the direction it should take. It also defines policies that guide how to achieve the strategy. Managers at all levels, including the CEO, define how to execute the strategy, comply with policies, and achieve the governing body's objectives. How strategy is defined and communicated is described in Chapter 9.

Many of the approaches to digital strategy are based on a tiered model. An example of this is shown in Figure 2.5. The organization's strategy is called the 'business strategy' or 'enterprise strategy'. The digital strategy is a subset of the business strategy, and applies to those parts of the business that will be impacted by digital technology. The IT strategy is separate, but supports both the digital enablement projects and the established parts of the organization.

In practice, though, the model for digital and IT strategy is far more complex. A more appropriate example is based on a clearer definition of business, digital, and IT strategy and is shown in Figure 2.6.

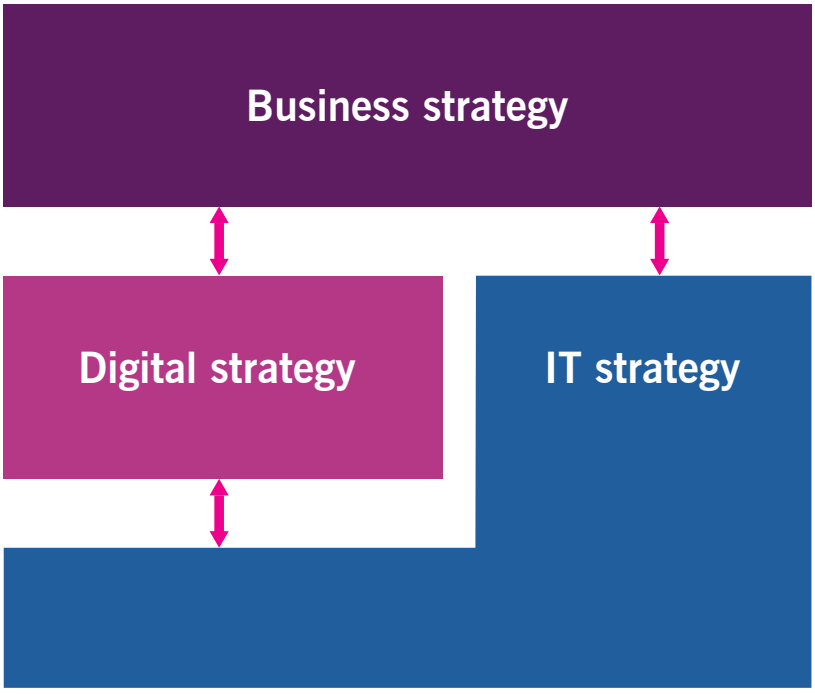


Figure 2.5 Traditional perspective of business, digital, and IT strategy

2.7.1 Business strategy

Business strategy is how an organization defines and achieves its purpose. Every organization has a business strategy. Some organizations maintain a formal set of processes and documents. Others rely on less-formal communication, decision-making criteria, and patterns of behaviour by the governing body and executives.

Regardless of the rigour of a strategy management practice, a business strategy will encompass:

- a way of defining, refining, and communicating the vision of the organization
- a way of defining its objectives
- its business model
- a means of aligning the different parts of the organization's ecosystem to achieve its goals (e.g. organizations and people; information and technology; value streams and processes; and partners and suppliers)
- guiding principles that determine how decisions are made and what actions are taken
- agreement on which courses of action the organization will take and how to allocate resources to them (often in the form of strategic plans)
- a definition of what the organization will *not* do.

The organization's culture determines how it observes and enforces its business strategy; for example, whether it uses regulatory requirements. However, the organization's success depends on a relevant, cohesive, and clearly communicated strategy. Without such a strategy, it will fall behind its competitors.

2.7.2 Digital strategy

The term 'digital strategy' is commonly used to refer to:

- elements of the business strategy that are based on the use of digital technology
- a migration plan whereby an organization automates its activities or replaces outdated technology with digital technology.

These two statements imply that the business strategy is separate from the technology used to achieve it. Alternatively, they suggest that using digital technology is limited to optimizing the organization's performance. This is reflected in Figure 2.5, where the digital strategy is seen as a subset of the business strategy. The statements also show why many organizations have appointed a chief digital officer (CDO), which has resulted in more failure than success. This is because:

- If the CDO does not have authority over certain areas, the best they can do is to provide advice. Yet if those with the authority to enact that change disagree with the CDO's advice, it might be ignored.
- Some executives see digital transformation as a future programme. Therefore it has a lower priority than meeting the organization's current commitments. Digital transformation programmes are consequently delayed or their funding withheld.
- Sometimes, the CDO is tasked with project management responsibilities, such as coordinating projects that are owned by other business leaders. The CDO has little strategic input, and the resulting programme is as fragmented as the organization itself.

Neither of the first two statements reflects the broad range of opportunities or impact that digital technology offers. Nor does it reflect the fundamental shift in culture, practices, and objectives that an organization must experience to be successful in a digital world.

Definition: Digital strategy

A business strategy that is based all or in part on using digital technology to achieve its goals and purpose.

To achieve the following goals, a business strategy will be largely composed of a digital strategy that performs one or more of the following actions:

- exploit a market opportunity that has been created due to customers using new digital technology
- use digital technology to engage with customers and improve the customer experience
- relaunch existing products and services with new features and delivery methods enabled by digital technology
- use digital technology to improve the performance or efficiency of the organization's operations.

Digital strategy is merely the business strategy based on emerging technologies. A better illustration of how digital, business, and IT strategies are related is shown in Figure 2.6. This figure illustrates how digital and IT strategies merge in response to an organization's growing reliance on technology. This is achieved by seeking new opportunities and maximizing the use of current capabilities.

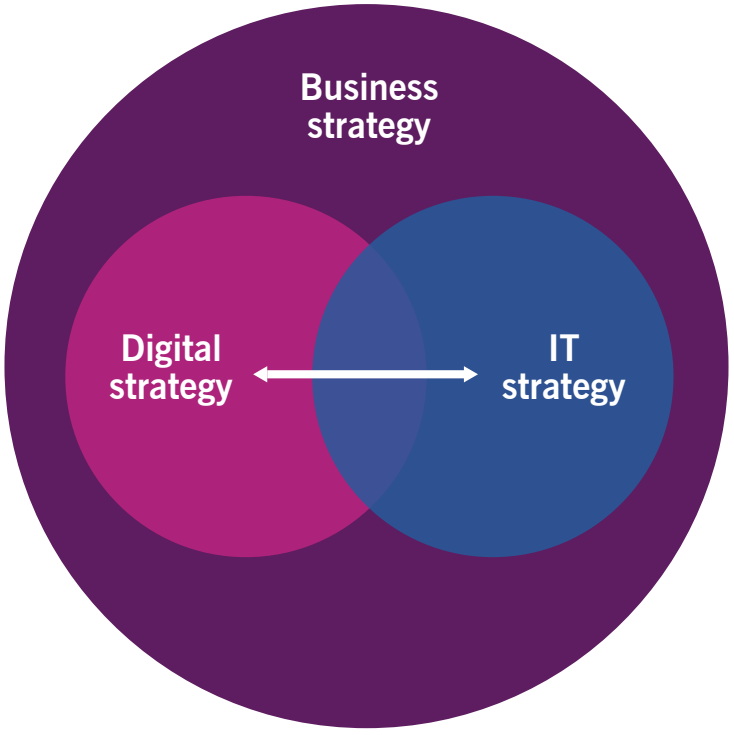


Figure 2.6 Revised perspective (example) of business, digital, and IT strategy

This guide discourages the practice of restricting the digital strategy to identifying which technologies an organization will use and how it will introduce them. At best, this approach is a digital technology programme or initiative, not a digital strategy.

Digital strategy is about understanding:

- how technology has changed, and how it has changed the world in which an organization operates
- whether the organization needs to respond to these changes or continue along its current course
- how to identify opportunities in the digital world
- the risks involved with each opportunity
- how to plot a course that exploits opportunities, and mitigates or avoids risk.

2.7.3 IT strategy

The term 'IT strategy' is commonly used in one of three ways:

- As a component of digital strategy, because digital technology includes IT. This use originated from the time when IT solutions were used to achieve a competitive advantage. This use of the term has largely been replaced by the term 'digital strategy'.
- As a technology strategy and corresponding architecture that supports the digital strategy; for example, what type of IT will deliver a uniform customer experience across a variety of platforms?
- As the back-office strategy and administrative elements of information technology (e.g. the data centre and infrastructure).

IT strategy is about understanding:

- how an organization's IT department supports its business goals
- which technology will be used to perform business operations
- how to utilize the technology envisioned in the digital strategy
- how to move to technology that supports the organization's objectives
- the nature and role of technology suppliers.

The ITIL story: Tiers of strategy

Dave: *Collaboration throughout an organization is essential to success, and strategy management is no different. It is important that aspects of business, digital, and IT strategy can work together to give the best results.*

Anya: *At Axle, we hold key meetings offsite and all senior executives attend. We make sure all opinions and perspectives are respected. Ultimately, although we might have different approaches to the same issues or opportunities, we all want Axle to succeed.*

2.8 Business models

The terms 'strategy', 'business model', and 'tactics' are often used interchangeably, yet they each have different meanings. *ITIL®4: Direct, Plan and Improve* defines them as:

- **Strategy** The course of action by which an organization achieves its objectives.
- **Business model** A formal description of how an organization should be configured to create value for customers based on its strategy.
- **Tactics** The specific methods by which a strategy is enacted.

2.8.1 The role of business models

A business model describes how an organization should be configured to provide value to customers based on the strategy. It shows how every component should collaborate to provide value, rather than focusing only on how each product or service individually provides value. A business model must reflect the organization's system and the consequences of strategy.

A business model is a framework that consists of three major themes:

- How an organization works to realize value through its services, products, and offerings. This includes suppliers, resources and assets, key activities, and cost structures associated with value creation.
- How an organization creates value. This includes via customer relationships, channels, customers segments, and revenue streams.
- How an organization fulfils its promises and expectations.

An effective business model must adapt these themes so that it meets the following criteria:

- provides a strong narrative regarding the organization's value realization
- uses a viable financial model (e.g. calculating the costs needed to realize the model).

2.8.2 Business models and strategy

This section will use a vehicle analogy to demonstrate how strategy, business models, and tactics collaborate to realize value (Casadesus-Masanell and Ricart, 2011).

Vehicles are available in a variety of shapes, sizes, and features, to provide value by satisfying each driver's specific requirements. Each design results in differing capabilities for each type of vehicle. For example, if a driver needs a vehicle for use on mountainous or unpaved roads, they will need a vehicle with powerful off-road capabilities. If the terrain is the competitive landscape, the design of the car will be the strategy. Table 2.1 illustrates this.

Table 2.1 Strategy, business model, and tactics

Strategy	Business model	Tactics
Strategic assessment: understanding the terrain, determining any special features the driver requires to navigate that terrain Strategic choice: selecting or designing the appropriate car	Strategic assets: the car and its features to be used for the terrain, who will maintain it etc.	Driving techniques for specific conditions and situations (e.g. driving on slippery roads, making fast turns)

The strategy aspect involves evaluating the internal and external environments to determine the landscape. It also involves predicting the contingencies that might be encountered, such as changes in the political landscape.

The appropriate business model can be determined after gaining an understanding of the landscape and the organization's capabilities. The organization can sustain its competitive advantage by either defending its unique position in the market or exploiting its key characteristic. It can achieve this by developing a variety of business model configurations to address a range of strategic contingencies.

Business and operating models can be detailed and complex documents. Alternatively, the models can be explained in a canvas format, as shown in the business model canvas in Figure 2.7 (Osterwalder and Pigneur, 2010) and further defined in section 5.1.4. The business model canvas can be supplemented with documentation, but it is important to remember that it is its simple visual format that makes it easy to understand. Strategic choices are summarized across each key element of the organization, which represents how the organization creates value and delivers it to its customers.

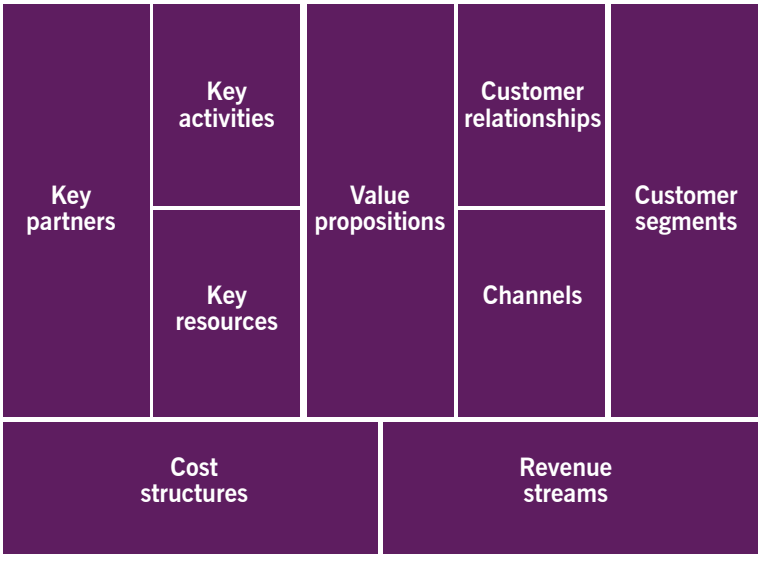


Figure 2.7 Business model canvas

Adapted from Osterwalder and Pigneur (2010)

The business model is an effective planning tool, as it can be used to visualize ideas. A range of business models and organizational configurations can be combined without delving into complex details. As a planning tool, the business model helps strategists to analyse, test, and validate ideas against individual business elements. It also demonstrates the possible results of those ideas, across the entire business model.

Business models can easily be copied by competitors, due to their conceptual and adaptable nature. It is common practice for organizations to compare competitors' business models, to determine how best to compete against them. Good business models, therefore, rarely provide long-term competitive advantages. The achievement of a long-term advantage involves offering and delivering unique value propositions that are difficult to emulate. This is achieved by using a strong strategic plan, which defines how an organization will apply the business model in specific regions, customer segments, or in the specific use of key suppliers, etc.

The business model template illustrated in Figure 2.8 provides a canvas for answering key questions about who an organization will serve (customer scope), what it will offer to them (value proposition), and how it will be delivered (value creation/operating model). It should also explain how the business model will prevent replication from competitors (value capture), or, in other words, what makes it unique and difficult to emulate (Boudreau, 2018).

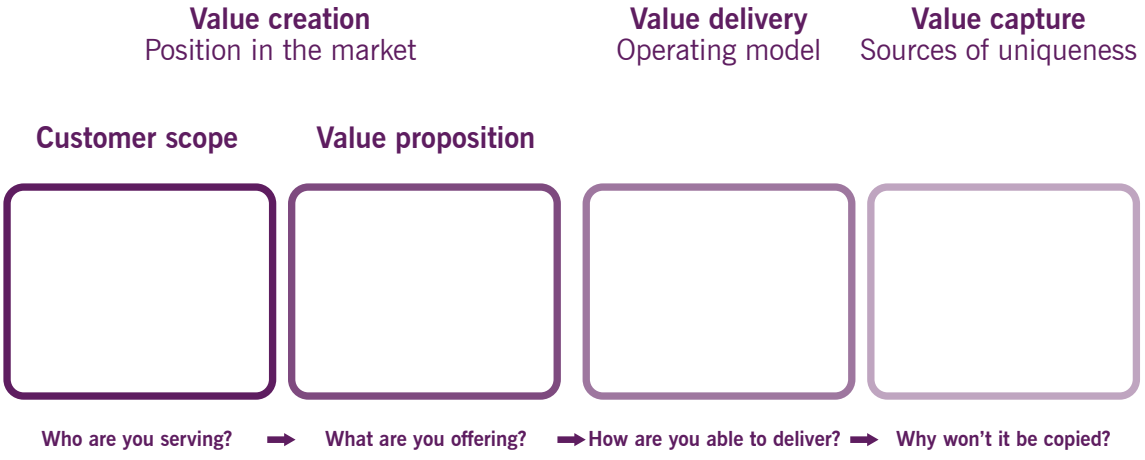


Figure 2.8 Adapted company design template

Reproduced from Boudreau (2018)

The more commoditized the services that an organization provides are, the easier it is to replicate the business model. This is because organizations that provide similar services tend to replicate capabilities, activities, methods, and organizational structures.

However, culture can be a major factor in the success of a business model by making it less of a commodity. Competitors generally fail when they try to replicate a business model without first adapting it to their own culture, or changing their culture; and these are not easy changes.

The ITIL story: Business models

Anya: *The business model canvas is a great example of the ITIL guiding principles of 'collaborate and promote visibility' and 'think and work holistically'. It helps the leadership team and their staff to visualize and understand how the work of each department in the organization combines to create value for customers. It has led to many interesting discussions and decisions.*

Su*: I used to focus purely on my part of the business, managing our travel experience products and services, but this role has now expanded to include our new food delivery venture. The canvas has helped me to understand that all of Axle Car Hire's products have dependencies on key partners, customer relationships, channels, and so many more things, and we must consider all of them in how we operate.*

2.9 Operating models

ITIL®4: Direct, Plan and Improve defines an operating model as 'conceptual and/or visual representation of how an organization co-creates value with its customers and other stakeholders, as well as how the organization runs itself.'

If business models are used to describe how a business captures value, then operating models are used to describe how the organization will be run. Using the vehicle analogy, if the business model applies to a car designed for a specific terrain, the operating model describes the required components, how they are installed, and how the car operates to provide value to the driver. This is illustrated in Table 2.2.

Table 2.2 Strategy, business model, and operating model comparisons

	Strategy	Business model	Operating model
Key question	Where does the organization want to be and how does it get there?	How does the organization create value for the stakeholders?	How does the organization ensure effective and efficient operations?
Example	The design of the car that ensures it is suitable for a particular terrain and meets the driver's needs, therefore providing value to the driver	The features that provide value to the driver in a particular terrain, e.g. engine size or type, tyre types. Multiple business models can be used in a strategy	The car's components, and how it is assembled to ensure that it performs as expected (e.g. engine timing, tyre pressure, power steering sensitivity, maintenance plan)

An operating model represents a series of practices and choices; the interaction between them determines if and how the business delivers its defined value proposition and holds its market position. An operating model ensures that all of these choices and practices (such as which staff need to be hired, what technology needs to be deployed, and which partners need to be used) work together in a unified way.

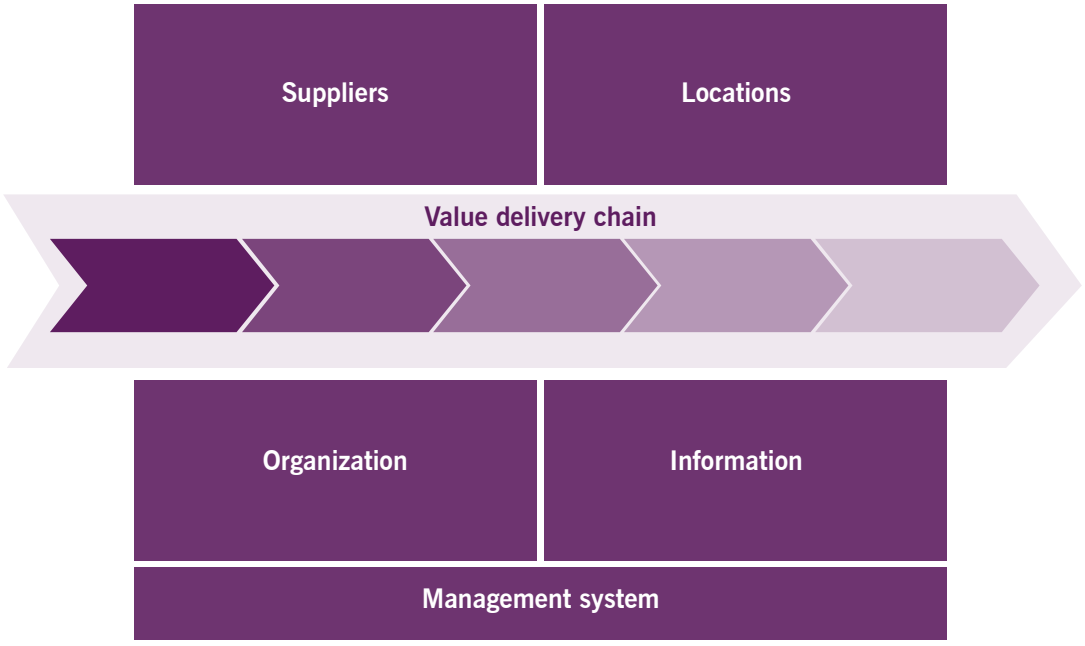


Figure 2.9 Operating model canvas

Reproduced with permission from Campbell *et al.* (2017)

An operating model is a tool used to facilitate the design and configuration of an organization's operations, to enable the creation of the value outlined in the business model. There are two key themes in an operating model:

- The key work that takes place. At the centre of an operating model are the organization's value streams, which illustrate the main work an organization needs to do to deliver its value propositions to its identified consumers.
- The context in which the value streams will be performed, including:
  - how partners and suppliers will be involved in the value streams and the creation of value
  - where the work done in the value streams will be located, and what assets are needed in those locations to perform the work
  - the organizational structure, skill sets, decision structures, and process and practice ownership required to do the work in the value streams
  - the applications, or other technology, and information services needed to perform the work throughout the value streams
  - how the targets will be decided and performance measured, to ensure that the value streams are functioning optimally.

The organization's value propositions drive the operating model, as the value streams enable the creation of the value as defined in the business model, even though the value proposition is not a part of the operating model. Consequently, the value propositions are the objectives of the operating model.

The operating model canvas is used to plan and improve operating models. It is illustrated in Figure 2.9 (Campbell *et al.,* 2017).

There is a lot of talk in the industry about 'digital operating models'. However, many of these are merely frameworks that show how different types of emerging technology are related to one another, or else they are guides that show how an organization can use emerging technologies to replace or augment existing capabilities. These types of model are technology models, frameworks, or architectures. They are not operating models.

An operating model for a digital organization will look very similar to that of any other organization. For example, it will:

- specify how value is created
- identify value streams and state how they will be managed
- outline the roles of people, processes, and technology in those value streams
- define which partners the organization works with, what their roles are, and what contracts are in place
- highlight the importance of culture, and outline ways to promote the type of culture required to achieve the organization's purpose
- identify consumers and their roles in the value streams, including which products and services they consume and what factors influence that consumption
- include a portfolio of projects, services, and products, along with information about the investment required to maintain it.

An operating model for a digital organization is unique in that:

- many of the technologies specified are emerging technologies, although they often perform the same function as older technologies or manual activities in other operating models
- it is likely to emphasize innovation and experimentation
- its processes will be geared towards the pace of change in the organization's environment: they will be more agile in nature (e.g. they will focus more on speed to market, minimum viable products, and the incremental development of products and services).

In ITIL, the concept of the operating model is represented by the service value chain, which is a detailed operating model, suitable for digital organizations.

The ITIL story: Operating models

Dave: *As chief operating officer, our operating model is always on my mind. We have amazing people who can design and offer great products and services to our customers, but we also have to pay attention to operating them and running other 'back-office' aspects of our business.*

Our operating model asserts how the company is run, how we measure success, and how we manage our assets, liabilities, and risks. There are many different components to our operating model, and this sometimes means that teams will have to collaborate in different ways depending on the type of work they are doing; for example, the procurement team orders new vehicles, and the legal team supports it in reviewing the terms and conditions. In some unfortunate cases, the legal team has to lead on litigation efforts, during which it relies on the procurement team to support it.

2.10 Strategy and the service value system

An organization's existence depends on its ability to translate demand into services and products that are relevant and valuable to its consumers. Its strategy is based on its analyses of, and responses to, opportunities and demands in its environment. The subsequent plans, actions, and structures are defined in the service value system and service value chain, which express the organization's strategy.

The service value system provides a description of how an organization's components and activities collaborate to enable value creation. Specifically, the service value system articulates both what an organization's strategy is and how it will be realized. Figure 2.10 depicts how strategy affects the service value system.

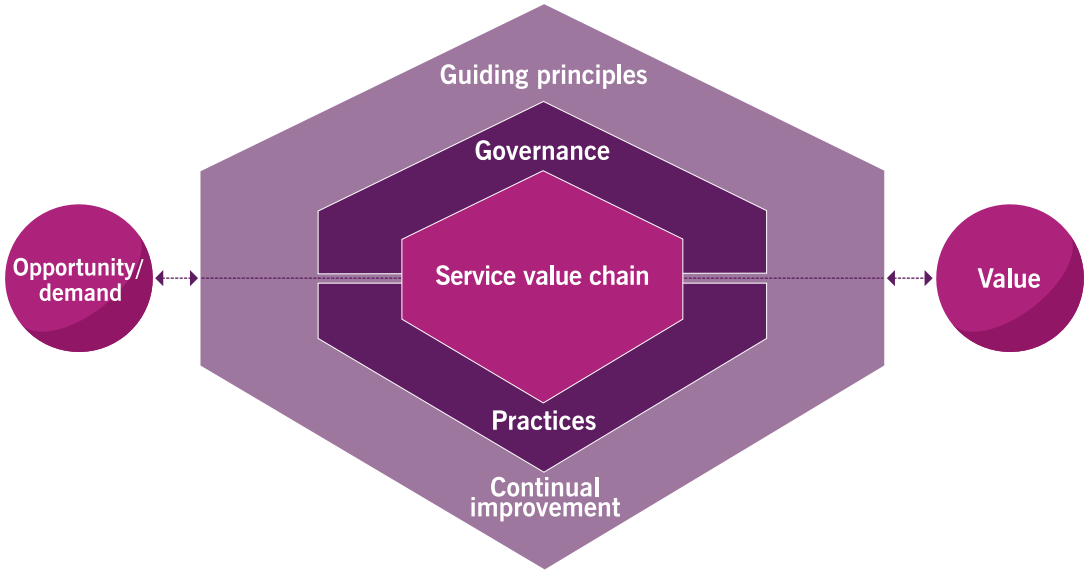


Figure 2.10 The service value system

2.10.1 Opportunity and demand

Strategy formulation must also include a comparison of an organization's internal environment, such as current objectives and operations, with changes in its external environment (see section 4.1). Changes in the environment can represent new business opportunities or variations in demand.

The way that an organization responds to opportunities and shifts in demand is referred to as its 'strategic position'. This is discussed in detail in section 3.3.

2.10.1.1 Opportunity

An opportunity is a situation that allows an organization to expand its existing operation, either by introducing new products and services or by moving into a new market. Opportunities can be the result of changes in the environment, stagnation in the existing industry, or simply areas that have been ignored by competitors. For example, instead of withdrawing from the piano manufacturing business due to a drop in traditional piano sales, Yamaha invented a mechanism to turn acoustic instruments into automated playing pianos. This created a market of 40 million consumers who had bought pianos but were not using them. Opportunities represent pre-emptive strategic positioning, where the organization proactively seeks to exploit an opportunity against potential competitors.

Opportunities and opportunity analysis are discussed in more detail in section 4.2.

2.10.1.2 Demand

Environmental changes have major implications for demand, as they tend to impact the demand for existing services. This is a reactive strategy, sometimes called a 'protective strategy', where the organization alters its operation to meet the change in demand. The ways of responding to each type of change in demand are as follows:

- Variable demand from the same market, for the same products and services:
  - Find ways to fulfil the increased demand using existing operations (equipment, people, partners, suppliers, etc.). This requires a strategy aimed at achieving greater efficiency.
  - Use the same basic operating model, and increase the amount of equipment, people, partners, suppliers, etc. This requires investing in a strategy, which can be scaled to demand. A key reason for investing in cloud-based solutions is the ability to scale operational activities up or down on demand, without the need for further capital investment.
  - Use the increased demand to fund a change to the organization's existing operating model, or to change its business model.
- Demand from new markets for existing services and products, or for new products in existing markets, representing both an opportunity and a variation in demand:
  - Use the organization's existing operation to meet all demand; however, this will require greater efficiency or investment in scaling the operation (e.g. transferring parts of the operation to cloud technology).
  - Replicate the organization's existing operation for the new market, adjusted for local conditions and culture. This is often the preferred option for organizations moving into markets that have strict laws, preventing customer data from being moved out of the geographical location.
  - Use the new market to launch a new business or operating model, which can later be reapplied in the original business.
- A sustained reduction in demand:
  - Retire the existing services or products.
  - Replace them with new or updated ones.
  - Diversify into other lines of business that are more profitable, while continuing to provide the legacy services and products to existing consumers.

2.10.2 Value

Definition: Value

The perceived benefits, usefulness, and importance of something.

Value is also co-created by the organization and other stakeholders, as it seeks to meet demand and fulfil opportunities.

Whereas tactical and operational elements of the organization tend to focus on the value of individual services and products to a set of consumers, strategy is concerned with the overall ability of the organization to co-

create value in a particular environment. Strategy defines the value propositions that individual services and products must achieve.

Environmental analysis, strategic planning, and business modelling help the organization gain a strategic position, which includes a proposal for how it will compete with rivals. Specifically, the proposal will describe the opportunities, markets, and value propositions the organization will pursue.

The organization must be able to explain how it co-creates value in each of its markets. This explanation will include a high-level overview of the value elements that are specified in every product or service line, namely:

- supported outcomes
- increased efficiencies
- reduced risk.

An example of this explanation is an organization's unique value proposition (UVP), which is a short statement that explains the unique value the organization provides. Such a statement is usually not the organization's complete strategic vision, although it might extract some of the wording. The complete strategic vision is also likely to contain specific details about revenue targets and the organization's internal environment.

Examples of a UVP include:

- **Mailchimp** Send better emails.
- **Lyft** Rides in minutes.
- **Dollar shave club** A great shave for a few bucks a month. No commitment, no fees.
- **FreshBooks** Small business accounting designed for you, the non-accountant.

The portfolio of services and products must be aligned with the organization's strategic position. Also, every function in the organization must be able to identify its role in achieving that strategic position. Enterprise management reporting must show how the organization performs against its desired position. Most organizations report on profitability; however, corporate legislation is evolving to include other elements, such as social responsibility, sustainability, organizational viability, and ethical business practices. All of these contribute to an organization's ability to achieve its position, and therefore its ability to co-create value.

It is not uncommon for a business unit to identify an opportunity and develop a successful product, only to find that it has moved the organization away from its strategic position and reduced its overall value. For example, the oral hygiene company Colgate launched a line of frozen foods; what might have been thought of as entrepreneurship was in reality irresponsible opportunism. Entrepreneurship is a matter of due diligence and calculated risk in the context of the organization's strategy.

2.10.3 Governance

Organizational governance is the system by which an organization is directed and controlled. In the context of strategy, the major activities of governance are:

- **Evaluate** The governing body evaluates the strategy, portfolios, and relationships with other parties. This evaluation is a continual process of review and revision as the context of the organization and its stakeholders changes.
- **Direct** The governing body assigns responsibility for, and directs, the preparation and implementation of organizational strategy and policies. Strategies set the direction and prioritization for organizational activity, future investment etc. Policies establish the requirements for behaviour across the organization and, where relevant, suppliers, partners, and other stakeholders.
- **Monitor** The governing body monitors the organization's performance, practices, products, and services. The purpose of this is to ensure that the organization performs in accordance with its policies and direction.

The strategy and operation of the organization are subject to governance. This does not mean that the governing body has direct oversight of all aspects of the organization. Instead, it means that all aspects of the business are designed and operated within the scope of the agreed strategy, policies, practices, etc. The performance of each of these aspects is reported on, so that the governing body can assess the effectiveness of the strategy and the organization's long-term viability.

Governance in the context of digital and IT strategy is described in more detail in Chapter 12.

The ITIL story: Governance

Anya: *I lead Axle Car Hire and I am also accountable to the board of governors. The board agreed with my recommendation to expand into the food delivery business, and updated the organization's vision and direction accordingly. The board looks to the leadership team and me to execute this vision. I report our performance to the board every quarter, and we review and discuss the results and agree to any changes to our strategy.*

2.10.4 Guiding principles

ITIL specifies seven guiding principles, outlined in Table 2.3.

Table 2.3 Description of seven guiding principles

Guiding principle	Description
Focus on value	All of the organization's actions must translate, either directly or indirectly, into value for the stakeholders. The focus on value encompasses many perspectives, including the experiences of customers and users.
Start where you are	Do not start from scratch and build something new without considering what is already available. There is likely to be a great deal in the current services, processes, programmes, projects, and people that can be used to create the desired outcome. Investigate and observe the current situation to ensure that it is fully understood.
Progress iteratively with feedback	Do not attempt to do everything at once. Even large-scale initiatives must be accomplished iteratively. It is easier to maintain a sharper focus on each effort, by organizing work into smaller, manageable sections that can be executed and completed in a timely manner. Using feedback before, throughout, and after each iteration will ensure that actions are focused and appropriate, even if circumstances change.
Collaborate and promote visibility	Collaborating across boundaries produces results that have greater buy-in and relevance to objectives, and more likelihood of long-term success. Achieving objectives requires information, understanding, and trust. Work and consequences should be visible, hidden agendas avoided, and information shared as much as possible.
Think and work holistically	No service, or element used to provide a service, works in isolation. The outcomes achieved by the service provider and service consumer will suffer unless the organization works on the service in its entirety. Results are delivered to customers through the management and integration of information, technology, organization, people, practices, partners, and agreements, which should all be coordinated to provide a defined value.
Keep it simple and practical	If a process, service, action, or metric fails to provide value or produce a useful outcome, eliminate it. In a process or procedure, use the minimum number of steps necessary to accomplish the objective(s). Always use outcome-based thinking to produce practical solutions that deliver results.
Optimize and automate	Resources of all types should be used to their best effect. Eliminate anything that is wasteful, and use technology to its full capabilities. Human intervention should only occur where it contributes value.

These guiding principles are essential for any organization pursuing a digital strategy. However, these are not the only principles an organization will use when creating and implementing its strategy. The strategy should include any principles that decision-makers need to use when implementing a strategic initiative, or when defining a lower level of strategy.

Examples of additional guiding principles are:

- Do no harm (Hippocratic oath taken by medical professionals).
- Treat everyone with respect and care (the Aflac way).
- Your problem is my problem (the Aflac way).
- Deliver WOW through service (Zappos).
- Create fun and a little weirdness (Zappos).

2.10.5 Continual improvement

Continual improvement occurs at all levels of an organization. It can be applied to the organization, or to an individual product, service, technology, or organizational unit.

The strategy management process reflects the steps of the ITIL continual improvement model, which is described in detail in the strategy management practice guide. However, it is important to note that the purpose of making continual improvements is not always the same as that of defining and implementing strategy. The primary objective of strategy is to ensure that the organization continues to be viable in a changing environment, which may require improvement of existing capabilities, but more often aims at expanding or reducing its operation.

Continual improvement can be applied to an organization's strategy in two ways:

- The strategy management practice, its activities, and its outputs are subject to continual improvement (e.g. improving the communication of strategic plans).
- The improvement of the organization itself might be the basis for its strategy. This is discussed in more detail in section 5.2.1. An example of this approach is reducing the order-to-delivery time of an existing product line, thus ensuring the organization's competitiveness in a time-sensitive market.

As the strategy evolves, it is important to update and reconfigure the practices, as this activity is an aspect of continual improvement.

A detailed discussion of the ITIL continual improvement model is included in *ITIL® Foundation: ITIL 4 Edition* and the continual improvement practice guide. The steps of the model are illustrated in Figure 1.1.

2.10.6 Practices

An organization's strategy specifies how it will achieve its objectives, by utilizing value streams at all levels of the organization. Practices utilize the processes, resources, partners, and technologies and how they will contribute to the strategy. Three of these practices, strategy management, portfolio management, and architecture management, are used to map the organization's capabilities and assets to its desired outcomes.

Strategy involves continually updating and aligning the practices, which are created and configured to achieve specific objectives. As the strategy evolves, it is important to update and reconfigure the practices, which is a function of continual improvement. This includes continuously updating the organization's architecture, to show how each component contributes to the strategy, and to the performance required for an effective strategy.

Wardley mapping focuses on mapping capabilities to products and services. It can also be used to map how practices co-create value.

The ITIL story: Strategy and the service value system

Henri: *We use ITIL concepts all the time for a variety of business activities. The service value system is particularly useful when considering strategy. It shows how each of the conceptual components of the organization combine to drive our strategy, tactics, and operations. This ranges from the guiding principles, which influence how we work, behave, and make decisions, to practices, where we actually do the work to manage our products and services.*

Anya: *And we cannot forget about continual improvement, which gives every member of staff, along with our customers, partners, and other external stakeholders, the ability to identify and push for an improvement in any and every aspect of our company.*

PART II

THE STRATEGY JOURNEY

Strategy is not a single process that starts at one point and ends neatly at another. Defining, planning, and implementing a strategy are cyclical activities, which are performed in multiple areas of the organization at any time. Strategy is a formal, defined set of activities that follow the continual improvement model (Figure 1.1).

Although they follow the same overall pattern, there are some key differences between strategy and continual improvement. For example:

- Continual improvement relates to something that exists and is being refined. 'Strategy' can refer to improvement measures, as well as the introduction of something new. Usually, strategy is a combination of both ongoing improvements and something new.
- Improvements are incremental and preserve the essence of what is being improved. Strategy is often transformational.
- Improvements do not change organizational objectives. Rather, they find better ways to achieve them. Strategy generally reviews and revises the objectives.
- Improvement focuses on how to better exploit existing opportunities, whereas strategy looks for new opportunities to exploit or expand existing ones.

However, with strategic cycles becoming shorter, the continual improvement model becomes increasingly relevant to strategy planning and implementation.

CHAPTER 3

WHAT IS THE VISION?

3 What is the vision?

Vision is a defined aspiration of what an organization would like to become in the future. It may include the future-state picture of the problems that the organization will solve for consumers. It also describes how consumers will interact with the organization's products and services, and what its people, their skills, and the overall structure will look like.

Many executives would like their organization to be the next big digital success. Others would simply like to improve its ability to compete digitally. Either way, the changes demanded by the digital world are not trivial. It will take more than tweaking existing methods to reposition the organization's market position. The decisions that leaders make will impact how it works at every level and in every business unit. For an overview of the market and industry, see Table 3.1.

Table 3.1 Market and industry overview

	Market	Industry
Definition	Where buyers and sellers meet to trade products and services of value; the market is driven by demand and supply forces	A group of organizations engaged in the same type of business activity or the production of similar products or services
Focus	Service consumers	Service providers
Competition	Among numerous sellers and buyers	Among organizations operating in the same industry

An organization's desired position and vision are the result of several decisions, including:

- positions based on digital disruption (section 3.1)
- finding a balanced strategic approach (sections 3.2 and 5.2)
- the nature of evaluated opportunities (section 4.2)
- the organization's business model (sections 2.8 and 5.1.4)
- the organization's capabilities (section 4.3 and Chapters 9–12)

The ITIL story: What is the vision?

Anya: *The positioning of Axle Car Hire, including our products and services, is critical in establishing our long-term success. This is particularly important when we launch new products and services such as the food delivery venture. We need to ensure that our customers think of Axle as an affordable, reliable, and innovative transportation hire company. It is not just about changing our marketing communications; we also need to deliver on that promise.*

Dave: *This requires everyone at Axle to be aligned with our internal values, focused on supporting our customers and partners, and at the same time managing our environmental impact.*

3.1 Digital disruption

Disruption is a fundamental shift in an organization's operation caused by new or changed internal or external factors. These factors may be political, economic, social, technological, legal, or environmental (PESTLE). The focus of this publication is on disruptions triggered by the development of digital technology.

Digital disruption occurs when digital technology causes a fundamental shift in how any aspect of the organization's internal or external environment functions. Successful organizations react quickly and appropriately to the disruption. The most successful organizations are those that use digital technology to disrupt the environment and gain an advantage.

Digital disruption occurs at three main levels, illustrated in Figure 3.1 and described below.

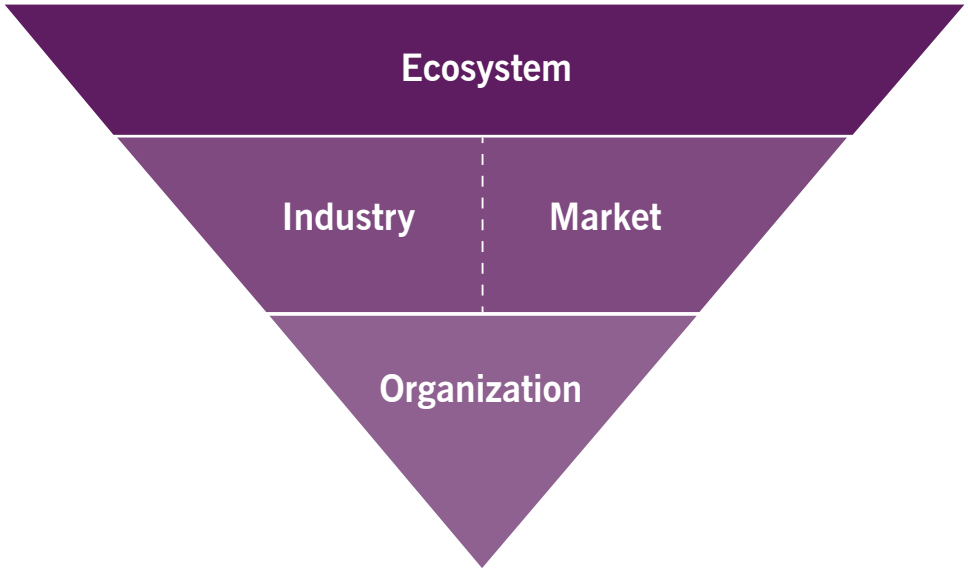


Figure 3.1 Levels of digital disruption

At each of these levels, disruption can include increased market/customer relevance and/or greater operational excellence.

Examples of industries include banking, insurance, and healthcare. Markets can include different market segments (e.g. characteristic or needs-based segmentation) and are often broader than an industry. An example of a market is first-time buyers needing a mortgage.

3.1.1 Ecosystem disruption

Ecosystem disruption occurs when digital technology introduces a change that impacts organizations across multiple industries and markets. It also changes how multiple ecosystem factors work. These are outlined using PESTLE, which is described in detail in section 4.1. Organizations that wish to disrupt the ecosystem must be prepared to use disruptive digital technology across the business, in multiple market segments and industries at the same time.

For example, the ability to use mobile and cloud-based technologies to connect individuals in virtual communities has resulted in the growth of the gig economy. Organizations such as Uber, Airbnb, Etsy, and TaskRabbit provide a platform where people who need a service connect with people who can provide it.

3.1.2 Industry/market disruption

3.1.2.1 Industry disruption

Industry disruption occurs when digital technology introduces a change that impacts a specific industry (e.g. manufacturing, finance, retail, or mining) or a group of related industries (e.g. e-books and self-publishing have disrupted printing, publishing, and retail). Organizations choosing to disrupt an industry will do so in one of two ways:

- Using the technology to compete more effectively and increase the market share, by either bankrupting or acquiring competitors. They can achieve this by:
  - using technologies that are not easy to replicate, forcing competitors to invest in expensive technologies to compete
  - using technology to improve the general perception of the industry (e.g. reducing emissions)
  - finding ways to lessen the negative effects of regulation without compromising efficiency or quality
- Using the technology to spin off a new organization, which sells the new technology as products or services to its competitors.

Although industry disruption might be an objective, it is usually the result of pursuing operational excellence (see sections 3.2.2 and 5.2.2).

There is no guarantee that disruptive technology will provide a competitive advantage. When the new technology is publicly known, it opens the market for competitors who may gain an advantage through better delivery or the further development of the technology (see Chapter 10).

3.1.2.2 Market disruption

Market disruption occurs when digital technology introduces a change that impacts a particular market or market segment. For example, a cosmetics retailer could use technology to change how consumers research and buy cosmetics.

As with industry disruption, market disruption can be an objective in itself. It could also be the result of improving products and services, distribution and delivery methods, or customer engagement models. Market disruption can sometimes be based on replicating the success of one market in another. Another form of disruption is the result of using existing capabilities to create new or reimagined products or services in another market.

3.1.3 Organizational disruption

The majority of organizations are not disruptive by nature. They have mature and well-established markets, products, services, and operations. However, disruptions to their markets or industry require them to recover or preserve their position in the market.

Such an organization will need to use the technology that has already disrupted its environment to remain competitive. It will need to embrace the external disruptions, and disrupt itself. In some cases, the organization may become so successful that it emerges as a leader, and the new innovative culture that emerges enables it to disrupt the layers above it. For example, a petrochemical company started using test data from its laboratories to create statistical performance and emission forecasts. This forecasting practice provided such accurate results that it replaced physical testing for certain types of test, reducing costs and attracting

customers from competitors who had outsourced their laboratories. This created a new industry testing standard and forced competitors to conform.

3.1.4 Being a disruptor or responding to disruption

Ecosystem, industry, and market disruptions are often conceived and planned by visionary individuals and organizations. In other cases, they may be the result of an organization simply responding to disruption to maintain or grow its position. The decisions that the company makes determine its position in the industries and markets it will compete in.

Organizations do not always intend to be disruptive. Some become disruptive as a response to disruptions in their environment.

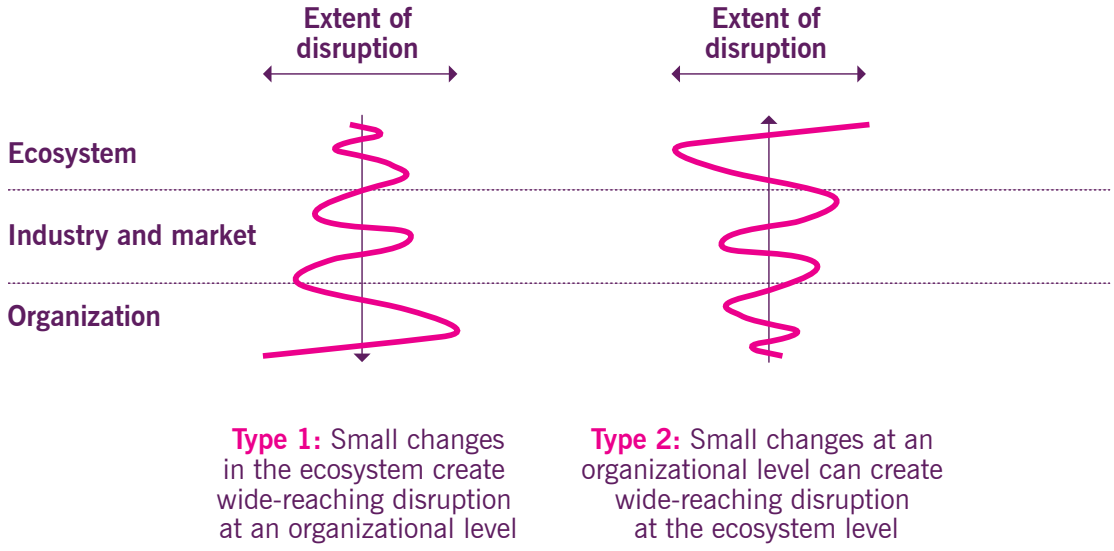


Figure 3.2 Types of disruption

Figure 3.2 illustrates two ways in which disruptions occur. To the left of the figure, a relatively small change in the environment has far-reaching consequences, as it impacts some aspect of all organizations. Organizations that wish to remain competitive need to be equal to the challenges posed by the disruption. On the right of the figure, an organization makes a change that has far-reaching consequences for the whole economy.

The ITIL story: Being a disruptor or responding to disruption

Anya: *Disruptions can occur anywhere, and without warning.*

Henri: *Axle can be disrupted by a competitor offering a different experience or a different price point. We might be disrupted by the loss of a key partner relationship. That happened recently when our preferred repair garage in the Bay Area was bought by our competitor, TechRidez. But sometimes, we can also disrupt the market. The success we had with our e-bikes in Switzerland has forced our competitors to launch similar services, with varying degrees of success.*

3.2 Deciding on a balanced strategic focus

Organizations wishing to disrupt a particular layer will find a range of strategic approaches available to them. Some of these will be more focused on understanding consumers and their requirements, and providing new and unique services and products to meet those requirements. These approaches are geared towards improving an organization's customer/market relevance. Other approaches focus on helping an organization to perform more efficiently and deliver better and cheaper products and services. These approaches are known as 'operational excellence'.

In reality, it will be difficult to create a competitive advantage unless a strategy addresses customer needs and performance optimization. If an organization focuses solely on customer or market relevance as a differentiator, it will find it difficult to achieve a competitive position if the operational teams cannot consistently deliver on their promises to consumers, increase quality, and decrease costs.

On the other hand, a strategy that is focused solely on improving an organization's efficiency and performance will not improve its ability to sell low-cost, high-quality products and services that meet changing consumer needs. This singular focus on operational excellence has resulted in the challenge that Toyota is facing with increased competition from Tesla (Forbes, 2020).

It is important that organizations simultaneously consider both internal and external environments, operational excellence, and customer/market relevance. If they focus on what other organizations are doing, they might overlook the characteristic that makes them unique, as they try to emulate others. An organization that focuses only on being consistent with its existing culture and capabilities might miss significant changes in the market that render those capabilities irrelevant. For example, Kodak disregarded the opportunity presented by digital photography because its capabilities supported film and print.

3.2.1 Customer/market relevance

Organizations focusing on customer or market relevance as a basis for disruption will try to change the basic customer experience, customer journey, and behaviour of customers, influencing their demand for new products or how they engage with the organization. This is often achieved by driving innovation into the market, by either creating new markets or transforming the existing market. Organizations taking this approach will primarily focus on staying relevant to customer needs or market dynamics as they change.

3.2.2 Operational excellence

Organizations focusing on operational excellence as a basis for disruption will use technology in innovative ways to obtain higher levels of performance and quality with lower cost, improved productivity, and reduced waste.

3.2.3 Internal and external focus

When crafting a digital vision, some organizations (primarily business-to-consumer ones) look outwards and ask questions such as:

- What markets do we serve?
- What products and services do we currently provide to the market? Are they valuable?
- What opportunities are there for growth or disruption? What threats do we face?
- What capabilities do we have that open new avenues for us in existing or new markets?

Other organizations strategize by looking inwards and asking:

- What do we need to do to continue doing business?
- What do we need to do differently?
- How do we manage the risk associated with each opportunity?
- How do we monitor and control our journey?
- How can we improve operational efficiencies?
- How can we reduce costs?
- How do we get to where we want to be?

3.2.4 A balanced approach

Regardless of the starting point, strategies will touch on both customer/market relevance and operational excellence. However, devising a strategy to deliver new products to a new market will not be effective if the organization's operational capabilities cannot progress with the demand. Conversely, improving the organization's performance or reducing cost will not have much impact if there is no demand for its products or services.

Looking inwards by monitoring and improving operational performance is a worthy goal in itself. Moreover, it is difficult to improve the consumer experience, or disrupt the industry or market, without operational excellence. But no organization has the luxury of completely ignoring customer experience in favour of operational improvements. By looking outwards, an organization must determine to what extent it needs to fundamentally change the consumer experience to drive engagement. Alternatively, a better strategy might be to keep the customer satisfied by making small incremental improvements. Table 3.2 summarizes the two approaches with respect to customer and market relevance, and operational excellence.

Most organizations will, therefore, find themselves taking a balanced approach, even if the strategy tends to focus on one outlook more than the other. Most importantly, there should only be one strategy that addresses both, not separate strategies for customer and market relevance and for operational excellence.

Table 3.2 Looking outwards vs looking inwards

	Looking outwards	Looking inwards
Customer/market relevance	How are customer needs changing? What products and services will they need? How will they procure and use them? What opportunities are emerging? How easy will it be to do business with the organization? What PESTLE (political, economic, social, technological, legal, and environmental) factors need to be considered?	How do we engage with customers? How do customers experience the way we deliver products and services? How do our employees and technology support the customer experience? What will we need in order to exploit new opportunities?
Operational excellence	How do other organizations perform? What technologies do they use? How much do they spend on running their business? What PESTLE factors need to be considered?	What are our capabilities? Is there a better way of running the business? Can we use technology more effectively and efficiently? How will performance need to improve over time?

The ITIL story: A balanced approach

Anya: *It is important that we maintain a balance between focusing on our customers and the competition, and on our ability to deliver our products and services efficiently and effectively, all while creating a great experience.*

Dave: *As part of my role, I must consider what we need to operate prudently: within budget, in a timely fashion, managing risks and issues, etc.*

Su: *I assess what we need to do to develop digital solutions that delight our customers, which will lead to higher revenue over time.*

Anya: *It is important to ensure that we balance our focus on different areas to ensure we get the best results.*

3.3 Positioning tools for digital organizations

Strategic decision-makers need tools to help them evaluate opportunities and decide how to position their organizations in the digital world. This decision is not simple, and will include:

- the markets and industries that the organization will be serving
- the desired levels of customer/market relevance and operational excellence
- which opportunities it will exploit (for both customer/market relevance and operational excellence)
- the value proposition for consumers in its targeted markets or industries
- which products and services it will deliver
- which business model will emerge as these decisions are made.

Hundreds of useful tools are available to assist organizations, to the extent that choosing a set of analytical techniques and tools is almost as complex as the positioning analysis. A detailed description of tools and techniques is outside the scope of this publication. This section describes the major features required for positioning models and provides examples of widely used techniques. Chapter 4 describes several internal and external assessment tools that can also be used for positioning decisions.

Since digital markets are in a constant state of evolution and disruption, there is currently no industry standard digital model or formula for success. However, several approaches have emerged based on analyses of successful companies.

Two major approaches are maturity models and digital positioning and sense making.

3.3.1 Maturity models

Maturity models are based on the idea that there is a set of characteristics or capabilities that increases an organization's chances of success in a digital world. An organization that cultivates these characteristics and capabilities will be in a better position to succeed as a digital organization.

Two types of maturity model are prevalent. The first focuses on the characteristics of the organization, regardless of the position it wants to attain. The second focuses on helping it to evolve from one level of disruption (usually organizational) to the next (either market or industry, and then ecosystem).

An example of the first type of maturity model is the Four Levels of Digital Mastery (Westerman *et al.,* 2014). In this model, shown in Figure 3.3, organizations are assessed based on two dimensions: digital capabilities and leadership capabilities. This is further organized into quadrants:

- **Beginners** have little experience with digital technologies and have low leadership capabilities.
- **Fashionistas** are digitally savvy, but lack mature leadership capabilities. These organizations have no shortage of innovative ideas and solutions.
- **Conservatives** boast strong leadership capabilities, but have inadequate technology skills.
- **Digital masters** enjoy the best of both worlds, since they have mature leadership capabilities and also are adept at using technology in new ways.

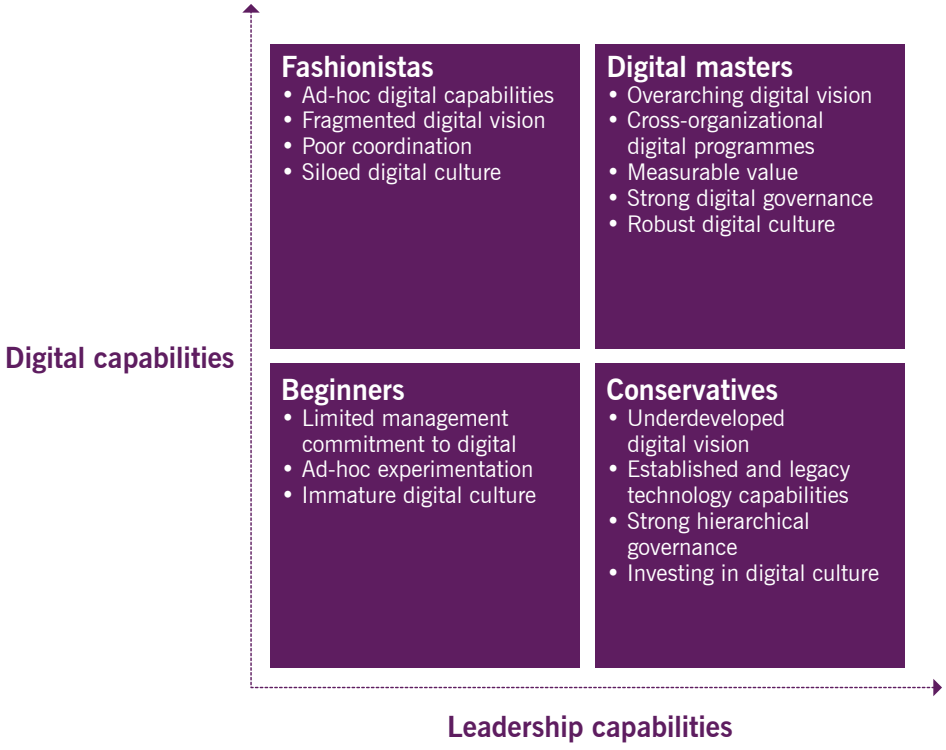


Figure 3.3 Four types of digital master

Reproduced with permission from Westerman *et al*. (2014); adapted from the Digital Transformation Study conducted by the MIT Center for Digital Business and Capgemini Consulting (2011)

The first type of maturity model suggests that all organizations should aspire to be masters of both leadership and digital capabilities. It defines what these capabilities are, and the characteristics of an organization that has both. Although this information is helpful when developing an organization's internal capabilities, it does not provide any guidance about which opportunities represent the optimal course of action for each organization.

The second type of maturity model suggests that organizations start their digital journeys by using technology to improve operational efficiencies, then progress to reshaping the consumer experience, and inevitably try to redefine the industry and reframe the entire market. In some applications of this approach, only organizations that have succeeded in transforming the market are deemed to be truly successful.

Maturity models suggest that there is a predictable and consistent course towards success, which is dependent on the organization's ability to adopt or cultivate specific characteristics or capabilities. Although the second type of maturity model maintains that the organization will follow a predictable series of positions, truly disruptive organizations have not necessarily followed this pattern.

3.3.1.1 The limits of maturity models

Digital positioning is a deliberate and often fast-paced activity, which simultaneously balances multiple internal focus areas. Adopting and pursuing the maturity model as a primary approach can be time-consuming. It can also focus the organization on the wrong set of variables to achieve its desired position.

Sometimes a maturity model is used as a substitute for rigorous strategic analysis and positioning. In these cases, the organization assumes that, as long as it complies with the maturity model, the eventual result will be the best possible outcome. There are a number of problems with this approach, including:

- The components of maturity models are derived from the analysis of multiple organizations. Not all characteristics and success factors will apply to an individual organization or to every type of position.
- Success is a subjective concept. It is measured differently in different types of organization, and for different positions. Success does not always depend on being at the pinnacle of maturity, neither does it depend on the organization transforming its chosen position. Many organizations specifically choose to follow others, or to tackle parts of the ecosystem that are left behind by the disruptors.
- Maturity models do not always encourage satisfactory positions. Organizations seeking to compete in non-disruptive ways might find maturity models less helpful: for example, a business-to-business company that is more interested in reducing operational costs than in reshaping consumer experience; or a manufacturing company that wants to find ways of reducing waste in its own industry but does not care about revolutionizing the market.

Maturity models can help identify the characteristics and capabilities needed to take a particular position. They are also helpful in defining initiatives to cultivate valuable characteristics and capabilities, but are inadequate for determining an organization's position. A maturity model is more helpful to an organization that has already defined its desired position, and wants to understand how it maps to other organizations that have already taken that journey.

Therefore, maturity models are not appropriate tools for organizations wishing to disrupt industries, markets, or ecosystems. These positions are not mature or established. Rather, maturity models are helpful to organizations that wish to follow in the footsteps of those that have already been successful.

3.3.2 Digital positioning and sense making

The positioning framework shown in Figure 3.4 can also be used to define the positions of competitors and to indicate how an organization's position is likely to change in the near-to-medium term (as it executes its stated strategies). Depending on the visualization techniques used, the clustering of organizations in the digital positioning framework can be used to highlight the 'zone of competition', i.e. the strategic areas of focus that are likely to see the maximum competition. An organization may consider exiting the zone of competition as a way of ensuring long-term viability.

For example, in Figure 3.5, an organization might assess its position based on the AXELOS four pillars of digital transformation:

- business transformation (focused on the organization's business model)
- operational transformation (focused on the operation model and operational excellence)
- cultural transformation (focused on attitude and behaviour)
- experience transformation (focused on interactions with the organization's consumers and partners).

In Figure 3.5, we can see that organizations are clustering around experience and operational transformation. As a result, those within the cluster (the zone of competition) may have to invest more to maintain viability, or may choose to exit the zone to create novel competitive differentiation (i.e. one organization is moving out of the zone of competition, into 'cultural transformation').

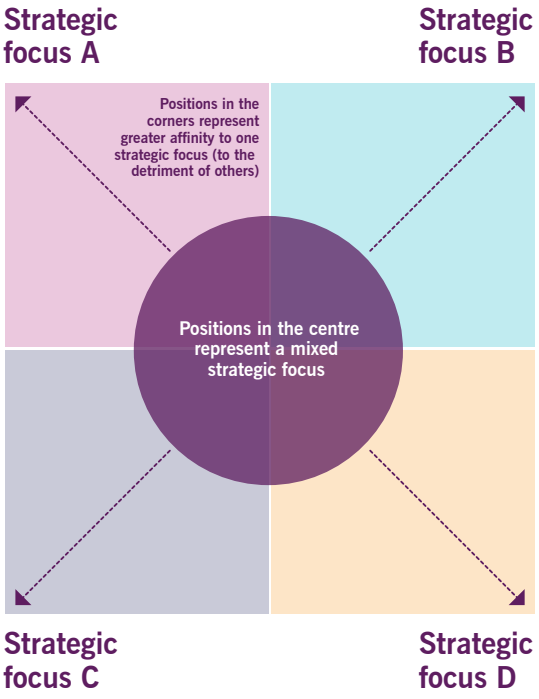


Figure 3.4 Digital positioning assessment framework

Based on approaches to positioning, sense making and strategic mapping referred to in Beyond20's (2020) digital positioning model, Snowden's (2007) Cynefin model and Wardley's (2016) Wardley maps.

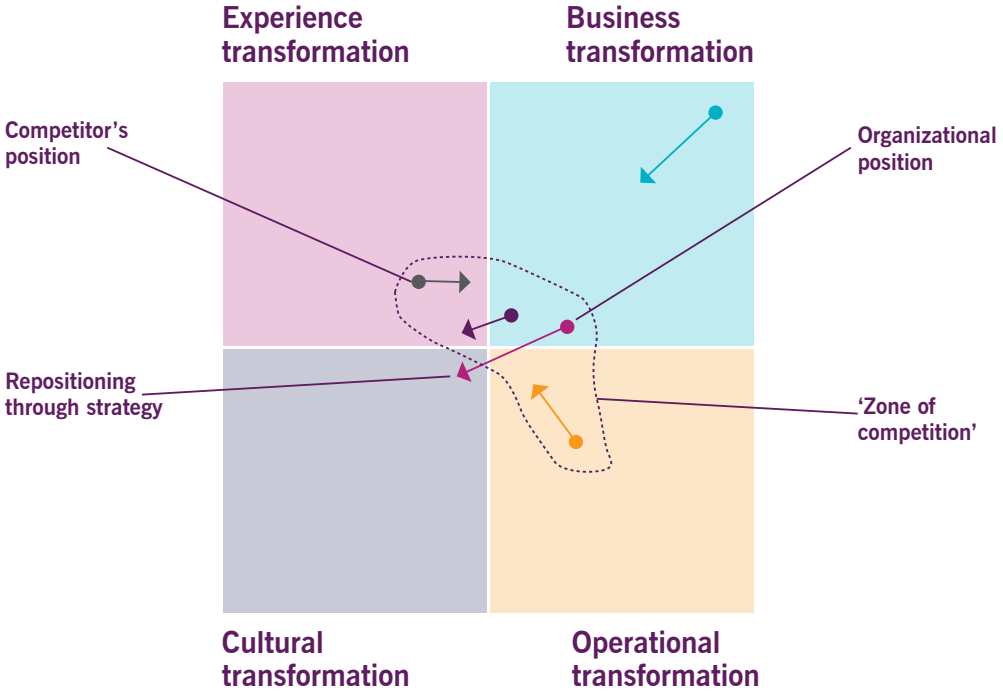


Figure 3.5 Positioning assessment framework focused on business, operational, cultural and experience transformation

The same organization might choose to assess itself against different, but equally valid, areas of focus articulated in the digital strategy, such as:

- physical presence
- digital presence
- use of emerging technology
- use of industry standard technology.

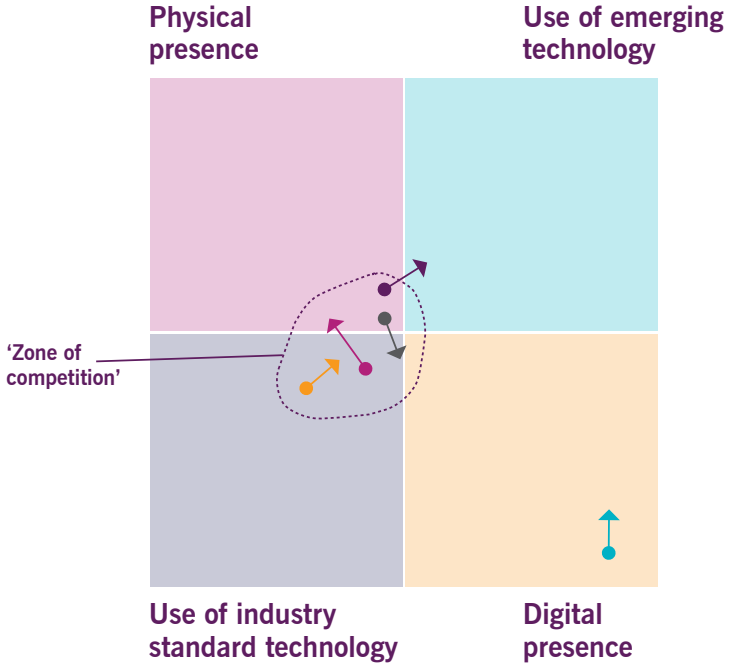


Figure 3.6 Positioning assessment framework focused on physical and digital presence, and the use of emerging and standard technologies

As you can see in Figure 3.6, the different strategic areas of focus change the positions of the same organizations, the direction of travel for each organization, and even what cluster forms the zone of competition. For this reason, digital positioning goals should be designed to reflect the organization's purpose and vision. The organization is also recommended to re-evaluate its position as frequently as possible to reflect changes in a VUCA ecosystem.

The ITIL story: Positioning tools

Henri: *As we grow, we need to understand how we, and our competitors, have changed. Using a positioning tool allows us to compare our capabilities to those of the market, and can help drive our short- and medium-term strategy. This helps to highlight different and often conflicting perspectives from various departments, such as the need to maintain stability, to mature our capabilities, or to evolve our products and services.*

Anya: *These 'conflicts' are natural and can lead to creative solutions. We get worried only if we cannot resolve them! Using ITIL's guiding principles helps remind us that we should agree on and focus on value, that we must collaborate and promote visibility, and work in iterative ways where we can. The principles remind us that everyone at Axle Car Hire wants the company to succeed, but that we have different opinions on how to make that happen.*

3.4 Creating the vision

Digital transformation often requires new ways of thinking and working for everyone; it can also require an organization to change processes and systems that used to work well. The organization will need to move from its current way of working and institute new processes, practices, systems, and skills. It can be a daunting undertaking, and a clear digital vision can overcome fears and drive positive action.

3.4.1 What is a vision?

In recent years, many organizations have differentiated between their vision and their purpose. The purpose of an organization is the reason why it exists, or its core business. Whereas a purpose defines the business an organization is in, a vision is a defined aspiration of what it would like to become in the future. It encapsulates the objectives that it aims to achieve, usually within a stated time.

The purpose may be part of an organization's vision, but it should only be included in its vision statement if it is planning to change its purpose, or the way it intends to meet its purpose. Otherwise, it can be confusing when an organization embeds its purpose (what it already does), in its vision statement (what it will achieve in the future). These should be two separate statements.

The organization's business strategy encompasses its purpose and vision, and outlines the specific initiatives required to achieve these results. The business strategy will be supported by various functions, each with its own strategy, depending on the organization's complexity. Examples include a marketing strategy, product strategy, and supply chain strategy. Each of these strategies must be linked and coordinated, to ensure that there is no overlap, duplication, or omission.

The organization's digital and IT strategy must reflect and support its purpose, vision, and business strategy. A single group within the organization cannot achieve this unless it collaborates with multiple stakeholders. The digital and IT strategy should not, therefore, be seen as the IT department's strategy, even if that department is responsible for defining and directing it.

Furthermore, the digital strategy defines the future state of the problems that the organization will solve for its customers. It also describes how customers will interact with the organization's products and services, and what its people, skills, and overall company will look like. A digital vision should promote the transformation, and foster understanding at all levels. This approach will persuade teams to assist in realizing the new reality.

3.4.2 Confirming the scope of the vision

A team can only define the vision and strategy of the areas for which it is responsible. Before defining the vision and strategy, the team should confirm the scope and ensure that someone with the appropriate level of authority over each area is included in the team.

Yet it is a common error for groups who define strategy to include areas over which they have no authority, resulting in failure, delays, or significant additional costs. Many organizations assume that if an expectation is defined in a strategy, it is a legitimate requirement and the affected team must find funding and resources to fulfil it. This is only true if the organization's governance has been effectively applied. This means that:

- the inclusion of an area in a strategy has been authorized by the governing body, or by a person or role representing the governing body
- the person or role responsible for the budget of that area has made funding available
- resources have been made available by their manager, without compromising the organization's existing operation and commitments.

One role of the strategy management practice is to ensure that any vision or strategy is accurately scoped and led by those with the appropriate level of authority.

3.4.3 Defining the vision

Sometimes, the vision is defined before an environmental or digital readiness assessment has been performed, usually to narrow the scope of the assessment. However, the vision must be reviewed and refined in consideration of the assessment findings.

It is best to define the vision as a group, with the participation of all stakeholders who have authority over any aspect of the strategy. This ensures that all these stakeholders have a consistent understanding of the vision and feel invested in achieving it.

The task of defining a vision can be contentious. Differences of opinion and political dynamics often surface. Though sometimes frustrating, this is an important part of the process. It represents a conflict between individual or departmental objectives and those of the broader organization. It is helpful to directly identify and address the underlying conflict. It is therefore a good idea to involve an independent person, such as a consultant or member of a different department, to facilitate this exercise.

Many organizations use a vision statement as part of their marketing, and publish it in a lobby or waiting room, or on a website. However, an organization's vision is primarily a statement of its desired future state, used to direct strategy planning and implementation. Many aspects of a vision are not appropriate for external marketing (e.g. profitability objectives or competitive tactics). An organization should not limit its vision to statements that are appropriate for external stakeholders, and neither should it reveal confidential information in its marketing. This means that there might be two versions of the vision statement, with one (internal) being an element of the organization's strategy, and the other (external) a subset or paraphrased version for marketing.

Guidelines for conducting a vision definition workshop include the following:

- Include a representative (preferably the most senior person) from each business area.
- Limit the number of participants so that each person can meaningfully participate. This number is typically between 8 and 12 people. If the group needs to be bigger, break the workshop into smaller groups, with a representative who speaks on behalf of the group during joint sessions.
- Be aware of the political dynamics and sensitivities of members of the group.
- Ensure that every voice is heard, and that all viewpoints have been considered in any decision. Participants who feel that their contribution has not been considered may pursue their agenda outside the meeting, with disruptive consequences.
- Decisions should be as unanimous as the organizational culture allows. It is helpful to define 'unanimous' as: every member of the team is prepared to accept the decision, even if there are elements that they do not fully agree with.
- If a stakeholder has concerns about any aspect of the vision, note these concerns and address them.
- External stakeholders, such as customers and suppliers, should be directly included only if they are responsible for achieving some aspect of the strategy. This is possible in collaborative relationships where partners share objectives and may even define a joint vision for the partnership. In other cases, a vision is likely to include several internal elements, which are outside the partners' band of visibility and might damage the relationship if exposed. If an aspect of the vision needs to be validated with external stakeholders, this step can be done as a separate exercise, such as in a focus group of customers.

Guidelines for defining a vision include:

- Separate the purpose from the vision, unless the strategy specifically aims to change the organization's purpose.
- Be succinct and specific.
- The vision should be unambiguous and direct. Every stakeholder should know what it means, and what their part in achieving it should be.
- Be aspirational and inspiring. The vision is what the organization will strive to become. It drives the sense of purpose and togetherness of people who all believe in a common future goal.
- People will rally around the vision; therefore it should convey actions and concepts that embody the organization's core beliefs.
- There should not be any aspect of the statement that is inconsistent with the behaviour and values of the organization's executives, managers, and staff.
- The vision should be unique and specific to the organization.
- The vision should focus on the organization, not technology. Technology is not an end in and of itself. Instead, the vision should focus on how to enhance the consumers' experience, streamline operations, or transform business models.
- The vision should be based on a deep understanding of the organization's consumers and how emerging technologies enable it to solve problems.
- The vision should outline intent and outcome, and provide flexibility for others in the organization to innovate, discover, and develop the vision.
- The vision should be time-bound, to create a sense of urgency.

When defined, the vision is documented in the strategy. It might also be used in internal communications, as part of an awareness programme, and in other strategic initiatives. The vision should be communicated often and in a variety of ways. Leaders cannot expect it to be communicated once, remembered perfectly, and implemented immediately. The awareness programme should ensure that everyone understands their role within the larger vision, and how their actions contribute to the result.

In some countries, legislation requires certain organizations to include their vision and parts of the strategy in communications to shareholders and regulators. As mentioned above, a version of the vision can also be used in external marketing.

The ITIL story: Creating the vision

Anya: *Axle Car Hire's vision is to become the most recognized car-hire brand in the world. But we needed to create something more appropriate to guide our new food delivery service, yet still remain true to our overall vision. The vision for the food business also needs to reflect the fact that the venture is a new one for the mature capabilities of Axle Car Hire as a whole.*

Dave: *After much debate and discussion, we agreed that the vision for the food delivery business unit was 'to be recognized as the premier provider of food delivery rental vehicles'. The vision statement may sound simplistic, but it certainly is not simple! As well as the vehicles we are providing, we will also have to pay attention to things such as food safety standards, the customer journey, processing payments in a timely fashion, understanding the needs of self-employed delivery workers, and much more.*

Su: *The vision statement is a great way to articulate the ITIL guiding principles of 'focus on value' and 'think and work holistically'. It helps teams across the company to understand the direction of the business.*

CHAPTER 4

WHERE ARE WE NOW?

4 Where are we now?

Strategy articulates the past, current, and future relationships between an organization and its environment.

Every organization fulfils a need within an environment, and continues to exist only because it continues to meet some need in its environment. This is the purpose of the organization.

An organization achieves its purpose by interacting with its environment. Successful strategies identify each key part of the environment that it interacts with, and the nature of those interactions. Strategy also identifies the capabilities that the organization will need to conduct those interactions successfully.

4.1 Environmental analysis

Environmental analysis encompasses three main areas:

- The organization's environment, often referred to as the 'external environment'. These are external conditions that affect the organization.
- The organization itself, often referred to as the organization's 'internal environment'.
- The interaction between the organization and its external environment.

Strategy defines the optimal configuration and activities of the organization, so that it can achieve its purpose in its environment.

These three areas are increasingly complex, as waves of technological innovation continue to be disruptive. Several models have emerged to help organizations understand them. The model used in ITIL combines the PESTLE approach to analysing the external environment with the four dimensions of service management for analysing the organization itself. The use of both approaches is particularly helpful in understanding the interactions between the two environments. This model is illustrated in Figure 4.1.

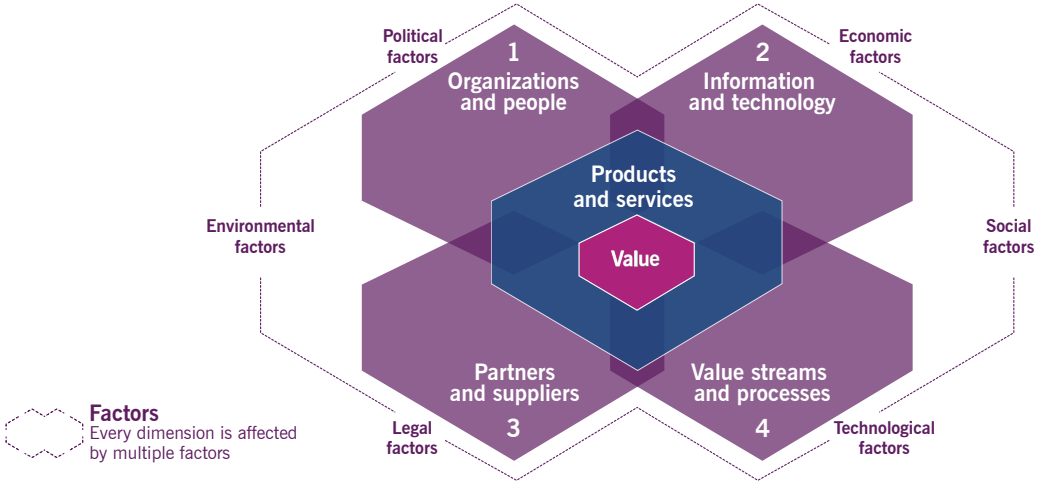


Figure 4.1 The context of strategy applied to the four dimensions of service management and PESTLE

4.1.1 External analysis

There are several approaches to analysing the external environment. Porter's five forces model is helpful when evaluating the competitive dynamics in an environment. PESTLE is helpful in categorizing factors influencing or constraining how an organization operates, as shown in Table 4.1.

Table 4.1 PESTLE: environment analysis factors and their influence on digital strategy

Factors	Description	Examples
Political	The influence of governments through policies (tax, fiscal, trade, labour, state ownership, etc.), stability, level of corruption, openness to influence, available subsidies, etc.	Governments may force or ban the use of certain technology platforms or applications
Economic	Factors determining the performance of an economy, such as inflation, interest rates, foreign exchange rates, demand/supply models, foreign investment, unemployment rates, and consumer purchasing power	Economic fluctuations may affect affordability of consumer technologies; commoditization and adoption of technology solutions are closely related to the costs of provision and consumption
Social	A population's culture, attitudes, norms, values, demographics (such as age, income, location, and language), buying trends, mobility, etc.	Social movements for or against certain technology solutions, their vendors, or their countries of origin may change the technology adoption overnight
Technological	The level and impact of technology innovation, including focus on research and development, attitude to innovation and technology, incentives to use innovative technology, automation, etc.	Technology innovations affect existing solutions, sometimes by quickly replacing them completely
Legal	Linked to political, but specifically legislation rather than policy, including laws related to discrimination, competition, employment, consumer protection, copyright and patents, and health and safety	Legislation regulating data processing, privacy and other information-related matters may limit, prohibit, or endorse the adoption and development of certain technologies
Environmental	Constraints or enablers linked to the availability (or scarcity) of natural resources, geography, climate, and pollution and carbon footprint targets	Environmental factors, especially disastrous ones, may interrupt or stimulate operation and adoption of certain technologies

Using external analysis, strategy asks questions such as:

- What needs exist in our environment?
- How important are those needs to people and other organizations?
- How could those needs be fulfilled? (What kind of services or products would meet that need?)
- How do those needs change over time?
- Are other organizations meeting those needs, and if so, are they doing so adequately?
- What are the limitations of our environment? (Is there anything that we are prevented from doing?)

4.1.1.1 Tools for external environment analysis

Some of the tools available for external environment analysis are listed in Table 4.2. This is not an exhaustive list, but it illustrates that each tool has its own approach, assumptions, and use.

Table 4.2 Tools for external environmental analysis

Tool	Description	Use
PESTLE	A framework to analyse macro-environmental factors that impact an organization	Monitoring impact and potential changes to the organization so that it can adjust its position or strategy to stay relevant
SWOT analysis	A tool to analyse the strengths, weaknesses, opportunities, and threats facing an organization	To identify actions an organization must take, relative to a specific opportunity or situation
Delphi method or estimate/talk/estimate	A forecasting process framework where several rounds of questionnaires are sent to a group of experts and shared with the group after each round	Forecast the results of a proposed action or scenario, and determine the best course of action or response
Lifecycle analysis	A method used to evaluate the environmental impact of a product through its lifecycle	To determine what standards must be met to compete in an ecologically sensitive market, and how to comply with them
Scenario planning	A method where variables in a market or situation are described, and results are projected for alterations of each variable	To understand the range of outcomes that might result in a situation in the organization's environment, understand what causes them, and develop a plan for each likely outcome that is adjusted as more certainty about the variables is learned
Value ecosystem analysis or business ecosystem analysis	A method used to map the different parts of a business ecosystem and the value that they contribute and derive from each other	Create detailed business or operating models, and evaluate the impact of changes in the environment on the value of the relationships between ecosystem components
Porter's five forces	A framework for evaluating competitive forces operating in an environment; these are: ● competition ● new entrants ● power of suppliers ● power of customers ● threat of substitute products	Analysis of an organization's value proposition and how to strengthen its competitive position in situations influenced by various types of competitor
Directional policy matrix	A tool to identify preferred market segments based on how attractive the segment is and whether the organization has the capabilities to support it	Market segmentation, especially when identifying markets for existing capabilities; also helps to identify what capabilities need to be developed in pursuing a market segment
Competitor analysis	A method of analysing a specific competitor's products, sales methods, sourcing and manufacturing methods, and marketing strategies	Create strategies that are designed to improve an organization's capabilities to make them better than a competitor's, to outperform it in the market

4.1.2 Internal analysis (the four dimensions of service management)

As an image of the external environment emerges, strategy looks inwards to the organization. It seeks to understand ways to ensure the organization's success in its environment. Strategy uses internal analysis to determine:

- whether the organization has the capabilities required to achieve its purpose in the environment that it operates in
- whether current capabilities could be used to create new lines of business, products, or services
- where it might be possible to make the organization more effective or efficient in meeting its purpose.

The internal environment is described in *ITIL® Foundation: ITIL 4 Edition* as four dimensions of service management. These dimensions describe the organization's resources, and how they interact with each other and with the external environment to meet its objectives. It is important to note that all four dimensions are critical for defining and implementing strategy. An overview is provided in Table 4.3.

Table 4.3 The four dimensions of service management and their influence on digital strategy

Dimension	Description	Examples
Organizations and people	The organization's structure and system of authority Skills, knowledge, and competency of its workforce Leadership that supports the organization's values Organizational culture The ability to collaborate and coordinate across areas of specialization Clear definition of roles and responsibilities	The organization's culture, competencies and structure are critical for a digital strategy, and define its overall attitude towards digital technology
Information and technology	The systems, information, knowledge, and experience required to make good decisions and follow them Automation of activities and decisions The means to create value Together with people and partners, the means to build and deliver products and services How information is exchanged between different parts of the organization and its partners The design, procurement, or building of technology Which technology best suits the organization's needs How to measure the performance of technology and how it is used How to manage investment in technology The skills needed to manage technology	Current technology architecture, which includes automation and digitization of the business, defines a starting point, opportunities, and constraints for the digital strategy
Partners and suppliers	Those that supply goods or services that enable an organization to create value, and to build, sell, and deliver products and services Deciding whether to manufacture tools or perform activities internally, or to source them from a supplier or partner How contracts are negotiated, agreed, and managed How supplier and partner performance is aligned to the organization's objectives How supplier and partner performance is measured and reported	Opportunities and constraints for the organization's digital strategy are defined by its dependency on third-party technology and by the digital strategies of its key partners and suppliers
Value streams and processes	What activities, workflows, controls, and procedures are needed to achieve the organization's objectives Which products and services are produced, what steps are taken to produce them, and how much those steps cost The cost and return of each product and service Delivery models for each product or service	The levels of automation and digitization of the organization's value streams, together with the complexity and variability of processes and workflows, impact the objectives of the digital strategy and provide opportunities and constraints for it

Internal analysis compares the results of external analysis with the organization's current capabilities, and asks questions such as:

- What capabilities do we need to fulfil the identified needs?
- What knowledge would we need?
- Which people would we need to hire?
- What technology would we need to invest in?
- What unique characteristics does the organization have that enable it to fulfil needs in a way that cannot be easily copied by competitors?
- Would we need to work with other organizations?
- What are our constraints? (What are we unable to do, or what are we able to do in one way but not in another way?)
- How should we organize ourselves?
- What is the best way of working to fulfil the identified needs?

4.1.2.1 Tools for internal environment analysis

Some of the tools available for internal environment analysis are listed in Table 4.4. This is not an exhaustive list, but it shows that each tool has its own approach, assumptions, and use.

Table 4.4 Tools for internal environmental analysis

Tool	Description	Use
SWOT analysis	A tool to analyse the strengths, weaknesses, opportunities, and threats facing an organization	To compare an organization's strengths and weaknesses with the capabilities required to exploit opportunities and reduce threats; used to identify threat countermeasures, and to identify which capabilities need to be developed
Delphi method or estimate/talk/estimate	A forecasting process framework where several rounds of questionnaires are sent to a group of experts and shared with the group after each round	Can be used internally to determine what course of action to take to improve the organization or deal with a challenge
Lifecycle analysis	A method used to evaluate the environmental impact of a product through its lifecycle	To create policies about how to produce the most responsible design and manufacturing, packaging, and distribution methods for a product
Scenario planning	A method where variables in a market or situation are described, and results are projected for alterations of each variable	To understand the range of outcomes that might result in a situation of organization change, understand what causes them, and develop a plan for each likely outcome that is adjusted after developing greater certainty about the variables
Value ecosystem analysis or business ecosystem analysis	A method used to map the different parts of a business ecosystem and the value that they contribute and derive from each other	Creating detailed business or operating models, and evaluating the impact of changes in the environment on the value of the relationships between ecosystem components
Skills matrix	Assessment techniques used to identify the type and level of skill and knowledge in an organization	Determining whether the current profile of skills and knowledge is enough to embark on a particular course of action; identifying the needs for training and education programmes
Capability maturity matrix	A maturity model, applied in many contexts, that rates an organization's maturity relative to an industry approach or standard	To determine how proficient an organization is in a specific area (e.g. software engineering, service management, security and risk management)
Cultural assessments	Assessments that determine the way in which work is performed, decisions are made, risks are taken, innovation is encouraged, etc.	Cultural assessments can help in preparing for the required changes, and determining how to best promote them within the organization

4.1.3 Interaction between the organization and its environment

Environmental analysis does not end with the strategy definition. The organization changes with each actioned step of the strategy if the changes affect the jobs it creates, the products and services it provides, the resources it manages and consumes, etc.

Not all these changes are easy to predict, and not all are under the organization's control. Strategy must include continuous monitoring and analysis of the organization and its environment, to ensure it remains relevant. This includes constant evaluation of:

- how the needs being met by the organization are changing
- who is competing to meet those needs
- whether there are new, better ways of meeting them
- whether the size of the existing needs is changing

- whether new needs are emerging
- whether the organization's services and products are still adequate to meet needs in the environment, and if not, how they will need to change
- whether new capabilities have evolved that will change the organization's business model.

4.1.4 Using the results of environmental analysis

Environmental analysis helps the organization to identify and articulate:

- the purpose of the organization
- the nature of its interactions with its environment
- the products and services it offers, and the needs that each one fulfils
- the size of the needs it will fulfil
- the constraints imposed by its environment
- the capabilities it will need
- how it will organize itself to fulfil its purpose (e.g. its business model)
- who it will need to cooperate with.

The ITIL story: Environmental analysis

Anya: *No organization exists in a vacuum. Our products and services are available in many countries, and we source staff, equipment, and other services from around the world. We need to be sensible and practical when drafting our business strategy to reflect internal and external challenges. We use a variety of tools and models to help us analyse our internal and external circumstances. Our starting point is often a simple PESTLE analysis.*

Dave: *The countries, societies, and economies we operate in provide opportunities and demand, but they can also shape how we work. For example, we need to consider how we would collect payment in a country without a high degree of adoption of credit cards.*

Anya: *Now we are expanding to meet a new opportunity with the food delivery service, we must also be mindful of other things such as food safety.*

4.2 Opportunity analysis

Positioning is not just a matter of deciding which level of disruption an organization wants to pursue, or which aspect of its environment it wishes to focus on. As it investigates each area, several opportunities will emerge.

Strategy management includes evaluating each opportunity to determine the following:

- Whether it is consistent with the organization's strategic objectives.
- The level of demand for products or services that the opportunity represents.
- How competitors are likely to pursue the opportunity, and how well the organization is positioned against them.

- How long the opportunity is likely to exist. Some opportunities can be very lucrative, but short-lived; for example, dial-up internet services were mainstream for only a few years before broadband replaced them in most markets. Although some markets still use dial-up internet services, only a handful of service providers remain, and there are few, if any, new entrants. Other organizations bypassed dial-up to meet the growing needs of the mobile, online consumer.
- The impact of pursuing the opportunity (e.g. investment, changes the organization will need to make, and potential return on investment). This is discussed in detail in section 5.3.
- The impact of *not* pursuing the opportunity (e.g. loss of revenue, reduced competitive advantage, and comparison to other opportunities).
- Risks associated with the opportunity, and the governing body's appetite for risk. This is discussed in detail in Chapter 11.
- The legal and ethical aspects involved; for example, will a new technology enable behaviour such as money laundering, anonymous libel, or misinformation about current events?
- The organization's ability to make the required cultural changes.

Opportunity analysis will identify which opportunities are viable and support the organization's strategy. It will also identify undesirable approaches, even those that appear attractive at first.

4.2.1 Tools for opportunity analysis

There are almost as many ways of evaluating opportunities as there are opportunities themselves. Table 4.5 provides some examples of the tools used.

Table 4.5 Examples of opportunity analysis tools

Tool	Description	Use
Luehrman: portfolio of real options, or option space analysis	A method of identifying several options for potential future situations	Instead of focusing on detailed planning for one or two strategic projects, Luehrman (1998) created an analysis tool that allows planners to define high-level options and rank them according to when they are likely to become necessary; all options are monitored, but they are evaluated in detail only when appropriate
Market spaces	A method for finding market spaces that are underserved or not served at all by competitors	Identifying or creating opportunities by focusing on spaces between industries; so instead of competing directly with competitors (e.g. by evaluating whether its customers could be attracted by a substitute strategy), Home Depot attracted customers who used contractors for home repair or remodelling projects, and showed them how they could do it themselves with more control and less cost
Strategic industry factors	These are factors that must be in place for an organization to succeed in a market (e.g. healthcare companies in the US must comply with the Health Insurance Portability and Accountability Act)	Opportunities are assessed according to whether the organization has the strategic industry factors to succeed; if not, it needs to determine what investment would be required to obtain them
Investment prioritization	A framework that prioritizes opportunities by comparing the investment required, risk, and time with the projected outcome, returns, and likelihood	To evaluate and compare multiple opportunities using a similar rating system, even if the opportunities are different in nature

4.3 Digital readiness assessment

Many organizations have plunged into digital transformation initiatives without knowing whether they had the appropriate capabilities and practices. Unfortunately, few organizations know where to begin or what it takes to prepare for digital transformation; as a result, few initiatives are successful. According to Gartner (2019), only a quarter of midsize and large organizations will successfully target new ways of working in 80% of their initiatives. An effective digital readiness assessment can help with these preparations.

Although an organization may try to be more concerned with digital solutions than with assessments, a well-conceived assessment can help demonstrate where it is deficient. It will, therefore, identify where the organization should concentrate its resources and prioritization efforts to produce the best results.

The analysis of all aspects of the organization's environment (internal and external) and how it is likely to change, together with an assessment of the organization's current position, capabilities, and resources, will provide a baseline for the next stage of the strategy: how to achieve the vision.

The strategy assessment is not a report, but a process of consideration, prioritization, and decisions based on the results of all the analyses performed in this phase of the strategy. Its output will be a detailed set of strategic objectives, prioritized by its connection to the vision. It will also include details about the current state of the organization and a description of all the barriers to achieving the objective. It will communicate the key principles and policies that helped form the planning decisions.

The strategy assessment will give the planning team a picture of the organization's future state. The next phase will involve planning how to achieve the strategic objectives. The stakeholders performing this task may have to review and refine the strategy assessment, depending on the results of the planning activities. For example, it might be too expensive or too difficult to make the changes needed to achieve an objective.

The following sections provide an overview of the key activities of a digital readiness assessment.

4.3.1 Evaluating current organizational capabilities

Digital readiness assessments can be done within an organization or by experienced external providers, and often examine how organizations are performing in six key areas:

- **Strategy and digital positioning** Organizations that are strong in this area have a clearly defined digital transformation vision, which is shared at all levels of the organization. There is also a high-level understanding of digital positioning and how to execute the digital position.
- **Value streams, practices, and processes** Organizations that are strong in this area have well-established practices and processes that support the overall digital business. Value streams are well understood and mapped across the organization.
- **Information and technology** Organizations that are strong in this area use automation in the right areas and make good use of digital technology to increase customer excellence, operational excellence, or both.
- **Organizational development and learning** Organizations that are strong in this area effectively recruit, hire, develop, and provide growth opportunities to employees with digital skills. This key area drives the 'organization and people' aspect of the four dimensions of service management.
- **Risk management** Organizations that are strong in this area have a mature attitude towards business and digital risk, effectively balancing and responding to threats and opportunities.
- **Innovation** Organizations that are strong in this area value and support digital initiatives, and integrate them into the rest of the organization.

Data and information resulting from these key areas can help leadership teams determine where there are gaps that need to be addressed.

The ITIL story: Evaluating organizational capabilities

Dave: *The four dimensions of service management in ITIL provide a good model to use when initiating reviews of internal capabilities. We also have to acknowledge and account for subtle differences and nuances at different levels or parts of the organization, such as risk appetite or a desire to innovate.*

4.3.2 Gap analysis

The digital assessment areas can be assessed individually or together. A gap analysis finds the organization's strengths and weaknesses, and can result in actionable, practical steps for it to implement in the short, medium, and long terms.

A gap analysis report is likely to contain the following information:

- the organization's objectives (desired future state)
- a description of the current situation linked to each objective
- a description of what is needed to achieve the future state (capabilities, resources, partners, etc.)
- the actions required to close the gap between the current and future states.

The ITIL story: Gap analysis

Dave: *It is important to remember that a gap analysis is a snapshot of a moment in time. The moment we act to correct the gap, or to execute our strategy, we change ourselves and the environment we work in. As a result, the gap changes, sometimes in unexpected ways. We may narrow the gap, but introduce new challenges in other areas. As a result, we have tasked Su and Luna to generate a new gap analysis for the food delivery venture every three months to make sure we stay on top of a potentially volatile environment.*

Su: *The ITIL business analysis and knowledge management practices provide Axle Car Hire with many useful skills, information, and tools to rapidly conduct gap analysis as we iterate our products and services.*

4.3.3 Output

A digital readiness assessment, in combination with a digital positioning framework, can direct future activities and areas of focus for the organization in supporting digital transformation goals.

There are many different approaches to a digital readiness assessment. There are also many proprietary frameworks offered by consulting or technology vendors. However, they are all likely to include the following sections:

- cultural readiness (openness to change, innovative culture etc.)
- skills assessment for implementing and using digital technology
- level of innovation, or openness to innovation
- current levels of automation
- extent to which value streams have been defined and are ready to be automated
- nature of products and services provided (to what extent is it possible to move them into a digital operating model?)
- customer personas and profiles
- leadership style
- controls and governance.

4.3.4 Risks and challenges of digital readiness assessment

In their paper 'Developing maturity models for IT management', Becker *et al. (*2009) summarize some of the main issues when conducting a digital readiness assessment.

Many assessments are overcomplicated. Overly complex maturity models attempt to convince the organization of the validity of the findings and recommendations, by applying false rigour to subjective criteria. The resulting evidence, although detailed and at times insightful, is suspect, as it is largely subjective in nature and based more on opinion than on fact. In the proper context, such an assessment has merit. However, the results are usually presented in a way that suggests scientific empiricism. This, in turn, leads some organizations to make bad decisions, leading to poor results.

Many assessments are too simple. The direct opposite of the overly complex model is the overly simplistic one. This type of assessment usually asks one or a handful of participants a few basic questions.

Few assessments account for risk. Although digital transformations share many of the same risks as other business initiatives, some risks are unique to digital initiatives; for example, an organization may be prone to disruption from competitors using digital technologies, which threaten its very existence. There are also risks associated with transforming existing business models to new digital models. One of the biggest obstacles in garnering support for a digital transformation is in not understanding the risk attitudes of key stakeholders. Most digital assessment models ignore risk entirely. Those that do address it tend to focus narrowly on cybersecurity risks. Although cybersecurity is particularly important for many digital initiatives, it is just one of many risks. See Chapter 11 for more on risk.

Few assessments account for comprehensive practices. Many digital maturity assessments focus heavily on infrastructure, such as cloud vs on-premise, or on specific tools employed by the organization. Other assessments lump everything into one category, as though IT was one department with a few simple activities. Although stable and predictable technology is a prerequisite for a successful digital initiative, it is not enough. Nor is the role of IT to manage technology. The best technology-enabled organizations work strategically across all teams, to deliver innovative products and services to consumers.

The assessment of strategy and leadership is not appropriately addressed. Organizations that are ready for digital transformation have leaders who establish a compelling vision for the future business model. Unfortunately, most digital assessment models do not evaluate the leadership's understanding of the digital landscape, or the extent to which it sets a clear direction for the organization. Furthermore, a digital readiness assessment must consider the organization's ability to run the current business model and digital business model simultaneously: in other words, as parallel execution models. See section 8.2 for more details on the various parallel execution models.

CHAPTER 5

WHERE DO WE WANT TO BE AND HOW DO WE GET THERE?

5 Where do we want to be and how do we get there?

5.1 Strategy planning

5.1.1 Strategy cycles and planning horizons

The creation of the strategy is not a one-off activity, and cannot be expressed in a single document that is then never amended. Strategy is not a destination: it is a journey with a stated direction and objectives. Therefore, strategy management activities are ongoing. Strategic decisions, plans, and actions vary in their lifetime, applicability, and priority in the constantly changing circumstances of today's organizations. Internal and external factors constantly change, as should an organization's strategies.

Organizations that both define and review their strategy annually will find that they are more reactive. This is because technological innovation and competitive disruption of the market occur frequently. Strategy must, therefore, be managed within shorter cycles, with more scenarios and strategic options considered than previously. The planning cycles might change as the environment and organization evolve. Sometimes this will be to a more stable state; for example, as key technology evolves (as described in Chapter 10).

Strategy generation is a process with several associated artefacts. There is no rule that specifies how frequently it should be executed. It also can be executed in an iterative fashion. Based on the organization's environment, a balance needs to be found between the time and effort needed to perform the review, and the strategic direction and response needed to address new opportunities and risks.

Different levels of strategy usually have different review and update cycles, and should be managed at the appropriate levels of authority. For example, an organization might allow individual business units to change portions of their strategy, based on immediate threats or opportunities on an iterative and ongoing basis, whereas the less time-sensitive elements of the enterprise strategy can be reviewed every six months.

Figure 5.1 illustrates the variability of planning and review cycles. In this example, the organization's purpose and vision remain unchanged for five years, providing a single navigation point. The strategy explains how the organization will achieve its purpose and vision. It is established at the beginning of a five-year period, and two strategic initiatives are launched. Towards the end of the first year, the environmental analysis is updated and the strategy is adjusted. Consequently, minor changes are made to the initiatives, and two new ones are launched.

In the second year, it becomes clear that the environment is changing more rapidly than anticipated, so the review is conducted earlier. A strategy is established for the next six months. This cycle is repeated until changes in the environment slow down and it stabilizes. In times of rapid change, the organization needs to be more agile. Therefore there is an increase in both the frequency of planning cycles and the number of initiatives,

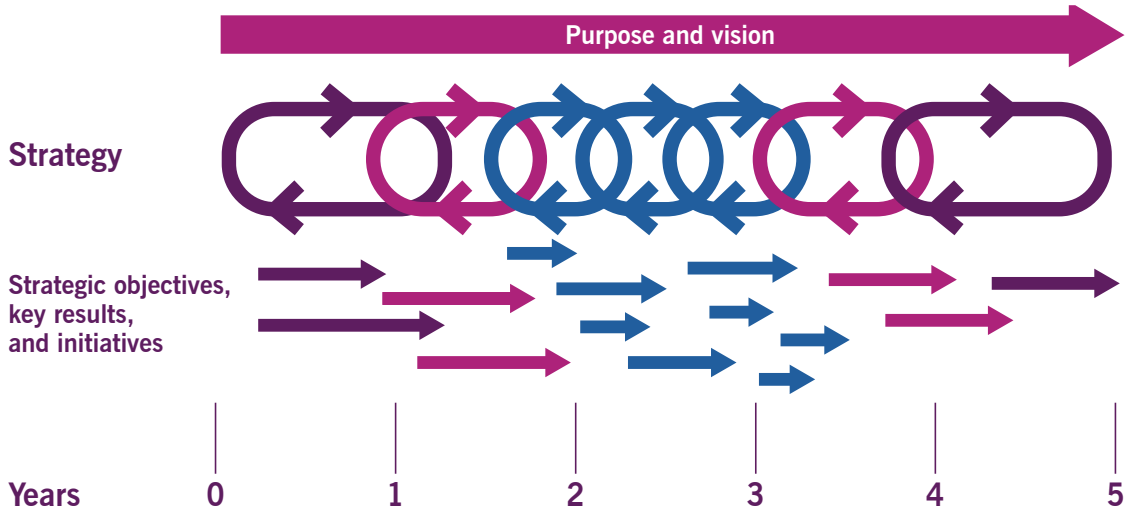


Figure 5.1 Strategy cycles

but also a reduction in scope. As the environment stabilizes, the strategy cycles lengthen again. However, the agile practices and culture are likely to continue, albeit in a modified format.

This is covered in more detail in Chapters 6 and 7, which describe implementation and measurement approaches.

5.1.2 Strategy structure and content

Strategy is a system of artefacts; this system can sometimes be complex. To create and manage it effectively, an organization needs to find a structure which supports and reflects its business model, architecture, organizational structure, and system of governance and control.

5.1.2.1 Strategy consists of many artefacts

Strategy is often associated with a single strategic planning document. In fact, there are many tangible artefacts that are used in the process of defining, achieving, and maintaining the organization's vision, position, and objectives. These include:

- strategic assessment
- positioning statement or analysis
- several scenarios indicating likely outcomes if certain variables are changed
- vision
- business model
- financial analyses of all options
- plan, or several related plans
- project and product portfolio, often together with an application portfolio
- detailed architecture of the future-state organization, infrastructure, solution, or some other aspect of the strategy
- risk analysis and treatment options.

Traditionally, these artefacts have been collected into one location, often a physical binder, marked as confidential, and then distributed to key stakeholders. Even if it was possible to access them, they were complicated and difficult to read. The documents were typically updated annually, to correspond with budget cycles, and were often out of date.

As organizations face increasing rates of change, they recognize that strategies need to be updated more frequently, to be more accessible, and to be easier to read and track. Collaboration platforms and document-sharing make it possible to synchronize and manage the various artefacts of strategy more easily. Instead of describing each artefact in detail, this section focuses on the process of defining the overall strategy and managing the artefacts that result from that process.

5.1.2.2 Structure and content

Strategy artefacts are complex and contain a large amount of information. Yet a strategy must also be easily communicated to, understood by, and implemented by a diverse range of stakeholders.

The approach of documenting a strategy in a single strategic plan document has proved to be impractical, for many reasons including:

- It is complicated and difficult to read and, therefore, most people do not read it.
- Some parts of the strategy might contain information that is sensitive, or appropriate only for senior leaders of the organization. Organizations have restricted employee access to parts of the strategy, due to sensitive data (usually financial details). This leads to a sense of secrecy and distrust, and encourages siloed, hierarchical working methods.
- Some parts of the plan, such as detailed initiative plans, are only intended for the team conducting that initiative, and do not help with the understanding or communicating of the strategy.
- Reviewing and revising the document is a large-scale exercise, especially if change control is required to ensure that multiple physical (or even virtual) copies are synchronized. This makes it almost impossible to update the plan with the frequency required in a volatile environment.

A better approach is to structure the strategy as a collection of views rather than a single document. At the very least, there should be different versions of the strategy for different audiences, all based on a master set of artefacts to ensure consistency. For example, all employees should know the organization's purpose and vision. They should also know the overall guiding principles, and the means that the organization intends to use to achieve the vision. In addition, all teams should understand how the strategy impacts them, and what they are expected to do to achieve the strategic objectives. Teams involved in strategic initiatives must be familiar with the activities and dependencies, including the impact of a delayed, changed, or incomplete initiative.

A suggested structure is provided in Table 5.1, for those leaders responsible for defining, maintaining, and overseeing the implementation of strategy. Each element is a section of a document or digital artefact and represents a view of the strategy, which is valid at any given time.

Table 5.1 shows how strategy can be positioned as a dynamic management tool, which can be measured, reviewed, and adjusted to meet changing environmental factors at any point. For greater effectiveness, the major points of the strategy should be included in a dashboard, which is used to coordinate and report the progress of the implementation of the strategy. More information about the dashboard, the frequency and types of review, and when to adjust a strategy is provided in Chapter 7.

The format of a strategy is determined by how often it is revised, the number and type of stakeholders who need to access it, and the number of strategies that exist within the organization.

Table 5.1 Elements of a strategy document

Element	Description
Purpose and vision	This is the stakeholders' purpose in defining the strategy, and the vision that they aim to achieve. If this is not the enterprise strategy, these statements must show how they support the purpose and vision of the enterprise, or of any strategy that the stakeholders support.
Scope and authority	The strategy should clearly state which parts of the organization are included and which are excluded. This section should also indicate the authority that has been delegated to those responsible for implementing the strategy.
Context	A summary of the findings and recommendations of strategic assessment(s), together with information about where those assessments can be found. The context should include information about the internal and external environments, the desired position, the challenges the strategy seeks to overcome, and the opportunities it intends to exploit.
Objectives and key results (OKRs)	The specific objectives and measurable results that this strategy aims to achieve (see Chapter 7). This section might also specify which objectives are excluded from the strategy.
Budget and investment	The total investment anticipated for the strategy, together with any conditions or constraints.
Principles	These are the principles used when defining the strategy, and which form the basis for decisions made by stakeholders when implementing it. This will also outline the thresholds that require a decision to be escalated to a more senior decision-maker. This section should include a reference to any policies relevant to the definition and implementation of the strategy.
Capabilities	An overview of key organizational capabilities and their current maturity, showing which ones need to be developed or expanded.
Roadmap	A visualization of the major initiatives and milestones involved in implementing the strategy.
Initiative overviews	Detailed initiative plans are separate artefacts, and are defined and maintained by the leader and the initiative team itself. These documents will provide an overview of each initiative, including: ● objectives ● budget ● initiative leader and team members ● milestones and deliverables, with anticipated timelines ● dependencies on other stakeholders or other strategies and initiatives ● key performance indicators ● current status of the initiative.

A large organization might have to manage several strategies, each defined and maintained by different groups, departments, or executives. The structure of each of these strategies and relationships between them reflect the organization's business model and business architecture.

Some organizations have a department responsible for coordinating and maintaining all strategies on behalf of the various strategy owners. A decentralized organization might delegate the definition and management of the strategies to the heads of each division, who should be following guidelines and policies specified by the governing body and senior corporate executives. In a smaller organization, a single executive might be responsible for documenting and maintaining a single strategy, on behalf of the governing body and the executive team.

Most importantly, the strategy should not be developed and managed in isolation. For example, some organizations depend on enterprise architects to define and manage strategies as a service, leaving leaders and managers to focus on running the business. Another example is delegating the task of strategy generation to an external consultancy. This approach is flawed, as neither the architects nor the consultants have authority over the areas for which they define the plans. A better approach is to engage these specialists as members of the strategy team while the leaders and managers still retain ownership of the strategy for their areas. Enterprise architects play an invaluable role in linking strategies, ensuring consistency and completeness, and translating the strategy into workable plans. However, it is inappropriate to make the enterprise architects fully responsible for the strategy.

A format should be selected to enable each stakeholder to view and maintain the part of the strategy that they are responsible for, and to ensure that all changes are visible to other stakeholders. Changes in one part of a strategy must be reflected in other parts. If changes in one part of the organization impact the strategy of another part, these must be easily detected and communicated, so that leaders can analyse them and decide whether the strategy must be adjusted.

A small organization might find it adequate to have a single shared folder containing the relevant documents. A large one will find it necessary to provide shared platforms with the ability to index, tag, and link documents or parts of documents. This will enable different stakeholders to view the strategy as a single virtual document, based on parts of several different ones.

5.1.2.3 Oversight and controls

The governing body has oversight of the organization's strategy, but the definition of that strategy is often delegated to the executives. These executives may each create a strategy for their area of responsibility. All iterations of the strategy must be connected and consistent.

Strategic controls are covered in more detail in Chapter 7, but should include:

- measuring and reporting the progress of strategic initiatives
- measuring and reporting whether the strategy is achieving its objectives
- evaluating whether the strategy is still relevant in its changing environment
- detecting unintended consequences
- regular stakeholder meetings to consider the above, and determine whether action is required to change the strategy or any part of a related strategic initiative
- reporting to other strategy owners whose strategy is linked to this one
- checks against the enterprise strategy, to ensure that stakeholders do not make the organization deviate from its desired position or objectives.

5.1.3 Financial aspects of digital and IT strategy

The financial aspects of the strategy should reflect and support organizational goals and customer needs. The successful delivery of business models, for new or enhanced products and services in a rapidly changing digital environment, depends on an appropriate level of funding. It also requires the appropriate funding strategy for the various conditions and needs.

Agile organizations tend to treat strategic funding differently compared with more traditional environments. Whereas a traditional organization may fund large, multi-year projects and programmes, agile organizations often break funding down into smaller, experimentation-driven decisions, which allow them to react in a nimbler fashion to new data from the industry, market, and/or customers. They also tend to provide funding at the team level and across value streams.

5.1.3.1 Funding projects, products, and services

It is worth noting that not all projects are strategic, but they may require expenditure over and above the operating budget. Non-strategic project investments include:

- replacing existing technology with cheaper, more efficient technology without changing any other aspect of the performance, process, or activity
- ensuring that non-compliant components begin to comply.

The organization's executives must ensure that such investments are within the scope and policies set by the financial strategy.

5.1.3.2 Balancing the cost of innovation and operation

Traditionally, innovation is separated from operations. If a strategy has been translated into people, processes, and technology that deliver exactly what has been specified, organizations do not want innovative thinking.

In these cases, innovation is limited to research and development units and is only funded as part of identified strategic initiatives. Employees are moved out of business operations to form part of the innovation team, and moved back when the innovation is ready to deploy, as change agents. However, the need for agility in responding to strategic drivers and market demand requires operational processes, people, and technology that can adjust, adapt, and transform easily and quickly.

Whereas dedicated research and development units and innovative projects will continue to drive strategic growth, agile organizations also recognize that innovation must be part of their culture and ongoing business practice.

Every operational budget and every employee's objectives should include some level of innovative activity. Great ideas can come from all parts of the organization, particularly those closest to the work and in customer-facing roles. Ideas might be focused on improving existing products or services, processes, and working practices. Many larger, transformational ideas, and resulting strategies, have originated from operational staff.

Full cost recovery model (working capital fund)

Organizations are adopting full cost recovery strategies, where operating expenses are recovered from internal and external customers, to maintain operations while driving innovation and establishing new capabilities. This type of strategy is typically used by internal functions within an organization, to encourage them to operate as a business. Such a model is referred to as a 'working capital fund'.

There are several benefits to adopting a self-sustaining funding model approach:

- **Improves cost transparency** Customers only pay for what they consume, and can build an effective understanding of what activities will drive certain costs. This also allows the organization to develop profiles for each customer type.
- **Drives strategic investment planning** The ability to recover costs ensures that funds are available for upgrades. This requires decisions about where to invest, based on customer needs. Thus, decisions must be made and acted upon regarding new and existing services, instead of requiring customers to provide their own funding.
- **Reduces funding fluctuation** The transition to a full cost recovery model stops the reliance on variable capital investment funds from within the organization, which require faster planning and delivery capabilities.

The ability to adopt this funding model approach requires the following considerations, though these should not outweigh the benefits that a full cost recovery model can bring:

- **Effective demand forecasting** Customer demand patterns must be analysed to ensure that the budget is sufficient. This must include applying the relevant risk factors to manage demand and avoid any negative impact on the service.
- **Automated reporting capabilities** It is critical that the funds are transparent and within the expected limits, so that the model remains workable. These capabilities should be automated so that they accurately state the current funds at any time.
- **Sufficient contingency planning** A full cost recovery model requires the availability of sufficient funds in case the anticipated revenues do not materialize.

5.1.3.3 Financial policies

Financial growth is the aim of many strategies, and finances are required to implement most strategies. Every strategy will, therefore, have a financial component.

Sometimes, a strategy will prompt the organization to look for new sources of finance. In other cases, the organization might have a surplus of cash that it needs to invest, and might seek to diversify or expand its customer base. It may choose to launch an innovation-based strategy, and invest in research and development to generate new ideas; or it might explore opportunities for mergers and acquisitions.

Financial legislation, regulation, and policies can also prompt a strategy; for example, tax laws might make it attractive to pursue one market over another.

Operational vs capital expenditure

Capital costs or capital expenditure (capex) is the cost of purchasing or creating resources that are recognized as financial assets (e.g. computer equipment and buildings). The cost of fixed assets depreciates over multiple accounting periods. This is reflected in the cost of resources, products, and services within each period. Only depreciation (the agreed portion of the initial cost) is included in the costs within each period.

Operational costs or operational expenditure (opex) is the cost that the organization incurs through its normal business operations. These costs typically include repeating payments, such as payroll and payments for a supplier's services. Operational costs for the period are fully included in the calculated costs of the respective resources, products, and services within the period.

Funding technology as an operational expense (paying only for what is consumed) makes it possible for organizations to move quickly from one solution to another as opportunities emerge in external factors (e.g. in any part of PESTLE).

Projects requiring multi-year technology investments often require a long-term commitment to working in the way in which that technology dictates. For example, it is tempting to believe that simply migrating to cloud-based resources will automatically lead to cost savings and increased agility. In practice, costs might not actually be lower, and agility is not automatic. Furthermore, the ability to quickly and easily add computing power can result in teams deferring or ignoring underlying architectural problems or technical debt. Cloud technology is still proprietary, and cloud applications and platforms can require extensive customization to work for individual organizations. Vendor or solution lock-in is still problematic, and agility depends on the organization's culture more than the technology that it uses.

Moving from a capital expenditure to an operational expenditure model is not just a matter of switching between accounting categories. Subscription-based models enable an organization to gear its consumption of services

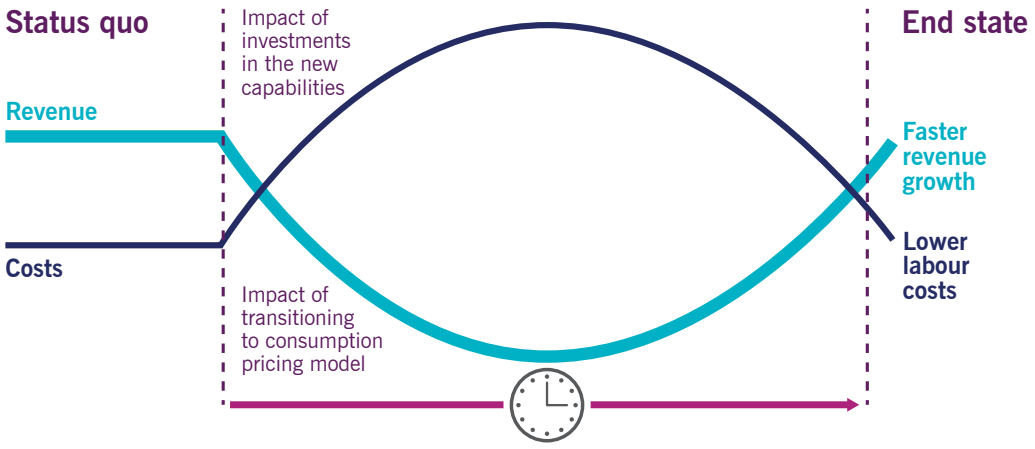


Figure 5.2 The fish model
After Lah and Wood (2016)

towards supporting its objectives. They also make it possible to scale services to reach a broader range of consumers.

Lah and Wood (2016) describe the economics of subscription using a fish model (Figure 5.2). Instead of being generated immediately from one sale, revenue is generated in smaller increments (e.g. monthly amounts) over the lifetime of a contract. Expenses increase as the company invests in its subscription offering (e.g. software development, hosting, customer success teams).

Eventually, the situation is reversed. Revenues increase, as customers can be added at scale, and the lifetime value of ongoing subscription customers is higher compared with that of single-transaction customers. Expenses decrease after the main subscription infrastructure is completed, and it can be scaled cheaply.

Organizations such as Adobe and Microsoft, which moved from annual licence contracts to customized subscriptions, often saw initial resistance and a loss of shareholder confidence. Within a year, Adobe had seen a significant increase in both revenue and share price; and Microsoft has maintained its leadership position in office automation software.

Funding mix

An organization's strategy depends on the funding available and the investor appetite for risk.

Funding sources include:

- investors, including venture capitalists, shareholders, bonds, and joint ventures
- cash reserves
- loans.

Very few growth strategies are immediately profitable. Investment is required at the very beginning, and it takes some time before returns are generated. It could be several years before the initial investment is fully recovered. In the meantime, the organization's executives need to ensure that there are sufficient financial reserves to keep it operational.

Although it might be tempting to invest all of the reserves into growth, the organization is at the mercy of market volatility and other external factors. An unexpected upturn in demand might leave it unable to expand quickly enough, whereas an unexpected downturn might leave it unable to meet its financial obligations.

Every financial strategy must therefore separate the investment required to execute the organization's growth strategy from the reserves required to keep it operating, while the strategy starts showing results and providing a return on investment.

Planning for growth

There can be a danger that strategy and investment are not aligned. Increases in demand and performance require increases in operational capability.

If a strategy has an inflexible budget that cannot evolve with demand and performance, it will ultimately fail. The strategy must specify the level of demand at which additional investment is required, and the level of investment that is appropriate.

These forecasts will use two main tools:

- scenarios, where different levels of demand are modelled, and a financial strategy created for each
- service models that specify what organizational capabilities are required for each scenario, and how these need to be increased or decreased.

Tax-based strategies

A diverse, multinational organization will often have multiple levels of strategy, which are based on the tax laws of the various countries it operates in, and the search for the best locations in which to build facilities, employ staff, procure raw materials, and sell products and services.

An operating entity (such as a brand, a product line, or even an entire business) develops its strategy within the constraints defined by the corporation.

5.1.3.4 Charging models

A variety of strategies can be used to determine pricing for organizations that sell their services to external customers. For existing products and services, pricing must remain competitive within the market and competition, and costing models will be built to understand the cost, price, and profitability of products and services delivered to consumers.

Pricing strategies might allow for short-term, increased pricing and margins for new and innovative products and services that do not have competitors. In today's digital age, with the rapid rate of change, competitors will quickly catch up with the new products and services. The impact of the long-term pricing of products and services must be considered.

When services are offered within the organization, unnecessary spend can be limited by making the costs of technology visible to the customers and sponsors. To do so, the organization must have a strategy in place for sharing internal, service-based costing. This helps to ensure that internal costs are low and improvement opportunities are regularly identified, so that consumer prices remain competitive. Some examples of common digital charging models are listed in Table 5.2.

Table 5.2 Examples of common digital charging models

Type	Description
Free	Offer a free-to-use product or service that is supported by other forms of revenue, such as advertising or referral/affiliate
Freemium	Offer a free-to-use product or service that is supplemented by additional paid packages
Tiered	Offer different packages with increasing levels of features at different price points
Dynamic/variable	Seven types of dynamic pricing are shown (Sahay, 2007)

The ITIL story: Financial aspects of digital and IT strategy

Dave: *Changing financial models is complex, and there are many factors to consider. It is not just deciding how much funding is available to individual departments. We need to consider a number of other things, such as the impact that changing our models has on how we report our results to our shareholders. We should also think about how restating results might change the way our banks and suppliers view us, and the subsequent impact on how much we can borrow, or the terms our suppliers set. There is a lot of modelling and analysis that goes into a decision to change the funding model!*

Anya: *At the same time, we need to ensure that every department has the necessary resources to deliver the results and outcomes that will allow our new food delivery service to succeed.*

5.1.4 Using business models for strategy planning

The creation of new business models, or changes to existing ones, usually translates into large and expensive organizational changes across organizational structures, value streams, practices, people, partner and supplier models, and information and technologies. An organization, therefore, needs to approach changes to its business model and strategy with caution. It must ensure that the changes are made in response to appropriate triggers, to justify the effort expended.

The concept and structure of business models are described in section 2.8. An organization's business model adopts a strategic focus that depends on the organization's key values. The current version of the Barrett model, developed by the Barrett Values Centre (2020) and shown in Figure 5.3, describes organizational values, and can be used to define an organization's strategic focus.

Figure 5.3 The Barrett model

Reproduced with permission from the Barrett Values Centre (2020).

An organization can focus more on its foundational needs and values (Levels 1–3), on its evolution and transformation (Level 4), or on its purpose and contribution to a common good (Levels 5–7).

An organization analyses internal and external data when evaluating and defining a strategy. This provides insights for providing a balance between actively exploiting the current business model, protecting it, and creating an entirely new one. The data can be grouped into two categories, according to the insights it provides, as described in Table 5.3.

Table 5.3 Information that supports business model planning

Key values according to the Barrett model	Signs suggesting that the business model is being exploited or should evolve	Signs suggesting a need to protect or review the business model
Purpose (alignment/ collaboration/contribution)	New needs of society New social responsibility requirements and expectations New opportunities for collaboration and value co-creation New communities to serve, or changes in opportunities to serve the current communities	New regulations challenging the business model Feedback indicating a decline in the value perceived by the stakeholders Transparency and openness being challenged Employee satisfaction declining
Evolution	Technology development providing opportunities for innovation Other external factors suggesting a need or opportunity to transform the business Innovative ideas being generated in the organization, suggesting a transformation opportunity	The current business model's relevance being in decline External opportunities that cannot be used within the current business model Large-scale disasters affecting the relevance and viability of the current business model and strategy
Foundation (viability/ relationships/performance)	Opportunity or a new business model due to new or emerging technology Removal of a barrier to entry for customers who were excluded from the existing market, by providing cheaper prices or simpler solutions Current value proposition optimization, i.e. offering the same, or the value proposition improving drastically or being modified for an unserved market	A declining trend in performance metrics such as market value, customer retention, product or service sales, or customer satisfaction Difficulty in finding new ways to enhance offerings and value propositions for the current business model Customers finding alternative products and services increasingly attractive and desirable Erosion of the barrier to entry into the industry, and an increase in new low-end competitor disruptors entering as threats The current offerings and value proposition in the current business model having become irrelevant or commoditized over time

The indicators in Table 5.3 are not mutually exclusive or collectively exhaustive. These are examples of events where an organization might consider changing its business model or creating a new one. The key values (according to the Barrett model or another relevant assessment) are important because they affect the organization's ability to detect, process, and react to the signs. For example, an organization focused on profit and efficiency is likely to ignore signs at the higher levels, such as the emergence of new social responsibility expectations. However, organizations that operate at the higher levels of the model preserve the ability to capture, process, and use indicators at the lower levels.

When an organization is creating a new business model or changing an existing one, business model canvases (described in section 2.9) are versatile and can be used as a tool for innovation, validation and benchmarking, or communication and alignment as indicated in Figure 5.4.

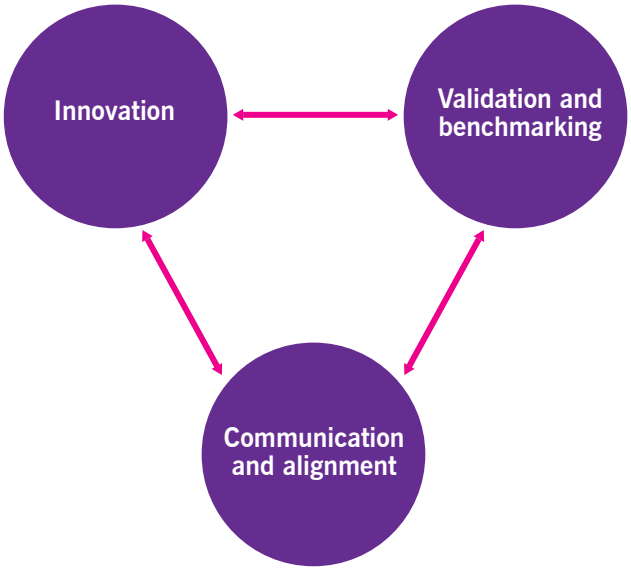


Figure 5.4 Uses of a business model canvas

A business model canvas is a strategic management tool for developing new business models or visualizing enhanced ones. It is often depicted as a chart, as shown in Figure 2.7 and Table 5.4, and describes a product or service value proposition, consumer segments and relationships, and components including value streams and activities, along with the cost structure and potential revenue streams. A business model canvas defines and analyses the key assumptions regarding a new or changed business model. It is often used as a communication tool, to explain a new or enhanced business model and prompt further discussion and decision-making with key stakeholders.

Table 5.4 Business model canvas example

<table>
<tr>
<td rowspan="2">Key partners and suppliers
With whom do we need to work to produce and deliver the solution?
What key activities do we need partners or suppliers to provide?</td>
<td>Key value streams, processes, and activities
What do we need to do to produce, market, and deliver the solution?
What information and technology is needed?</td>
<td rowspan="2">Value propositions
What problems or needs does this solution solve or satisfy?
How does this solution fit into the overall strategy?
How do we create a sustainable, competitive advantage?
What does success look like?</td>
<td>Consumer relationships
How do we acquire and retain customers?
How do we talk to customers, users, and/or sponsors about our solution?</td>
<td rowspan="2">Consumer segments
Who will buy or use this solution?
Who are our most important customers?
How large is the current and future market for this solution?</td>
</tr>
<tr>
<td>Key resources
What do we need to have to produce, market, and deliver the solution?</td>
<td>Channels
How do we deliver the solution to customers?
Where will customers be able to obtain the solution?
How do other organizations currently reach customers?</td>
</tr>
<tr>
<td colspan="3">Cost structure
What are the key cost contributors for the solution?
How will the solution be priced?
What margins do we expect?</td>
<td colspan="2">Revenue streams
What is the revenue model?
What level of value are our customers willing to pay for?
What are the potential service offerings and/or value-add services?</td>
</tr>
</table>

Changes to the business model are not guaranteed to be successful. There have, however, been certain recurring traits in successful transformations. These can be evaluated and utilized when designing a business model, according to Kavadias *et al.* (2016):

- **Personalization** Tailored products or services are better able to meet customer needs. IKEA's modular designs enable customization and are a good example of personalization.
- **Closed loop** Replacing linear consumption processes with closed-loop ones will ensure that used products are recycled, reducing overall resource costs. An example of this business model is printing cartridges for copy machines.
- **Asset-sharing** Sharing costly assets with customers without the organization having to own them, as seen with companies such as Uber.
- **Usage-based pricing** Charging customers only for when they use a product or service (e.g. cloud platforms that provide on-demand, autoscaling computing).
- **Collaborative ecosystem** Collaborating with supply chain partners though a technology platform, thus spreading business risks more appropriately, leading to further cost reductions. Examples of collaborative ecosystems are global retailers such as Amazon or Alibaba.

The key is to link market needs with emerging technologies. The more links there are, the higher the chances that innovations will be successful, and the more likely it is that the organization will transform the industry.

There are many different patterns or designs that can be used when designing business models. Several of these patterns are listed, along with short descriptions and examples, in Table 5.5 (Johnson, 2010). These patterns can be used when reviewing and reworking the organization's business model.

The following sections provide an overview of how business models (depicted as business model canvases) can be used to drive a variety of outcomes.

5.1.4.1 Business models and innovation

When using business models for innovation, the objective is to generate new ideas to either enhance existing business models and the associated value propositions, or create entirely new ones. This is achieved by collecting information from various sources and reviewing them across current or new business models, as illustrated in Figure 5.5. The use of ideation techniques, such as creating scenarios, storytelling, and prototyping, generates ideas that might lead to market diversity.

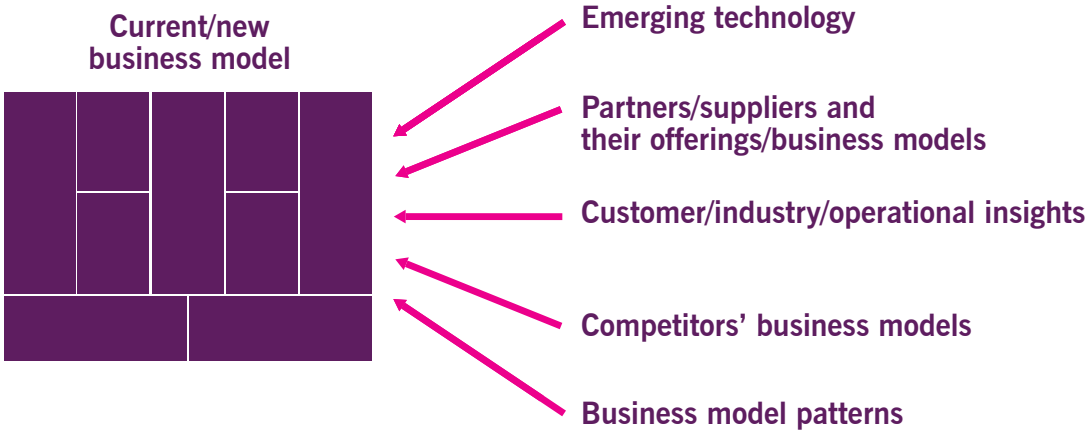


Figure 5.5 Business model for innovation

Table 5.5 Business model patterns

Patterns	How it works	Examples
Affinity club	Form partnerships with and pay royalties to a membership organization, for the right to sell products and services exclusively to the membership organization's customers, thereby providing access to new customers and expanding the customer base	MBNA credit cards
Brokerage	Convene buyers with sellers and charge a fee per transaction to one or another party	Real estate platforms Travel websites eBay
Bundling	Package related products and/or services together	Fast-food value meals Apple iPod/iTunes
Demand-based pricing	Differential charging based on demand patterns	Cell phone carriers Utility companies Public transit Uber (surge pricing)
Crowdsourcing	Get a large group of people to contribute content for free	Wikipedia YouTube Linux
Disintermediation	Provide products and services directly to customers, thereby sidestepping traditional intermediaries	Tesla WebMD Canyon Bicycles
Fractionalization	Sell partial use of a product or service	Time-share condos, planes, or boats
Freemium	Offer basic services for free (beyond a free, time-bound trial) and charge for premium services	Recruiting websites Video-conferencing platforms
Leasing	Rent rather than sell high-margin, high-priced products	Cars Copiers
Low touch	Lower prices by decreasing the level of service	Walmart IKEA
Negative operating cycle	Lower prices by reducing inventory and receiving payment before delivering the offering	Amazon Alibaba
Pay as you go	Charge for actual usage of services consumed	Gas and electricity companies
Razor and blade	Offer the main, high-margin component below cost to increase volume sales of the low-margin, high-volume companion products or services	Gillette razors (the originator of the pattern) Printers and ink
Reverse razor and blade	Offer the main, low-margin component below cost to encourage sales of the high-margin companion product	Amazon Kindle Apple iPod/iTunes
Reverse auction	Set a ceiling price and have participants bid as the price drops	Freelance work platforms
Product to service	Rather than selling a product, sell the service the product performs	Car-sharing services
Standardization	Standardize a previously personalized service to lower costs	McDonald's Southwest Airlines
Subscription	Charge a monthly or annual subscription fee to gain access to a service	Netflix Software as a service platforms
User communities	Grant members access to a network and charge both membership fees and advertising	Angie's List (home services website)

Information for new ideas can be collected from:

- **New/emerging technology** New applications of technology can be identified by assessing the use of emerging technologies in specific scenarios across a business model.
- **Partners/suppliers and their offerings/business models** By reviewing partner and/or supplier offerings and business models across the market, and even in adjacent markets, innovative ways of creating or delivering value might be discovered.
- **Customer/industry/operational insights** Gathering insights from customers, the industry, and even internal operations, to emphasize emerging behaviours or patterns, can result in innovative ways of providing value.
- **Competitors' business models** These are also good sources of inspiration, and, when coupled with the other sources of information, they can emphasize underserved market segments or customer needs. However, simply copying other organizations is not a strong approach. Rather, this should be used as inspiration to identify how unique, differentiated products and services can be delivered, based on consumer needs.
- **Business model patterns** An assortment of generic business model patterns or archetypes can be referenced to generate ideas for delivering value in new ways. These are a great source of ideas when combined with the insights and information discussed above.

5.1.4.2 Business models as a validation and benchmarking tool

The purpose of using business models for validation and benchmarking is to identify improvement opportunities within current or new business models, as shown in Figure 5.6.

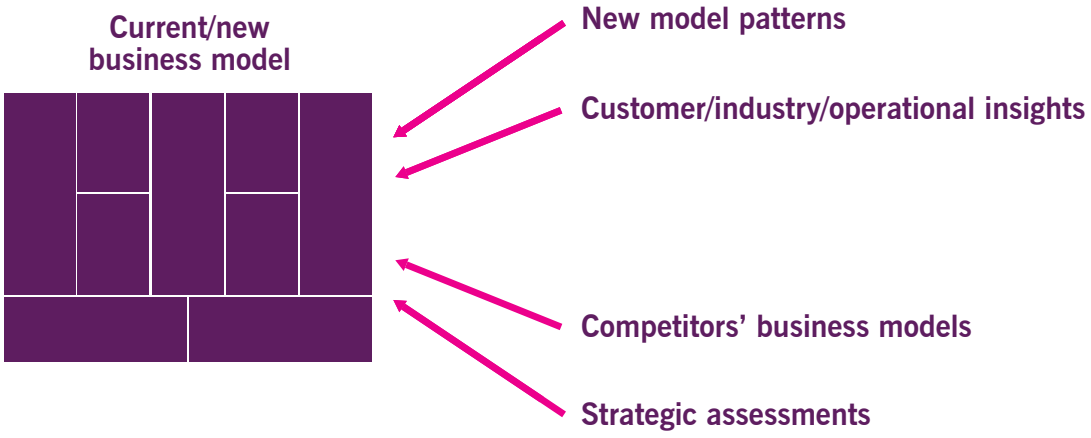


Figure 5.6 Business model for validation and benchmarking

New business models or prototypes can emerge from innovations. Alternatively, innovations can identify methods for improving current business models. New business models can be benchmarked against current ones to find disparities. A new model can be inserted into a project plan to transition a current business model to its new state. A variety of new business models can be benchmarked against each other to determine which is the best strategic choice.

Insights from customers, industry, and internal operations can be evaluated against current business models, to identify gaps between the intended business model and reality. These gaps can indicate opportunities for business model innovation, or can represent the need to review and rework an organization's operating model or marketing efforts.

By comparing its current business model against a competitor's, an organization can determine where potential threats might exist (for example, competitors that offer value propositions that the organization does not), and where efforts need to be focused in addressing these threats. By evaluating its current business model against a current strategic assessment, an organization can identify whether it is adequately positioned for the market, both now and in the future. Alternatively, this could lead to the discovery of imminent threats that must be addressed.

5.1.4.3 Business models as a communication and alignment tool

The purpose of using a business model for communication and alignment is to ensure that its intended value proposition is clearly articulated, along with how that value is created and delivered, as shown in Figure 5.7.

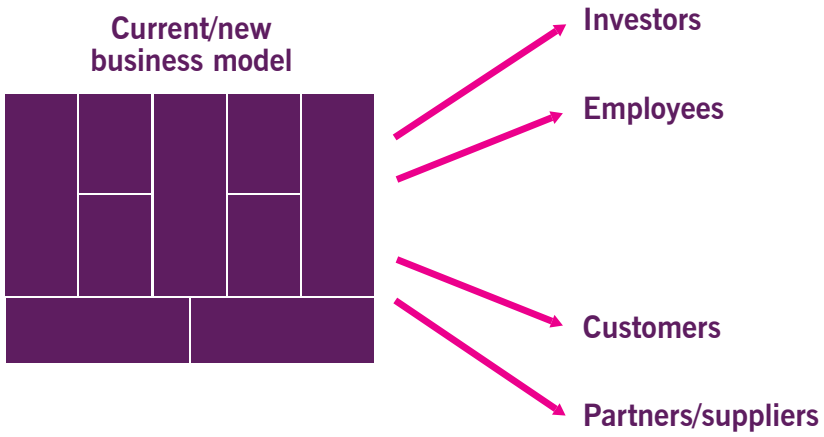


Figure 5.7 Business model for communication and alignment

The value proposition is communicated to:

- **Investors** A well-articulated business model and its earning potential can be communicated to potential investors to increase the attractiveness of the investment.
- **Employees** All employees need to clearly know what work they are doing and how they are providing value to consumers. A business model canvas illustrates the business model, how employees are aligned to the organization's intended value, and how that value will be created and delivered. This will improve organizational performance and the customer experience.
- **Customers** A clearly communicated value proposition will attract customers and grow the organization's market share.
- **Partners/suppliers** Partners and suppliers should understand the value that the organization is trying to deliver, and how it plans to create and deliver it. This will help them understand how they are involved in delivering that value, and will ensure a harmonious relationship between them and the organization.

The ITIL story: Using business models for strategy planning

Anya: *Though it is important to create a vision based on strategy, organizations also need to configure themselves to be able to realize that vision. At Axle Car Hire, we have worked extensively on our business model, and we continue to revise and refine it based on internal and external feedback. Our new food delivery venture has deliberately adopted a different business model, albeit one that is still aligned to Axle's overall business model. We are creating something innovative, so it is important that our business model can enable the venture to succeed.*

Dave: *Using techniques such as the business model canvas during discussions on the food delivery service illustrated many of our internal activities and key resources, our relationships with our key partners and suppliers, and our cost structures and revenue streams. No one can keep track of all the variables we work with, and the canvas helps people to communicate diverse perspectives.*

Su: *Participating in the business model discussions helps me to understand how our products fit into the broader ecosystem both within Axle Car Hire and beyond it. This exemplifies the ITIL guiding principles of 'focus on value', 'collaborate and promote visibility', and 'think and work holistically'!*

5.2 Strategic approaches for digital organizations

A digital organization's strategy expresses its values and business model. The strategic focus and supporting approaches differ depending on the key values (e.g. from lower to higher levels of the Barrett model). The approaches adopted and developed at the lower levels are likely to remain valid and useful when the organization evolves to the higher levels. Table 5.6 describes the key focus areas of the strategic approaches at the different levels.

Table 5.6 Key focus areas of the strategic approaches

Levels of the Barrett model	Key focus areas of the strategic approaches
Purpose (alignment/collaboration/contribution)	Social responsibility Sustainability Community involvement Transparency Employee fulfilment
Evolution	Innovation Agility and resilience Organizational changes Knowledge and learning
Foundation (viability/relationships/performance)	Customer/market relevance Operational excellence

5.2.1 Strategic approaches for customer/market relevance

When an organization has decided on the focus and structure of its business model, it will need to define specific approaches to achieve and maintain customer and market relevance. As explained in Chapter 3, it should be noted that these approaches are not mutually exclusive with the approaches described in sections 5.2.2 to 5.2.4. A balanced approach is needed.

'Customer relevance' refers to an organization's ability to continually meet and exceed customer expectations, and changes to the customer and their context. Consumer needs change over time, and the organization remains relevant by understanding what value looks like from the consumer perspective. The traditional drivers of consumer value remain relevant. McCarthy (1960) described the four Ps in *Basic Marketing: A Managerial Approach.* They are:

- product
- price
- promotion
- place.

Unsurprisingly, since the concept was developed with marketing in mind, this view of value is provider-driven or provider-centric. It was later amended by Lauterborn (1990) to a 4 Cs classification to represent a more consumer-centric consideration of consumer value. These 4 Cs are:

- consumer wants and needs, instead of the product or service itself
- cost instead of price, since consumers also include costs other than the price of the item they are purchasing, such as the cost of their time and effort
- communication instead of promotion, since it implies a more collaborative approach of value co-creation and evolution
- convenience instead of place, since consumers can order and receive products and services where it is most convenient for them, rather than where the supplier has a location.

Additional complexity arises when government, non-profit, and commercial organizations have multiple consumer groups, partners, and other organizations that they provide products and services to, each with a different perspective of value.

'Market relevance' refers to an organization's ability to continue to operate within a market that is characterized by a particular use of digital technology, and how that technology and its use changes.

These strategies all depend on understanding the customer's context and experience and how these change over time, and their use of the organization's products and services.

The following sections provide an overview of several approaches, tools, and techniques that can help an organization understand the challenges posed by customer needs, elevate the customer experience, and retain customer and market relevance.

5.2.1.1 Customer journeys

> *The purpose of a business is to create a customer.* Peter Drucker

Customer journeys, defined in more detail as part of *ITIL®4: Drive Stakeholder Value,* are the sum of experiences that customers have with a service provider. From a strategic perspective, they provide insight about service consumers to leaders and other key stakeholders.

Strategic approaches to customer/market relevance start by assuming that a customer's reason for engaging with an organization is broader than the service or product itself. By understanding what the customer is trying to achieve and/or the customer's challenges, and how each type of customer researches, buys, and uses products and services, an organization can increase its value by offering a more focused solution and meeting a greater percentage of its customers' needs. For example, a global financial services company changed its organization's structure to match customer journeys. It created a new business unit called Finding a Home, by merging Home Loans and the Household Insurance divisions into a single business unit and adding a realtor matching service. Not only did this increase customer loyalty and net promoter scores, but it also augmented its sources of revenue.

The key aspect of this approach is centred around the customer journey, which provides a view into how a customer or user interacts with a product or service (see Figure 5.8 for an example of a customer journey).

Definition: Customer journey

The complete end-to-end experience that service customers have with one or more service providers and/or their products through touchpoints and service interactions.

The various elements of a customer journey can be described as follows:

- Definition:
  - represents the perceived experience by a customer or user through a defined end-to-end process
  - can also be used to design the future experience for a new or existing service
- Purpose:
  - provides the ability to map out what customers/users feel is important and determine the gap between desired experience and reality
- Key elements:
  - persona: representation of a user or customer who is completing the journey
  - journey steps: each step of the journey is mapped out, including wait times
  - thoughts and feelings: key positive and negative emotions felt during the journey
  - touchpoints: interactions between people, technology, services, value streams, etc.
  - underlying ecosystem: capturing the effectiveness of the organization, tools, and policies that contribute to the perceived experience
  - current state (focused on how customers perceive a service today) vs future state (predict the experience using personas as a hypothesis).

Design thinking has become an important framework for ensuring a customer-focused approach, by using it to solve problems through empathizing with the person experiencing the problem. It is a form of human-centred design, and is used to solve highly ambiguous problems that are complex and not yet understood. Design thinking typically involves a series of steps, involving time to empathize and define the problem statement before developing a potential solution.

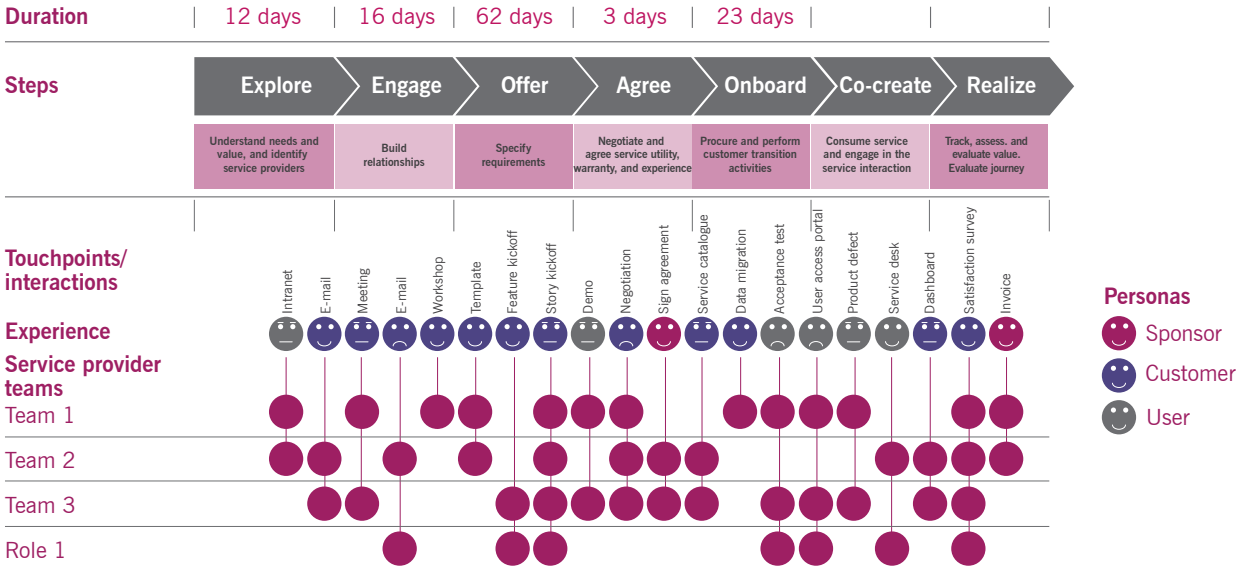


Figure 5.8 Example of a customer journey map

5.2.1.2 Omnichannel delivery and support

Another approach is the use of an omnichannel strategy. The objective of a seamless omnichannel approach is to ensure continual customer engagement across multiple communication and delivery channels, both online and offline, to deliver consistent and positive customer experiences.

The Walt Disney Company is a good example of an organization that has created a robust online and offline omnichannel customer experience across several channels, including theme parks, hotels, restaurants, films, television, cruise lines, and merchandising. The My Disney Experience website and mobile app allows families to plan their entire Disney holiday experience with a single tool, which leads to an enhanced customer experience, better customer engagement and brand loyalty, and increased spending both online and offline. These communication channels are touchpoints that customers interact with to reach their desired outcome. Distribution channels can be either direct (serving the organization's own internal functions) or indirect (originating from partners). Table 5.7 provides some examples of the different types of channel.

Table 5.7 Examples of different types of channel

Channel type	Function examples	Outcome examples
Direct	Sales and marketing	Customers directly engage with a service provider in multiple ways across websites, emails, and chat to gain access to the product or service
Indirect	Broker Reseller	Customers engage with a third party, who provides access to a portfolio of services and capabilities to meet their needs

To provide an effective omnichannel experience, an organization must develop two features related to the customer experience:

- **Digital customer experience** This focuses on customer interactions to ensure a positive experience, and on developing the appropriate interaction mediums.
- **Digital operational excellence** This focuses on the underlying ecosystem required to deliver the customer experience, including both the internal functions within the organization and the partners and third-party services that must be managed and integrated.

Another aspect of omnichannel strategies is the use of digital technology to link the different communication channels used in the customer journey to provide a consistent experience. For example, a shopper is able to explore products from a home computer, then go to the store, complete the sale on a mobile phone, and track the item's delivery. This is discussed in more detail in *ITIL® 4: Drive Stakeholder Value,* and is illustrated in Figure 5.9.

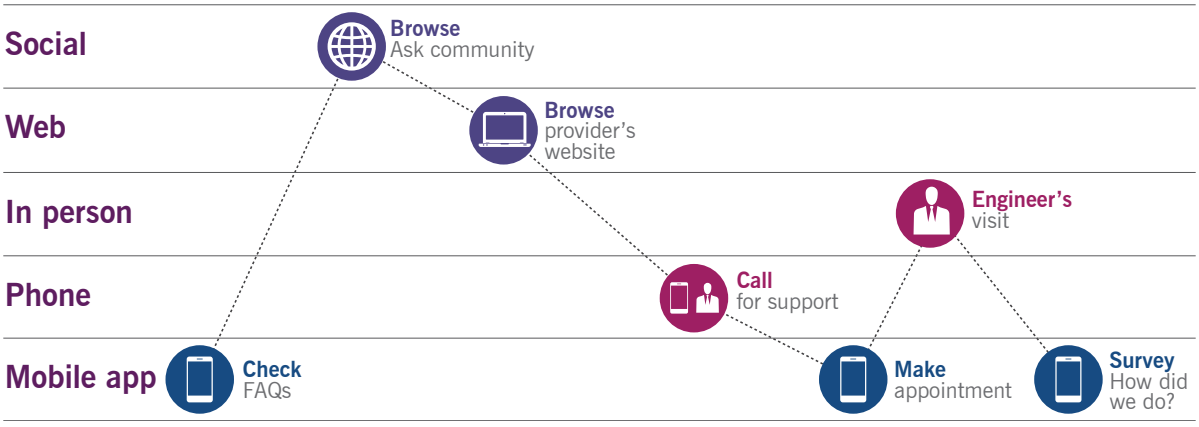


Figure 5.9 Seamless user journey with omnichannel management

5.2.1.3 Context-sensitive delivery and support

An organization must tailor its approach to customers through its response to situations where the customer is on their journey. It is important to understand the customer and their desired outcomes, to encourage customer engagement. This can be achieved by evaluating the context of all interactions captured to drive insights and become more responsive. There are three aspects to consider when developing a context-sensitive approach:

- **Evaluating interactions** The use of omnichannel capabilities provides a broad spectrum of information on how customers interact with an organization. Understanding the pattern of these interactions and the context by which they occur will help tailor the support provided.
- **Building feedback mechanisms** Developing feedback loops within existing products and services provides the data needed to respond effectively. This approach provides the ability to support real-time response to adapt to customer needs.
- **Developing analytical capabilities** The sheer amount of data that can be collected is endless, and hence developing analytical capabilities (discussed in the next section) enables more data-driven decisions to improve the overall experience.

5.2.1.4 Customer analytics

Collecting, analysing, and understanding vital customer data and analytics should drive strategic decision-making across the organization. Information about how and why customers have engaged with the organization in the past, and their demand for new and future products and services, can point to gaps in the organization's portfolio and performance.

This information is particularly helpful if it can be correlated with environmental factors; for example, understanding the brands that customers have purchased to determine the future trends of economic indicators, and the likelihood of a shift in customer purchasing behaviour.

5.2.1.5 Customer 360 approach

Customer 360 is an approach that has been used by organizations over the years. It uses the advances in digital technology, specifically data virtualization and analysis, to analyse consumers' needs, preferences, and behaviours. The Customer 360 approach focuses on obtaining data from multiple sources, such as internal CRM and financial systems, and external social media feeds. This data is then integrated into a comprehensive view of the consumer's relationship with the company, and of other environmental influences.

The insights gained from this analysis enable organizations to design services and products to meet a broader range of needs, or to provide additional methods of engaging existing or potential consumers. The aim is to better meet a consumer's need, or to expand a consumer's use of the organization's products and services; thereby reducing the customer's reliance on competitors or alternatives.

5.2.1.6 Staying relevant: evaluating and responding to customer feedback

The ability to obtain close to real-time feedback and evaluation is critical to maintaining customer relevance. The most successful digital companies maintain a singular focus on customer needs. New or changed products and services are derived from interactions with, and an understanding of, customer needs.

Customer satisfaction and net promoter scores can indicate where an organization's strategy is strong, and where there are gaps that need to be addressed. This data should be validated with frequent face-to-face interaction with consumers, to understand their perspective, goals, perceptions, and needs.

The ITIL story: Strategic approaches for customer/market relevance

Su: *Examining and improving how we meet our customers' needs is an important part of my job. Techniques such as customer journey mapping and analytics help us to understand how our customers experience our products and services, and enable us to correlate that experience with other variables, such as the time it takes to book a vehicle on the website, as opposed to via the app.*

These techniques are essential for the new food delivery service. As we are moving into an area that Axle has not previously worked in, it is critical that we understand our customers' needs and how we can meet them.

5.2.2 Strategic approaches for operational excellence

Organizations must also focus on operational excellence, otherwise attempts to use technology to benefit the customer will be inconsistent, short-lived, and ineffective. Operational excellence impacts the effectiveness of the four dimensions of service management:

- **Organizations and people** Organizations that display organizational excellence have clear roles and responsibilities, and a culture of experimentation and continual improvement. In addition, the level of governance and control is intentional and balanced. Unnecessary bureaucracy is analysed, and removed when it does not add value. Decisions are made using a risk-based approach and delegated to teams who perform the work (see *ITIL®4: Direct, Plan and Improve* for additional detail on decision-making).

- **Information and technology** This is shared across the organization. Human resources focus on high-value tasks. Low-value, repetitive activities are optimized and automated. Information and technology systems are integrated across the organization to increase the flow of data, information, and knowledge.
- **Partners and suppliers** Collaborate with strategic partners and suppliers to enable growth, innovation, and continual improvement.
- **Value streams and processes** Identify gaps and eliminate waste by visualizing the value streams that deliver key products and services to customers. Practices and processes must be refined so that actions are clear, repeatable, scalable, efficient, and effective.

The interactions between the dimensions are shown in Figure 4.1 (see also section 4.1.2).

Examples of how organizations use operational excellence to gain a competitive advantage and create value include:

- **Scale advantage** These are organizational models based on building a competitive advantage by growing the organization or its customer base. For example:
  - A large company uses its size to achieve economies of scale. Its increased bargaining power and ability to spread its costs over a broader base of business units make it difficult for smaller organizations to compete on cost.
  - A company launches a platform that becomes the preferred way for customers to explore and purchase products or services.
- **Incumbency advantages** The first organization to enter the market often becomes the preferred provider. New entrants must overcome a lack of credibility, and provide higher-quality or more specialized competitive products or services.
- **Resource-based advantages** Organizations rely on the fact that they have access to resources that other organizations do not. To enable a resource-based competitive advantage, the resources are valuable, rare, non-replicable, durable, and organization-specific. These include company secrets, patents, culture, etc.

The following sections cover some approaches that support operational excellence.

5.2.2.1 Continual improvement as a basis for strategy

Although it is important to have a culture of continual improvement, strategies based on improvement alone are not disruptive by nature, as they are based on the assumption that the current business model provides a competitive advantage, and therefore the nature of the business does not need to be changed. Rather, continual improvement ensures that the organization does not lose customers, and maintains its market position.

Continual improvement is incremental in nature and, although it might leverage some invention or innovation, it does not seek to disrupt the industry or market. As a key strategic approach, it is suitable for legacy environments and stable industries or markets. Nevertheless, continual improvement should form part of every strategy. Even organizations that are reliant on innovative disruption must be able to deliver consistent, stable, and improved services and products over the long term.

There are two types of strategy that try to improve suboptimal performance within an organization:

- **Information and technology modernization** This approach might be taken when performance has degraded over time due to ageing technology, or where frequent additions and changes to equipment or applications have improved functionality but have slowed and increased the cost of maintenance.
- **Value stream and process improvement** This approach might be taken when significant changes occur within the organization's internal environment. For example, a business process might change so much that its supporting technology solution is no longer effective.

5.2.2.2 Automation

A cohesive approach to automation can improve the customer experience and operational excellence. Automation provides new products and services, and changes an organization's strategy, business models, and overall vision. The use and benefits of automation are continually changing, and can be configured to complement the organization's environment.

Automation strategies are aimed, as described here, at improving performance or expanding operational activities to accommodate growth.

They are based on commoditizing lower-level activities and decisions, by either replacing or augmenting the staff who perform those tasks. The end result is the ability to do more with fewer people, and to redeploy staff into higher-value roles. Automation strategies must, therefore, include education and training programmes for staff who are expected to be redeployed.

Three levels of automation are illustrated in Table 5.8.

Table 5.8 Descriptions of the three levels of automation

Level of automation	Description
Simple automation	The ability to automate commonly performed actions or decisions. These strategies are aimed at reducing cost and increasing speed, but do not change the fundamental operation of the organization. With this type of automation, closed and open feedback loops are identified and automated (e.g. simple automation might include the automation of a business process such as a service request).
Complex automation	The ability to coordinate several simple but related automated activities or decisions. Complex automation, for example, might include the automation of several related processes, such as employee onboarding or the automation of several components of a value stream.
Intelligent automation	The ability to automate commonly performed actions or decisions differently depends on shifting contexts or objectives; for example, using artificial intelligence to automate decision-making in a loan application process, involving the analysis of multiple variables before moving on to the next step. Infrastructure as code is another example of intelligent automation.

5.2.2.3 Service optimization

Service optimization strategies are continual improvement strategies, aimed at improving the quality or performance of a specific service. The service must be assessed, to determine whether it is involved in achieving the organization's objectives and fulfilling customer needs, before embarking on an optimization strategy.

5.2.2.4 Technology modernization

These strategies are aimed at improving performance and efficiency, by replacing ageing technology that has become too expensive to maintain, or inappropriate architectures that are unable to support the functionality or performance required by changing business needs.

5.2.2.5 Sourcing strategies

Shadow IT is now an accepted business practice in many organizations. However, the potential lack of control over supplier relationships and contracts, along with a lack of oversight of technology investment, requires strategies to arrange sourcing.

A digital organization needs to be able to rely on suppliers who can change with it, and a set of contracts that enables this to happen. Sourcing strategies must:

- support the organization's financial strategies
- coordinate the efforts of multiple suppliers whose performance, services, and products are interrelated and interdependent in the service value system
- provide for flexible contracts that allow the organization to change and adapt to its changing environment without penalizing the supplier
- focus on the relationship between the organization and its suppliers, to ensure ongoing strategic alignment.

ITIL® 4: Create, Deliver and Support explores outsourcing strategies and common service integration and management models: service guardian, single provider, retained service integration, and service integration as a service.

5.2.2.6 Workforce strategies

Workforce strategies should also be considered when trying to achieve operational excellence. This includes hiring for the future technical and soft skills that the digital organization will need. It also involves effective onboarding, training and development, and employee engagement programmes. Employees, partners, and suppliers should clearly understand the organizational goals, expectations, roles and responsibilities, existing processes, value streams, and practices needed for consistent performance, and for identifying and implementing improvements (see the workforce and talent management practice guide for additional details).

5.2.2.7 Employee 360 approach

Similarly to the Customer 360 approach, the Employee 360 approach uses advances in digital technology, specifically data virtualization and analysis, to analyse employees' needs, preferences, and behaviours. The Employee 360 approach focuses on obtaining data from multiple sources, such as internal systems and external social media feeds. This data is then combined to provide a comprehensive view of the employees' experience.

The insights gained from this analysis enable the organization to learn as much as possible about employees' working patterns in relation to their job functions, value streams, and business outcomes. This ensures that the organization can optimize working patterns, provide more suitable tools and techniques, improve the environment, and remove restrictions on productivity.

The employee journey is an important aspect of the employee experience. It consists of the actions that each employee takes to perform their daily work. A better understanding of employee journeys can ensure that tasks and tools are better positioned, to enable a seamless flow of work and reduce interruptions.

It is important that an ethical approach is taken when conducting this work, and that employees' privacy is respected in collecting and analysing this data. The objective is to create a more satisfying, productive work environment, not to demotivate employees by spying on them.

The ITIL story: Strategic approaches for operational excellence

Dave: *An important part of our business model focuses on how we go to market, or how we interact with customers and channel partners. But the model is incomplete unless we take the time to understand how we should organize ourselves to meet our customers' expectations.*

This might mean using the business model to discuss how we invest in automation to allow cars to be booked more quickly, or what sort of partners and suppliers we will work with to ensure our delivery vehicles meet food safety standards. We might also use the model to assess the skills and staff we need, so we are ready to tackle whatever challenges come our way.

5.2.3 Strategic approaches to evolution

Organizations that base their business model on the ability to utilize emerging opportunities need to be innovative and agile, embrace organizational changes, and continually develop new competencies. There are many approaches to developing these traits, some of which are described in other chapters. A brief overview is provided below.

5.2.3.1 Innovation

Definition: Innovation

The adoption of a novel technology or way of working that has led to the significant improvement of an organization, product, or service.

The definition highlights the fact that, on its own, novel technology or ways of working are not innovations, and do not necessarily improve a situation. Novel technology is required for innovations to happen, but just because it is new is not sufficient. Novelty does not guarantee innovation: technology and approaches are only innovative if their adoption leads to improved value. The key capabilities essential for an organization to benefit from innovations are:

- research and development to generate and identify innovation opportunities
- continual analysis of opportunities
- effective implementation of selected technologies or ways of working.

These capabilities introduce requirements to multiple practices, such as business analysis, portfolio management, project management, change enablement, organizational change management, workforce and talent management, and relationship management. A dedicated value stream will probably be needed to manage innovations.

Innovativeness, just like any strategic objective, cannot be managed by a small, specialized team working in isolation. If chosen as a strategic priority, it should be embedded into the organization's operation at every level. The organization should discover innovation opportunities, by continually monitoring relevant sources, and via internal research and development work.

Initiatives should be processed promptly and transparently, with effective feedback loops. Where possible, an initiative's originators should be involved in realizing it. Its effect should be reviewed and reported, with a high tolerance for failure. This is because some initiatives might prove to be ineffective.

See Chapter 10 for more information on managing innovation.

5.2.3.2 Agility and resilience

Definitions

- **Organizational agility** The ability of an organization to move and adapt quickly, flexibly, and decisively in response to events in the internal or external environment.
- **Organizational resilience** The ability of an organization to anticipate, prepare for, respond to, and overcome adverse events in the internal or external environment.

External influences could be political, economic, social, technological, legal, or environmental (PESTLE). Resilience cannot be achieved without a shared understanding of the organization's priorities and objectives. This sets the direction and promotes alignment, even when external circumstances change. In extreme situations, resilience is provided by effective continuity, when normal capability to adapt to changing circumstances is insufficient. Agility supports resilience by enabling the internal changes required to adapt to external influences.

The organization's purpose and vision manage the form of agility and resilience expected by the stakeholders, and influence the organization's business model. The strategy transforms this direction into strategic objectives, models, and initiatives to achieve the required form of organizational agility and resilience.

For more information on achieving organizational agility and resilience, see Chapter 8 and the strategy management practice guide.

5.2.3.3 Organizational change management

An organization cannot evolve without an effective and established organizational change management (OCM) practice. People are responsible for behavioural changes, which are a response to changing circumstances.

OCM is used to develop a value-driven environment across the organization and enable successful changes. The organizational vision requires stakeholders to adopt new ways of working, and minimize the risks and any negative impact on the quality of services and/or products and the consumer experience.

Stakeholders must display presence, consciousness, self-leadership, and responsibility when embarking on efforts to change behaviour. Throughout the whole organizational change lifecycle, is important to focus on the individuals involved in the change, the relationships between them, and the systems in general.

To achieve effective and sustainable organizational changes, an organization should:

- create and maintain a change-enabling culture across the organization
- establish and maintain a holistic approach and continual improvement for OCM
- ensure that organizational changes are realized in an effective manner, satisfying stakeholders' needs and meeting compliance requirements.

These actions can be supported by following these principles:

- clear and relevant objectives
- strong and committed leadership
- willing and prepared participants
- sustained improvement.

An organization's leaders should adapt these principles to achieve the desired outcome. For more information on these principles and the OCM practice, see the organizational change management practice guide.

5.2.3.4 Knowledge management

Continuing professional development and effective knowledge management are essential for an organization's evolution. The ability to learn depends on the organization's absorptive capacity.

Definition: Absorptive capacity

An organization's ability to recognize the value of new information, embed it into an existing knowledge system, and apply it to achieve the intended business outcomes.

An organization should continually develop absorptive capacity, to be innovative and adaptive to change. Absorbing and integrating new knowledge from outside the organization and into the knowledge system is complex. It should occur simultaneously on various levels (external, organizational, teams, and individuals). It should also consider the four dimensions of service management (Mikhailava, 2011).

This continual development of absorptive capacity can be achieved by creating and using new knowledge to support innovations and encourage an adaptive change culture. The SECI (socialization, externalization, combination, and internalization) model of knowledge dimensions, developed by Nonaka and refined by Takeuchi (Nonaka and Takeuchi, 1995), is particularly useful for this purpose. It is used to describe knowledge-sharing and the transformation process at any level of an organization.

The model describes two types of knowledge, explicit and tacit:

- Explicit knowledge can be transferred to others, codified, assessed, verbalized, and stored. It includes information from books, databases, descriptions, etc.
- Tacit knowledge is difficult to transfer, express, codify, and assess. It is based on experience, values, capabilities, and skills.

It also considers two dimensions for knowledge creation:

- The conversion of tacit knowledge to explicit knowledge and vice versa.
- The transfer of knowledge from an individual to groups/organizations.

The SECI model identifies four ways in which knowledge is combined, transferred, accepted, and shared, as shown in Figure 5.10.

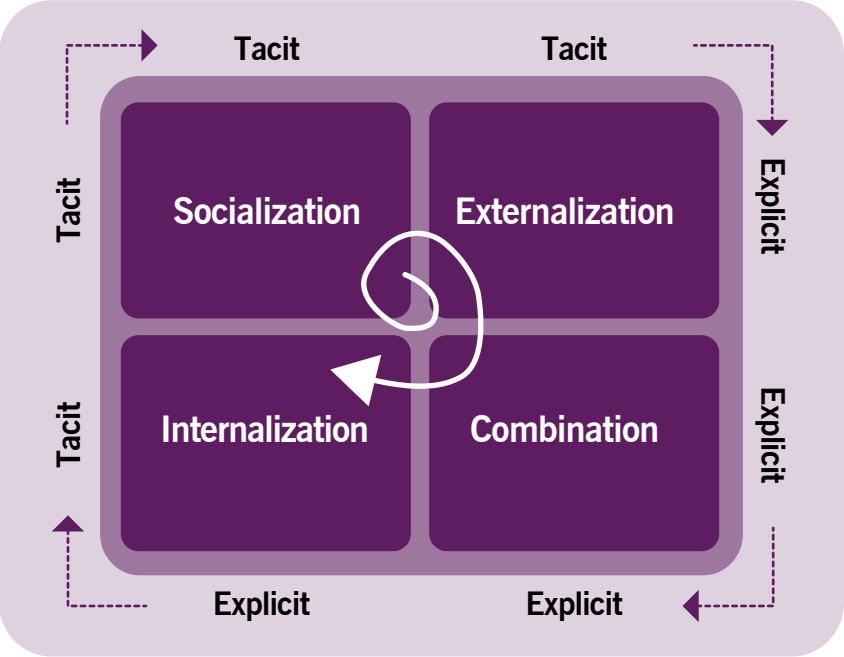


Figure 5.10 The development of knowledge-sharing according to the SECI model

To achieve effective and continuing knowledge management, an organization should:

- create and maintain valuable knowledge and utilize it across the organization
- effectively use information to enable decision-making across the organization.

For more recommendations on achieving these aims, see the knowledge management practice guide.

5.2.4 Strategic approaches to social responsibility and sustainability

The concept of a sustainable organization evolved from a focus on environmental matters to a wider understanding of sustainability. It is a key feature in the vision and strategy of many organizations, and is increasingly important within the context of VUCA business environments.

Definition: Sustainability

A business approach focused on creating long-term value for society and other stakeholders by addressing the risks and opportunities associated with economic, environmental, and social developments.

The social aspect of sustainability includes employee fulfilment, which is based on the concept of employee wellbeing and continuing development. It has now expanded to include the employee's need for purpose.

5.2.4.1 Triple bottom line

Organizations are moving from a focus on profitability to the triple bottom line, an approach that covers economic, social, and environmental aspects, as shown in Figure 5.11 (Bordoloi *et al.*, 2018). The triple bottom line marks a shift from short-term financial goals to long-term sustainability goals. Sustainability goals improve an organization's reputation and drive stakeholder value for customers, employees, and society in the form of better health, climate, and resource utilization.

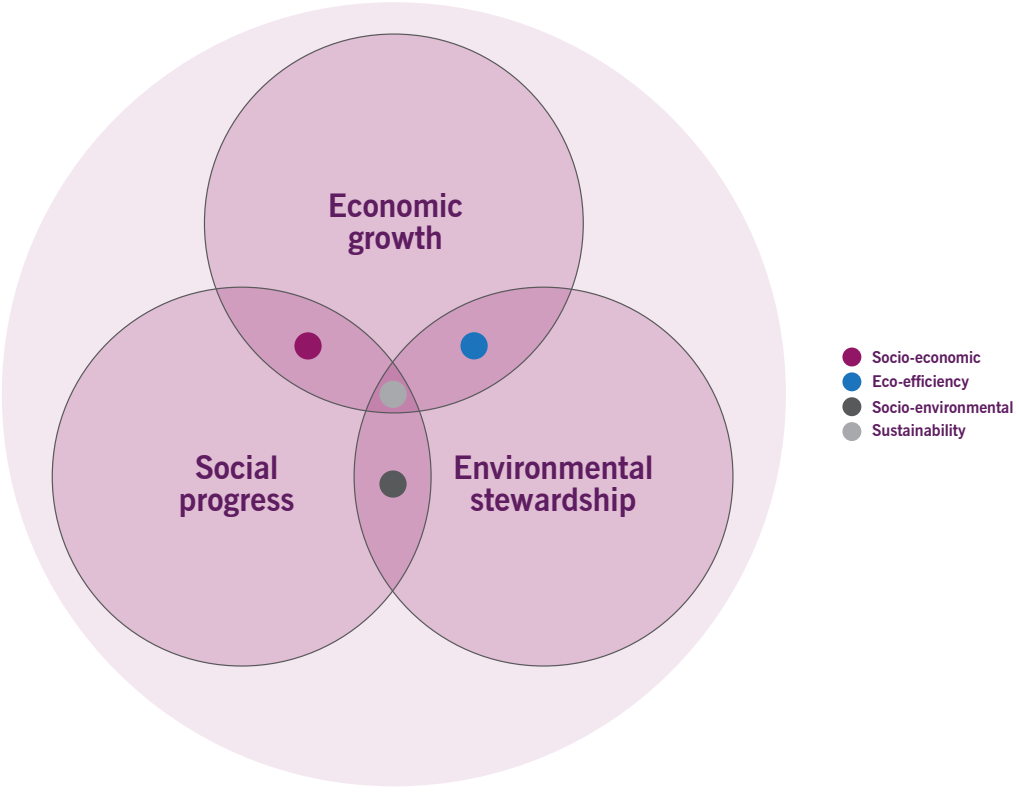
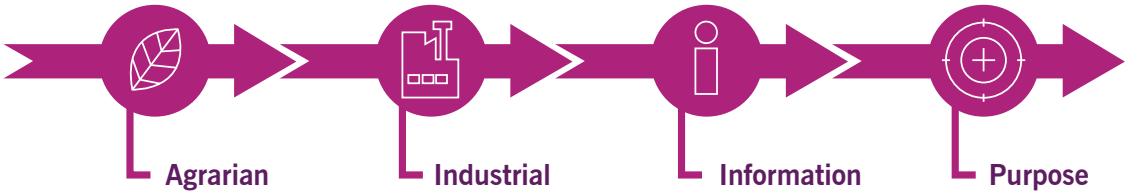


Figure 5.11 The triple bottom line model

To enable sustainability as a strategic priority, an organization should embed appropriate principles, objectives, and ways of thinking and working into all of its teams, value streams, products, and services. The strategy management practice ensures that the sustainability principles and objectives are clearly defined and communicated, so they can be embedded into the organization's approaches and practices, such as architecture management, supplier management, business analysis, service financial management, relationship management, service design, and portfolio management. Considerations, challenges, and suggestions from these practices are important inputs to the strategy definition. Sustainability strategy should be developed by the organization, rather than by a small group of leaders.

5.2.4.2 Employee fulfilment

The concept of employee engagement positioned employees as stakeholders. Organizations now acquire and retain talent and drive innovation, by meeting employees' individual needs. The evolution of workforce and talent management exceeded the traditional focus on commitment, satisfaction, and discretionary effort. Nowadays, organizations must also focus on the employees' sense of purpose (PricewaterhouseCoopers, 2018).



	Agrarian	Industrial	Information	Purpose
Employee value proposition	Survival	Satisfaction	Engagement	Meaning and fulfilment
Desired employee characteristics	Strength	Efficiency	Knowledge and curiosity	Self-awareness
Development focus	Stamina	Craft mastery	Creativity and innovation	Purpose

Figure 5.12 Evolution of work

There is a clear correlation between Figure 5.12, which shows the evolution of work, and the Barrett model described in section 5.1.4. Organizations in the later stages of evolution prefer purpose and engagement over survival and efficiency, but do not disregard the latter.

Definition: Employee fulfilment

The feeling that people have when their work aligns with their intrinsic motivation and provides them with a sense of purpose.

Organizations can create and maintain this sense of fulfilment, via opportunities that emphasize relationships, impact, and growth. Studies show that although wellbeing, structure, and continuing development provide a good foundation for employee fulfilment, they might be insufficient for creating and maintaining a shared sense of purpose.

The sense of fulfilment is based on meaningful work relationships, how a person views their contribution towards an important goal, and the sense of development based on overcoming personal challenges. Nonetheless, senior leadership is often viewed as an obstacle to employee fulfilment. The other key obstacles are the employees themselves, their managers, and their teammates.

Leaders who are interested in creating and maintaining an organization with a strong sense of purpose need to apply certain measures. This includes developing a culture of good relationships, where employees are contributing to the overall outcome and have a shared purpose. Yet leaders must also embed a sense of purpose with their own behaviour.

See the workforce and talent management practice guide for more on organizational culture and conscious leadership.

5.3 Strategy discussion and approval

5.3.1 Portfolio optimization

It is critical that every strategy combines the development of new areas and the delivery of existing commitments.

Definition: Portfolio

A collection of assets into which an organization chooses to invest its resources in order to receive the best return.

Portfolio management encompasses several portfolios, including:

- **Product and service portfolio** The products and services managed by the organization, which represent its commitments and investments across its customers and market spaces. It also represents current contractual commitments, new product and service development, and ongoing improvement plans.
- **Programme and project portfolio** Used to manage and coordinate projects, and to ensure that objectives meet the deadline, cost constraints, and specifications. The project portfolio also ensures that projects are not duplicated and stay within the agreed scope, and that resources are available. It manages both single projects and large-scale programmes. It supports the organization's product and service portfolio, and improvements to its practices and service value system (SVS).
- **Customer portfolio** Reflects the organization's commitment to serve certain consumer groups and market spaces. It might influence the structure and content of the product and service portfolio and the project portfolio. The customer portfolio is used to ensure that the relationship between business outcomes, customers, and services is well understood.

Portfolios can also be created to manage resources (e.g. applications), customer groups, business segments, etc. The key concepts behind portfolio management are the same regardless of the items being managed: they help to achieve optimal return on the investment from a holistic system of assets, as Figure 5.13 shows.

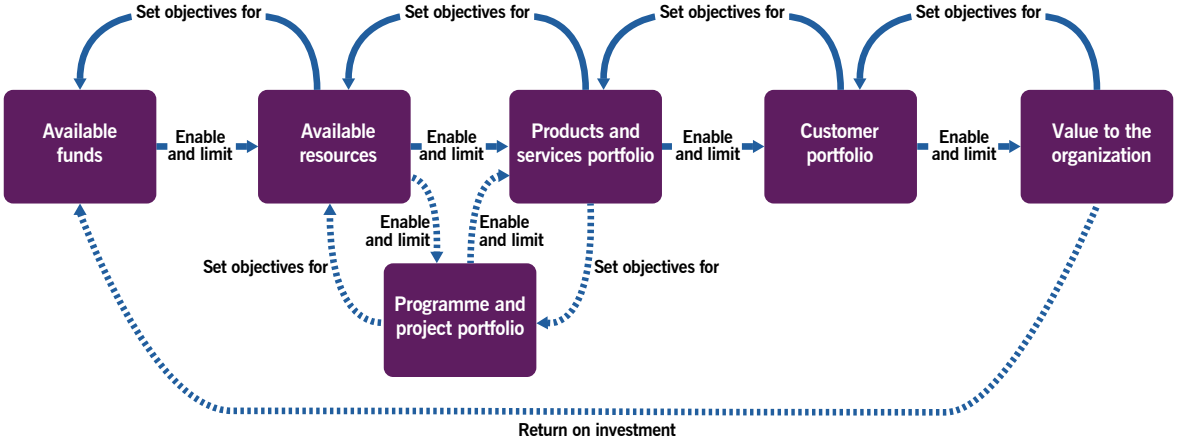


Figure 5.13 An organization's portfolios enable a return on investments

Portfolio management identifies and tracks investment in every service and product at every stage of its lifecycle, and links that investment to the anticipated and achieved value. The portfolio management practice is a valuable strategic tool that informs decisions on how to balance investment between new initiatives and existing operations.

5.3.2 Business cases, portfolio, and strategy

A strategy can be viewed as a business case. This is because it:

- outlines the issues the organization faces if it ignores the changes in its environment
- articulates a vision that is mandated by the organization's governing body and senior leadership
- specifies options for the organization to better achieve its vision and purpose, together with the costs and outcomes associated with each.

However, a strategy consists of several proposed initiatives and changes to the organization's portfolio. Each of these should have its own business case included in the strategy. This is because:

- they might be funded by various groups of stakeholders
- some might be implemented and measured separately, and therefore must offer value on their own merits, not just within the context of the overall strategy
- a business case will enable stakeholders to choose the most desirable option (if there is one)
- stakeholders might reject the strategy as a whole, but decide to implement some of the proposed initiatives or portfolio changes.

A business case for an initiative or portfolio change must also show how it supports the overall strategy, in addition to information about costs, risks, and benefits. Thus, stakeholders can judge the impact on the strategy.

Business cases should be designed to reflect the structure of the strategy. For example:

- If the strategy consists of multiple, independent initiatives, a business case should be designed for each one, and the stakeholders should decide each action on its own merits.
- If the strategy consists of multiple scenarios, a business case should be generated for each option, so that stakeholders can compare the business cases.
- If a strategy contains options, the business case should enable the stakeholders to evaluate each option's impact on their part of the organization, but there must be a mechanism to show what the impact will be if a combination of options is selected.

Strategy can, therefore, be approved by proposing a single business case to all stakeholders. Or, it could involve creating multiple business cases for specific groups of stakeholders. Regardless, those managing the strategy must report on its value and status.

5.3.3 Business cases for strategy

5.3.3.1 Quantifying the value of a digital or IT strategy

A strategy's value is measured by how well it supports the organization's purpose and vision, and how well it enables the organization to achieve its desired outcome. A business case must show how the initiative will help the organization achieve its vision, fulfil its purpose, or sustain its market position.

Furthermore, the business case must outline the initiatives that the organization will not be able to pursue, as it has already invested in another initiative. There are always other options available, and the business case must describe what they are (see also 'Opportunity costs' below).

The vision and purpose of most organizations go beyond financial objectives. The strategy must also show how value, other than the financial, will be created.

Costs

The costs outlined in a strategy or its associated business case should follow the categories used elsewhere in the organization. It should indicate when the costs will occur, along with:

- capital investments
- operational expenses
- resource utilization
- technology costs
- compliance costs
- innovation or research and development costs
- partnership and/or supplier costs.

Some organizations also calculate the impact of a change; for example, changes to the existing culture; having to discontinue certain product lines; losing the knowledge and experience used to operate the existing business; or the impact on the established brand when changing the organization's business model.

Risks

The strategy or its associated business case will provide information about the negative risks, their potential impact, and the recommended risk treatments. Stakeholders will use this information to decide whether to accept each risk with its recommended treatments, or find alternative or additional treatments.

When the stakeholder has approved the strategy or business case, they have also accepted the level of risk, and will fund the recommended risk treatments. Alternatively, they might change the risk treatments to reduce the impact or likelihood of the risk. This will authorize the use of additional funding. Or, they might be willing to accept a higher level of risk and reduce the amount spent on risk treatments.

Returns and benefits

A return is the result of a strategy investment. It is calculated by subtracting the costs (financial and non-financial) of the strategy from the anticipated benefits (financial and non-financial).

Non-financial features (both costs and benefits) of the strategy are sometimes assigned a monetary value. However, this is not always possible. The calculation involves a subjective assessment by stakeholders who can judge the likelihood and impact of the benefit. A non-financial benefit is often evaluated in terms of value for money.

Not all returns are straightforward. Some start small and accelerate over time. Other returns are larger, but only occur once. It is important that stakeholders understand the return, so that they will not terminate the strategy at the wrong moment.

Opportunity costs

Opportunity cost is a technique used to help stakeholders compare one option (e.g. stay as we are) with another (implement the strategy). It specifies the impact to the organization of choosing one option over another. In other words, it is what the organization will stand to lose if it chooses a particular option.

Opportunity cost is calculated by subtracting the return that would have been generated by the alternative options from the return expected by the strategy being proposed. It is important to consider both financial and non-financial aspects in this calculation.

The ITIL story: Business cases for strategy

Anya: *Just as creating a vision statement and strategy is a collaborative exercise across the company, so is creating a business case. Although there may be an overall business case that covers the new food delivery service as a whole, we may also need to assess potential solutions or initiatives on an individual basis as they arise.*

Dave: *There are many interdependencies across the company. IT might require support from marketing, marketing might need support from HR, etc. A business case is a good way of describing how various teams aim to deliver the outcomes defined by our strategy, while highlighting costs, risks, personnel commitments, and more.*

Luna: *There may also be dependencies on local partners and suppliers, or risks from external factors. I am often asked to provide market intelligence on our relationships with local garages, restaurants, consumer sentiment, political events, etc.*

5.3.4 Communicating the business case

Communicating the strategy as business cases for approval is very different to communicating it to stakeholders. The strategy is widely communicated, some parts of it externally. Staff, partners, suppliers, and even consumers, should understand how the organization wants to position itself. They should be told about the impact of the strategy, and how to realize positive impacts and avoid negative ones.

Business cases, including those components of the strategy that contain cost and return calculations, are only shared with stakeholders who will approve and fund the strategy. This means that business cases are always communicated to the appropriate stakeholders together with the strategy itself.

5.3.4.1 Intended audience

Business cases are inputs for making decisions. They are intended to convince key decision-makers of the merits of a course of action. They should be presented only to stakeholders involved in making the decision, and should not be used to raise general awareness or to educate stakeholders impacted by the strategy. This is achieved through a separate set of awareness and education activities.

A further point to consider is the level of strategy included in the business case. In the case of an enterprise strategy, all stakeholders who will provide final approval and funding should be involved in defining the strategy. A business case will only be developed to investigate and provide additional information about details or options in the strategy.

Where a strategy has been defined for a particular function, region, team, etc., funding might need to be obtained by stakeholders who were not involved in defining the strategy. In these cases, the business case must also show that the strategy is consistent with other strategies in the organization, and show how those strategies will be impacted if approval is not given.

The audience of a business case should include:

- stakeholders who are expected to fund the initiative defined in the business case
- advisers to those stakeholders, such as enterprise architects, finance experts, legal experts, and technology experts.

5.3.4.2 Timing

Business cases should reflect the timing of initiatives and the review cycles of the strategy. If a strategy is broken down into initiatives, each one should include a business case designed around the timeframe of that initiative. The business case will indicate the start and finish of the initiative and a number of measurable checkpoints in between.

Care should be taken to review and revise each business case with each review of the strategy. Changes to the strategy or any of its initiatives might impact the investment required, the outcomes achieved, or the time taken to achieve them. These need to be approved as part of the approval of the strategy.

If a business case indicates that an initiative is no longer viable, the strategy will need to be revised along with any associated business cases (e.g. those of other initiatives). Scenario planning will typically include a business case for each scenario. As it becomes clear that the current scenario is unrealistic, the organization will use the business cases of the current and alternative scenarios to plot a new course.

It is important for future strategy definition that actual achievements are reviewed after the completion of the current initiative or strategic planning cycle. This will not only indicate the relative success of the strategy or initiative, but also provide insight into the accuracy and completeness of the process of defining business cases.

5.3.4.3 Format

Many organizations have a template for business cases, setting out the required structure and composition. Sections that are usually required in a business case include:

- executive summary: a high-level view of the business case
- introduction
- statement of the problem: a straightforward articulation of the problem being solved
- analysis: the situation behind the problem, and sufficient details to educate the reader
- discussion of possible options, identifying potential solutions to the problem described:
  - benefits: why it would be a good idea to do it
  - cost: including resource requirements
  - likely timescale for the project
  - anticipated return on investment, with an explanation
  - risk: possible negative outcomes, and those factors that might prevent successful implementation
- recommendations for the project and how it is to be conducted
- details of the chosen option
- conclusion: a reminder of why it is essential in addressing the problem.

5.3.4.4 Obtaining and processing feedback

To challenge the business case for a strategy is to challenge some aspect of the strategy itself. Stakeholders who were not involved in defining the strategy might see a business case as an opportunity to influence it in some way.

The only remedy for this situation is to ensure that all stakeholders are appropriately represented in defining the strategy in the first place. Business cases for strategy should not come as a surprise for any leader who is required to provide approval or funding.

Whether it is included in the strategy itself or produced as a separate document, the business case is necessary for the following reasons:

- There needs to be an auditable approval for any funding allocated to the strategy.
- The business case ensures that no assumptions are made about the availability of funding.
- Those defining a strategy are often blinded to its flaws and less obvious costs. A business case ensures that every stakeholder has an opportunity to identify both positive and negative aspects of the strategy and make an informed decision.
- It ensures that all organizational initiatives are aligned with the overarching strategy, not what one function, division, or other silo deems to be important for its own team, which might be in conflict with other areas of the strategy or organization.

Feedback is provided to the leadership team defining the strategy, so that necessary adjustments can be made and checked against all dependencies, and the business case updated for approval.

5.3.4.5 Dealing with resistance

In many organizations, the task of defining the digital and IT strategy is delegated to a senior executive, who is required to obtain final approval from the organization's other executives, and possibly from the governing body.

This approach can be problematic, since the digital and IT strategy is so integral to the business strategy (see section 2.8). A digital and IT strategy defined separately from the business strategy that it supports is unlikely to find much encouragement from the executives leading this area.

Key to dealing with resistance, therefore, is for the digital and IT strategy to be developed in conjunction with the teams defining the business strategy. If the latter has already been developed, the digital and IT strategy team must use the business strategy as a starting point. The digital and IT strategy must show how it will make the business strategy more achievable, and how it will make its initiatives more cost effective. In addition, the digital and IT strategy team can work with business leaders to discuss opportunities presented by emerging digital technology. At all stages of development, the strategy team must establish a basis of collaboration with the leaders and teams responsible for the other strategies.

However, there are situations where an organization resists digitization even when its survival depends on the success of the digital and IT strategy. There are many instances where leaders have been delegated or hired to create a digital and IT strategy only to be faced by a hostile group of executives, and an organization whose culture resists their initiatives at almost every turn.

In these situations, influence, cooperation, and education are inadequate. Unless there is a strong mandate from senior executives and the governing body, frequently communicated, the strategy will not be effective. Of course, this message of support must be reinforced by any possible technique available to change the attitude of stakeholders at every level. Some of these techniques can be found in the organizational change management practice guide; they include:

- education and awareness programmes
- reassuring employees of their continued employment
- creating safe working environments where individuals can express fears about changes to existing working methods
- negotiation
- creating incentives to support the programme
- reskilling programmes where required.

In all cases, this process must be an initiative of the most senior executive, or a member of the governing body.

CHAPTER 6

TAKE ACTION!

6 Take action!

The implementation of a strategy is as complex as the strategy itself. Strategy requires a constant evaluation and revision of the organization's current position and operation, making it impossible to implement in a single, tidy project. An organization that defines its strategy, creates plans, and then tries to fully implement those plans before reviewing and updating the strategy will struggle to stay relevant in a VUCA (volatile, uncertain, complex, and ambiguous) environment.

In navigation terms, the purpose and vision are the desired destination. Assessments and positioning are the constellations and instruments that show the organization where it is in relation to its objective. The plans and projects show how it needs to constantly adjust to currents, winds, other craft, and controlling entities to reach that objective. This chapter outlines how the organization will move in its desired direction.

The ITIL story: Managing strategic initiatives

Anya: *Changing teams or companies is always hard. Although people welcome change, they do not like it when they are the ones who must change. Leaders must be able to lead their staff through transformations, managing the concerns of their staff, customers, and suppliers.*

Dave: *There are many organizational change and design models, but the common concepts and principles are clearly discussed as part of the ITIL organizational change management practice.*

Luna: *Many of our long-time customers in the Bay Area have been wondering if the imminent launch of our food delivery service has distracted us from supplementing or improving the products and services they already use. Some of the garages we use to maintain our fleet of vehicles are worried that they do not have the new skills or equipment they need to maintain the food delivery vehicles. I have regular meetings with both key customers and suppliers to reassure them that we are not abandoning them.*

6.1 How strategies are implemented

Without a clear approach for how strategy will be executed, any initiative will start, stop, and potentially fail, never ultimately turning into long-term, sustainable action. There are significantly fewer books and resources written about how to execute the strategy and turn the vision into reality; execution is difficult to get right. This section provides ideas on how to execute against the strategy after it has been created.

The strategic plans themselves are implemented by teams. It is the role of team managers and individual teams to determine how to implement these plans and to measure progress against them. It is the role of leaders to ensure that team managers and teams have the funding and resources they need.

Unfortunately, a common problem is that leaders paint a vision of what the organization needs but do not take the extra step of removing roadblocks and providing the tools their teams need in order to be successful, once the initiative is underway. The most successful leaders are those who realize that employees within their own organization, in addition to shareholders and external customers, are also their customers.

Organizations that are successful in achieving their strategies share the following key characteristics:

- **Successful organizations clearly and consistently communicate their vision** They give people context behind the decision. They also ensure that messaging about the long-term vision is repeated throughout the organization and in different ways (videos, emails, office posters, staff meetings, etc.). Telling staff once does not work. Messaging needs to be pervasive at all levels of an organization, and integrated with examples and stories. It needs to be repeated several times, until teams own the changes and the changes become embedded into the organization's culture.
- **These organizations push decision-making to the team level** Successful organizations allow teams doing the work on the ground to make decisions at that level. Leadership provides the overall direction and intent, whereas teams determine how to accomplish the work and make decisions. The role of the leadership team is to take quick, decisive action on decisions for which teams need executive leadership support. This allows teams to continue to move quickly and not be constrained by bureaucracy and waiting. Small, empowered teams often result in increased productivity, quality and morale; decreased time needed to deliver products and services to market; and less overall risk (Rigby *et al.,* 2018).
- **Focus on fewer initiatives at a time** Organizations always have more ideas and initiatives than they can reasonably execute. As a result, they are less successful in completing initiatives compared with organizations and teams that are focused on a single initiative. Teams work faster and with better results when they can focus, and can avoid distractions and task-switching, thus doing fewer things better. This is true at the leadership level as well as the team level. The most successful organizations maintain a prioritized and sequenced backlog of strategic initiatives at the leadership level that aligns at the team level, so that staff are clear on what to work on next and what to reject. Leaders and teams alike commonly struggle with focusing on too many tasks at once. The problem with making everything the first priority means that nothing is the first priority. As a result, teams will make decisions on what to prioritize, which might not align with what is most important strategically to the organization. Leaders can ensure that teams focus by providing high-level prioritization, and avoiding giving then more work than they have the capacity to complete. Time is an organization's most precious commodity, particularly in a rapidly changing digital environment, and it should be used to its best effect.
- **Remove barriers that impede progress** One of the key roles of leaders is to remove barriers and ensure that staff have what they need to be successful. This can include:
  - providing collaboration toolsets or other technologies
  - approving resources that allow teams to experiment and learn
  - communicating prioritized and sequenced initiatives so teams can focus on and deliver high-value work
  - changing reporting structures
  - removing unnecessary approvals or other constraints
  - changing strategic partnerships or supplier relationships
  - connecting coaches and mentors with teams
  - removing other bureaucratic elements within the organization.

Strategies that require large-scale transformations can be launched at once or incrementally, as described in the following sections. With either type of transition, teams might need to be restructured to better align with value streams or specific products or services delivered to consumers. Any organizational restructuring should be

carefully considered to ensure that changes improve the flow of work, communication, and collaboration within and between teams, and allow them to work more effectively in delivering outcomes.

In addition, there will be significant setbacks throughout any transformation, and leaders can become uneasy with future uncertainties, doubt themselves, and doubt whether the transformation is working or even worth the disruption. Digital transformation is not for the faint-hearted. The performance of new and changing teams might become slower before it increases, as teams are adjusting to a new way of working. Patience with teams, the overall organization, and oneself is key.

The role of executive leaders is to help guide their teams through the chaos, resistance, integration, and pain that often comes with meaningful organizational change. Thus, a clear vision for making the change must be communicated to all parties across the organization, prior to, during, and after implementing any transformational change.

Figure 6.1 provides an overview of the Satir change model, used to describe the stages that any individual, team, or organization goes through when implementing a significant change. When an organization starts to face setbacks, many will unfortunately stop and return to the status quo. This will ultimately make it harder for the organization to institute change in the future. However, the most successful digital organizations prepare for the resistance, chaos, setbacks, etc., build the capabilities that are needed to achieve their long-term digital goals, and eventually move past these challenges to improved performance and results.

When the Satir change model (Satir *et al.,* 1991) is used in combination with Kotter's eight-step process (Kotter, 2014), it can provide a toolset for leaders in working with their teams at all levels and leading the transformational change. Kotter's eight steps are:

- create a sense of urgency
- build a guiding coalition
- form a strategic vision and initiatives
- enlist a volunteer army
- enable action by removing barriers
- generate short-term wins
- sustain acceleration
- institute change.

Change happens not only at the organizational level, but also at the employee level; sustained change arises from people and teams changing how they work. At an employee level, leaders can help people and teams embrace change using the ADKAR model: awareness, desire, knowledge, ability, and reinforcement.

In preparing for the change, the 7-S model created by Peters and Waterman (2004) describes the following elements that need to be managed and balanced during the transformation:

- shared values, principles, and beliefs
- strategy
- structure (this combines with system and style to shape an organization's culture)
- system
- style
- staff
- skills.

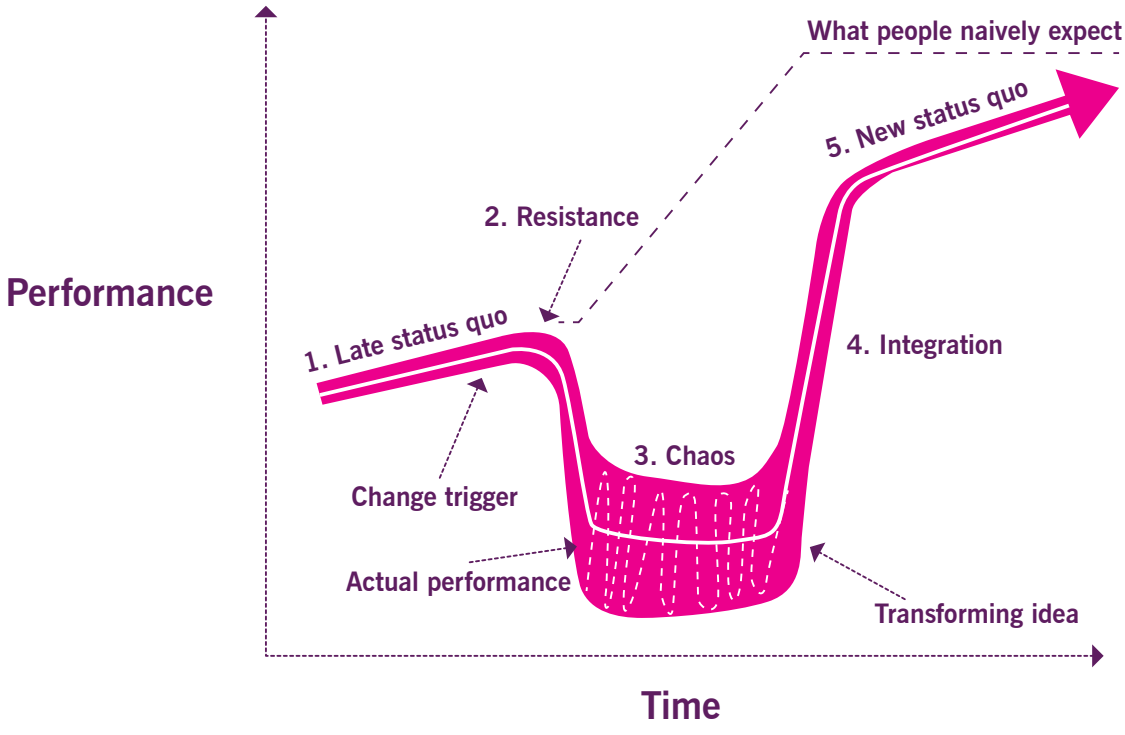


Figure 6.1 Satir change model

These elements should be defined, developed, and improved throughout any transformative digital initiative. For more details on the 7-S model, see the workforce and talent management practice guide.

The organizational change management practice guide provides additional details on ensuring leaders create, communicate, and support values-based organizational changes.

6.1.1 Large-scale transformation

Enterprise-wide implementations have the benefit of moving the organization to a future state all at once, and allow organizations to react more quickly to an urgent, external threat or opportunity. However, this type of transformation can be extremely difficult to implement, and it takes a tremendous amount of commitment, alignment, focus, and coordination between teams at all levels of the organization.

It is imperative that the members of the leadership team are fully aligned with one another and understand the risks associated with this type of approach. Leaders need to coordinate often (daily or weekly, for example) to ensure that their teams are implementing changes effectively, and that feedback and data are gathered throughout the transformation and used to guide future improvements. Leaders must be prepared to remove roadblocks quickly and be ready to support their teams and institute wide-reaching changes, including how the organization is governed, structured etc. One of the biggest challenges that leaders must help the organization overcome is changing bureaucratic processes, procedures, governance, etc. to allow faster and more effective ways of working, to deliver successful outcomes to consumers.

To fully become a more agile organization, all areas of the organization should be addressed. An organization that only changes part of how it works will find that individual teams will become frustrated with the slower pace in other areas of it. Thus, change of some kind will need to happen within all parts of it, unless there is a viable reason for a division, department etc. to maintain a more traditional structure or way of working.

Often, some parts of the organization will change much more easily than others, and leaders will need to address bottlenecks and resistance as they arise. To do this, they will need to work with teams and other leaders across the organization. In times of change, particularly when trying to become more agile, leaders need to look for ways to use the guiding principle of 'keep it simple and practical', and ensure that a minimally viable bureaucracy, management, and/or governance is in place (Sutherland and Scrum Inc., 2020).

6.1.2 Incremental transformation

Another approach to transformation is to start with a pilot team, division, department, or value stream that is working well or provides the most value, or is causing significant issues and must be urgently changed. Then, the changes should be incorporated, and the pilot structure subsequently replicated to other groups throughout the organization. This approach allows the organization to break a large transformation down into smaller steps, and learn from and ease into the change. Furthermore, team members from the pilot groups can help coach and train new teams.

With every transformed team, it is important for leaders to gather feedback and data on team performance and outcomes to guide future steps. Although it is changing a few areas or teams at a time, the long-term vision of eventually changing all or most of the organization should remain the focus.

This approach can take from several months to several years. Leaders will need to be patient with the rate of change that can be absorbed within the organization. Change does not happen overnight, and setbacks will invariably occur. As a result, leaders must be realistic about how quickly their organization can change and help their staff through the changes, reminding them of the vision behind those changes. Successes and progress should be tracked on a much shorter timescale, in terms of days and weeks, so that teams can quickly improve.

6.1.3 Mergers and acquisitions

Organizations have the ability to take on a new technology, market space, or digital capability through mergers and acquisitions. There is inherent risk in this approach, however, if focus is not placed on aligning the new organization's strategy, vision, practices, and culture. The people side of integrating an acquired or merged company should not be underestimated.

6.1.4 Individual changes

Most discussions about strategy cover how enterprise strategy is converted into several sub-strategies and initiatives. However, a grassroots strategy starts as an individual change in one part of the organization and then spreads. For example, introducing self-help tools and knowledge management as a way of providing first-line support to IT users quickly evolved into self-help approaches for external customers, supported by chatbots and crowdsourced solutions.

As effective as these strategies can be, they can also plunge the organization into disarray, and divert it from its desired purpose and vision. If, using the example above, an organization is aiming for a highly personalized customer experience, it will sabotage itself if one party within it starts using anonymous self-help tools and reams of knowledge articles to save on the cost of customer service agents.

Although grassroots initiatives can help identify innovative ideas and use cases, they should also be subject to good governance. Leaders must strive to find the right balance between encouraging innovative approaches and maintaining the organization's overall strategic direction.

One technique that can be very helpful in this process is the Lean Change Management canvases (2014). This technique helps teams who wish to introduce a change to test its impact on other parts of the organization and the overall direction and strategy of the enterprise.

The ITIL story: Individual changes

Anya: *There are many options when implementing strategy, from company-wide changes to smaller, more focused changes, or even acquiring other companies to strengthen our position. Often companies have to find the right mix of initiatives.*

Dave: *For example, while Axle is setting up our food delivery business unit, my team has been tasked with incrementally improving our supply chain and back-end functions such as legal and human resources.*

6.2 Coordinating strategy and strategic initiatives

Strategies at the leadership level should be coordinated from the start, and coordination and communication between leaders needs to continue as the transformation is implemented. If coordination and communication are relaxed, success will be lopsided within one part of the overall organizational system, and progress will be slow.

6.2.1 Managing strategic initiatives

Strategic initiatives are essentially projects or programmes, combined with their contribution to the achievement of the strategy they support. As such, they should be managed in a largely similar way to any other projects or programmes in the organization. However, there are some differences, including the following:

- The projects or programmes are tied to one or more strategies. Changes to a strategy must be reflected in changes to the impacted projects or programmes. This means that project activities, timelines, budget, and even objectives can be relatively fluid, making it almost impossible to manage using rigid project management methodologies.
- The success of the project or programme is not only measured by whether it is implemented on time, to specification, and within budget, but also whether it has moved the organization closer to its purpose and vision. Project or programme success and strategic success are thus linked. This is covered in more detail in Chapter 7.
- The status and progress of projects and programmes are reported to, and directed by, the owners of the strategy that commissioned them.

As with any organizational transformation, it is critical that leaders obtain feedback and data on how teams and the organization are performing, and whether outcomes are being delivered and value is being created for consumers. They need to analyse financial returns on investment, and make appropriate adjustments as needed.

This is also the main reason for strategic-based budgeting practices, as described in Chapter 5, where budgets are adjusted throughout the year based on the actual results of strategic initiatives. For example, if the marketing project results in a higher demand in one region, the budget must be adjusted for the project that is focusing on building manufacturing and distribution channels in that region.

6.2.2 Education and training

Education and training are at the root of success of strategy implementations, although in digital organizations they do not often occur in traditional classroom settings. The key aims of education and training are to:

- understand the reasons for the changes, and to link them to the strategic outcomes that are necessary to ensure the organization's continued success
- ensure that all stakeholders understand what is expected of them during the transition
- learn the new skills required to work within the new environment
- indicate how measuring performance will change, and how success will be rewarded in the new environment
- equip the team to assess its current work and any projects it is working on to evaluate impacts of the new initiative. It is possible that the strategic planning team has unintentionally overlooked some aspect of a team's work. Team leaders must be given the opportunity to raise this concern at the strategic planning level, and either the strategy or the team's initiative must be adjusted.

6.2.3 Educating peers

Some of the main objectors to digital strategy are likely to be at the most senior levels of the organization. People who have built their careers on growing the organization to its current position might find it difficult to accept the radical nature of the changes.

This publication does not include a discussion of the various political dynamics of senior management in organizations, since these are not unique to digital and IT strategy. However, you should know that a verbal agreement to an initiative in a management meeting does not always translate into support.

Every major leadership meeting should involve a brief update on how changes in the digital world are impacting the organization, and how this impacts its strategy.

6.2.4 Educating managers and staff

Simply communicating the digital and IT strategy and its resulting initiatives does not ensure that staff will be able to implement them. Education and training are required, so that staff are aware of what the strategy means to them, and specifically how they are required to implement it.

If the initiative requires cultural change or changes to the way people approach their work, the approach to education cannot rely on a series of manuals or even classroom sessions. It must incorporate several other channels to reinforce it (e.g. frequent messages from the CEO, highly visible and repeated updates, focus groups, onsite support).

Table 6.1 provides some guidelines for an education programme sponsored by digital leaders.

Table 6.1 Education and training programme for stakeholders

Scope	Audience	Purpose
Strategic context	Everyone	To explain the changes in the environment and what opportunities they represent for the organization. (Why are we doing this?)
High-level overview of each strategic initiative and its outcomes	Everyone	To highlight the overall vision for digital strategy in the organization and show why this work is so important. (Where are we going?)
Detailed overview of each strategic initiative and its outcomes	Senior and middle management, senior technical experts	To indicate the level of effort, what is required of each part of the organization, and how the initiatives will be measured. (What are we going to be doing?)
Detailed description of the objectives and activities of each initiative	Managers and staff involved in each initiative	To educate staff involved in the initiative about exactly what is expected of them, how they will be working, who they will be working with, what the outputs are and when they are expected, how everyday work will continue alongside this initiative, etc. (What am I going to be doing?)
How to use the tools that form part of each initiative	Practitioners (staff, partners, suppliers, contractors, etc.)	To educate and train those building the solution in how to use the tools available to them, and the features and functionality of the technology being configured and implemented. (How will I be doing it?)
How to work in the changed organization	Managers and practitioners	To educate and train those using the new tools, processes, and working methods in how to do so effectively. (How has my job changed as a result of these changes?)

6.2.5 Educating consumers

ITIL®4: Drive Stakeholder Value explores how to communicate with consumers and educate them about changes to the organization, and its products and services. Without replicating these sections here, it is important that digital leaders consider the following points:

- This activity must be part of the organization's overall marketing approach and programme.
- Consumers should never be surprised by changes (unless the surprise is pleasant and anticipated).
- Some changes might still be confusing despite education and marketing. In these instances, effective and friendly support is necessary and should be used to improve the release and education activities.
- Changes should be as intuitive as possible, even if the product is complex. In the context of digital technology, the simpler and more intuitive, the better. Customers often lose patience with applications that require extensive configuration, user guides/manuals, or development.

6.2.6 Educating shareholders

Shareholder education needs to focus on how the changes in strategy will impact the value of the organization. Getting shareholders to approve major strategic changes will require digital leaders to communicate clearly about:

- the impact on the organization's overall purpose (to survive and grow in the digital world, Motorola decided to forgo the move to smartphones and focused its attention on other applications of its communication technology)
- the impact on revenue, investments, and profits
- the length of time before these targets can be realized.

Although many shareholders consider social responsibility and environmental sustainability to be important, they do not always consider these to be sufficient reasons to support a major change in strategy. If these constitute a major component, digital leaders must link them to the impact on revenue, investment, and profitability.

6.2.7 Educating suppliers

Increasingly, a supplier's success depends on its understanding of a customer organization and its business. It will be helpful for the key supplier's employees to learn how the organization works and what it is hoping to achieve.

As workloads vary, so too do demands for products and services from suppliers. The knowledge of what drives workloads, and the ability to forecast that, will help the supplier to gear its resources, performance, and cost to the benefit of both parties.

Digital initiatives often include suppliers as part of their products. The more the supplier knows about the product and the outcomes it is being used to achieve, the better it will be able to perform.

Paradoxically, the more commoditized a service or product, the more helpful it is for those who deliver the product to know how it is being used, so that they can support it more effectively. Vodafone in the UK found that customers using virtual servers on its cloud service needed different levels and types of support depending on whether they were using it for development, testing, or live operations, and changed its support model as a result.

The ITIL story: Educating suppliers

Anya: *I spend a lot of my time working with shareholders, as well as key consumers, suppliers, regulators, local city officials, etc. Making them aware of our plans and aspirations is key to refining our products and services to meet their concerns and needs.*

Dave: *We have people dedicated to managing these relationships and educating internal and external stakeholders. However, for topics of strategic importance, it is vital that we have publicly visible and active leaders driving the conversations.*

6.3 Leading digital transformation

Digital transformation should be seen as a component of digital and IT strategy, and not the strategy itself. Some technology vendors and technology-centric consultants and managers, though, tend to represent digital transformation as if it were a self-contained strategy.

Digital transformation is just one of many aspects of change that the organization will need to undergo to achieve its objectives in a changing environment. It is important that leaders focus on the organization's overall strategy, business model, and operating model. This is so that the digitization of any aspect of it is fully assessed and aligned with aspects that are not included in the digital transformation programme.

There are many views of how digital transformation should be approached. Some see it as the radical transformation of an entire organization to make it fully digital. Others believe that it consists of a number of related but autonomous projects, to transform individual business processes, products, or services.

De Kock (2017) found that organizations often used three main paradigms in approaching digital transformation. These are shown in Figure 6.2.

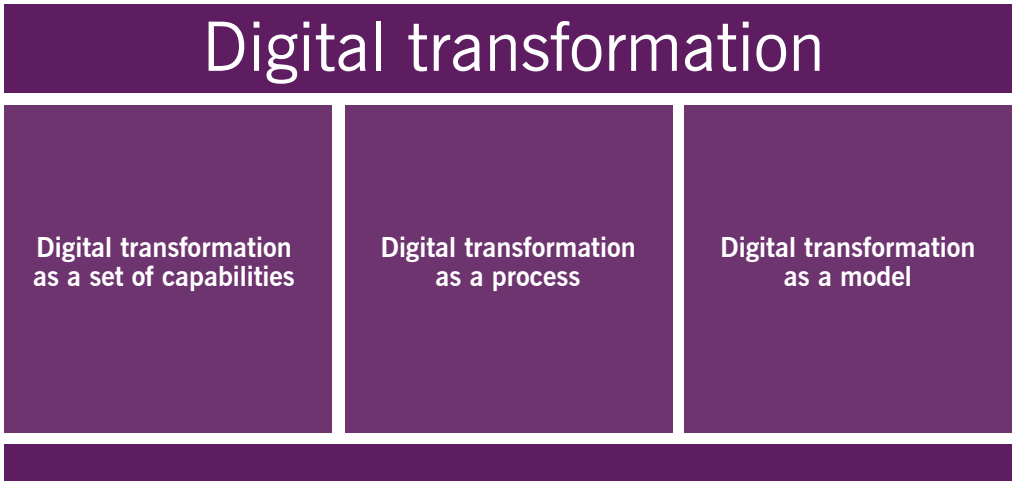


Figure 6.2 Common digital transformation paradigms

The paradigms in Figure 6.2 determine the scope and objectives of the transformation programme, along with the type and sequence of activities. These paradigms can be summarized as follows:

- **Digital transformation as a set of capabilities** These organizations view emerging technology as a way to enhance their current capabilities or to introduce new ones. The purpose of digital transformation is to maintain or grow the organization's current position. Such an organization wishes to change the way it works, so that it will perform better at a lower cost.
- **Digital transformation as a process** These organizations have a vision of what their ideal, fully digital organization is. Digital transformation is then a matter of achieving that fully digital state. A maturity model is used to assess the current state and define a desired future state. A roadmap defines the digital transformation process that should be followed to achieve that state. As long as the organization is on target, it is likely to make the right strategic decisions regarding its position, products, services, and operations. This paradigm can be considered as defining how the organization will transform.
- **Digital transformation as a model** This evaluates the opportunities offered by specific digital technologies, or combinations of technologies. These models are often used as tools in ideation workshops to generate new innovative uses for technology. They help to evaluate digitally enabled business models, new conceptual product lines, technology use cases, etc., to make the changes necessary to exploit opportunities that offer the highest returns. This paradigm can be considered as defining what the organization will transform. Innovative models such as business or operating model canvases are often used to define the vision of the organization's fully digital state, or parts of it. The digital transformation as a process paradigm would typically follow suit.

Truly successful digital organizations have a mixture of the three paradigms. They establish the required digital capabilities to provide a sustained competitive advantage, mature them through a digital transformation process, and use digital transformation models to innovate further.

When an organization has achieved its initial goal of establishing the digital competencies needed to achieve its position in the digital world, the next phase of its journey is unlikely to be another large-scale, disruptive transformation. Rather, sustaining its position will require an ongoing digital evolution. This is where it responds and adapts to changes in market conditions, using the digital competencies and capabilities it established during the transformation programme.

6.3.1 Introducing digital technology

Some organizations view digital transformation as the introduction of digital technology solutions, not as a transformation programme in its own right. Regardless of whether it is a strategic change or an effort to optimize an individual practice or activity, the organization should recognize that, over time, it will be transformational. It should be formally managed as such.

There are five major ways of introducing digital technology into an organization. All of these must be incorporated into a digital transformation programme:

- **Individual stakeholders** Employees, contractors, and suppliers often use personal devices to complete work activities. Consumers use a variety of technologies to engage with the organization and use its products and services. Each represents a potentially better way for the organization to meet its objectives. A BYOD (bring your own device) policy might make it easier for internal service providers to focus on their own systems without having to support diverse technologies. However, it might also prevent them from discovering a better way for the organization to meet its business objectives as they might overlook useful technology solutions.
- **Operational optimization** Many digital technologies are introduced purely to solve an immediate operational challenge, not to change the organization's operating model. An IT manager might modernize an application by migrating it into the cloud; a sales manager might engage with a third-party software provider to track leads generated by email. Each of these operational improvements increases the performance of a business activity, and might lower the cost. They are all consistent within the existing enterprise strategy. However, each of them introduces a significant change; together, these represent a significant shift in the organization's overall operating model.
- **Business unit or product strategy** These strategies are usually triggered by the enterprise strategy, and often include details about how digital technology will be used to improve or transform some aspect of the organization. In theory, these should all be reported through the enterprise strategy and budget. In reality, many initiatives are created through these strategies, which can result in disparities between the technological directions of different parts of the organization.
- **IT strategy** An IT strategy is not always a digital strategy, but it considers all the technology that it is required to manage. Increasingly, these technologies expand from just IT to include OT and communication technology. Although the IT strategy might result in a more concerted approach to how the organization uses digital technology, it does not observe those systems or services procured by other parts of the organization outside the scope of the IT group's authority. Additionally, if the relationship between IT and other parts of the organization is adversarial, the IT strategy will be ineffective as a way of driving digital transformation consistently across the organization.
- **Digital strategy** If a digital strategy focuses on all aspects of the organization's business and operating model, it will help to forge a consistent approach to digital transformation. However, many digital strategies are scoped for a subset of technologies (e.g. how the organization will use AI or blockchain) and do not address the overarching transformation of the organization into a digital one.

Small or incremental changes should not be stopped, because they are often the start of innovations that improve the organization's performance and position. Rather, these changes should be coordinated and harnessed into a more consistent and deliberate effort to transform the organization.

It is not enough to simply coordinate individual initiatives. There must be a single vision and strategy that outlines the result of all the initiatives working together. If there is no digital strategy, but multiple digital initiatives, it is time for the organization to pause and shift to a strategy-led transformation.

6.3.2 Identifying the best role to lead digital transformation programmes

The best role to lead a digital transformation is one that has authority and influence over the areas being transformed, supported where necessary by those with detailed technical and organizational knowledge. For many organizations, this means that the CIO role needs to be expanded from that of a technology manager to include strategic business leadership.

In most cases, digital transformation will span multiple parts of an organization. Although there might be a single person coordinating the programme, multiple people will need to play leadership roles. The organization's needs and the scope of the programme will determine the best approach to achieve this level of collaboration in leadership. Some organizations might institute a task force; others might form a steering committee. An example of a formal approach is provided by Scrum Alliance International, which recommends that digital transformation projects be led by a chief product owner (overseeing the products and services) and chief scrum master (overseeing the people and the process) working together.

Errors made in digital transformation initiatives include the following:

- Appointing a technology expert to lead the transformation programme. Although technology might be at the centre of digital transformation, many aspects of the organization will be transformed. Digital transformation benefits from leaders who fully understand how those components are related, how they contribute to the organization's success, and how technology impacts each of them.
- The CIO is responsible for the project, but other business units or functional executives are not involved. Digital transformation benefits from leaders who can bring multiple business units together to define and evaluate options, agree a common approach for the whole organization, and implement it using stakeholders from the impacted parts of the organization.
- Seeing digital transformation as a project or programme, with a senior project management expert leading the initiative. Although good project or programme management skills are essential for successful planning and implementation, that is not the primary requirement of a digital transformation programme. The programme will impact the organization's strategy and its business and operating models. Digital transformation benefits from leaders who have an in-depth knowledge and experience of the organization and its business.
- Only focusing on emerging technologies, and forgetting that the technology already used by the organization is critical to its success. This common error is based on the perception that newer innovations will automatically overcome the limitations and challenges of the current environment. In fact, emerging technology is far more complex, and demands that the organization must already be able to understand and effectively manage the existing environment. For example, many CIOs had cloud migration and management at the top of their priority list for several years, but their priorities have evolved because of the emergence of artificial intelligence and machine learning technologies. However, managing the cloud and realizing the return on that investment is still proving to be a major challenge for many CIOs. Digital transformation benefits from leaders who understand the challenges involved with the current environment and seek to resolve those with a combination of existing and new approaches. They do not create unrealistic or uninformed expectations for digital technology, and they ensure that the organization has the capabilities to manage the business and operating models.
- Inappropriately scoping the digital transformation programme. This topic is discussed in the next sections.

From these errors, a picture emerges about the type of leaders required for a successful digital transformation:

- They have authority and influence over the areas impacted by the transformation.
- They can understand and clearly communicate the drivers of, and vision for, the transformation.
- They understand the organization, its culture, its capabilities, and its current and desired business and operating models.
- They have access to details of the organization's strategy. Even better, they are among the executives responsible for defining the strategy and overseeing its implementation.
- Even if they are managing individual, small-scale transformation projects, they can assess the impact of each element of the digital transformation on the organization's strategy and business and operating models over time. They have direct involvement in the team that defines strategy.
- They are senior leaders, usually at the executive level, who can easily work across organizational boundaries and who have the respect of, and access to, other senior leaders.
- They manage a team of experts in business processes, technology, project and programme management, workforce management, organizational change management, and architecture.
- They can build strategic relationships with external suppliers, partners, and vendors to ensure that they have accurate information about digital technologies and business trends in their industry.

Unless the scope of the initiative is limited, it is unrealistic to expect this role to be performed by an executive with other demanding duties. Some organizations have tried to overcome this by creating a new role of chief digital officer (CDO) to lead the digital transformation effort. However, this approach has often foundered, because the role does not have authority over the areas being transformed.

CDOs are often dependent on the resources and authority of other executives to plan and implement the digital transformation initiatives. Unless the organization's culture is highly collaborative, this approach generally results in a confusion of roles and decision-making authority, with a corresponding confusion in the various departments they manage.

Successful initiatives are more generally led by a senior executive reporting directly to the CEO and acting under the CEO's authority. They facilitate collaboration between executives, and ensure a process of joint decision-making and resource allocation. In the most successful organizations, the entire executive team and its supporting teams are fully engaged in digital transformation efforts.

This might start as a temporary role, depending on the nature of the initiative. If it is a larger, multi-year programme, it is likely to form part of, or lead, the formal strategy function of the CEO.

The ITIL story: Identifying the best role to lead digital transformation

Anya: *Our food delivery service needs a leader who understands the potential of technology to solve business problems, has knowledge of local market conditions, and has a great rapport with customers and suppliers. It needs a leader who can guide a nascent line of business. As regional manager for the Bay City area, and someone who has just the skills we need, Luna is the perfect candidate to take this on.*

Luna: *I am thrilled that Anya has asked me to lead the launch of this innovative service that uses digital technology to solve real problems in our area. I first came to California to integrate the Bay City Hire operations into Axle. I am delighted that Axle continues to invest in my career development by giving me further challenging initiatives!*

6.3.3 Scoping digital transformation

The scope of digital transformation will vary widely depending on several factors, including:

- the reason for the digital transformation programme: some organizations might be focused on digitizing parts of the existing business for operational efficiency, but not on establishing capabilities that allow them to gain sustained competitive advantage. Others will focus on developing capabilities that will make them more competitive, and some will focus on a combination of both
- the scope of the organization's digital strategy, if the initiative is a strategic one
- the nature of the problem being solved if the transformation is not initiated by a strategy
- the number of organizational units, value streams, products, or services impacted
- the type and quantity of infrastructure and application replacements in modernization projects
- how much change the organization is able to manage at any given time
- whether the organization is responding to a short-term situation or is planning for long-term growth or change.

It is important to target the digital transformation initiative at achieving specific business objectives, not to follow a particular trend. Information about industry trends is helpful however in identifying opportunities and approaches. As such, the digital transformation initiative might result in some aspects of the organization following a trend, but that is a result of the initiative, not its purpose.

Errors of scoping include:

- pursuing a digital maturity model that advocates adopting technologies and practices that are not required for the organization to meet its strategic outcomes
- not articulating the reason for a digital transformation
- conducting several individual digital transformation projects or programmes without coordinating them, thus resulting in fragmented solutions that are difficult and expensive to integrate
- trying to deploy new architectures without first building the digital capabilities required to operate as a digital organization (e.g. cross-functional teams, agile working practices, or advanced levels of automation)
- adopting a new technology without understanding or planning for the cultural impact or the new skills required to manage it
- equating the adoption of new technology with digital transformation
- not establishing capabilities that will ensure a sustained digital advantage
- allowing technology vendors to shape digital and IT strategy.

6.3.4 Typical activities of a digital transformation programme

The activities of a digital transformation programme will be determined by its scope and objectives. A single initiative to modernize a technology component will be very different to an initiative aimed at bringing a new digital product to market. Both will be different to a programme aimed at transforming several lines of business, to benefit from a new digital supply chain.

There are innumerable diverse examples of projects, initiatives, and programmes available online, each as unique as the organization that created it and the scope of programme it was designed for. However, narrowing digital transformation down to just one implementation framework is not only impossible, but it will almost certainly result in failure.

Instead, this section will use two scenarios typically labelled as digital transformation programmes, and outline the major activities that are likely to be included in each. Note that the sequence of these activities might change depending on the purpose and scope of the initiative. Rather than replicating what another organization has done, you should forge a path that works for yours.

Detailed information on project management activities and approaches can be found in the ITIL project management practice guide.

6.3.4.1 Scenario 1: Building capabilities to become a digital organization

This scenario is often referred to as a 'digital strategy'. It is a programme of initiatives, used to build the capabilities that an organization requires to become digital. This could involve automating existing business elements, or changing business and operating models to compete digitally.

In this scenario, the organization will appoint a digital task force to define and implement the digital transformation programme. The task force will consist of senior leaders and experts in technology, customer experience, and the organization's business.

The major activities of this type of digital transformation approach are illustrated in Figure 6.3. Throughout the programme, the task force will use an approach such as Kotter's eight steps (see the organizational change management practice guide) to lead the changes. These steps do not need to be strictly adhered to or performed sequentially, but rather are included as an example. The steps are often performed iteratively and incrementally, according to the organization's needs and strategy.

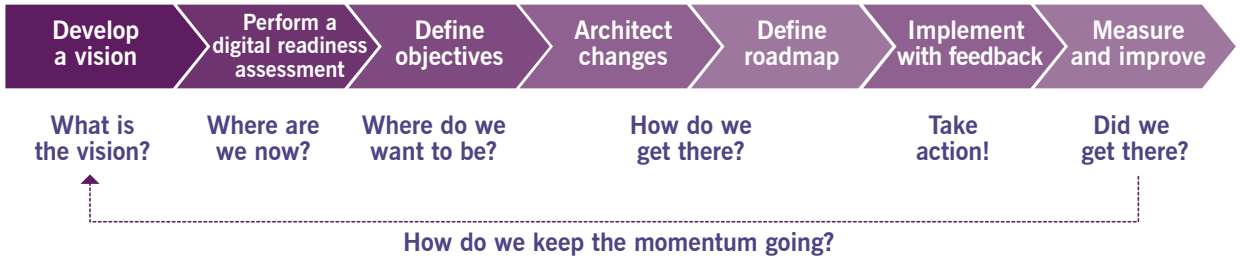


Figure 6.3 Typical steps in a digital transformation programme

Digital transformation is not effective if driven by a single leader; therefore it is important to establish oversight. The organization must ensure the following:

- **Good governance** The organization must ensure that digital transformation happens within the strategy and policies set by the governing body, and is managed consistently across all impacted units of the organization. This can be established through a steering committee.
- **Leadership** A digital task force consisting of key leaders and experts will be needed to lead the digital transformation.
- **Collaboration** The programme must specify how the organization's various units or functions will be involved, how communication will work, and how decisions will be made.

Develop a vision

The organization's strategy will define its purpose, vision, and desired position, and the opportunities it wishes to pursue. It must also articulate its definition of what digital means to the organization, and what digital

capabilities it needs to achieve that definition. When the strategy has been defined, the digital task force can use it to confirm or define a vision for the programme (which should reflect the strategy's vision) and to set specific goals for the programme.

Perform a digital readiness assessment

Assess the digital capabilities

This might be part of the digital readiness assessment, but is more of an assessment of the organization's current capabilities, regardless of what its objectives are likely to be. Note that this should have been completed as part of the strategic assessment of the internal environment.

Identify digital use cases

These use cases define how the organization intends to use its digital capabilities, and which digital capabilities are underdeveloped or missing. For example, an organization that identifies customer experience management as an important digital capability might find that it does not have customer journey maps, or any methodology or supporting technologies, for this capability.

Use cases might show that they need to create customer journey maps for key services or products, establish feedback loops to obtain customer suggestions and feedback, measure customer satisfaction across the entire customer journey, define key metrics to identify where improvement is needed, and develop a methodology to orchestrate these components.

If a digital business model and operating model have been defined, their capabilities need to be mapped, and the organization needs to quantify the maturity level of each capability.

Define objectives

The digital transformation programme will build the capabilities the organization needs to achieve its strategic objectives, taking the following into account:

- When a digital readiness assessment has been conducted, the team will use it as a baseline.
- If the strategy has not been defined, or has not specifically referenced the need for digital transformation, it must be defined or revised before further work on the digital transformation programme is conducted. The organization might decide to use the digital transformation programme to define its digital strategy, but it must then find leaders who will be responsible for expanding the strategy's scope beyond the transformation.
- The digital transformation programme must be defined within the policies and constraints defined in the organization's strategy and its business and operating models.

Architect changes

A review of the organization's strategy and its artefacts, especially enterprise architecture information, will help the team to identify which components of the current state are already digitized, which are partially digitized, and which are not digitized. It will also identify any components that do not yet exist, and which have to be created or obtained. The team will then architect all areas that need to be changed. This might include documents, processes or practices, activities, infrastructure, applications, data sources, organizational structures, roles, and skills. The architecture management practice guide provides additional details on these concepts.

Define roadmap

The digital task force will group the changes into initiatives or projects and sequence them. Examples of groupings might be by system, architecture, process, department, geography, or product line.

The grouping of these activities does not necessarily have to be the same for each project or programme. For example, the digital task force might decide to digitize all paper records from all departments first, then move on to a function-by-function basis to assess and transform each function's individual business processes.

Although Figure 6.3 and the term 'roadmap' imply a linear implementation, the guiding principle of 'progress iteratively with feedback' is important here. As each set of activities is completed, the team will learn from its experience and will need to adjust future plans. The roadmap should therefore show incremental units of work, rather than a multi-year timeline of final deliverables.

Implement with feedback

The digital task force charters projects or programmes for each group of activities, assigns an owner for each group, and ensures that plans and budgets are defined for each group. It also ensures that resources and funding are made available as needed. Each project or programme should define incremental units of work, with iterations so that feedback can be provided, data collected, and the project or programme adjusted as lessons are learned or key assumptions or technologies are changed.

Measure and improve

Although each project or programme will measure its progress and the quality of work, there is a risk that changes in each iteration might cause a deviation from the enterprise strategy. Or, the digital task force might learn something that renders the current strategy less effective. Measurement and improvement here, therefore, relates to the effectiveness and efficiency of the digital transformation project or programme itself, but also the overall impact of the programme on the strategy and vice versa.

6.3.4.2 Scenario 2: Conducting a single digital transformation initiative

In this type of digital transformation, one or more stakeholders finds an opportunity to use digital technology to do something better, faster, or cheaper.

This suggests that the organization has already achieved a level of digital maturity and is making incremental improvements. However, it might be that it has no digital strategy and is simply developing digital capabilities as and when needed. This is a dangerous practice, as it could result in fragmented, duplicated, or diverse solutions that are expensive to manage, integrate, or maintain. If this is the case, the organization should strongly consider creating a formal digital strategy and ensuring that all innovation is effectively coordinated.

This type of transformation tends to be limited to a single organizational unit, product, value stream, or practice. Although the stakeholder might view the transformation as strategic, it is generally operational or tactical in nature. Examples include a new feature in a product, a quicker method to process orders, and a technology that stores data with a lower cost and faster access.

These are not digital transformation programmes as such, but if there are enough of them across a large enough part of the organization, they will present a significant source of transformation to the organization. These initiatives need to be carefully managed and coordinated to ensure that:

- there is no duplication or overlap between them
- a business case has been defined for each one, and there is a clear return on investment and available funding and resources
- they are consistent with the organization's digital strategy and will help the organization to achieve its vision and objectives; in some cases, they may be counter to the strategy and should be stopped; or if they accelerate or better realize the strategic objectives, the strategy might need to be reviewed and revised
- they comply with strategic policies and architectural guidelines.

These initiatives follow the standard approach for managing projects or programmes. However, there is a major difference: project management is used to deliver outcomes for which a plan or standard business case exists.

Often, however, an individual digital transformation initiative does not start as part of an overall plan or standard business practice. Instead, it introduces fundamentally different ways of working. It will not be initiated through standard project management practices, but will require a different approval and planning mechanism. This is provided through the way the organization manages innovation, and is described in more detail in Chapter 10.

When approved, the activities that manage these initiatives are similar to those in any standard project or programme, with some significant differences:

- additional evaluation of the initiative's impact on the organization's strategy
- lessons learned from these initiatives tend to be more far-reaching; for example, a successful implementation might require an evaluation of whether the architecture change could be relevant for other parts of the organization
- results or status are reported to strategic leaders, who use them, together with other metrics, to determine the strategy's effectiveness and relevance; deviation from anticipated results could lead to decisions to rapidly change the scope of the project or terminate it altogether.

6.4 Strategy communication and implementation

Leaders who develop, plan, and manage strategy in isolation from the rest of the organization will struggle to achieve the strategic objectives. Employees, partners, and other stakeholders will not know what the appropriate course of action is when faced with decisions. Incentive systems are not geared to encourage the behaviours that the strategy requires. Employees are left to discover what is appropriate when trying to satisfy customers whose needs are not being fully met. Yet a surprising number of organizations maintain their strategies as closely guarded executive-confidential secrets.

In times of volatility, uncertainty, complexity, and ambiguity (VUCA), it is more important than ever for leaders to communicate and reinforce the organization's strategy, guiding principles, and objectives. An effective company is one whose employees, partners, suppliers, and even customers are engaged in helping it determine the right strategy and then effectively implement it.

Leaders who want to instil the strategy and its initiatives at the heart of every stakeholder will find the following principles useful:

- Engage employees and other stakeholders, as appropriate, when defining elements of the strategy. For example, ask employees to help define the values that will shape the future company.
- Reinforce the purpose, vision, objectives, and achievement of strategic initiatives at every opportunity. Although the entire strategy should not be summarized at every meeting, the leaders should include some element of it in various forums and media. Management meetings should show teams how they are contributing to a strategic objective. Newsletters should be structured around how the company is moving

forwards and meeting its purpose. Executives should structure reports and presentations around the company's achievements in meeting its objectives.

- Use strategy dashboards on the internal company website, and make them a part of weekly team or management meetings.
- Include important elements of the strategy in the employee and contractor onboarding process.
- Praise and reward those teams that exemplify a particular value, have achieved an objective, or have progressed an initiative.
- Build strategic metrics into employee objectives and vendor contracts.
- Be clear about the competition, and how the organization differentiates itself through its strategy. Ensure that stakeholders know why the strategy is important for the organization to achieve and maintain its position in the market, and show how each initiative will ensure that it gets there. This does not mean disparaging competitors. It is far healthier to build a strategy that is based on a healthy respect for the competition and a knowledge of its strengths and weaknesses. Stakeholders might even find occasions for new opportunities and partnerships as they look for ways to meet the challenges of competition.
- Encourage feedback, and listen to stakeholders as they explain what is working and what is not. Ask them for a better way of doing something when a strategy hits a roadblock.
- Keep explaining how the new way is different from the old way, and why the new way is so important. At the same time, listen to fears and concerns and deal with them appropriately.

CHAPTER 7

DID WE GET THERE?

7 Did we get there?

Strategy management is a continual practice. It involves reviewing and updating the direction of the strategy, based on reassessing the environment and evaluating the progress and achievements of the strategic initiatives. This requires ongoing strategic measurement and reporting, which applies more generic measurement and reporting practice to the strategy. Measuring a strategy provides insights for its continual improvement or significant review, and may trigger a wider reconsideration, such as a business model review.

The measurement and resulting improvements support the organization's ongoing relevance and viability, and its ability to achieve its purpose and objectives in a volatile and uncertain environment.

7.1 Key facts about measurement

Measurement is not the only aid to successful management. Many management challenges can be addressed through leadership, communication, design, intuition, and other means. It is not true that 'we cannot manage what we do not measure'.

Measurements provide information that can be used to make decisions and pinpoint issues, which can be tackled with management efforts, and assure a reliable foundation for motivation.

Measurements have no intrinsic value. They only become valuable when applied in a management context. They can help with four management tasks:

- **Influencing behaviour** By defining measurable targets, an organization sets the direction for activities and expectations for outcomes. Each objective should have one or more indicators to enable the assessment of progress.
- **Justifying changes** Any improvement initiative (or any change) requires justification. Metrics that display negative trends or deviations from target values are quantitative arguments for change.
- **Validating decisions** Measurements help to ensure that activities have been completed, staff work towards targets, and decisions yield the desired outcomes.
- **Intervening** Metrics, especially leading indicators, are triggers for corrective actions.

The most common measurement categories are:

- **Performance** What does the managed object (organization, practice, product, service, team) achieve?
- **Maturity** Does it have the necessary capabilities to fulfil its purpose?
- **Compliance** Does it comply with internal and/or external requirements?

To support these management tasks and measurement categories, various types of metrics are used. The most common and relevant for measuring a strategy are described below.

7.1.1 Types of metrics

Definition: Metric

A measurement or calculation that is monitored or reported for management and improvement.

The main types of metrics are as follows:

- **Effectiveness metrics** These indicate the degree to which an activity (or group of interrelated activities) fulfils its purpose and achieves its objectives.
- **Efficiency metrics** These illustrate how an organization utilizes resources to perform activities and manage products and services.
- **Productivity metrics** These show the amount of work that is performed and the resulting outputs. They can also be described as the 'throughput' of a resource or a system.
- **Conformance metrics** These demonstrate how a managed object meets pre-agreed rules and requirements; they are of interest mostly to the owners of the managed object (e.g. practice owners, product owners) and governing bodies.

7.1.2 Lagging and leading metrics

Lagging metrics report what has already been achieved. Lagging indicators are impossible to influence and relatively easy to measure.

Leading metrics help to predict what is likely to happen in the future. Leading indicators are often difficult to measure, but fairly easy to influence (see Figure 7.1 for a summary of lagging and leading indicators).

Organizations that focus only on lagging indicators, such as those used in service level agreement (SLA) reports, might be able to report on trends based on past events, but are otherwise limited in their ability to shape future results. An example of a lagging indicator is revenue from a digital initiative for a prior month, whereas a leading indicator would be the number of experiments in support of a digital initiative that a team runs each week. Teams and leaders need to invest in the up-front time needed to define, set targets for, monitor, and review both leading and lagging indicators to support informed decision-making.

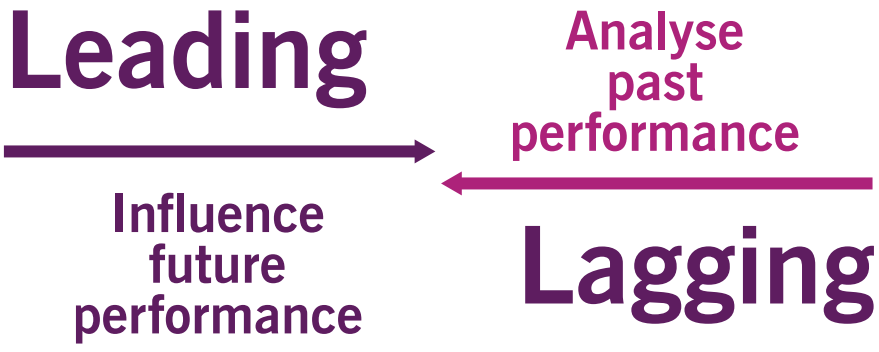


Figure 7.1 Lagging and leading indicators

7.1.3 Outside-in and inside-out metrics

Another aspect of metric categories is outside-in vs inside-out metrics. Outside-in metrics represent the customer view of an organization's services, whereas inside-out metrics represent the internal (IT) organizational view of services. Every customer-facing report should be based on outside-in metrics that focus on the value and outcomes that achieve the results and experiences the customers desire. Digital transformation efforts must maintain an outside-in focus as part of a balanced approach to measuring progress and, ultimately, the success of the effort.

7.1.4 Metrics and indicators

Definitions

- **Indicator** A metric that is used to assess and manage something.
- **Key performance indicator** An important metric that is used to evaluate the success in meeting an objective.
- **Performance** A measure of what is achieved or delivered by a system, person, team, practice, or service.

Metrics are useful when they support decision-making by indicating important aspects of a managed object; in other words, when they serve as indicators. The most important indicators are known as 'key performance indicators' ('KPIs').

A metric is only a KPI when it is crucial for assessing an object's state. The management context differentiates between metrics that indicate key information and those that are supplementary. Indicators are 'key' when they relate to the most important properties of an object or the factors that significantly affect those properties (e.g. a factor that indicates the severity of a bottleneck).

KPIs help to assess the state of an object in terms such as 'good' or 'bad', 'acceptable' or 'unacceptable'. A metric can only be used as a KPI if it has an agreed target value and a tolerance (acceptable deviation from the target value).

Most indicators used for services and practices also have a 'target trend'; they should either rise or decline. For example, the timeliness of completing changes should increase, and time to market (TTM) should decrease. In these examples, the bands of tolerance are mono-directional. If the target trend of an indicator is growth, its tolerance will be lower than the target value.

To use metrics as KPIs, it is important to:

- identify the key metrics
- define target values and trends
- define tolerances.

7.1.5 Cascading and linking measurement

ITIL®4: Direct, Plan and Improve provides an overview of aligning purpose, objectives, indicators, and metrics within an organization. This structure is shown in Figure 7.2.

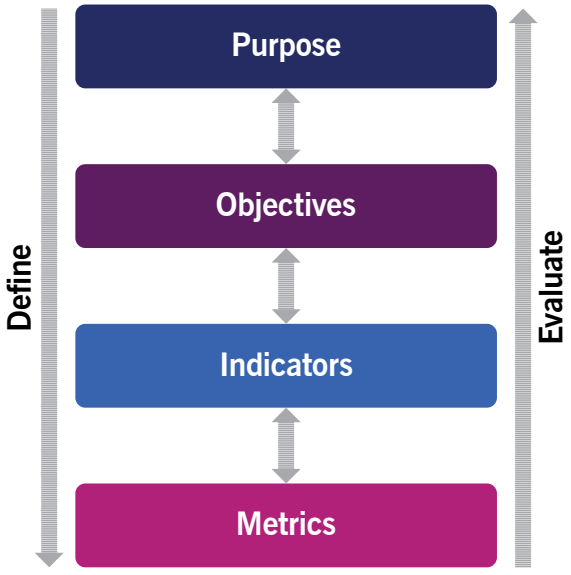


Figure 7.2 Planning and evaluation model

From a strategic point of view, it is important to note that the nature of the purpose, objectives, indicators, and metrics may change. Different audiences need to see metrics that allow them to measure and change things that are in their control.

Examples of objectives, indicators, and metrics are shown in Table 7.1.

Table 7.1 Examples of objectives, indicators, and metrics at different levels of management

Focus	Purpose	Objectives	Indicators	Metrics
Strategy	The purpose of the organization defining the strategy	Strategic objectives, such as ability to operate in a particular market or grow a particular line of business	Outcome-based	Organizational achievements (such as revenue growth level attained, market share), benchmark results
Strategic initiative	To implement an aspect of the organization's strategy (e.g. build a new product, create a new customer engagement model)	Project objectives, such as time to complete, budget, specifications	Achievement-based	Milestones met, money spent, resource utilization, specifications complied with
Function/ department or team operations	To use the resources, tools, processes, etc. defined by the organization to perform the roles assigned to them (e.g. manufacture products, sell products)	Operational objectives, such as work rates, production levels, output quality	Performance-based	Revenue generated, expenses, productivity (quantity, quality, and timing), audits
Order/service request/ incident/ change/etc.	To identify, process, and complete items of work assigned to a function, team etc.	Process objectives, such as ticket duration, quantity, frequency, maximum cost	Occurrence-based	Number completed, time to complete, cost per ticket, revenue per ticket, occurrence patterns

The measurement and reporting practice provides a universally applicable method for designing a measurement system. This method includes five distinct steps:

- Define the objectives.
- Identify success factors.
- Select metrics and measurement tools.
- Form a system of key performance indicators.
- Aggregate the measurement data.

When applied to a strategy, these steps imply the following:

- Define the organization's purpose and strategic objectives.
- Identify success factors supporting the purpose and every objective. These may include key capabilities to develop, key results to achieve, and key requirements to meet.
- Select relevant metrics (performance metrics to evaluate achievement of results; maturity metrics to evaluate developing capabilities; conformance/compliance metrics to evaluate how the requirements are being met).
- For the key metrics, agree target trends, values, and tolerances (acceptable deviations), thus creating strategic indicators.
- Design a balanced scorecard of the key indicators; present dashboards and reports tailored for the target audience's needs.

The resulting system of KPIs must be balanced. It should be able to identify, for example, whether some aspects of an object's state are being ignored in favour of others (e.g. if quality is neglected in pursuit of speed).

See the measurement and reporting practice guide for more on applying this five-step method.

The ITIL story: Cascading and linking measurement

Anya: *Measuring the success of the food delivery business is critical. We need to understand what works and what doesn't, so that we can take appropriate actions. We must have a balanced perspective on our ability to execute, and how our customers feel and think about our products and services.*

Dave: *It is important to choose what to measure and how to measure it. We cannot judge the success of the food delivery business with our traditional metrics. For example, one food delivery agent might rent a car for three hours, making an average of ten deliveries. Our traditional measurements might have logged that as a single vehicle hire.*

Luna: *As we launch the new service, the meaning of 'value' has changed. The ITIL guiding principle 'focus on value' sparked a discussion about how we define 'value' for the food delivery business, and 'keep it simple and practical' has allowed us to quickly agree on relevant metrics that are easy to collect and analyse. In some cases, we have adjusted our traditional measures (such as frequency of bookings), and in other cases we have had to create new ones (such as number of deliveries per hour).*

7.1.6 Objectives and key results

Some organizations have adopted a specialized approach to defining strategic objectives and critical success factors (CSFs) known as 'objectives and key results' ('OKR').

Definition: Objectives and key results (OKR)

A framework for defining and tracking objectives and their outcomes.

Various frameworks have been developed over the years, and all have seen both success and failure. The key is not in what the metric is, but in how it is used. If metrics do not enable appropriate decision-making and action, they will be meaningless.

OKR as a method is focused on defining strategic objectives and their outcomes, and tracking both to see that they are achieved. OKRs measure those things the organization does, along with the effects they have on their environment.

In the terms defined in sections 7.1.1 to 7.1.4, OKR is about defining strategic objectives and relevant lagging performance indicators, in order to monitor the ongoing performance of the strategic initiatives and the overall strategy.

Google's OKR playbook

This is how Google's OKR playbook* describes the key features of the OKR framework.

Objectives are the 'whats'. They:

- express goals and intents
- are aggressive yet realistic
- must be tangible, objective, and unambiguous; it should be obvious to a rational observer whether an objective has been achieved.

The successful achievement of an objective must provide clear value for the organization.

Key results are the 'hows'. They:

- express measurable milestones that, if achieved, will advance the objective(s) in a manner useful to their constituents
- must describe outcomes, not activities
- must include evidence of completion; this evidence must be available, credible, and easily discoverable.

* https://www.whatmatters.com/resources/google-okr-playbook/

Several leading digital organizations use OKRs to set strategic, ambitious goals; align and focus the organization; and visibly track results or outcomes against these goals. OKRs help organizations change how teams work by shifting the emphasis from outputs to outcomes.

All objectives defined by the organization should be linked to the higher strategic objectives, with generally three to five high-level objectives defined, and three to five expected key results defined for each objective. As a result, OKRs form the top priorities for the organization. Objectives and key results are reviewed and revised on a short time horizon. Generally, objectives are reviewed monthly or quarterly, and progress is reviewed weekly. This approach allows an organization to quickly adapt and respond to internal and external changes. Furthermore, grades should be analysed to ensure they are neither too high nor too low (60–70% of the total is generally considered to be a good range). Teams with high grades should be pushed further, and low grades should be analysed and refined to support teams that are struggling.

Figure 7.3 shows how OKRs can bridge the gap between strategy and execution. This approach implies that individuals create tactical OKRs based on an organization's strategic OKRs.

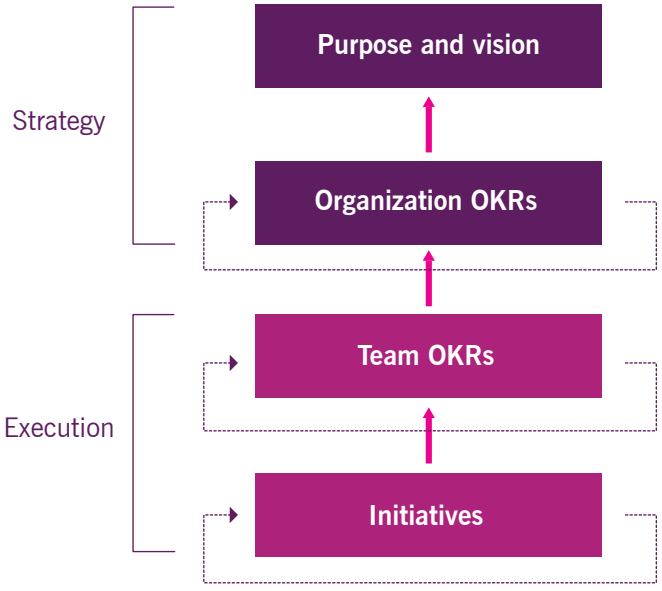


Figure 7.3 How OKRs bridge strategy and execution
Adapted with permission from Perdoo (2020)

Other organizations ensure this alignment without introducing a specific terminology by following OKR-like principles when defining their objectives, CSFs, metrics, and KPIs.

The ITIL story: OKRs

Anya: *OKRs are a great way to track results when the data is hard to collect, or when there are no clear links between actions and results. For example, launching the new food delivery service depends on multiple teams both inside and outside Axle Car Hire working together, prevailing socio-economic conditions, the health of the local restaurant business, and many more factors.*

7.2 Measuring a strategy

7.2.1 Strategy measurement principles

Some principles of strategic measurement for digital organizations are outlined below:

- Ensure the frequency of strategy review matches the volatility of the organization's environment. An annual review cycle is adequate for stable environments, but less stable environments should review the strategy at least quarterly, and the progress of strategic initiatives at least monthly.
- Adjust and evolve the existing strategy. Do not start from scratch unless the entire strategy has failed.
- Change budgeting policies to link with the strategy cycle, not the other way around. Although this may be difficult in public or highly regulated companies, an organization should find ways to meet both the requirements of financial reporting, and the ability to meet changing demands of strategic initiatives and the changed operations that result from them.
- Align operational reporting to strategic reports so that the real impact of a strategy is easier to measure, and also so that changes effected by the strategy are easier to implement (since performance, incentives, and rewards are linked to the desired way of working rather than the previous way).

As with any other managed object, a strategy should be measured and evaluated to ensure that progress is being made, the results are checked, and the direction is validated. In other words, the three main reasons to measure strategy are to:

- determine whether the strategy is being implemented as planned (the progress)
- evaluate whether it is achieving its defined objectives (the performance)
- indicate whether it is still relevant/suitable given changes in the internal or external environment (the relevance).

7.2.2 Measuring the progress

Stakeholders will need to ensure that the initiatives used to implement the strategy are proceeding as expected. They will need reports that communicate the status of each initiative, and that alert them to any potential or actual exceptions to what has been planned.

The leaders of the initiative will need to know the status of every action, who is performing it, and whether it is on time, within budget, and to specification. Actions or decisions made in response to these reports will include:

- determining whether additional or different resources are needed for an activity
- alerting senior leaders and strategy stakeholders about potential delays or cost overruns
- rescheduling or resequencing work.

Leaders responsible for the strategy will need to know the overall status of every initiative, and whether it is on time, within budget, and to specification. Actions made in response to these reports will include:

- allocating additional funding to an initiative
- revising the strategy's timelines
- alerting key stakeholders of delays (or acceleration) in delivering a particular outcome
- deciding whether to continue with the initiative or switch to an alternative
- adjusting the strategy as appropriate.

7.2.3 Measuring the performance

Completing initiatives does not automatically result in achieving all the objectives of the strategy. There are many other factors at play. For example, the strategy might have overlooked a critical element, or underestimated the importance of some aspect of the organization or its environment. A strategy that depends on market acceptance of a technology will fail if the market rejects that strategy, no matter how well the initiatives have been implemented.

Leaders responsible for defining and implementing the strategy will need to know how the organization is progressing against its stated objectives. Some of these will be performance-based (e.g. whether revenue is increasing). Others will be related to achieving a milestone (e.g. achieving sustainability certification for all office buildings). Yet others might be measured in other achievements, such as avoiding emission penalties in factories, or achieving accreditation to deliver a service in a market. Actions made in response to these reports might include:

- Changing the strategy to respond to a particular event (e.g. delaying one new product line while doubling efforts to launch another on time; withdrawing from a market because of a failure to become certified in that market; accelerating entry into a new market because new regulations support the organization's business model).
- Moving to implementing an alternative scenario (e.g. the strategy was based on a high market willingness to conduct business online, but experience has shown only a moderate acceptance; this was an alternative scenario in the strategy).
- Allocating additional resources to one part of the organization (e.g. if demand exceeds expectation, factories might need additional capacity to cope with increased production rates).
- Withdrawing from an opportunity or market, thus cancelling that part of the strategy.

Executives and members of the governing body who are not directly involved in managing the strategy will need to be informed of changes to it. This will enable them to get involved in decisions as required.

7.2.4 Measuring the relevance

Even if an organization is implementing strategic objectives according to plan, and the organization is moving towards achieving its strategic goals, changes in the internal and external environments might change that at any time. It is vital that those responsible for the strategy of the organization continue to monitor the factors of the environment that led them to define their current strategy.

It should be remembered that as soon as the organization starts implementing a strategy, it triggers change. If these changes are not anticipated, the strategy will need to be adjusted. Strategy reviews should consider that the strategy itself is causing change, not just reacting to changes in external factors. This means that strategy metrics must focus on changes to the environment that happen independently of the strategy, as well as cause-and-effect relationships embedded within the strategy itself.

The ITIL story: Measuring strategy

Dave: *Every month, my team puts together a report, compiling data from internal and external sources to present a balanced picture of how well we are tracking against our strategic goals. We ensure that we use qualitative and quantitative data in our reports, from operational dashboards to reports and anecdotes from our teams in the field, key customers, procurement managers, and others.*

Henri: *My team has helped automate much of the monthly reporting, especially in compiling data and in identifying trends, but the analysis is done by Dave's team.*

Anya: *The executive team reviews the reports every month, and uses the opportunity to discuss and agree to any appropriate (minor) interventions. We also meet quarterly to review longer-term trends, and discuss potential changes to our business or functional strategy.*

7.3 Instrumenting strategy

Information that is gathered and processed is primarily used for producing reports, but might be valuable in a variety of situations, such as audits, quality management, continual improvement, and service validation. Metrics are usually presented as reports or dashboards, which are intended to support good decision-making. They should be relevant to the recipients of the information and related to the required topic. Reports and dashboards should make it easy for the recipient to see what needs to be done and then take action. The metrics and reporting used in measuring and improving strategy should be defined in the strategy itself.

Reports normally contain not only measurement results, but also post-processing outputs, such as:

- comparisons between actual and target values (to highlight deviations and to evaluate the current state of the managed object)
- comparisons between actual values and data from previous periods (to assess trends over time)
- comparisons between different indicators (to evaluate correlations and identify bottlenecks).

Reports can also describe the reasons behind the current state of the object, together with conclusions and recommendations, and even action plans. Based on their purpose and content, reports can be categorized as operational or analytical.

7.3.1 Operational reports and dashboards

Operational reports help to quickly identify deviations from plans and objectives as they happen, so that necessary corrective measures are triggered. Facts (e.g. measurement outputs) form the content of an operational report. Such data normally can be captured automatically with minimal or no human effort.

Because of the high level of automation, little time is required to produce such reports. This means they can be delivered often, e.g. daily or even several times a day. This provides the most up-to-date data to support decision-making.

Dashboards are a special form of an operational report. They have several key properties:

- They present only the most important indicators.
- All data is presented on a single screen (hence the automotive analogy).
- They are available online (unlike printed reports).

Data updates can happen in real time, every several minutes, on demand, or according to an agreed schedule. Information about a managed object is transmitted in a condensed form, allowing a quick identification of, and response to, any deviation.

Organizations are beginning to replace lengthy planning documents with electronic digital strategy dashboards linked to various strategic reports and artefacts. The purpose of these dashboards is to have real-time visibility to view the status of the strategy from all perspectives (strategy implementation, effectiveness and relevance) and respond quickly. Appropriate links between documents and other artefacts, and feeds from business operation systems and external sources, can quickly identify the need for attention, and even allow leaders to model the impact of changes to the strategy.

7.3.2 Analytical reports

The purpose of this type of report is to identify hidden issues, define causes, and discover improvement opportunities. Operational reports focus on facts, whereas analytical reports help to understand the facts and reach conclusions and recommendations.

Analytical reports cannot be fully automated. An expert, analyst, or consultant is needed to help develop them. Depending on the scope of research, this can take anywhere from several days to several months. For that reason, analytical reports are less frequent than operational ones, and support long-term decision-making with a planning horizon of a quarter or beyond, such as developing a new business or operating model.

Analytical reports are usually produced in a printed, paginated form and sent to interested parties. In some cases, analytical reports may require a release authorization.

7.3.3 Operational vs analytical reports

Table 7.2 summarizes the differences between the two types of reports.

7.4 Strategy review

Keeping a strategy relevant and maintaining its effectiveness is the subject of continual strategy planning, as described in Chapters 3 to 5. It is enabled and supported by tools and approaches covered in Chapter 8. However, shorter cycles of improvements and corrections apply to strategic initiatives, products, teams, organizational structures, and other managed objects, based on the ongoing strategic measurement and reporting. Every strategic cycle includes a review step, which leads to optimization of both the initiative fulfilment and the defined scope and tolerances.

When defining targets and metrics for strategic objectives, an organization should be careful about its influence on people's behaviour and the unintended consequences for the organization. For example, if a strategic objective of embracing open innovation is supported by a target of 50% of innovations being sourced from outside the company, it might lead to artificial regulation of the naturally emerging innovative initiative and cause harm to the organization, while at the same time demonstrating the expected achievement.

Table 7.2 Operational report vs analytical report

Property	Operational report	Analytical report
Purpose	To deliver information to evaluate the current state, to identify bottlenecks, and to support operational decisions	To deliver analytical evaluation of the managed object, to identify hidden issues and their causes, and to suggest improvement options
Activity to produce	Ongoing measurements of resources and operations	Targeted analytical research
Content	Measurement results Comparisons with the target and historic values Matching different indicator values to identify correlations and bottlenecks	Content is driven by the research goal and analysis method; a sample table of contents can be as follows: ● a structure of goals related to the management object, and its current state description ● industry benchmarking ● identified issues and their causes ● conclusions and recommendations
Production technology	Automated, with minimal human labour	Manually created by a qualified analyst; such a report requires both data collection and human involvement in the form of interviews, workshops, and brainstorming
Production time	From several seconds to several hours	From several days to several months
Decision horizon	Not exceeding a quarter; normally within a month	From a quarter to several years
Authorization	Not required	Sometimes required

Data is at the core of the personal and organizational decision-making process and evolution. Yet it is not the only source of knowledge used in decision-making. In fact, the term 'data-driven' often implies that data equals or includes insight. If data is assembled from facts, statistics, quantities, symbols, etc., the exclusive use of a data-driven approach might limit an organization's potential to evolve, and might prove to be unwise.

Insight is the ability to gain an accurate and deep understanding of a subject. It might be interpreted as knowing and feeling the underlying nature of things. Insights are a result of human intelligence, including emotions, experience, and feelings. They are a supplementary component of the data, and are a result of an individual's experience and personality. Therefore, the greater an individual's experience and expertise, the more useful their insights will be. Insights cannot be produced by artificial intelligence.

Techniques such as ALOE (asking, listening, observing, empathizing) and the development of emotional, social, and system intelligence support an organization's performance and evolution. They work much more effectively when adopted by the strategic decision-makers, and help to create and maintain an insight-driven strategy.

See the practice guides for strategy management, measurement and reporting, and knowledge management for more on measurement and decision-making.

CHAPTER 8

HOW DO WE KEEP THE MOMENTUM GOING?

8 How do we keep the momentum going?

Strategic momentum is achieved in two main ways. First, the strategy should be concerned with the organization's long-term viability. Actions should be taken to ensure that the organization's trajectory is good over several iterations of strategy. The strategy must also remain relevant to the organization's changing environment.

Second, the actions taken to move the organization into the future must not stop it from meeting its existing commitments. It cannot stop operating to implement strategic initiatives: they must be implemented alongside current business operations.

8.1 Long-term momentum: ensuring organizational viability

An organization's viability is a fundamental outcome of its strategy. Internal and external environments, including consumer needs, are changing increasingly quickly and drastically, so the organization must be adaptable. Any organization's resilience will be tested by sudden or drastic events; its digital strategies may be accelerated or halted, and their priorities will change. Organizations that can recover, pivot, and progress in a new direction stand the best chance of long-term success.

Disruptive events create opportunities for organizations to become more agile and lean, to streamline and improve operations, to find and exploit new innovations and technology, and to deliver new and improved products and services to consumers. This chapter will explore ways of looking at and assessing these new environments. It will also describe tools, techniques, and approaches that will help organizations to respond effectively.

8.1.1 VUCA

The number and magnitude of challenging events are increasing, and the environment in which today's organizations operate is often described as volatile, uncertain, complex, and ambiguous (VUCA).

The term 'VUCA' was coined by the US Army War College and later adopted to describe the business, social, and economic environment:

- **Volatility** The speed of change in an industry, market, or overall environment.
- **Uncertainty** The lack of predictability in an environment.
- **Complexity** The number of issues and amount of confusion that surround the organization.
- **Ambiguity** The lack of clarity and potential for misreading situations.

The pace of change is increasing, the number of components in systems is growing, and cause-and-effect logic is becoming less linear. These changes are stimulated by digital transformation, the service economy, and other internal and external trends.

8.1.1.1 Digital transformation

The digitization of business and the related changes in technology's role in organizations' business and operating models introduce new factors to consider, including:

- the changing role of technology competency in business management
- the increasing pace of competition
- disruptive digitally native competitors
- the changing roles of IT management and IT teams in business
- the increasing significance of data quality and effective data management
- new legislation and requirements in areas such as privacy and information security
- IT management practices expanding into various business areas
- the return to or introduction of in-house software development
- new dependencies on third parties, such as providers of cloud and communication services.

These factors may have different significance for different organizations, but they are generally on the agenda of governing bodies and executive leaders in nearly every industry. Organizations are diving into digital transformation; some still need to learn to swim.

8.1.1.2 Service economy

Today, all organizations are service organizations: they are service consumers and service providers. There are no self-sufficient organizations with zero external dependencies. Rather, business ecosystems are becoming more and more complex.

There are various sourcing trends. Some organizations rely on service integration and management services provided by a trusted partner; others prefer the diversity and flexibility of disintermediation and the gig economy. Other trends, such as peer-to-peer services and platforms or subscription-based services, are developed by and impact organizations everywhere. In any event, no resulting ecosystem can be called simple.

The service economy raises a number of challenges:

- multiple dependencies
- lack of control over dependencies
- complex sourcing models
- lack of holistic end-to-end understanding of value streams
- strong and volatile external factors (PESTLE)
- the expansion of service-based business models into traditionally goods-focused industries.

Just like digital transformation, service economy challenges affect organizations in different ways, although most organizations are affected and many are not ready for today's service economy.

8.1.1.3 Digital transformation and the service economy contribute to the VUCA environment

Table 8.1 outlines how digital transformation and the service economy contribute to the VUCA environment.

Table 8.1 Digital transformation, the service economy, and the VUCA environment

	Digital transformation	Service economy
Volatility	Technologies are continually changing and introducing new risks and opportunities. Failing to keep pace with opportunities may result in loss of leadership; failing to recognize risks may result in loss of business.	Business models and relationship models are continually changing. These changes lead to organizations repositioning in markets and industries.
Uncertainty	The current and future states of technology and its role in business are unclear. Technology portfolio decisions are difficult to make, because new technologies emerge before older ones can prove or disprove their effectiveness.	Every member of the service relationship network has limited exposure to others; an assessment of other organizations' capabilities and the associated risks is difficult and never complete. The growing number of external dependencies increases the overall uncertainty of the organization's current status and forecasts.
Complexity	The number of moving parts in the technology landscape is growing. The cause-and-effect relationship is unclear. Technology is increasingly self-organizing. Procedure-based approaches to IT management are no longer effective.	The number of stakeholders in a service relationship is growing, and their interdependencies are changing and never fully known. Relationships based solely on formal agreements are ineffective in mid- and long-term perspectives.
Ambiguity	It is hard to assess the impacts of a technology event or proposal; even known effects can be contradictory and ambiguous. Few consequences can be forecasted with acceptable levels of assurance.	Due to the complexity of stakeholders' interests and the variability of social norms, it is hard to assess the impacts of a portfolio, relationship, or marketing decision. Only a few consequences can be forecasted with acceptable levels of assurance.

Digital transformation and the service economy are not the only contributors to increasing levels of volatility, uncertainty, complexity, and ambiguity, but these are particularly relevant to digital and IT strategy. Digitally enabled organizations are very likely to find these factors relevant and important.

The ITIL story: VUCA

Anya: *The concept of VUCA reflects the competitive modern landscape. It is becoming increasingly difficult to create or stick to long-term plans due to the variable nature of people and organizations. For example, at this moment, I cannot predict with certainty how the food delivery service will fare in its first year. However, I can provide a range of possible outcomes based on our modelling and our assumptions. For many of our shareholders, employees, and other stakeholders, that can seem strange and scary. We will apply the ITIL guiding principle 'progress iteratively with feedback' to confirm that our assumptions are still correct and our plans are still viable.*

Henri: *We can make sure we provide our teams with the best tools, skills, and other resources they need to execute our strategic plans, and closely monitor their progress and help them when they face obstacles.*

Dave: *We report back to the board and our shareholders on our progress, successes and shortcomings, and on how we plan to make course corrections, if necessary. But ultimately, Anya is right, we cannot predict the future with full certainty.*

8.1.2 Ensuring the viability of digital organizations

General recommendations for acting in a VUCA environment are available from various publications. In the shortest form, they can be reduced to the recommendations given in Table 8.2 (based on Bennett and Lemoine, 2014; *A Guide to AgileSHIFT®;* and other sources).

Table 8.2 Recommendations for acting in a VUCA environment

Characteristic	Recommendation
Volatility	Prepare for variations by investing in extra resources
Uncertainty	Improve knowledge management and the quality of information
Complexity	Restructure for self-organization and agility
Ambiguity	Experiment to explore available options

8.1.2.1 The guiding principles

ITIL 4 is designed with VUCA challenges in mind, so ITIL recommendations can help address VUCA challenges. ITIL's seven guiding principles can be mapped to, and used to apply, the recommendations listed in Table 8.2, as shown in Table 8.3.

Table 8.3 Recommendations for acting in a VUCA environment mapped to the seven guiding principles

Characteristic	Recommendation	Focus on value	Start where you are	Progress iteratively with feedback	Collaborate and promote visibility	Think and work holistically	Keep it simple and practical	Optimize and automate
Volatility	Prepare for variations by investing in extra resources	X		X	X	X	X	
Uncertainty	Improve knowledge management and the quality of information	X	X	X			X	X
Complexity	Restructure for self-organization and agility	X		X	X	X		
Ambiguity	Experiment to explore available options	X		X	X	X		

The mapping in Table 8.3 shows which principles are most important relative to each VUCA challenge. However, as in any other situation, practitioners should consider possible applications for all seven in every challenge.

8.1.2.2 Key behaviour patterns and organizational characteristics

Section 3.1 in *ITIL®4: High-velocity IT* describes five behaviour patterns, shown in Figure 8.1, that organizations should adopt in order to succeed in digital transformation.

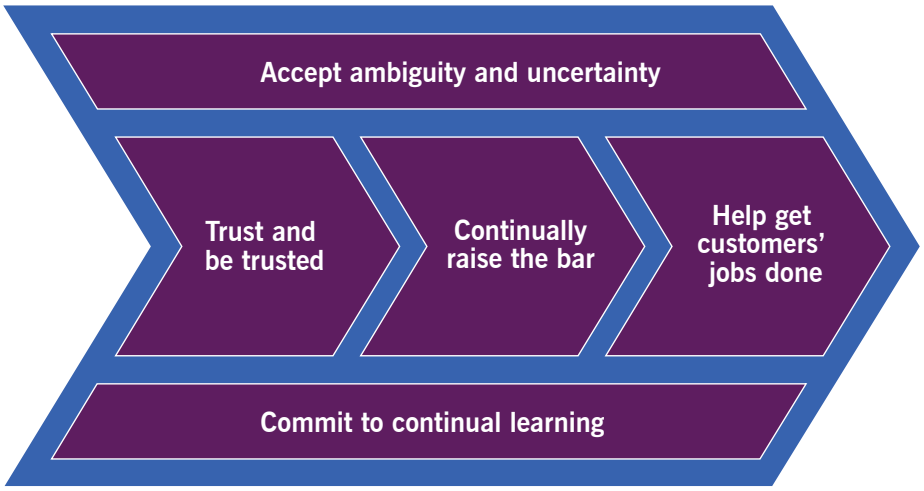


Figure 8.1 Key behaviour patterns of a digital organization

The first pattern, 'accept ambiguity and uncertainty', is directly linked to the VUCA model and does not require explanation. However, the other four address the VUCA challenges in a less obvious way:

- **Trust and be trusted** This implies trust-based relationships within the organization, and between it and its external stakeholders. Trust-based relationships mean higher levels of autonomy and responsibility, and shared objectives and principles. These help organizations to react to changes faster and more effectively, because they do not necessarily have to follow formal, rigid agreements.
- **Continually raise the bar** Readiness to face new objectives and an ability to work proactively are helpful qualities in an ever-changing environment, where new risks and opportunities are identified often.
- **Help get customers' jobs done** Resonating with the principle 'focus on value', this pattern puts value for customers on the top of organizational, team, and individual priorities. Combined with other patterns, it helps to find and implement solutions that meet customers' needs and expectations, even if they keep changing.
- **Commit to continual learning** This behaviour pattern underpins the others. Ignorance is the root cause of many organizational problems, typically when somebody does not have the right information when they have to act. Uncertainty and ambiguity can be specifically addressed by effective knowledge management, which is impossible without a commitment to continual learning and information sharing.

These factors help to develop and maintain five important characteristics, shown in Figure 8.2, that help organizations operate in a VUCA environment:

- lean
- agile
- co-creational
- continuous
- resilient.

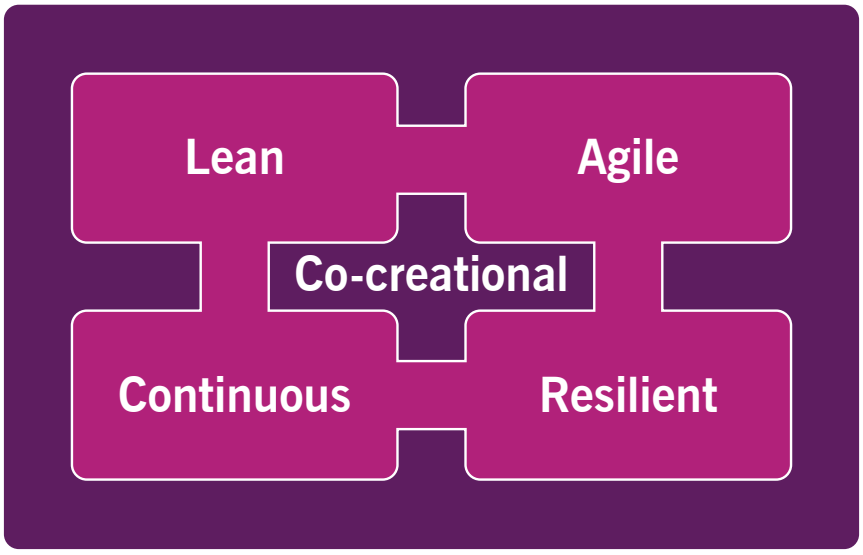


Figure 8.2 Five characteristics for operating in a VUCA environment

Key message

Organizational agility is an organization's ability to move and adapt quickly, flexibly, and decisively in response to events in the internal or external environment.

Organizational resilience is an organization's ability to anticipate, prepare for, respond to, and overcome adverse events in the internal or external environment.

Lean organizations are focused on the continual improvement of their value streams' workflows and the elimination of waste.

Continuous organizations are those that can provide uninterrupted delivery of products and services to consumers, to continuously meet changing needs and requirements and to adjust to the changing environment.

Organizations that are lean, agile, resilient, and continuous are better equipped for value co-creation in the form of services that can be easily adapted for ever-changing environments and customer needs.

The ITIL story: Ensuring the viability of digital organizations

Anya: *It is important that we consider the guiding principles and key behaviour patterns of ITIL as we move into a new line of business. They advise the whole organization, regardless of title, or department, on how to work in this new environment.*

Henri: *We first adopted the ITIL guiding principles to guide our IT service management work. Over time they have helped us work and make decisions in consistent ways across projects and programmes. And now we are finding their value when making strategic decisions. By following the guiding principles, we can give our new food delivery business the best chance of success. The principles are universal in that respect.*

Su: *We first started adopting the key behaviour patterns when we looked at modernizing our IT and digital capabilities. But as Anya shared her vision for the food delivery business with us, I began to understand that the same behaviours are not just applicable to digital or high-velocity teams, but should be scaled across the entire organization. Everyone at Axle Car Hire should be able to trust the work I do, and vice versa. We need to accept ambiguity and uncertainty, and take the necessary steps to protect the organization from unexpected events.*

8.1.3 Strategic approaches to address VUCA

An organization's strategy should be designed to ensure that it can operate effectively in a VUCA environment. It should include creating awareness of VUCA, embracing it, and ensuring that relevant behaviour patterns and organizational characteristics are developed. This can be supported by a number of approaches and techniques.

8.1.3.1 Addressing volatility

Digital and IT strategies should include a strategy for survival that includes, but is not limited to, selection processes for funding projects and programmes, and for knowledge-sharing, communication, succession planning, and decision-making.

Leaders should plan where cuts will need to be made when unexpected changes, such as economic downturns, occur. It is important to avoid making extensive cuts in areas that will help the organization recover and rebuild, such as market research that will provide critical consumer feedback and engagement; or areas that address organizational development and improvement.

8.1.3.2 Addressing uncertainty

The ability to learn is an important aspect of a person or organization. In the case of an organization, it is enabled and limited by the organization's absorptive capacity (Mikhailava, 2011).

Definition: Absorptive capacity

An organization's ability to recognize the value of new information, embed it into an existing knowledge system, and apply it to achieve the intended business outcomes.

To be innovative and adaptive, an organization should continually develop absorptive capacity. Absorbing knowledge and integrating it into a knowledge system is a complex process that should occur simultaneously on various levels (external, organizational, teams, and individuals). It should also consider the four dimensions of service management.

To decrease uncertainty and provide informational support for innovations and an adaptive change culture, an organization should continually develop its absorptive capacity by creating and using new knowledge.

Effective knowledge management combines explicit and tacit knowledge, supporting data-driven and insight-driven decisions. Explicit knowledge can be transferred, codified, assessed, verbalized, and stored. It includes information from books, databases, descriptions, etc. Tacit knowledge is difficult to transfer, express, codify, and assess. It is based on experience, values, capabilities, and skills.

The knowledge management practice guide provides more details on effective knowledge management.

8.1.3.3 Addressing complexity

Operating and decision-making in an environment of changing complexity is difficult. The practitioner must assess the current context and apply an effective heuristic. The most widely adopted framework for this is Cynefin, which was developed by Dave Snowden (2011) and is shown in Figure 8.3.

Cynefin offers a practical way of assessing complexity and determining appropriate courses of action. It distinguishes between five domains or contexts that characterize the relationship between cause and effect. It allows leaders to use different perspectives, orient themselves, understand complexity, and address problems and opportunities.

The five domains, organized by the relationship between cause and effect, are: clear, complicated, chaotic, complex, and confused. The domains on the right-hand side of the diagram allow cause and effect to be deduced, whereas the domains on the left-hand side can only be deduced by hindsight, if at all. This framework helps leaders and practitioners to use the most appropriate approach for the context at hand, which will not necessarily be the approach they prefer.

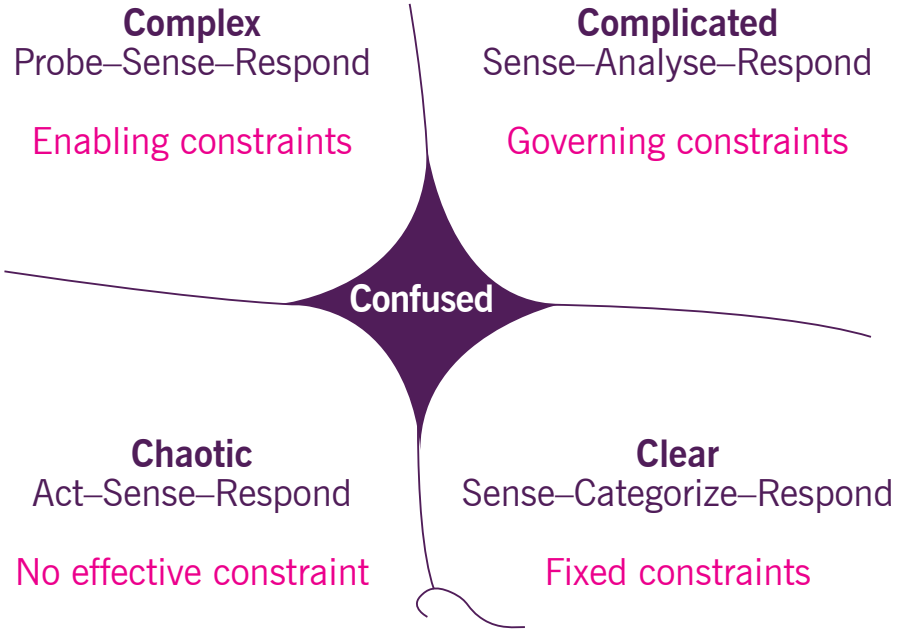


Figure 8.3 The Cynefin framework

After Snowden (2011); reproduced by permission of Cognitive Edge

In a clear context, where cause and effect are known and the context is stable, the best approach is to understand the facts (sense), locate the rules or best practice that apply (categorize), and use the rules or best practice to resolve the context (respond).

When a context is complicated, the advice is to analyse the context: there may be several right answers, so experts need to investigate multiple options. Categorization in the 'sense, categorize, respond' heuristic is therefore replaced with analysis.

In complex environments, a single answer may not exist. People should probe first, then sense, then respond. Safe-to-fail experiments can be conducted to better understand what has occurred and help determine a best course of action.

In a chaotic context, relationships between cause and effect are constantly shifting and are unknown. The steps in this context are to act to establish order, understand the facts (sense), and then respond by moving the context from chaos to complexity.

8.1.3.4 Addressing ambiguity

Leaders, managers, and practitioners often cannot identify the best option from an available range. Every solution may have merit, bring disbenefits, or lead to missed opportunities. An effective approach is to embrace experimentation and promote it across the organization. On the strategic level, this includes not only experimenting with strategic options, such as portfolio decisions, positioning, and organizational structure, but also establishing a safety culture that enables people at all levels to experiment. See more on safety culture in *ITIL®4: High-velocity IT,* section 3.2.2.2.

One technique to support experimentation is Toyota kata: a mental model and behaviour pattern for scientific thinking and routines for practice and coaching (see *ITIL®4: High-velocity IT,* section 3.2.3.3).

The steps of the improvement kata are illustrated in Figure 8.4:

1 **Get the direction or challenge** Improvement should be aimed at specific goals, not just random outputs or outcomes.
2 **Grasp the current condition** A direction is not useful unless we know where the organization is right now.
3 **Establish your next target condition** Describe both the outcome desired next, and the expected condition of the process to generate that outcome.
4 **Conduct experiments to get there** Come up with ideas to overcome obstacles and run experiments with those ideas. If possible, test only one hypothesis at a time.

This technique maps very well to the ITIL continual improvement model (see *ITIL® Foundation: ITIL 4 Edition,* section 4.6). The first two steps of each model align. The third and fourth steps of each model are similar, but Toyota kata works effectively where there are many options available to answer the question 'How do we get there?' or even 'Where do we want to be?' Experimentation is the best way to answer these questions.

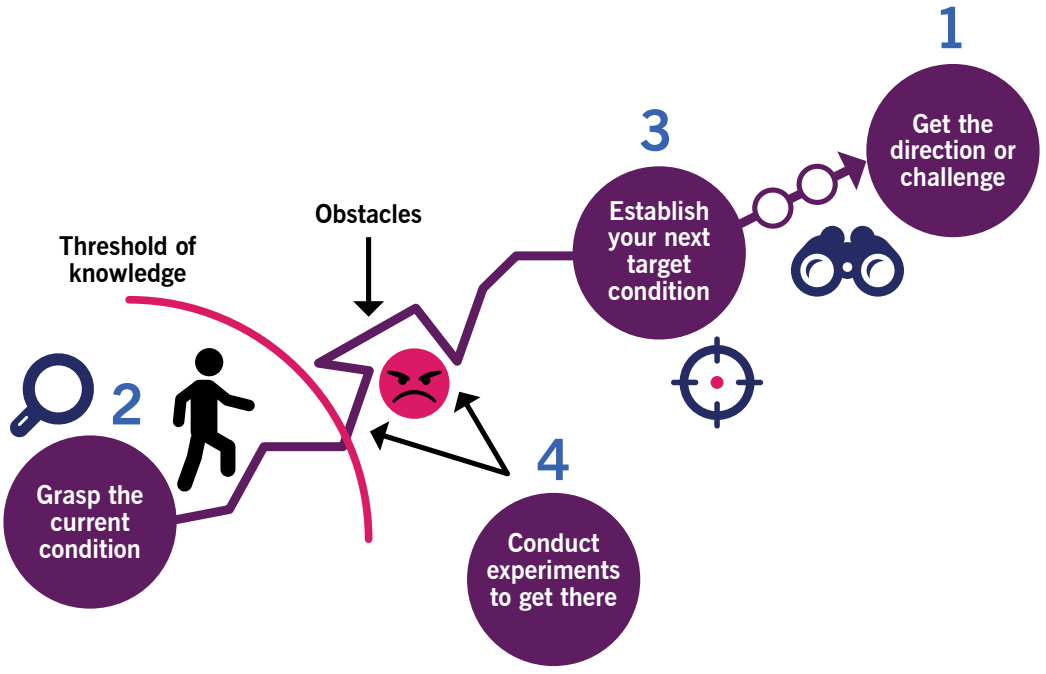


Figure 8.4 Toyota improvement kata

Adapted from Rother (2018); licensed under Creative Commons

The ITIL story: Strategic approaches to address VUCA

Anya: *Frameworks such as Cynefin, and techniques such as Toyota kata, allow the executive team to understand the environment, and the context, within which a decision needs to be made. Although these frameworks and techniques have already been embraced by software engineering communities, they are also relevant to other parts of the organization.*

Dave: *I use the Cynefin framework with my Legal team to understand whether I need to bring in experts, or if I should 'test the water' using small actions (which is a method perfectly suited to the complex domain).*

Henri: *I use the Toyota kata method to better understand and meet the needs of Axle's customers.*

Luna: *I have learned to use these techniques to make better decisions with respect to the Bay Area business I manage. For example, does a customer booking query require a straightforward, standard response, or do I need to investigate first? If I am faced with a difficult decision, such as what marketing campaign to invest in next quarter, I find myself formulating hypotheses and running simple experiments. These tests generate the data I need to make a better decision.*

8.2 Short-term momentum: parallel operation

Even during digital transformation, existing products and services must be delivered and supported for consumers.

Several studies show that a staggering proportion of digital transformation efforts fail. One of the biggest reasons for this is that organizations will not survive if they stop normal operations while transformation is in progress. Revenue needs to be made; missions need to be accomplished. The simultaneous goals of changing and staying the same seem contradictory.

It is easy to underestimate or misunderstand the effect that a digital business initiative has on the status quo. Poor planning often leads to inappropriate support of the digital initiative. Worse, when an organization focuses exclusively on the digital initiative, it neglects the existing business model, undermining the entire business.

Many digitization initiatives include 'built-in' mechanisms for maintaining a steady state while transforming. For example, an organization that wants to improve operational performance by moving a subset of applications to a cloud-based delivery model will use tools included with its chosen platform to migrate with little or no interruption. More complex initiatives, however, require more complex planning. For example, an organization that seeks to transform large parts of its business model or operating model to disrupt an industry or market will need a more cohesive, coordinated plan to maintain a steady state while transforming.

8.2.1 Parallel operating models

Parallel operating models (POMs) are approaches to executing digital strategy while maintaining a steady state. They directly address the sustainment of two business models at the same time. Although POMs rarely exist in a pure state, they can be reduced to four basic models for the sake of comprehension:

- cannibalism
- erosion
- concurrence
- synergism.

8.2.1.1 Cannibalism

Cannibalism focuses on the rapid destruction of an existing business model and its subsequent replacement with a new digital business model.

Most forms of cannibalism aim to reduce the degree of parallel operation as much as possible. In these cases, assets or capabilities that can still be used are subsumed into the transformed environment, but often not in their current form.

Cannibalism is the most aggressive POM, often an extreme reaction to threats. It is frequently driven by overcrowded markets with many competitors and a dwindling consumer base. In practice, an organization suddenly realizes that its business model (and often its products and services) is unsustainable, or is under serious threat from competitors or radically new applications of technology.

PagesJaunes (the French Yellow Pages) is an example of cannibalism. Around 2009, when online information started replacing the need for print publication and advertising, the print revenues of *PagesJaunes* plummeted (as did those of other direct competitors). The new CEO, Jean-Pierre Remy, recognized that paper directories did not represent a successful future for *PagesJaunes*. The company's real strength was its ability to connect businesses to local consumers.

Against objections from veteran employees, Remy firmly announced his intention to destroy the old business model of print publications and adverts. His goal was for digital revenue to account for over 75% of total revenue within five years (at the time, it was less than 30%). He also discontinued investment in the print business model. Remy accomplished this vision within four years, and *PagesJaunes* reported revenue growth for the first time in years.

For some organizations, cannibalization is more proactive. For example, Netflix intentionally transformed from a rental DVD provider, to a consumer provider, to a streaming video provider, to a content creator. It continues to repurpose its business model and intentionally cannibalize its own content. As one Netflix-original programme begins to peak in popularity, the company creates and promotes new content. This may draw some customers away from existing content, but it also helps to grow the consumer base.

Some organizations deliberately use continuous cannibalization to offer multiple parallel products or services. Apple has intentionally cannibalized the Mac with the iPad, and the iPod with the iPhone. This repurposing turned into complementary products and synergy: many consumers own multiple Apple products, including some with crossover functionalities.

> *If you don't cannibalize yourself, someone else will.* Steve Jobs

8.2.1.2 Erosion

Erosion can be considered a kinder, gentler form of cannibalism where the organization uses the revenues of an existing and still profitable business model to fund a new digital business model.

Erosion is characterized by three basic conditions:

- The existing business model does not benefit from the new digital business model.
- The new digital business model needs the revenues of the existing business model for a time.
- The new digital business model tends to destroy the old business model over time.

For a time, both business models operate simultaneously. The intent is to benefit from the still-lucrative resources of the existing business model for as long as possible. Profits and the other resources of the existing business model are used to fund the emerging model.

Almost all POMs involve some form of erosion: new digital models need to be funded, and old business models provide revenue. In the case of erosion, however, the intent is to eventually destroy the existing business model. Erosion can be thought of as 'slow decay' or 'measured destruction'.

As an example, *The New York Times* (NYT), a leader in the newspaper world, was threatened by declining revenue from print-based advertising, which represented a significant revenue stream. NYT decided to provide online news content and charge users to access it. This bold decision came with significant risks. First, establishing the new digital business was costly. NYT used profits from its existing print business to subsidize the digital business. For several years, NYT's overall costs increased because it was effectively running two businesses in parallel.

Second, although NYT recognized that consumer demand supported 'going digital', it was unclear if or when the old print business would go away. Thus, swift cannibalization was not ideal; a slower (though aggressive) transition was needed. After several years, NYT print and digital subscription revenue combined was about double its print-based advertising revenue.

NYT is a classic example of erosion being boldly and proactively employed. For too many organizations, erosion becomes the default option when leaders vacillate and cannot determine what approach to take. No plan is not a good plan.

The ITIL story: Erosion

Henri: *We recently introduced a digital booking system, with customer apps, back-office inventory systems etc. We found that although some customers still preferred face-to-face interaction with a rental agent, the majority were quite enthusiastic about the new system.*

Luna: *As a result, we noticed that in some neighbourhoods, there was a complete cannibalization of our rental store business in favour of in-app booking. In response, we shut down the retail outlets in those areas. In other neighbourhoods and towns, there was a gentle erosion of our rental store business; we shut some of the smaller ones and consolidated business into the larger ones.*

8.2.1.3 Concurrence

Concurrence is an approach where the new digital business model neither helps nor harms the existing business model. Concurrence tends to work best when the organization is attempting to gain or increase market share.

Concurrence also works well when new consumers are hard to reach through existing channels. For example, a well-established men's clothier enjoys the loyal following of local clients who shop in-store, but the market is relatively small. Potential customers living outside the area cannot visit the store in person. The clothier opens an online shop, which builds on his brand and existing business model without compromising it.

In this example, there is no 'place-based' competition between the physical and online stores. Local customers continue to visit the physical shop; other customers primarily visit the online store. There is also no major reallocation of resources from the old model to the new one. Both models peacefully co-exist, and each model could exist without the other.

Arguably, in this scenario the online store does not represent a full digital transformation and is simply an additional sales channel.

The ITIL story: Concurrence

Anya: *Our food delivery service caters to the needs of a new market segment, and does not interfere with our existing lines of business. As a result, it operates concurrently with our existing products and services.*

8.2.1.4 Synergism

The basic idea behind synergism is that two models combined produce a greater or different result than they could have produced individually: $1 + 1 > 2$.

Synergism tends to work best in situations where adjacent or complementary sales channels exist, there is no competition among channels, and customers prefer omnichannel delivery. In other words, some customers want to shop in a physical store sometimes and online at other times.

Sephora, the cosmetics retailer, recognized that a critical aspect of selling make-up is the ability to try it on in a physical store. However, customers are highly influenced by online and video reviews, and recommendations from social media influencers. Sephora's mobile application allows in-store consumers to scan codes from physical displays, which navigates the customer to videos, tutorials, and product reviews. Once a customer becomes familiar with a product, they may decide to reorder the same product from the online store instead of travelling to a physical location. Additionally, Sephora created a Virtual Artist application that allows customers to virtually try on various make-up products regardless of where they are shopping. The physical store business model supports the online business model and vice versa, all aided by digital technology.

The synergism model also works well when complementary products exist. For example, customers who buy a smartphone may want to listen to music on it, which creates an opportunity to sell downloadable music through an online store owned by the same company that produces the smartphone. In turn, this creates a network effect: a customer's use of one product reinforces their use of related products. Furthermore, complementary products tend to increase switching costs. In other words, it becomes more expensive or difficult for customers to leave the brand in favour of competing products, which results in customer brand loyalty.

Although it is not appropriate for every organization, synergism is in many ways the most mature or advanced of the POMs. It may provide the greatest benefits, but it is also the most difficult to execute. This is due in large part to the relationship between the 'customer excellence' and 'operational excellence' digital positions. It is difficult to earn lasting improvements in customer excellence if tremendous operational efficiencies do not also exist.

8.2.1.5 Ineffective operating models

The worst POM is none at all. Organizations that have no model are either extraordinarily lucky or no longer in business. Some organizations operate parallel processes, technologies, or products simply by reacting to changes in the environment. Others adopt a model that is inappropriate for their objectives. These models are either too poorly defined, too expensive, or too rigid to be practical.

Characteristics of ineffective models include:

- being constructed without an outcomes-based view
- not accounting for alternative models or realistic scenarios
- being constructed as a response to extreme risk attitudes
- being based on a misunderstanding of the current business model
- not being sufficiently flexible, and not accounting for the potential need for repositioning.

8.2.2 Pace of transition from the old model to a digital model

The best POM varies according to the organization, as does the best pace of transition. The appropriate pace will tend towards either a rapid (often painful) transition period, or a cautious approach due to the uncertainties inherent in completely abandoning the old model and replacing it with a new one.

At least four factors need to be considered in determining the appropriate pace of transition:

- **Consumer demand** A good axiom for any organization to consider is 'when in doubt, ask the consumer'. In some cases, consumer demand dictates that the business model change sooner rather than later. A good indicator is how consumers use technology. A move to mobile, context-sensitive engagement technologies will require the organization to change to support those types of consumer journeys.
- **Organizational capabilities and culture** There is considerable debate in this area. Some suggest that organizations should ignore current strengths and weaknesses, and instead progress aggressively by purchasing new technologies and hiring people with the skills needed to support the future business model.

A more tempered approach suggests taking stock of the capabilities the organization currently has, understanding where it wants to be, and performing a gap analysis to understand what capabilities need to be built or acquired to bridge the gap. Digital positioning is helpful in understanding how improving specific practices will achieve a desired position.

- **Maturity of supporting digital technologies** Basing a strategy on emerging technology is risky. Technology in the early stages of innovation can be unstable. Early adopters may bet on the success of a particular technology, only to find the market moves in a different direction. An organization may find itself investing in a technology, only to find it being acquired by another vendor that wants to take it in a different direction. Therefore the pace of transition should not be driven primarily by the technology, but rather by what the organization hopes to achieve. Good practice is to start by identifying automation opportunities, and then consider which technologies would best support the future digital business model.
- **Threats from competitors and emerging technologies** There may be times when a competitor's use of digital technology usurps an organization's competitive position, prompting an accelerated response. However, prudent organizations avoid rushing into deploying a digital business model or technology to keep up with competitors. A model that works for one organization may not work for another. In some cases, it makes more sense to monitor a competitor to determine whether its digital business model or technology adoption is paying off before investing in a losing position.

The ITIL story: Pace of transition

Luna: *Pace of transition can vary by market segment. We saw with the rollout of our booking app that many of our loyal customers resisted adopting the new channel for a variety of reasons. It is important to consider the different views that customers and users have, and not think of them as a single entity.*

Anya: *The ITIL organizational change management practice provides guidance on how to work with our customers, suppliers, and other stakeholders to ensure that our digital initiatives are as successful as possible across the whole ecosystem.*

8.2.3 The role of continual improvement in parallel operating models

All organizations that have mastered digital transitions have a common appetite for change. They are not complacent with success or afraid of failure; they are never satisfied with industry-leading results or paralysed by failures. For them, continual improvement is the way business is done. Digital masters actively look for opportunities to tear down their own digital models, even before they begin to falter, in favour of models that will take them even further.

PART III

STRATEGIC CAPABILITIES

CHAPTER 9

DIGITAL LEADERSHIP

9 Digital leadership

Every chapter of this publication outlines some aspect of leadership in digital organizations. The entire guide is for leaders who are responsible for defining and implementing digital and IT strategy and for ensuring their organizations' ongoing relevance.

However, good leaders do not just perform the steps outlined here and in the related practice guides. Defining and implementing digital and IT strategies requires a fundamental shift in mindset, culture, and capabilities throughout the organization. This shift must start with the leaders.

9.1 Digital mindset

A digital mindset is a set of attitudes and behaviours that cause someone to continually consider the possibilities that digital technology offers their organization and its stakeholders and look for ways to make those possibilities real. This does not mean making changes for the sake of keeping up with technology trends. Rather, it means understanding how technology is changing the way people live and work, and collaborating with others to ensure that the organization stays relevant in the context of those changes.

A digital or 'growth' mindset recognizes that the changes happening in society and industry are not just happening to others, and they are not only visible to leaders. Employees, partners, and customers are going through these changes personally, in their homes, schools, communities, and social activities. Far from trying to enforce new and foreign work practices onto an unwitting workforce, the digital mindset seeks to expand and accelerate possibilities that are already on their horizons.

Successful digital organizations show a fundamentally different way of thinking about leadership. They use emerging technology as a foundation for their business, but their mindset is deeply human. Examination of recent case studies, blogs, and articles on what makes leadership work in these organizations shows consistent themes, including:

- Leaders facilitate the creation of a vision or purpose and empower teams to act to achieve it.
- Teams are encouraged to challenge the way things work and propose something better. This does not mean forcing changes to the existing system, but rather encouraging stakeholders to perceive constraints and find a better way.
- Leaders understand that changes take time and the organizational culture is an integral part of making them successful. Leaders continually consider culture. They do not force unwanted change (except when failing to do so would set the organization back). They are patient with people and impatient with organizational change. They explain, market, and persuade, but they also understand that often people only understand how much better things are when a change has been made. So, leaders set the pace and size of changes to an appropriate level for the organization, often accelerating as acceptance grows.
- Leaders relinquish control of their teams' activities and focus on removing constraints and facilitating decisions. They realize that great ideas can come from anywhere in the organization, and are servant leaders.
- Measurements of productivity are starting to include the achievement of outcomes, not just the quality of outputs.

- Safety is central. This includes safety in the ability to challenge, improve, or innovate, as well as physical safety. Leaders create liberating organizational structures that provide a culture of psychological safety and trust.
- At the same time, it is not all about change. Many stakeholders thrive in stable, routine environments. Leaders understand how to provide this environment even while undergoing transformation.
- In a context of continual change, instinct is a powerful asset. Good leaders understand their organization, people, and environment, and know what will and will not work.
- A digital mindset does not mean accepting every new idea or technology. Leaders are sceptical: they question ideas and base decisions on empirical data.
- Virtual teams and collaboration methods are crucial because they allow members to work wherever and however they are most productive. Digital leaders allow teams to self-organize and self-manage; they focus on outcomes and results for stakeholders.
- Digital leaders challenge their own assumptions about how they and others work. They drive change for themselves and their teams.

It is difficult to hire or develop mindset. Instead, it emerges as part of an individual's and organization's values and beliefs, sometimes stimulated by a person's history of work. The best digital leaders are people who understand their business and its history and people, but who have a record of understanding and implementing new ways of working. Organizations may need to change their leadership criteria, promoting those with the appropriate mindset rather than those who are traditional, are long-term employees, or have the most advanced degrees.

A conservative organization wishing to pursue a digital transformation strategy may find that it does not have enough people with the appropriate mindset, institutional knowledge, and digital skill set. To resolve this, leaders will need to do four things:

- Convince senior executives to support a fundamental shift in culture and work practices (defining what kind of organization they need and want to be part of, and what values and beliefs the organization will cultivate).
- Hire people who understand the organization's business and have made the type of changes desired in other organizations.
- Listen to and support each new hire's recommendations and decisions, even though they may result in temporary discomfort and difficult changes.
- Instil behaviours, language, metrics, and rituals that are consistent with the vision and desired cultural changes at every level of the organization. Because culture tends to develop around the organization's values, leaders must exhibit behaviours that demonstrate their commitment to the new way of working and reward employees who do the same.

The ITIL story: Digital mindset

Henri: *Digital leadership could be interpreted as 'leadership of a digital organization', 'leadership in the use of digital technology', or in other ways. At Axle Car Hire, we explored what the term meant to us, and to our board, and arrived at a common understanding.*

Anya: *Digital leadership is a business skill that enables professionals to understand how new technologies can solve existing problems, or how they can offer opportunities to win market share. I am not an expert in our technology, but I do have a conversational-level knowledge of it. For example, I can actively participate in discussions on how our apps and digital services can be leveraged to support the food delivery service.*

9.2 Communication

Exceptional communication skills are a fundamental requirement for digital leadership. These skills include the ability to:

- **Communicate at every level of the organization** At an executive level, a leader needs to be able to articulate the value of every element of the digital and IT strategy. At the level of the impacted workers, a leader needs to understand the strategy's impacts and be able to explain any forthcoming changes and their benefits. They should ensure that, even if the workers are unenthusiastic, they understand and will comply with the changes.
- **Plan a communication strategy** A communication agreement or commitment with consumers, partners, employees, and senior executives.
- **Obtain feedback to ensure that the communication has been effective** Good communicators monitor the results of their communication efforts to ensure that there is no misunderstanding or confusion, and they remedy these if they occur.
- **Frequently update stakeholders about the status of initiatives in the programme** This should be done in a format and with information tailored to each stakeholder group. Stakeholders should be aware of the vision, their roles and responsibilities, and the timelines and deadlines. For example, a supplier should know what they are expected to deliver, at what price, and when. A customer should know when and why their service will change, what they are expected to do, and what things will look like once the change has been made.
- **Showcase outcomes rather than performance** For example, instead of stating that a team has achieved its milestones, give an overview of what the team has achieved, including personalized examples. Digital leaders are great storytellers of team and organizational successes.

9.3 Relationship management

Without proper collaboration and coordination, the scale and number of changes introduced by digitization will increase miscommunication and disorganization.

Digital leaders rely on alignment, communication, and collaboration between stakeholders in different areas of the organization. Relationship management is more than a skill set: it should be a formal practice in which digital leaders play a central role. Relationship management is 'high-touch', not 'high-tech'.

The relationship management practice addresses relationships between individuals, teams, organizations, and virtual groups of stakeholders. It is instrumental in:

- establishing shared or mutually recognized goals
- facilitating a culture of no-blame cooperation and collaboration
- continual learning among and between teams
- setting guidelines and policies for open and transparent communication
- defining how to identify, prevent, and mediate in conflict situations.

Digital leaders will find relationship management invaluable for linking strategic objectives at an enterprise level with the objectives of individual parts of the organization. When implementing strategic initiatives, they can set up appropriate agreements to align goals and establish performance objectives between different types of stakeholders.

The relationship management practice guide provides detailed information about how to establish, manage, and execute this practice. It is a valuable resource for digital leaders.

The ITIL story: Relationship management

Anya: *Many organizations, including Axle Car Hire, have professionals dedicated to managing communications and relationships with key stakeholders. However, many managers and leaders misinterpret this to mean that they are not responsible for these activities. I often remind my teams that management and leadership are very public roles. A mentor of mine told me, 'We are all communicating, all the time.'*

Dave: *We all manage relationships, whether they are personal, private, or professional. When I hire people, I look to see if they have good interpersonal skills, such as communication and relationship management, in addition to any domain expertise.*

9.4 Education and learning

Section 6.2.2 sets out the education and training programme that should be included in the implementation of strategy. However, education is an ongoing activity that is central to the success of digital organizations. Specifically, ongoing education enables digital leaders to:

- understand the changes occurring in the internal and external environments
- identify technology and industry trends, and learn how these may be used to address specific areas in their organization
- learn about the mistakes other organizations made when adopting new technology or creating new business models
- communicate details about the organization's digital and IT strategy, and set expectations about the changes it will introduce
- inform stakeholders about how the application or use of new technologies will achieve or increase the organization's competitive advantage
- achieve higher levels of enthusiasm for the initiatives identified in the digital and IT strategy across all stakeholders
- teach the appropriate stakeholders the basic concepts and techniques of building, managing, supporting, and using each new technology
- promote a sense of humility: no one in the organization knows everything.

9.4.1 Self-education

Many universities and private education institutions offer courses in digital leadership. These courses are a good start for individuals wishing to augment their experience with an understanding of entrepreneurship, emerging technologies, and approaches to innovation that have taken place over the past few decades.

However, no education programme fully covers every digital technology or potential opportunity for the organization. Digital leaders spend a significant amount of time educating themselves through internet searches,

analyst reports, industry journals, technology reports, management forums, and learning from other leaders and their own teams.

Digital leaders may be the only ones in their organization undertaking this level of education, but they should not assume that others have the same level of understanding. Every communication should assume that some level of education is required to ensure full understanding and acceptance. At a minimum, digital leaders should explain the assumptions that have led to their communication.

9.4.2 Educating peers

Digital leaders should view their role partly as an ongoing education of other leaders in the organization (who will, by definition, become digital leaders as the organization evolves digitally). Communication should not only be linked to individual proposals; every major leadership meeting should involve a brief update on how changes in the digital world are impacting the organization and its strategy.

9.4.3 Educating other stakeholders

Often, leaders provide ongoing education about digital technology to other stakeholders outside the context of digital strategy initiatives. Some organizations hold regular events to stimulate thinking about emerging technologies and innovative approaches. These are normally aimed at special interest groups, and attendance is usually voluntary. The aim is to keep stakeholders aware that exploring new technology is an important part of the organization's culture. Leaders should always give examples of how other organizations have used these technologies. They should also explain how stakeholders can communicate their ideas about how to use the technology.

9.5 Evaluating emerging technology and industry trends

Digital leaders must be able to evaluate technologies and industry trends in terms of the opportunities or threats they represent for the organization. This requires an in-depth understanding of the organization's:

- current architecture, including which components might be impacted
- business model
- products and services, and their associated value propositions
- operating model and value streams.

Aspects of this are covered in the sections on digital positioning (Chapter 3), managing innovation (Chapter 10), and managing strategic risk (Chapter 11). There is more information in *ITIL® 4: High-velocity IT* and *ITIL® 4: Drive Stakeholder Value.*

Not every emerging technology will align with an organization's goals and vision, so digital leaders need to understand how to identify the technologies and trends that will significantly benefit their organization.

The ITIL story: valuating emerging technology and industry trends

Henri: *Education can sometimes mean formal classes and certifications. It can also include keeping up with trade journals and opinion pieces. I attend our local meet-up of IT leaders to listen to what other people are doing. We can evaluate the potential of new technology and trends without being technical or domain experts. We are considering options to track the locations of our food delivery vehicles to see if there is a way to optimize their delivery routes.*

Dave: *One of my responsibilities is to keep our key partners and suppliers aware of changes to our plans and projects. For example, our vehicle repair and maintenance partners are now able to service the food delivery vehicles.*

9.6 Agile management techniques

Digital organizations must be able to manage the high volume of innovation that their customers demand. To do this, they may use agile approaches to reduce time to market and respond to the level of change in their industry.

This approach involves merging build and run cycles, reducing design and production times, and automating or outsourcing as much repetitive work as possible. Cross-functional teams aligned with value streams are common. All of this requires a very different style of leadership.

These concepts are discussed in detail in *ITIL®4: High-velocity IT* and *ITIL®4: Create, Deliver and Support,* and in Chapter 12 of this guide.

9.7 Defining and using strategic metrics

Strategic metrics focus on outcomes and strategic objectives. Managers who are used to reporting performance (revenue, expenditure, number of items produced, number of incidents solved) and quality (number of exceptions, uptime, on-time delivery) must change their focus. Although these metrics can and should be an input for some strategic metrics, they are not enough by themselves.

Strategic metrics indicate whether:

- the initiatives designed to achieve the strategy are on track
- the strategy continues to be relevant and achievable
- the organization will achieve the anticipated benefits by following the strategy, or whether it needs to change the strategy or make further organizational changes.

Strategy metrics are covered in detail in Chapter 7.

9.8 Orchestrating diverse environments

Digital organizations are not only diverse in the culture and background of the staff they employ, but also in the technologies they use and the array of disciplines and knowledge they need to access to be successful.

Digital leaders need to develop leadership styles that facilitate collaboration between these diverse capabilities in support of the organization's objectives. These approaches are covered in detail in *ITIL®4: Create, Deliver and Support.*

9.9 Operationalizing strategy

Leaders who play a strategic role will find themselves in a unique, often uncomfortable, position. They are visionaries, ahead of the rest of the organization. They are also pragmatists, whose job it is to discover how to realize the benefits of each possibility they and their teams have discovered. Vision is only valuable if it can help the organization to meet its objectives. Digital leaders must combine imagination and application.

Digital leaders also need to be comfortable with the uncertainty that comes with being between the possible and the actual. They must develop a reward system based on being able to live and thrive in this in-between space.

The ITIL story: Operationalizing strategy

Anya: *Translating strategy into projects, or initiatives, can be challenging. Business and digital strategies should never be treated as static. They must evolve as they meet reality, whether that is addressing challenges in technical viability, or the changing tastes of consumers. As we learn more about how our food delivery service operates, we can make more informed decisions about how to invest in and improve it.*

9.10 Business and technology management skills

This chapter has listed a range of unique capabilities and features of digital leaders. In addition to all these, digital leaders are business leaders who must have the skill and knowledge that qualifies them to lead in their organization.

Digital leaders must understand the business of their organization. They must understand the technology upon which they are placing its future. Crucially, they must understand the disciplines and skills of managing both.

The languages of finance, marketing, business operations, information security, modern ways of working (such as ITIL 4, Lean, Agile, and DevOps), and technology management are all essential for a successful digital leader, as they are for any business leader.

Effective digital leaders are not necessarily born with the skills needed to lead a successful digital organization. Rather, they learn, develop, and practice 'conscious leadership' skills. For more details on conscious leadership, see the workforce and talent management practice guide.

CHAPTER 10

MANAGING INNOVATION AND EMERGING TECHNOLOGIES

10 Managing innovation and emerging technologies

Digital organizations are innovative by nature. This is partly because they actively seek to disrupt their market, their environment, or themselves, and partly because the rate of change in technology is so high that few leading organizations can stop changing once they have embarked on a path of digital strategy.

Innovation changes the fundamental nature of an organization's internal and external environments. A successful digital organization must be able to track, adopt, and adapt these innovations to maintain its position. To grow its competitive advantage, it must become innovative itself.

An innovation can be small and incremental or large and transformative, and it can take many forms. Innovation includes changes to products or services, the organizational structure, supply chains (as in the case of Amazon), or the customer experience (as in the case of Disney or Apple).

Some innovation is minimally disruptive: it changes how existing activities are performed without changing how the organization functions as a whole. Other innovations, those that bring the most long-term competitive advantage, are called 'discontinuous innovations'.

Definition: Discontinuous innovation

An innovation that completely replaces what came before.

These innovations require organizations to think and work differently, often changing their business and operating models.

Whether innovation is being used to enhance existing capabilities or as a means to disrupt an entire ecosystem, it enables digital transformation. How well an organization innovates determines how well it will compete and survive in the long term, so innovation is an essential skill for individuals, teams, and organizations. Unfortunately, most organizations do not understand innovation. Very often, even when they do, they lack a disciplined innovation process.

10.1 Definition

The term 'innovation' is broad. A search shows several common themes, including:

- a new idea, method, or device
- introducing something new into an organization
- translating ideas into a product or service
- developing ways to meet changing consumer needs
- using new technology to do something that has not previously been done
- using new technology to perform an existing activity more efficiently
- using existing technology in new ways to do something different
- finding new solutions that meet new or unarticulated needs.

Innovation is defined differently in ITIL 4.

Definition: Innovation

The adoption of a novel technology or way of working that has led to the significant improvement of an organization, product, or service.

An important aspect of this definition is that innovation can only be said to exist if an idea has been implemented and has impacted the organization. Many new technologies and ways of working are created and offered within and outside organizations, but they are only innovative if their adoption leads to improvement.

Evaluating possible innovations and focusing on those that are likely to produce the desired outcome is key to managing innovation. This approach relies on:

- continual opportunity analysis
- effective implementation of selected methods and devices.

These capabilities introduce requirements into multiple practices, particularly business analysis, portfolio management, project management, change enablement, organizational change management, workforce and talent management, and relationship management.

The management of innovations is likely to be supported by a dedicated value stream. However, innovation, like any strategic capability, cannot be managed by a small, specialized team working in isolation. Rather, it should be embedded in the organization's operations at every level. Identifying innovation opportunities should be encouraged across the organization.

Processing the initiatives should be a prompt and transparent process that includes effective feedback loops. It should involve the initiatives' originators wherever possible. The initiatives' effects should be reviewed and reported on with high failure tolerances: not every idea or initiative will become an innovation.

10.2 Managing innovation is a strategic capability

The purpose of managing innovation is always the same: to enable an organization to succeed in a constantly changing environment.

Some innovations will be used to determine the organization's strategic position. Other innovations will be used to perform existing activities more efficiently or effectively, enabling the organization to outperform competitors who offer similar products and services.

Furthermore, innovation can challenge an organization's existing strategy and objectives. For example, a strategy based on innovative technology must be revised if that technology is replaced or a competitor emerges with a better solution.

Digital leadership is not about being as innovative as possible or reacting to the innovations that an organization faces. It is the deliberate art of selecting, and then building or applying, those possibilities that will give an organization the greatest chance of success.

Executives need to be able to choose the opportunities that represent the best way for their organization to achieve its objectives. The ability to identify and manage innovation is thus at the core of an organization's ability to define and manage its strategy.

10.3 Managing innovation is a mindset and culture

Innovation begins with solving a problem for customers or within the organization. It requires an entrepreneurial mindset. Large global organizations often have formal research and development (R&D) or innovation teams, but the best ideas do not necessarily come from them. In fact, the vast majority of industry-changing innovations are developed by entrepreneurs.

This is because entrepreneurs focus on innovation that is important, not just interesting. They solve customer needs and build businesses around addressing those needs, rather than working on technology that is exciting. Innovation is the result, not the goal.

> ‘Work on what’s important, not just what’s interesting – there’s an infinite supply of both.’ Frank Guarnieri

It is critical to understand that innovation is only viable if it solves a customer problem; if it does not meet this criterion, it is a waste of time. Further, innovation should not be limited to an organization's R&D or innovation team. Some of the best ideas for innovation come from frontline workers who regularly interface with customers. They see the struggles, frustrations, and unsolved needs that customers face. Therefore, there must be mechanisms in place to capture and act on their ideas.

10.4 Innovation or adoption

The scope of innovation management is a matter of some debate, but organizations should take a pragmatic approach. For clarity, ITIL draws the following distinction: innovation is novel. It may be a new technology or way of working, or it may be a new way of using an existing technology or working method. Innovation does not include adopting a tried and trusted technology or working method, even if it is new to the organization.

However, for many organizations, the introduction of something new, innovative or not, requires a shift in capabilities and culture.

Innovation must be managed from the time an idea is conceived to the time that it has been built into a fully functional solution. Some organizations focus on initiating innovative ideas and building innovative solutions internally. Others scour the external environment for ideas and early-stage technologies that will save them time and effort in changing their business and operating models or product lines to become more competitive.

Most organizations prefer to wait for others to innovate, so that they can adopt the mature technology or method after it has been tested. Some use those solutions to spark smaller-scale innovations to apply to their unique environment. Table 10.1 outlines some of the key differences between organizations that innovate and those that adopt.

Table 10.1 Key differences between innovation and adoption

	Examples	Organizational requirements
Innovation	Employees find a novel way to perform an activity An existing capability is used to do something different, such as creating a new product or service A customer need sparks an idea for a new product or service An employee gets an idea to do something new or different based on what they have read about or observed in other organizations	A culture where innovation is encouraged An understanding at every level of the organization that the current way of doing things is not necessarily the best way The ability to evaluate ideas, authorize investment, and assign resources to build and test changes An appropriate level of tolerance for the failure of innovative ideas The ability to manage innovative components of the organization alongside legacy components
Adopting the innovation of others	A vendor announces the launch of an innovative new technology that will reduce cost and increase performance A vendor shares a product roadmap that shows features that are not currently available in the market A scientist patents a new technology that could revolutionize an industry A customer uses a supplier's products in an innovative way	The ability to monitor emerging technologies and how other organizations are using them The means to identify where these technologies can be used in the organization The ability to quantify the impact on the business and operating models of using a new technology A method (potentially a facility) to test the new technology A process to onboard the new technology

The way an organization uses innovation will be reflected by its position in the market. This can be described in terms of Geoffrey Moore's technology adoption lifecycle (Moore, 2014), shown in Figure 10.1.

Organizations that focus on innovating will tend to be more disruptive, but they will face a higher risk of rejection of their products or services. Many innovative technologies and products have found their way to the market but never been widely adopted. They eventually disappeared or remained niche. Examples include MiniDisc; full-keyboard mobile devices; smart spectacles, such as Google Glass; and Segway. Moore calls this risky part of the adoption curve 'the chasm'.

Those that only use tried and trusted technologies will compete as adopters, only disrupting their own organization in an effort to keep up with leading competitors. The early majority will often adopt technology but find innovative ways of using it.

It is important to note that all these positions (except for laggards) are viable, but the organization's chosen position will determine which approach is desirable. Laggards face the risk of being acquired and dismantled, or going out of business.

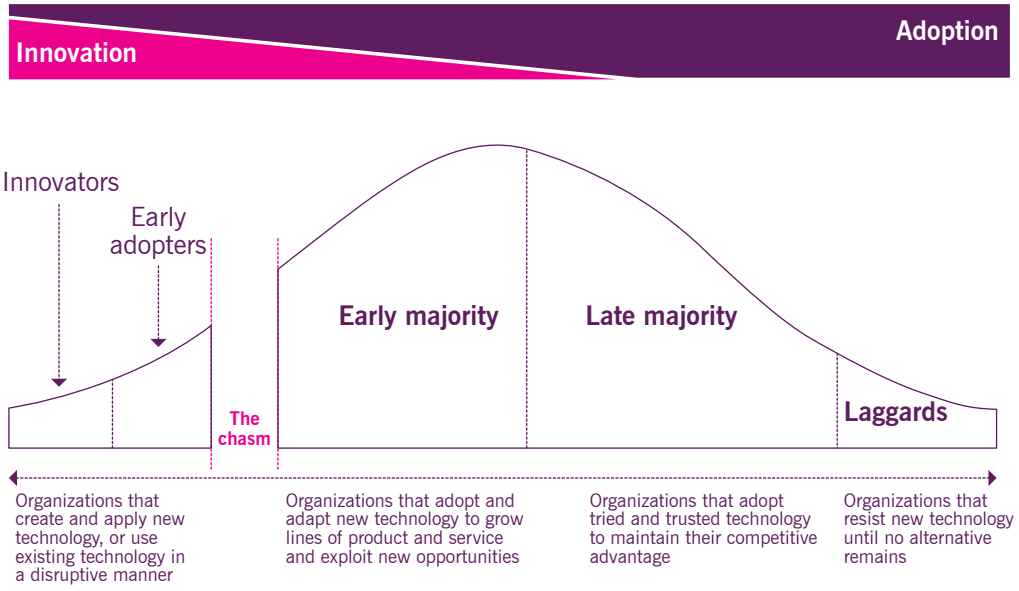


Figure 10.1 Technology adoption lifecycle
After Moore (2014)

The ITIL story: Innovation or adoption

Henri: *'Innovation' can mean a variety of things depending on the organization, but it can also be applied in various ways within an organization. For example, many of my teams use 'innovation' to refer to new features we deliver to delight our customers and users.*

Dave: *In operations, innovation is anything that helps the organization to work more effectively and efficiently; for example, a new tool to track supplier contracts. It could also include the unexpected use of an existing tool or system. Our procurement team recently began using our IT service management platform to track the vehicles used at each rental location.*

Anya: *At a strategic level, 'innovation' can refer to novel products and services (digital, real-life, or a mix of both) or even a differentiating business model.*

10.5 Achieving a balanced approach to innovation

Although innovation offers substantial rewards, it is also inherently disruptive and risky. Innovation can help an organization to outmanoeuvre its competitors, but uncontrolled innovation can waste precious time and resources and, ultimately, plunge it into chaos.

Managing innovation involves managing uncertainty. Almost everything about it is uncertain, including what it will cost, whether the idea will work in practice, whether the implementation will have the desired effects, whether the organization will accept the changes, etc.

Just as each organization evolves a risk posture that determines how it manages the uncertainty of risks, each organization will evolve a posture regarding innovation. This posture is determined by how the organization responds to several variables and is based on its culture, objectives, regulatory requirements, and funding.

Several variables will be relevant at any given time. Some of these will be more significant when considering the organization's overall approach to innovation, whereas others will be more significant when evaluating individual innovations. These variables include:

- **Overall driver** An organization that needs to innovate or go out of business will have a very different approach to innovation than the organization that is looking for ways to grow. The former will tend to look for a single opportunity and change the entire organization (e.g. moving from print to online publication). The latter may take longer to evaluate innovative ideas, and focus on those that are more incremental (e.g. finding a better way to provide information to customers doing comparative research on a product).
- **Ability to tolerate disruption** This variable defines how tolerant the organization is to operating with uncertainty. Organizations that have a high tolerance for chaos are continually innovating and changing. Most innovations will fail, but those that become viable business opportunities tend to be highly competitive. Organizations that tend towards order resist innovation, only making changes when necessary and thus risking stagnation and irrelevance. Some organizations actively encourage or create a disruptive environment to increase a focus on innovation (e.g. the practice of randomly changing employees' seating arrangements).
- **Innovation intensity** Some innovations will build upon existing capabilities over time, requiring little change to the organization. Others are discontinuous innovations, which completely replace the technology that preceded them (e.g. a publisher moving from printed newspapers to online news).
- **Strategic alignment** Some innovations may offer a high financial return, but if accepted, would move the organization away from its stated objectives or position. This variable defines the extent to which innovation will be allowed to challenge the existing strategy. If so, the way innovation is managed will be tightly coupled with the early stages of strategy definition. If not, innovative teams will be expected to adhere to the defined strategic objectives.
- **Return on investment** Organizations define a minimum expected return on the amount of money spent on an innovation. This is usually measured as an increase in income, but it could relate to the achievement of any objective (e.g. reduced carbon footprint or number of requests processed per hour).
- **Leverage** The ratio between the size of the innovation (measured in cost, effort, or organizational impact) and the outcome achieved. Leverage can indicate innovations that are easy to build or adopt but have major positive benefits. For example, a network device enabling an organization to make stock exchange trades faster than competitors does not require a change to the organization's business model, but it will significantly increase its competitive advantage. However, the leverage variable should be combined with other variables, such as the level of risk and the strategic alignment.
- **Risk attitude** This is described in detail in section 11.10.1. When a single innovation is being assessed, this will also include risk tolerance.
- **Incentive to innovate** This relates to whether stakeholders are motivated to innovate. Some organizations are quick to identify the need for innovation but slow to allocate resources or recognize the value of early failure.

These variables can be presented as a set of scales; organizations should find a balanced combination of values to support their strategy.

The ITIL story: Achieving a balanced approach to innovation

Anya: *There are many factors that influence how we manage innovation. As with risk management, individual departments within Axle Car Hire have different perspectives and approaches to innovation. It is important that as we create innovative services such as food delivery, we minimize the disruption to other parts of the business. Equally, we need to judge the success of the food delivery service differently to other parts of the business. Different parts of the business may use similar metrics, such as return on investment, but can have different targets.*

10.6 Formal approach to innovation management

Innovations are characterized by uncertainty, risk, and complexity, so it is important to develop a formal yet flexible structure, system, and methodology for developing and implementing new innovative products.

10.6.1 Organizing innovation management

Many organizations have a centralized innovation management team that facilitates or manages the process of innovation from idea generation to implementation. However, the actual innovation is performed by subject matter and business experts under the authority of executives or managers in the organization.

Innovation management teams, if they exist, are responsible for coordinating various formal innovation activities and processes; for example, they might host innovation fairs or 'hackathons'. They may facilitate design thinking workshops. They coordinate team members' schedules and activities. In some cases, they manage innovation projects and coordinate all activities until the solutions are developed and implemented.

Some innovations are so important to the organization that subject matter experts are moved from their regular job into a rotation where they work on the innovation full-time under the direction of the innovation management team.

These teams are closely aligned to teams responsible for defining and maintaining strategy. They usually report to a senior executive, such as the CEO or CTO. They are responsible for orchestrating, developing, administering, monitoring, and measuring the processes that manage innovation, as well as the innovations themselves. Innovation management teams also provide guidance to, and remove political hurdles from, the teams building the innovations.

However, innovation should not be limited to these teams. It should be encouraged at every level, and boundaries (such as regulatory restrictions) should be clarified so that innovators feel comfortable innovating without incurring negative responses.

There should be clear guidelines for managers or team leaders on how to encourage and coordinate innovation that improves the effectiveness of their area of responsibility, and when to engage with a more formal innovation management function. They should also understand what areas they cannot change, and how to propose ideas for innovation in those areas.

10.6.2 Activities in managing innovation

Innovation is a collective process; creating a sense of shared purpose is essential.

Individuals turn innovative uniqueness into real competitive advantages. In organizations where the focus is on productivity and performance, novel ideas often remain tacit: difficult to transfer to others, express, codify, and assess.

Cultivating a climate where people are openly encouraged to communicate directly, thereby enabling their perspectives, knowledge, and ideas to flow across the organization, is essential for innovation. As knowledge and perspectives are shared, innovation becomes a potent competitive force that drives financial wealth, productivity, and growth.

Managing innovation requires a process that shepherds ideas through different stages of validation. This process must include the capture and continual evaluation of each idea, culminating in the 'kill or progress' decision. Moving too quickly through the stages of validation will yield suboptimal results, as the accelerated process may not account for all factors, and those involved in the process may feel that their ideas are not being treated seriously.

10.6.2.1 Generating new ideas

Innovation begins with ideas, and managing innovation means encouraging, effectively communicating, and appropriately assessing these ideas.

The first task when managing innovation, therefore, is to establish ways for stakeholders to communicate improvement ideas. Some of the best ideas come from the staff working with technologies and processes, rather than from strategic planners. Cooperations can and should span wider than research laboratories, and even wider than one organization.

In 2019, HPE announced the launch of the HPE Digital Life Garage, which 'will be a business accelerator based on a co-innovation model, operated in collaboration with local market and global partners to create innovative technological concepts, develop them into an actionable Proof of Value and accelerate the idea-to-production lifecycle.' The name of the initiative refers to the HP Garage in Palo Alto, a private museum where Hewlett-Packard was founded, now considered the 'birthplace of Silicon Valley'.*

Idea generation does not only depend on stakeholders communicating their ideas. For it to work effectively, every stakeholder must know that their idea will be seriously considered. This means that there should be a formal idea evaluation channel that includes sending feedback to the idea's originator.

Some examples of formal idea-generating approaches are:

- dedicated brainstorming sessions
- design thinking sessions
- innovation fairs, where employees exhibit their ideas to other employees and a panel of judges
- 'hackathons', where the organization poses a challenge and ideas are proposed and discussed by stakeholders from every part of the organization
- innovation competitions, where employees are encouraged to propose an idea that, if implemented, will earn them a reward
- innovation mailboxes or walk-in centres, where anyone can engage with an innovation leader to raise and develop an idea.

*https://www.hpe.com/us/en/newsroom/press-release/2019/03/hpe-announces-next-generation-innovation-center-to-accelerate-uaes-innovation-ecosystem.html [accessed 30 July 2020]

If an idea is rejected, it is important to explain the reasons for rejection. The submitter should also be encouraged to continue generating ideas or get involved with other innovations.

10.6.2.2 Filtering ideas

When faced with a good idea, the first question to answer is, 'Do we understand our customer, and is this something they care about?' Practitioners must talk with and observe customers (face to face as far as possible) so that they understand customer needs and identify legitimate problems.

Other elements that matter when determining whether an idea is a potentially viable innovation include:

- the size and potential growth of the market
- alignment with organizational goals
- the investment needed
- time to market
- return on investment.

All innovations should be tested against these criteria.

At this early stage, there might not be enough information to fully evaluate the ideas. However, those that fall outside of an organizational policy, do not support the organization's strategic objectives, or are clearly unfeasible should be filtered out.

If an idea needs further explanation, this should be communicated and guidance provided where appropriate. However, stakeholders should be discouraged from spending further time or resources on developing an idea that is not in the organization's best interests.

If there is enough information available, the ideas are categorized (by type, business need, process, or business challenge) and evaluated. If there is not enough detail about an idea, further information may be requested from the submitter, or it might need to be incubated.

10.6.2.3 Incubating ideas

Incubation is the process of moving an idea from concept to reality. In most organizations, it is performed in multiple stages. At each stage, the organization reconsiders the idea, and either dismisses it or approves it to be moved on. For example, investigation and experimentation may show that an idea that sounded good initially may cost too much, take too long, or be too technically challenging to implement.

Incubation usually begins after filtering, although some ideas require some development to define details or quantify effects before they are submitted. It relies on collaboration by subject matter and business experts to develop ideas and test them to see if they are feasible.

10.6.2.4 Evaluating ideas

Ideas are evaluated using established criteria, such as the expected costs and outcomes, or the relevant business need, challenge, or opportunity. Ideas should be evaluated by executives who have authority and influence over the areas they will impact, and by those whose resources will be required to develop and implement the solutions.

10.6.2.5 Selecting ideas

After being evaluated, ideas are grouped by relevance to a particular customer problem, organizational problem, or industry challenge. They are then selected according to their ranking, evaluation, and potential to address the challenge.

The resulting recommendations are submitted to executives with the authority to assign resources and funding for approval. Once approved, the innovation management team works with other stakeholders to plan the solution's development, building, and deployment.

Ideas that are not approved should be archived and regularly reviewed. An idea that is currently unfeasible may become appropriate when circumstances change.

In summary, innovation should form part of the organization's portfolio. Ideas will be part of the pipeline until they are either built and deployed or permanently removed.

10.6.2.6 Identify and charter a team to build and test the innovation

The innovation management team should identify the appropriate team to build and test the innovation. This team would typically consist of:

- the person who proposed the idea as the lead subject matter expert
- technology experts
- experts in the organizational components that may be impacted
- architects
- programme or project managers.

The team would create a plan for the build and test, identifying what resources it needs, the activities, and how long each would take. Some organizations use swarms of innovation experts to help create these plans. The team will also build a high-level requirements document, any use and test cases, and design diagrams.

10.6.2.7 Developing prototypes

Some ideas are straightforward and can be implemented with minimal change. Most ideas, because they are new and represent a fundamental shift away from the existing technology or ways of working, require several rounds of development before they are ready to be deployed.

The first round of development is developing a prototype. The first level of prototype is a conceptual prototype or model, which shows the different components of the innovation and how they work. The conceptual prototype can be used to check assumptions and constraints, or to identify obstacles, such as incompatibilities between software components.

If the obstacles are significant, the innovation may be terminated at this point. Otherwise, the team will develop a working prototype that can perform the prime functionality. Multiple versions of the working prototype may be required before the team and its leaders are satisfied that it will work. If they are not satisfied, or if the cost of building the full solution is too high, the innovation may be terminated at this point.

The phrase 'fail fast, fail often' is appropriate here. The faster a prototype can disprove one assumption and suggest the next, the more cost effective the overall process, and the more reliable the input to the development and build of the solution will be. Also, less time and resources will be wasted on a solution that will not work.

Additional factors to consider in the prototype stage include:

- Prototypes help identify what needs to be learned to build the working innovation.
- Executives find prototypes much easier to relate to than complex architectures or business plans. Prototypes should be used to achieve buy-in.
- Even if a prototype does not work for the current use case, the team might find that it applies to the work of a future use case or team. The team managing innovation should maintain a library of prototypes.

10.6.2.8 Design, development, and testing

Once the prototype has been tested and there is sufficient information about the innovation's functionality and specifications, it will be moved into a formal design, development, and testing cycle. This concept is discussed in detail in *ITIL®4: Create, Deliver and Support.*

The ITIL story: Activities in managing innovation

Henri: *Different teams can have different cultures. Our development teams strive to learn through experimentation, for example, and they value learning about new tools and software engineering techniques above learning about customer support. On the other hand, our operations teams focus on stability and customer satisfaction rather than becoming experts in software engineering. Those differences are perfectly fine. Problems arise when tensions go unresolved.*

Dave: *There are also many skills that our teams have in common, such as communication, professionalism, problem-solving, and data analysis. These should be contextualized and taught, coached, or fostered regularly.*

10.7 Characteristics of organizations with an innovative culture

Innovation is about the organization continually dismantling the familiar and building something new in its place. Innovation requires a new mindset and new ways of working, skills, and combinations of skills. Despite technological progress, innovation has much more to do with culture.

There is no correct way of fostering an innovative culture. However, many innovative organizations display some of the following characteristics:

- **Leadership is committed to innovation at all levels** Leadership sets the intention for innovation by clearly stating the organization's vision, describing its approach, and clarifying what is expected of employees at all levels. Leaders demonstrate commitment by providing resources for promising programmes, funding training programmes, giving mid-level managers flexibility when exploring opportunities, and keeping up to date on the threats and opportunities posed by emerging technologies. Leaders should talk about innovation, and set an example by attending training and participating in internal innovation events.

- **Hiring for the skills of tomorrow** Many organizations focus on hiring for the skills the organization currently needs. Innovative organizations hire curious employees who are highly experienced but also demonstrate flexibility and a willingness to learn new skills. Additionally, they hire people with the digital skills they need to cultivate.
- **Employees are curious** Curious employees are lifelong learners interested in acquiring new skills, pursuing education and training opportunities, and exploring new ways of working. In the search for the curious, some organizations employ innovative interviewing techniques where prospective employees are asked to solve problems by playing games. Solving the problem is less important than how the prospect goes about solving it. Curious employees need to be supported by formal education and training programmes, opportunities for job-shadowing, on-the-job coaching, and mentoring.
- **Employees feel safe** Innovation often involves trial and error; some attempts will fail. Organizational leaders should create a psychologically safe environment where employees understand that they will not be sanctioned for honest mistakes. This is called a 'safety culture' and is covered in more detail in *ITIL®4: High-velocity IT.*
- **Learning from failure** In the phrase 'fail fast, fail often', 'fail' refers to creating in an iterative fashion: initial versions are not fully successful but usually contain part of the solution. Successive iterations build upon what worked in previous attempts and remove what was unsuccessful. According to a famous anecdote, a reporter asked Thomas Edison, 'How did it feel to fail 1000 times when inventing the light bulb?' Edison replied, 'I didn't fail 1000 times. The light bulb was an invention with 1000 steps.'

  In addition to 'failing' and learning quickly, organizations can learn from larger failures, such as failed customer offerings, poor digital positioning decisions, and misjudged threats and opportunities. They should use failure as an opportunity to adjust, learn, and improve.
- **Collaboration and problem-solving (not just coordination)** Functional silos tend to lead to deeper technical expertise, but they also often hamper a holistic approach to problem-solving. Some organizations coordinate across silos by introducing better and more frequent methods of communication and cross-functional touchpoints. Although this is an improvement, coordination is not collaboration. In a collaborative environment, a team not only contributes 'its piece' to the project or initiative; all teams work together to solve a problem.

  For some organizations, this means encouraging self-organizing teams and temporary teams that draw from across the organization to solve particular problems (see 'Swarming' in *ITIL® Foundation: ITIL 4 Edition*). Others maintain functional silos in certain areas while structuring innovation work into multi-disciplinary teams with largely cross-functional employees.
- **Focus on consumers and value** For many innovative organizations, the consumer is the highest priority. Solving consumer problems by creating and delivering compelling product and service offerings is the basis of many organizations. The most innovative ones focus on consumers at multiple levels.
- **Commitment to continual learning and skill-building** Success today will be very different from success in the future. Therefore, continual learning must be emphasized at all levels of the organization. For more on this, see section 10.9.4.
- **Reward and incentive mechanisms are aligned with innovation goals** Research consistently suggests that, if salaries are in line with the market, pay is not the prime motivating factor for engaging knowledge workers. Skill development and the ability to contribute to meaningful work tend to be better motivators. For example, creating career paths in product development or R&D gives employees confidence that they will be able to continually develop their skill sets in that organization.

  Some organizations offer cash rewards and bonuses for innovative concepts that are developed and go to market, but non-financial incentives are often more powerful (e.g. naming an invention after the inventor).

Combination approaches can also be successful. In one consumer technology company, product engineers often receive cash bonuses when they contribute to a successful patent, but the engineers themselves are often equally motivated by having their names on the patent documentation and being given time to innovate.

- **Continual improvement is the norm** Innovative organizations know that staying the same means falling behind. Continual improvement is more often than not the result of a gradual, consistent focus on getting better in many small ways.

The ITIL story: Characteristics of organizations with an innovative culture

Su: *There are many ways to handle innovation, and there is no universal approach. For example, when we designed the user interface and user journey of the app for our new food delivery service, we benefited from crowdsourced innovation. We tested prototypes and beta builds of our app with a subset of our user base so we better understood how they want to use our products to solve their problems.*

Anya: *Approaches to innovation may be triggered by a change in strategy. Our food delivery service is a prime example of a situation where we were not responding to an existential threat, but to an opportunity. It is important to understand that there is no approach that will work in all situations and contexts. Part of the job of the senior leader is to understand what approach works for any given situation, and equally what approach does not work!*

10.8 Building a culture that supports innovation

Creating a culture that supports innovation is not a short process. Acting on innovation often requires a multi-phased, incremental approach. Although the path towards an innovative culture will be different for every organization, it is useful to consider the following recommendations:

- **Educate executives** Executives often understand the value of learning at a high level, but do not always know what specific knowledge areas the organization lacks. Leaders and employees throughout the organization can educate them on what is needed.
- **Work with workforce and talent management** Human resources (HR) leaders have a large scope of responsibility, but do not always know what skills are needed to make the organization successful. Employees and leaders can partner with workforce and talent management or HR to help transform HR into human capital and talent management, by collaborating on the needed skills and advocating for career paths in new domains.
- **Evangelize digital technology opportunities** Some organizations do not understand the digital technologies that are changing their industries. It is especially important for IT and digital information leaders to keep executives apprised of emerging technologies and ensure that employees have the skills they need to take advantage of the opportunities these technologies present.
- **Provide learning tools** There are many toolsets to support continual learning, including learning management systems, IT service management software, knowledge management systems and knowledge repositories, known error databases, Kanban boards, 'war rooms', and training delivered by third-party vendors.

- **Give employees time to train, learn, and job-shadow** Some organizations claim to value employee learning and training but provide no time for employees to pursue learning opportunities. Unsurprisingly, most employees are too busy to focus on learning.

  After purchasing a learning management system, one client gave each service desk agent enough time to attend at least one hour of online training every week, as long as it was somewhat relevant to the organization. As a result, 30% of the agents acquired skills that allowed them to move to other areas of IT, and 100% of staff learned something that helped them improve in their current job.

  In addition to formal training, informal job-shadowing and cross-training can serve as other important ways for employees to learn.

- **Give employees the freedom to experiment** Innovation flourishes when failure is embraced, accepted, and seen as a growth opportunity. Innovative companies learn from every failure and continue experimenting towards success.
- **Encourage teams to incorporate learning into every day** Team learning can be group training and retreats, but it can also be morning meetings, daily scrums, team retrospectives, post-implementation reviews, and weekly debriefs. Leaders should create an environment in which knowledge, learning, and experimentation can be tried, shared, and used to help individuals, teams, and the organization improve over time.
- **Establish a market intelligence practice** Ensure teams understand where customer preferences, the market, and competitors are moving. Although it should not be an organization's only focus, competitors can be successful in areas where one's own organization may have failed; there is much to be learned in these cases. A competitor's advantage can be erased if the organization learns from the competitor's failures, imitates them, or creates an alternative product or service.

10.9 Approaches to innovation

A consistent and repeatable innovation process helps ensure that all ideas are managed, evaluated, and developed in the same way. This means that individuals and teams can learn their roles, and exercise them with greater comfort and insight.

Approaches to innovation are contextual: one size does not fit all organizations. This section describes several well-known approaches to innovation, loosely sequenced from least to most structured.

10.9.1 'Managed chaos' and distributed experimentation

Managed chaos, sometimes called 'bounded instability', is a theory of organizing that suggests organizations are most successful when they adapt to volatile environments, empower employees and leaders throughout the organization, and rely on self-organizing teams. Managed chaos, advocated by business writer Tom Peters (1988), suggests that there is limited value in strictly organizing or structuring day-to-day activities. Instead, managed chaos advocates viewing the organization as an ecosystem of interdependent systems or networks. Instead of focusing on the root causes of organizational problems, managed chaos suggests looking for big-picture patterns that foster or inhibit certain behaviours.

Individual employees and teams are given the freedom to identify, investigate, and solve the organization's problems and devise innovative solutions with little oversight or planning. Managed chaos encourages self-organizing teams and a high level of individual autonomy. The organization continually reorganizes at all levels and, through these iterations, finds better ways of collaborating. This organic, self-organized type of organization is often called a 'fractal organization'.

For example, at a popular online travel company, anybody can test anything at any time. A manager believed that the company's booking website needed radical simplification. The manager decided to change the website to include only a few basic options for customers on the front page. Because the company was radically committed to experimentation, and despite the risks, the manager was allowed to make these changes just before the busy holiday season. As it turned out, the changes were successful (as measured by increased website hits, bookings, and customer satisfaction scores).

Organizations committed to this sort of experimentation often view formal R&D departments as progress bottlenecks. Although the scientists and engineers who populate R&D departments are experts in their fields, they are often removed from operational results and interact infrequently with the end consumer. When every employee can experiment with incremental improvements, thousands of experiments can be conducted at any given time. Many of these experiments do not lead directly to improvements, but subsequent experiments often build upon their predecessors. Furthermore, a small number of experiments are likely to lead to major innovations that could transform the consumer experience or marketplace.

Many well-established organizations find it difficult to adopt a managed chaos approach because they are largely based on command and control systems, which take a top-down approach to organizing work and delegating authority. It is important for traditional organizations to understand that managed chaos is not the same as pure chaos. It is also not management by crisis. In managed chaos, the executive becomes the visionary, parameter-setter, and enabler, and mid-level leaders become coaches.

Organizations unfamiliar with managed chaos will find it difficult to transition overnight. However, they can support a transition to managed chaos by:

- clearly setting the vision for innovation
- hiring curious employees
- allowing a broad range of employees to conduct experiments
- understanding what metrics will be used to measure success
- ensuring that data and results take precedence over opinion
- ensuring that experiments, especially those involving customers, are legal and ethical.

10.9.2 Crowdsourced learning

Many organizations find that, although they have hired some of the most capable scientists, engineers, and developers, certain solutions do not resonate with the consumer or lead to major internal improvements. For example, one mobile computing and scanning technology company spends over $15 million per year on average on R&D. However, that investment leads to no directly marketable products, and little in terms of technology development that can be applied to alternative products. Crowdsourcing innovation can lead to much better results.

It may seem counterintuitive that outsiders can produce better results than highly educated and experienced R&D workers. However, R&D scientists tend to be removed from the customers for whom they are designing products, services, or processes. They also tend not to see how their innovation could help solve problems in domains outside of their own, or how other domains could help solve their problem.

Additionally, an organization's R&D department will always be outnumbered by the people running and operating the business. Crowdsourcing innovation often attracts a much larger number of inventors and problem-solvers than a company could keep full-time on staff.

Organizations typically crowdsource innovation by launching contests that are available to large communities (e.g. engineering associations or software developers) or customers. A challenge is posed, usually formulated as

a question or problem to solve; basic parameters are set; and a timeline for entries is communicated. Prizes (often monetary) are given to the innovators whose solutions are chosen by the sponsoring organization.

NASA was able to extend the usable life of the space station (and save hundreds of millions of dollars) with ideas submitted by contestants. An energy company outsourced a contest to find better ship-to-shore oil transportation techniques, and found that the best solution came from a practitioner in an entirely different industry. A leading global coffee retailer continually asks customers to submit ideas for new coffee drinks and routinely selects and test-markets customer suggestions. Each month, winning customers receive gift cards as rewards.

Unfortunately, organizational culture is often an obstacle to crowdsourced innovation. Organizations sometimes find it difficult to support a solution that was developed outside of the company, and R&D employees sometimes feel threated by crowdsourcing.

The following tips can help an organization in the pursuit of crowdsourced innovation:

- **Redefine the role of R&D** R&D employees should help to frame the specific problem for crowdsourcing and vet the technical feasibility of contestants' submissions. They need to find the best solution from many options.
- **Be specific in defining the problem** Open-ended problems do not lend themselves to crowdsourcing; contestants need to understand the basic parameters and constraints. For example, a contest that asks participants to design an unmanned and autonomous underwater robot is unlikely to yield viable results, or may yield too broad a range of responses. A better definition would be: 'Design an unmanned autonomous underwater device that can travel to 20 000 ft below sea level, operate without on-board lights, and navigate without human assistance for 48 hours at a time.'
- **Design appropriate rewards** Many innovators are motivated by intrinsic factors, and are more thrilled by solving the problem than by receiving external recognition or rewards. Nevertheless, innovators are unlikely to solve a complex problem for free. Rewards and recognition are a useful addition to management support and sufficient funding.
- **Understand intellectual property and ownership implications** It must be clear from the outset how the winning idea's intellectual property and ownership will be addressed. Ideally, when the winning innovator receives a prize, they should relinquish all ownership rights and agree not to compete with the organization.

10.9.3 Purposeful innovation

Peter Drucker said: 'Above all, innovation is work rather than genius. It requires knowledge. It requires ingenuity. And it requires focus […]. Most innovations result from a conscious, purposeful search for innovation opportunities, which are found only in a few situations' (Drucker, 2002).

Purposeful innovation is the systematic practice of innovation that results from focus, direction, and intentional opportunity mining. It does not rely on heuristics, hunches, or hidden opportunities, or directionless experimentation. Instead, purposeful innovation suggests that innovation should be managed like any other corporate function.

Drucker delineates seven areas where innovation efforts should be focused:

- unexpected occurrences
- incongruities
- process needs
- industry and market changes
- demographic changes
- changes in perception
- new knowledge.

10.9.4 Continual learning

Knowledge is perishable. The knowledge that enables success today will be out of date tomorrow. Ways of working must adapt as environmental conditions change, and individual skills must be updated as technology advances.

Continual learning, sometimes called 'constant learning', is the process of learning new skills and knowledge and reflecting on individual and group experiences on an ongoing basis. As innovation dismantles old ways of working, continual learning ensures that employees have up-to-date skills, and that teams are aware of consumer demand, competitive forces, and the overall state of the market. Continual learning applies at the organizational, team, and individual levels.

At the organizational level, the focus is on making sure the organization as a whole learns from internal experiences and external sources, such as customers, market trends and demand, and competitors. Leaders need to understand where the organization could benefit from learning and how to acquire the needed knowledge. For example, senior leaders may decide to establish a technology advisory board in partnership with IT to keep themselves up to date on digital technology trends.

Leaders should identify the critical skills the organization needs to accomplish its mission. For example, they may determine that the organization requires advanced skills in data analytics and business intelligence, then work with HR and other teams to understand what skill sets currently exist in the organization, which ones can be developed internally through training, and which need to be sourced through hiring.

At the team level, teams should routinely reflect on shared experiences and lessons learned. Although team goals should be aligned with the organization's strategic vision, executives do not always know what is needed at every level of the organization, so teams must inform senior leadership about skills deficits and learning gaps. The primary focus should be on ensuring that teams continually improve their collective performance and that team members have the necessary skills.

At the individual level, as employee roles change, new skills need to be developed. The guidance in *ITIL® 4: Create, Deliver and Support* is to develop deep subject matter expertise within one to three domains alongside complementary secondary skills.

Individuals should also be free to pursue some learning goals that are not directly aligned with the team's needs. For example, in one global research organization, leaders instructed team members to learn something that had no direct relationship to their job, then tell the team what they had learned. Although this approach may not work with every organization, some version of it could encourage employees to engage in learning.

The ITIL story: Continual learning

Henri: *At Axle, we regularly run hackathons to explore challenges. Sometimes we even create wireframes of solutions. This stimulates creative thinking within our teams.*

Dave: *We encourage every employee to raise ideas with their manager, just as we encourage customers to provide feedback to our product teams, and suppliers to discuss their ideas with our procurement team.*

Henri: *Prototype development and testing is a great example of the ITIL guiding principles in action! We can see how 'focus on value', 'collaborate and promote visibility', 'keep it simple and practical', and 'progress iteratively with feedback' come into play.*

10.10 Evaluating and adopting emerging technology

Kaimar Karu (2019) outlines the challenges associated with knowing when to adopt emerging technology. When an organization learns of a new approach, it will try to determine whether it should consider it. Some of the questions it asks are:

- Will it become a mainstream solution?
- Will we be left behind if we do not adopt it?
- Is it significant enough to focus on instead of something else?

Karu identifies four stages in which technology can be adopted, shown in Figure 10.2.

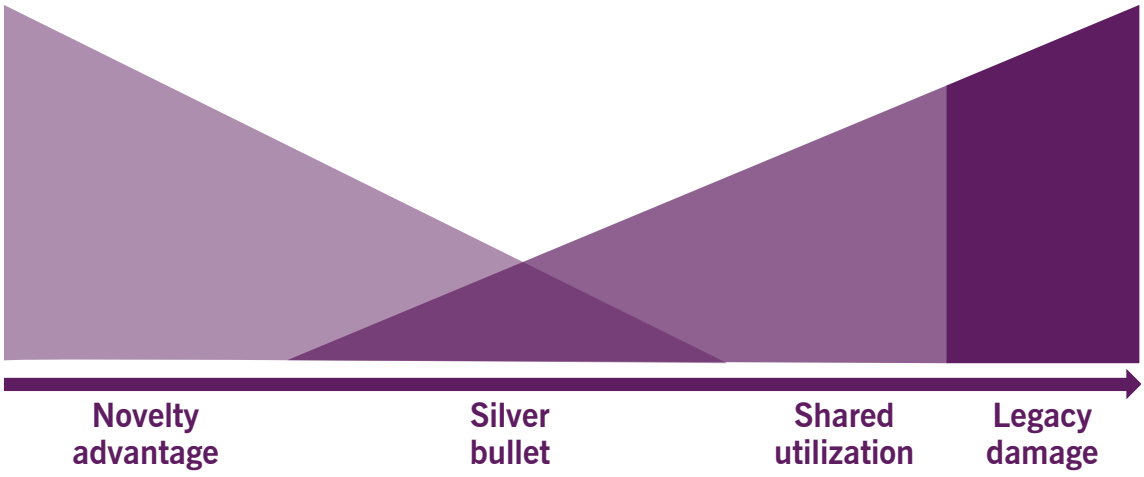


Figure 10.2 Stages of technology adoption

By the time most organizations hear about a new solution, it will already be entering the early majority stage of Moore's technology adoption lifecycle. Karu calls this the 'silver bullet' stage, where the technology is touted by vendors and their customers as the solution to all current challenges. If it meets the organization's needs and ensures or even extends its competitive advantage, this is a good time to adopt the technology. However, it is important that the organization adopts the technology with a realistic expectation about which challenges it solves and does not solve, and about what issues it could cause.

There is little competitive advantage to investing in technology in the 'shared utilization' stage, as it will already be an industry commodity. For example, while a new customer relationship management solution might have offered great competitive advantage in the 1990s, the standard functionality and features of such systems are now available in even the most inexpensive cloud platforms. Almost every organization uses one or the other solution.

Investing in a legacy environment that is becoming obsolete offers virtually no competitive advantage, and could damage the organization because of its inflexibility and the expense required to manage it.

Karu offers advice to organizations considering emerging technology while it is still in the 'novelty advantage' stage. In this stage, it is difficult to evaluate whether the technology will fade before it becomes successful, or will be the next big thing. This is represented in Figures 10.3 and 10.4.

Figure 10.3 Emerging technology in an organization's work environment

Figure 10.3 shows an organization's work environment. In the lower right corner, an emerging technology in the early stages of novelty advantage appears to offer a solution to a business challenge. It is difficult to know whether it is a fad or will become significant and move to the silver bullet stage, as shown in Figure 10.4.

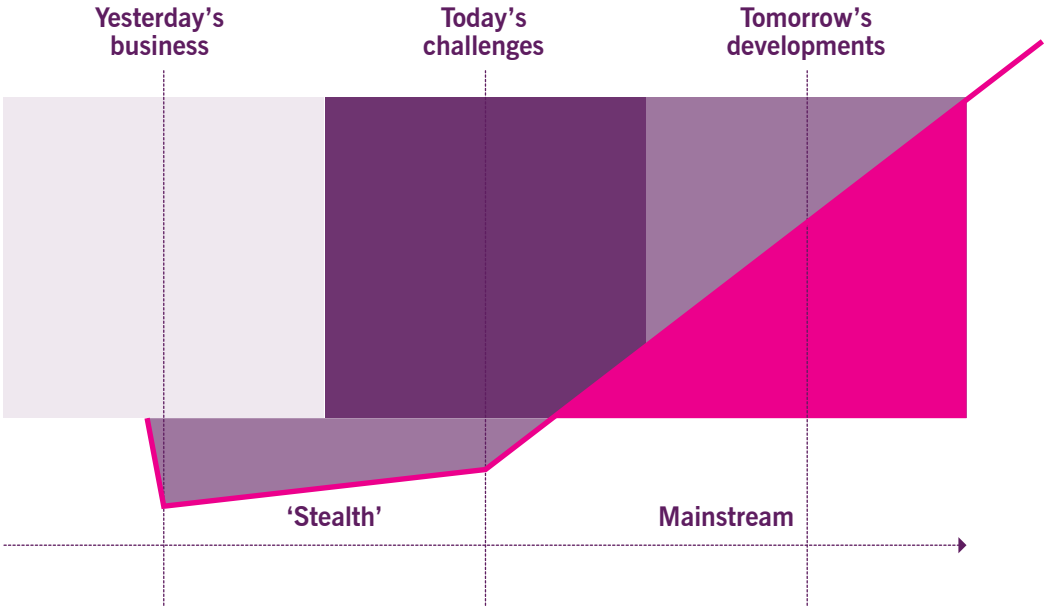


Figure 10.4 Emerging technology in context

The decision on whether or not to adopt this technology in the early stage will depend on the organization's strategy, objectives, and culture. However, the organization should always be deliberate and methodical about detecting, researching, and adopting emerging technology.

Key factors include:

- information about trends in the ecosystem, especially what has worked and what has failed
- a clear understanding of what will make the solution successful, such as architecture and capabilities
- the ability to quantify what the emerging technology will and will not do for the organization, what it will cost, and what the impacts on the organization and its stakeholders will be
- well-defined business and operating models, so that the impacts of the new solution can be understood
- the ability to test the new technology or method, which often requires a laboratory-type environment where real situations can be simulated or duplicated.

CHAPTER 11

MANAGING STRATEGIC RISK

11 Managing strategic risk

Developments in digital technology offer unprecedented opportunities, but are also inherently disruptive and risky. It is no overstatement to say that digital transformation can either propel an organization towards success or put it out of business.

At a tactical level, risk management is about identifying ways to combat existing and new threats and vulnerabilities. At a strategic level, it is about ensuring the success of the organization in an environment where the rules have changed because of digital technology.

11.1 Definitions

The ITIL risk management practice guide contains a definition of risk and a description of risk management and its associated concepts and activities.

Definition: Risk

A possible event that could cause harm or loss, or make it more difficult to achieve objectives. Can also be defined as uncertainty of outcome, and can be used in the context of measuring the probability of positive outcomes as well as negative outcomes.

When an uncertain outcome would result in harm or loss, the risk is negative. When the uncertain outcome would result in benefits for stakeholders, the risk is positive. Positive risks are sometimes also called 'opportunities'.

The purpose of the risk management practice is to ensure that an organization understands risks and deals with them effectively. Typical activities include:

- conducting environmental analyses to identify and frame risks
- determining and documenting the organization's risk capacity and risk appetite
- documenting risk management policies
- identifying, analysing, and evaluating risks
- determining the appropriate risk treatment
- identifying risk triggers and owners
- ensuring risk strategies are implemented appropriately.

11.2 Risk management in digital organizations

The risk management approach will vary depending on the transformation paradigm an organization uses. An organization that uses a process-based paradigm might start by assessing its current state, defining its desired future state, and identifying the risks associated with moving from one to another. An organization using a model-based paradigm would start by identifying potential business cases and evaluating the risks associated with each.

Risk comes from multiple sources and in many forms; for example:

- An organization basing its strategy on a new technology faces the risk of an alternative technology taking the lead (e.g. Zoom is the most popular remote meeting platform because of its ease of use and freemium offering).
- A new business model might be rejected because it is foreign to the current culture of both employees and customers. For example, the launch of Kellogg's cereals in India initially failed because the culture was based on freshly cooked, traditional breakfasts.
- Technology in early stages of development can be untested and flawed, which contributes to increased costs and reduced organizational performance.
- Consumers and employees using new technologies in new ways may expose the organization to unintended results, noteworthy failures, or even ethical issues.
- The Internet of Things (IoT) approaches expose data, information, and the operating procedures of equipment to risk. Attacks on supervisory control and data acquisition systems make the organization vulnerable to a shutdown or the malicious manipulation of industrial processes.
- To be competitive, organizations provide application programme interfaces (APIs) to give consumers, devices, and partners access to their data.
- Cybercriminals invest significantly in finding and exploiting vulnerabilities in new technology, often finding them before the developers and legitimate users do. These vulnerabilities expose the organization to theft, brand damage, and denial of service.

Approaches that focus on protecting assets inside an organization are limited. In a digital organization, the assets that need to be protected are everywhere: inside the organization, hosted by cloud service providers, in mobile apps, some even freely available to the public on websites and through third parties. Effective risk management will rely on all stakeholders being aware of the organization's risk management activities and actively contributing to risk assessment and mitigation using the tools the organization has provided.

Risk can also come from an organization taking on too much work or cost (e.g. overinvesting in large projects or programmes), or taking too long to deliver products and services to customers. Successful digital organizations take small, calculated risks that do not create large exposures for them. They deliver prototypes or minimum viable products and services to obtain frequent feedback and data before making large investments of time, money, and other resources.

The ITIL story: Risk management in digital organizations

Anya: *Risk management is a critical capability for any organization, and it is important to ensure everyone in your organization knows how to manage the risks they encounter.*

Dave: *Some risks may affect our operations. Legal or compliance risks are very serious matters. Other risks might affect our partners and suppliers. One key risk the senior leadership team discusses is our staffing levels and skills gaps.*

Henri: *In my team, we manage risks related to the technology we use, including risks to our technical operations and our ability to develop new features, and the risk of obsolescence when new technologies are invented.*

Anya: *We manage many strategic risks, including risks to our business model, risks of competitive vehicle hire companies disrupting our markets, and the risk of our supply chain being disrupted. The food delivery service introduces risks we have not encountered before, such as the risk of not meeting food safety standards. We even have to consider the risk that our food delivery business might not gain enough attention and consumers!*

11.3 Organizing risk management

The organization's governing body is ultimately accountable for implementing an appropriate risk management framework. Executives are responsible for overseeing and directing efforts in a manner consistent with that framework.

A formal risk management practice should be established in every organization. It should be structured to reflect the way the organization is managed. A risk or audit committee often takes responsibility for the ongoing maintenance of that framework, and for ensuring that risks have been appropriately defined and treated. Specialists, such as the chief information security officer or facilities director, focus on implementing risk and security measures.

11.4 Using risk management to evaluate opportunities

Digital technology presents many opportunities. Not all of them will take the organization where it wants to be. Organizations use risk management to determine which opportunities are likely to help it achieve its objectives and which are likely to have little or no return, or to harm it.

Risk management is a strategic enabler. It helps decision-makers and leaders by:

- identifying the positive and negative risks of each opportunity
- establishing the likelihood of positive and negative risks
- indicating what the organization should do to avoid negative risks
- indicating what action is most likely to ensure a positive outcome
- assessing the net result of all negative and positive risks.

11.5 Risk identification

Virtually all disciplines use frameworks for understanding and managing risk. Each has a prompt list of risk categories that can be used for identifying risks. For example:

- **PESTLE** A risk prompt list created by Aguilar (1967).
- **VUCA** A risk prompt list developed by Bennis and Nanus (1986) for general conditions and situations.
- **TECOP** (technical, economic, cultural, organizational, and political) A risk prompt list that focuses on understanding the internal context.
- **OODA** A concept that involves a recurring decision-making cycle of observe-orient-decide-act, created by US Air Force Colonel John Boyd and originally used to make operational decisions in military engagements.
- **Porter's five forces analysis** Extensively used to focus on threats posed by competition in the business world.
- **Force-field analysis** An approach from the social sciences to examine factors that influence a situation.

Practitioners can expand the scope of risk identification to include the impacts of digital technology by using the concept of disruption, innovation, cybersecurity, and engagement (DICE).

11.5.1 Disruption risks

Definition: Disruption risks

Risks that can disrupt the organization's operating or business model.

In the context of digital technology, disruption risks often relate to how a competitor uses digital technology to drastically change the customer experience or the way an industry operates, achieving an advantage over organizations that are slower to adopt the technology. Disruption risks can also come from consumers when they demand a better experience, or when their use of digital technology necessitates a shift in how services are provided.

Cloud or mobile technology can also give rise to disruption risks, as can factors such as scarcity of skills or trade restrictions, impacting how digital technology is used. Disruption risks are particularly relevant for organizations in stagnant industries that are slow to adopt new technologies. If the barriers to entry are sufficiently low, these organizations make excellent targets for disruption from companies in adjacent, or even entirely different, industries.

At the other end of the spectrum, an organization that embraces a new and unproven technology may find that the technology does not live up to its promise; instead it drains resources and money and leads the organization in the wrong direction.

Disruption risks are identified by industry reports on the adoption of technology and the evolution of consumers' demands.

11.5.2 Innovation risks

Definition: Innovation risks

Risks introduced by the organization's innovations.

Innovation is risky by nature. For this reason, innovations are developed and tested in controlled environments, with prototypes and minimum viable products being assessed before the business bets its future on them.

Some organizations may attempt to outperform a competitor by releasing innovative products or services before they have been properly tested. Although there is a higher appetite for innovation in a digital market, consumers are not always prepared to wait while a service provider corrects faulty products or inadequate services. A better or more attractive product will soon appear, especially because competitors quickly learn from their rivals' failures.

Innovation is key to an organization's ability to stay relevant to changing customers and markets. If it only focuses on those innovations that can be measured in terms of improvements to its current business (such as revenue or efficiency), it risks missing significant opportunities to strengthen or grow its overall position in the market.

On the other hand, some organizations pursue innovations that function well but do not contribute to the business. A new app may seem to improve communication with customers, but if it does not result in higher levels of satisfaction or increased sales, it was not worth the investment.

Innovation risks are identified by the regular analysis of industry-specific reports. The reports cover modelling, test reviews, the continual analysis of consumers' feedback (in short iterative cycles) and operational performance.

11.5.3 Cybersecurity risks

Definition: Cybersecurity risks

Risks of exposure or loss for an organization resulting from a cyber-attack or a data breach.

As organizations collect, store, mine, and analyse sensitive data (such as consumer or financial data), they become increasingly large and attractive targets for malicious behaviour. Decentralized data collection and dissemination exposes the organization to more channels for information theft and loss.

Security breaches have been well publicized and tools developed to protect each new technology as its use grows. However, the newer the technology, the less its vulnerabilities are understood. Organizations increasingly rely on vendors that provide threat intelligence and news about the growth of cyber-crime. This is gleaned from the experiences of other organizations, and information communicated on the deep web and dark web.

Cybersecurity risks are normally identified via the use of specialized software tools, vulnerability assessments, threat intelligence assessments, and by the analysis of industry reports. More proactive and reliable risk identification can be achieved when these methods are enhanced by machine learning.

11.5.4 Engagement risks

Definition: Engagement risks

Risks that originate from an organization's stakeholders, including its suppliers and partners, consumers, and employees.

Digital organizations depend on engaging with a range of stakeholders to ensure their success. Risk is increased if they engage with unsuitable partners, or if their engagement models do not detect changes in the stakeholders. For example:

- Consumers can easily switch between suppliers. If another vendor offers even a marginally better product or service or performs better than the incumbent, that vendor may win the business. This idea is discussed in detail in *ITIL®4: Drive Stakeholder Value*.
- Suppliers must be able to match the functionality and performance that the organization needs. Long-term, inflexible contracts are a significant threat to agile digital organizations.
- Partnerships can be risky if one partner is more open to new technology and more sensitive to changes in the environment than the other.
- Regulatory bodies may not allow organizations to make the changes necessary to exploit new opportunities. Although that body may be a constraint for all organizations in a market, it will put them at a disadvantage when competing in other markets that do not have those constraints.
- Internal engagement is critical. For example, a weak or contentious relationship between IT and other business units, where IT seeks to maintain control while business units forge their own digital strategies, may result in the failure of the organization's digital strategy; or where an innovative IT department is blocked by leaders sticking to outdated business practices.

Engagement risks can be identified by due diligence checks at the early stages of the relationship (the 'engage' step of the customer or employee journey; see *ITIL®4: Drive Stakeholder Value* and the workforce and talent management practice guide for further information). More proactive and reliable risk identification can be achieved when the due diligence checks are automated and enhanced by machine learning.

The ITIL story: Risk identification

Dave: *Risk management, such as continual improvement, is everyone's responsibility. The only way a modern organization can quickly identify and manage risks is to enable each staff member to speak up and take action without a lengthy cycle of approvals.*

Anya: *Let us not forget that partners, suppliers, and customers can be key components of your risk identification and mitigation strategy!*

Su: *There should also be limits, of course. For example, an engineer cannot be expected to manage legal risks. Agile practitioners talk about 'moving work to the right team'. The right team to manage a risk might be the senior leadership team, or another functional area. The ITIL guiding principles provide a solid foundation when engaging in risk management!*

11.6 The risk register

The primary output of risk identification is the risk register: a list of major identified risks, prioritized and with information about their history and current status. The risk register is overseen by a senior executive, and is regularly reviewed by the organization's risk or audit committee. Risks that impact the organization's strategy or viability must be communicated and reviewed by its governing body.

At a strategic level, the frequency of updates to the risk register should reflect the frequency of review of, and updates to, the organization's strategy and business model. At an initiative or project level, the register should be updated as frequently as checkpoint meetings occur.

The content and format of the risk register is described in more detail in the risk management practice guide.

11.7 Qualitative risk analysis

Qualitative risk analysis is used to determine the likelihood that a risk will occur and the impact that it will have if it does. Because it is impossible to address every risk in depth, qualitative risk analyses help to prioritize which risks need to be treated first and how much effort to expend on them. There are different types of qualitative risk analysis, including risk matrices and scenario-based analyses.

11.7.1 Risk matrix

The risk matrix, shown in Figure 11.1, shows the potential impact of the risk on the y-axis and the likelihood of the risk on the x-axis. This matrix can be used for both negative and positive risks, although it is primarily used to assess negative risks.

Organizations work to eliminate negative 'high' risks first, because they are potentially catastrophic. 'Low' risks are low impact and low likelihood; organizations often choose to accept them without taking proactive action. They will, however, continue to monitor 'low' risks in case they become 'medium' or 'high'. 'Medium' risks are the best candidates for risk modification or sharing.

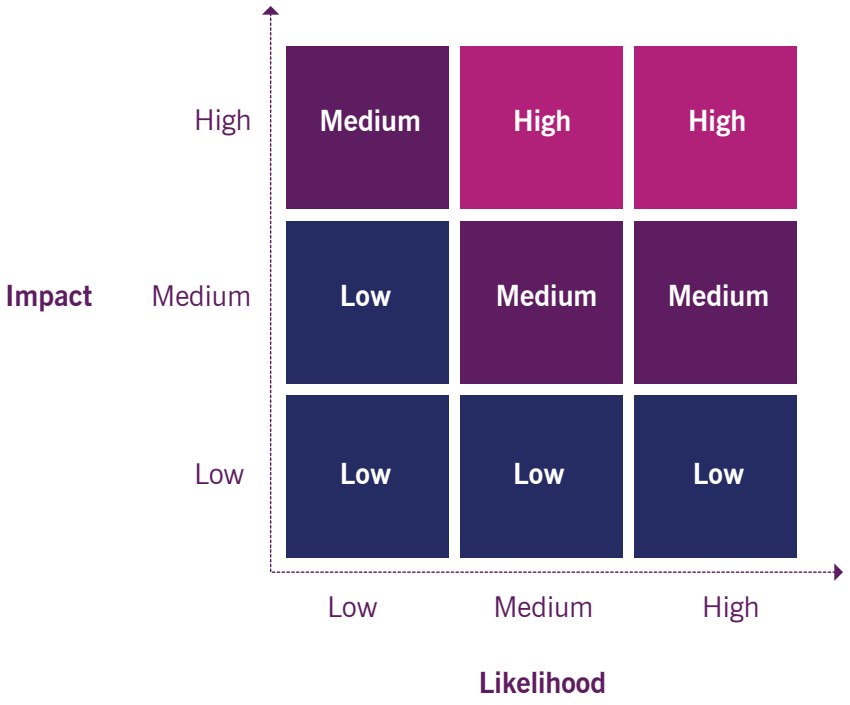


Figure 11.1 Matrix example for qualitative risk analysis

11.7.2 Scenario-based analyses

Strategy is concerned with evaluating whether an opportunity, with all its negative and positive risks, should be exploited.

Scenarios allow organizations to evaluate opportunities. In the context of risk management, scenarios:

- describe the opportunity and its components (consumers, staff, suppliers, technology, etc.)
- list the assumptions made when defining the opportunity
- identify the opportunity's variables
- project the effects of challenging assumptions and changing each variable
- assess the likelihood and impact of each change
- identify what actions should be taken to treat negative risks and ensure the achievement of positive risks.

11.8 Quantitative risk analysis

Quantitative risk analysis techniques attempt to place a monetary value on risks. These approaches are complex and require significant research and analysis. They are generally only used when a risk exceeds a pre-defined threshold.

Quantitative calculations used in scenario analyses include:

- **Annual rate of occurrence (ARO)** The probability that a risk will occur in a single year.
- **Single loss expectancy (SLE)** The expected financial loss due to a risk, applicable each time it occurs.
- **Annualized loss expectancy (ALE)** The expected financial loss due to a risk, averaged over a one-year period (SLE × ARO).

11.9 Risk triggers

A risk trigger is a condition that converts a risk into an actual event or issue. It could also be a condition that moves a risk to a different category of impact or likelihood. All major risks should have associated risk triggers and an owner who is responsible for monitoring them, so that timely action can be taken. This role is best performed by a subject matter expert who understands the category of risk involved.

11.10 Risk posture: balancing the risks and rewards of digital technology

'Risk posture' refers to an organization's overall approach to identifying, analysing, planning for, responding to, and managing risk. Risk posture is described in the risk management practice guide, but this section provides an overview of the major concepts and their use in defining and managing strategic risk.

A major part of defining strategy is articulating exactly how much risk the organization is willing to accept in pursuit of its objectives. The terms used to describe this are outlined in Table 11.1. These terms are often used interchangeably, and definitions change between industries. The terms or definitions used are unimportant. What is important is that everyone in the organization uses them in the same way, and that their meanings are incorporated into the organization's risk planning and response activities.

Table 11.1 Concepts that define an organization's approach to risk

Term	Description	Example
Risk capacity	The total amount of risk that an organization can tolerate	The total negative impact of risks in the risk register must be lower than $100 million
Risk appetite	The degree to which an organization will embrace negative risk in pursuit of its objectives	Executives must seek board approval for any project with a negative risk value higher than $50 000

11.10.1 Risk attitude

Risk attitude consists of a typical response to risk, based on risk capacity, appetite, tolerance, and thresholds. It does not just apply to organizations, but to individual stakeholders as well. It is important to understand the organization's attitude to risk, but also to identify how and why individual stakeholders may support or resist a particular opportunity.

The terms used to describe risk attitude vary. Some that are frequently used are:

- **Risk-averse** Risk-averse organizations and individuals overestimate negative risks and underestimate positive risks. They are likely to defend their current situation and resist any strategy that requires radical change. These organizations are unlikely to pursue digital opportunities as a way of disrupting the market. Rather, they focus on using new technology only when they are in danger of losing their position in the market, and will tend to only deploy solutions that have been tested by other organizations.
- **Risk-seeking** Risk-seeking organizations and individuals underestimate negative risks and overestimate positive risks. They are likely to rush into opportunities before fully considering all the negative risks involved. Many start-up companies fall into this category. A digital and IT strategy should ensure that the organization is fully prepared to manage all aspects of the opportunities it pursues. Leaders are responsible for detecting and resolving over-enthusiasm.

- **Risk-tolerant** Risk-tolerant organizations and individuals have an uninvolved attitude towards risk. They do not try to mitigate negative risks and do not actively pursue positive risks. These organizations' digital strategies are unlikely to discuss digital transformation. They may believe that their existing customer base and business model are unassailable.
- **Risk-neutral** Risk-neutral organizations and individuals take a long-term approach to risk. They assess both positive and negative threats as part of evaluating opportunities that are part of a digital and IT strategy. This is the healthiest risk attitude; leaders should foster it as much as possible, balancing the views of risk-averse and risk-seeking stakeholders to form a balanced approach to risk in the organization.

The ITIL story: Risk attitude

Dave: *An important point that often gets overlooked is that different parts of an organization can have, and perhaps should be encouraged to have, different attitudes and tolerances to risk. For example, our Agile software development teams have a higher risk tolerance than our supply chain and logistics teams. Our business model means that the risks of the food delivery service are not of immediate consequence to the private vehicle hire business.*

Anya: *Even different levels of the organization might have different attitudes to risk. The risk of a feature not meeting the customer's requirement might be high on Su's risk register, but would not feature highly on that of the executive team. It is important that we recognize the things that our teams worry about but equally help them understand how those risks may or may not be the concern of everyone else.*

11.11 Risk treatment

'Risk treatment', or 'risk mitigation', refers to the policies, plans, processes, and tools used to prepare for and lessen the impact of risk on the organization. Risk treatment generally falls into the following categories:

- **Risk retention or acceptance** The organization decides that the impact or probability of a potential risk is not worth the investment required to prevent it. The initiative will proceed without any countermeasures being implemented.
- **Risk avoidance** The organization decides that the impact or probability of a risk is too high or that it would be too expensive to prevent. It therefore decides not to pursue the opportunity or initiative.
- **Risk-sharing or transfer** The organization invests in a partnership whereby the partner takes some or all of the risk (e.g. a cloud service provider protects the organization's data) or indemnifies the organization against the impact of that risk (e.g. through insurance). Although an organization can transfer the management of risk, it cannot transfer its accountability. For example, if the cloud service provider is hacked and private data is leaked, the organization must rectify the situation with its customers.
- **Risk modification or reduction** Steps are taken to reduce the impact and/or probability of a risk. These include:
  - limiting access to valuable assets
  - monitoring valuable assets and alerting authorities in the event of breach or misuse
  - monitoring the environment for evidence that valuable assets have been stolen or compromised (such as customers' personally identifiable information)

- building redundancies to protect against failure or denial of access
- using automation to limit errors
- rapidly responding and recovering in the event of a manifest risk.

11.12 Achieving a risk-informed mindset and culture

Executives play a vital role in creating a risk-informed mindset and culture, including determining the organization's risk posture and attitude. The role demands that leaders engage in awareness and communication activities to promote understanding among all employees. It culminates in approving the actions the organization will take to treat risks.

Being risk-aware is not the same as being risk-averse. Leadership should not over-react to every possibility of a negative outcome and fear taking any risk. Instead, a risk-aware mindset encourages leaders to consider, in advance of a risk manifesting, how the organization will react. No organization can predict and prepare for every risk, but risk-aware organizations develop a good understanding of the most relevant risks and prepare accordingly.

In addition to creating a sense of urgency, digital leaders infuse their organizational culture with a sense of courage regarding risk. They reward prudent risk-taking in pursuit of opportunities, even though the anticipated benefits do not always materialize and occasionally some harm is caused. This is embodied in the phrases 'fail fast' and 'learn fast', which encourage educated experimentation, even if some experiments fail. It is always best to fail before investing too heavily in a solution, and to fail in a way that promotes learning.

At the same time, digital leaders are quick to admonish recklessness. 'Failing fast' is not an excuse for abandoning common sense. A good policy for employees to follow is to ask for clarification whenever they are unsure whether accepting a risk is warranted.

This approach should be supported through formal education about important risk factors, along with general awareness programmes about common risks and how to prevent them, such as protecting personal computers with passwords.

CHAPTER 12

STRUCTURING FOR DIGITAL BUSINESS

12 Structuring for digital business

12.1 Governance

Governance provides structure and direction to an organization to ensure the entire organization is working towards common objectives and strategy. These objectives and this strategy are designed to ensure the organization's long-term viability.

Governance is typically exercised by establishing formal organizational structures that are then represented in an organizational chart. These may include informal structures such as steering committees, decision-making frameworks and policies, and communication and educational processes (Peppard and Ward, 2016). Governance ensures that all parts of an organization are aligned and orchestrated so that changes in direction can be deployed effectively throughout the organization.

A digital business needs to be flexible and responsive in order to respond rapidly to market conditions and adopt new emerging practices and technology, to provide sustained competitive advantage. Effective governance enables this by:

- ensuring that critical decision-making is streamlined in the context of the organization's objectives and strategy
- ensuring that suitable processes and policy controls are in place to empower stakeholders to execute their daily functions, make decisions, and act within the safe organizational guidelines provided through governance
- enabling leaders to evaluate how the organization is performing against its objectives and strategy and change direction, knowing that all moving parts in the organization will align to the new direction
- ensuring that the organization's overall direction is transparent, so that all stakeholders know what they need to do to enable its strategy and respond effectively to threats.

12.1.1 The role of leadership

This publication uses the terms 'leader' and 'leadership' throughout. The following concepts are intended when these terms are used:

- the ability to influence or direct the behaviour of others
- the use of unique knowledge, skills, or power to effect changes in an organization or group
- the ability to make decisions on behalf of an organization or group
- the tendency to initiate action and/or motivate others to achieve a desired outcome.

In more traditional governance models and hierarchical organizational structures, the term 'leadership' was used primarily to indicate a characteristic of someone in a formal executive or management position. As organizations became more agile, nimble, and responsive, layers of management were often reduced in an effort to reduce

bureaucracy and accelerate decision-making. Leadership emerged as a valuable characteristic at all levels of the organization.

Organizations should understand the value of leadership and encourage it in a variety of situations. For example:

- Technical experts provide leadership in identifying, communicating, and testing innovative ideas, and are invaluable when helping with strategic positioning and approaches.
- Staff who lead in response to an unusual situation, such as a customer complaint or operations incident, should be able to act within defined boundaries.
- Team members working on a strategic initiative should be able to lead if the team depends on their expertise or knowledge to complete a task.

Although leadership should be encouraged at these levels, uncontrolled exertion of strong personalities should not. Good leaders understand the bounds of their authority in any situation, and know when to escalate. A key aspect of governance is ensuring that executives, managers, and leaders at every level of the organization know the limits of their authority and act within them.

Successful digital businesses adopt the philosophy of servant leadership, where leaders focus on empowering their employees to enhance their performance and to help them work towards the organization's strategy and objectives. Servant leadership is leadership that is focused on giving explicit support to people in their roles.

This form of leadership ensures customers' and employees' needs are put first, to ensure high levels of satisfaction, motivation, and engagement. Servant leadership is not a formal designation that only applies to organizational leaders; it is a philosophy that applies to everyone in an organization. Governance that drives the principles of servant leadership enables organizational autonomy and enhances the performance of teams.

The ITIL story: Governance and leadership

Anya: *Axle Car Hire's governance is provided by our board of directors, of which I am a member. Other members include key investors and industry experts. They provide Axle with an overall mission and direction, and leave the execution of this direction to Axle's executive management team.*

Henri: *The ITIL service value system is a useful concept that is applicable to organizations and teams of all sizes. As Anya says, the board of directors provides the corporate governance for Axle Car Hire. Within the company, Anya and her executive leadership team provide business unit governance to individual lines of business, and mid-level management provides functional governance to product teams, etc.*

12.1.2 Linking strategies and enabling digital co-evolution

It is unlikely that a large organization can control all aspects of its operations through a single enterprise strategy, especially where business units are organized by different geographies, product lines, or industry verticals.

Executives may find it necessary to create several strategies under the overall organizational strategy. Managers in each of these units might then find it necessary to use strategy to identify options and initiatives for achieving their departmental objectives. Further to this, IT strategies have typically been required to underpin these strategies in an effort to support and enable the respective enterprise strategies.

An important aspect of governance is that the enterprise strategy is linked to individual strategies at different levels and across different functions of the organization. This aspect of governance is executed by the levels of management that create different strategies and strong collaboration and coordination structures (potentially a steering committee). These structures ensure the continual updating and alignment of business models, roadmaps, capability models, business principles, policies, etc.

Value chains are created, aligned, and continually reviewed across the relevant committees. Typically the enterprise architecture function facilitates these and manages the artefacts. These artefacts are of particular importance because they visually represent the strategy, thereby assisting decision-making and enabling everyone to understand complex strategies and architecture.

It is important that each layer of strategy is linked so that changes can be communicated to others, and performance at the team or department level can be measured in terms of overall organizational success. In agile, flat organizations, this communication happens upwards, downwards, and across teams, and is coordinated by executive leadership. Executives and managers from different areas of the organization can compare their plans, to avoid duplication and ensure that there are no gaps. Additionally, constraints and options that are not visible to the governing body can be dealt with at the appropriate level of management.

12.1.3 Business and IT strategy co-evolution for digital organizations

Many leading digital organizations, such as Uber, Netflix, Facebook, and Starling Bank in the UK, have technology at the very core of their business. Business stakeholders understand technology and include it in their strategies, and technical stakeholders understand the business and deliver value accordingly. Strategic business decisions cannot be made without considering the technology platform. The technology is the conduit for the business strategy; in many ways, it *is* the business strategy. In this way, both business and technology strategy co-evolve to rapidly address changes in the market in order to remain competitive.

In many organizations, however, there is still a clear distinction between business and IT. Many digital strategies focus on 'business and IT alignment' through instruments such as SLAs. This is a problem because 'alignment' implies there are two distinct and separate entities. Business executives continue to see IT as a completely separate supporting entity, and view its digital strategy as a subset of the business strategy.

The notion of alignment becomes outdated when the pace of change in the market outpaces the ability of decision-makers in separate departments to align.

Organizations that co-evolve focus more on delivering change projects or programmes, such as OKRs, rather than digital projects. They are able to identify and deliver successful IT-related changes in response to, or in anticipation of, changing business conditions.

Successful digital strategies depend greatly on the experience and knowledge of the leaders and managers who decide which changes to make and which competencies to develop. This requires a high level of communication between IT and business leaders; both should learn from the other. This learning can only be achieved through formal structures, such as steering committees, or their equivalent, as described above.

12.1.4 Compliance

Public companies, government organizations, and even private companies in certain industries (such as insurance brokers) are required to demonstrate compliance with specific legislative or regulatory standards.

Compliance plays an important part in the health of an economy. It protects consumers from unscrupulous, dishonest, and incompetent providers; and it presents barriers to entry for potential competitors who are unable

to provide the levels of quality or service required in a particular economy. It also protects organizations from known risks, such as cybersecurity risks, by identifying the minimum standards of protection required by organizations to protect themselves and their stakeholders.

However, compliance is not an end in itself. It is a means of ensuring long-term viability and the healthy growth of the organization and its environment. Some compliance, such as complying with laws, is mandatory, but many standards, regulations, ethical codes, etc. can be valuable tools for aligning the behaviour and role of the organization and its stakeholders to the organization's objectives and strategy.

An organization's executives must demonstrate that it is configured and operates in compliance with the:

- strategy, policies, and standards defined by the governing body
- legislation of the countries in which the organization operates (health and safety, anti-trust, advertising, etc.)
- regulations defined by industry or government regulatory bodies
- organizational policies, standards, and rules (expense policies, travel policies etc.)
- standards defined by international, national, or industry standards bodies with which the organization is required or has decided to comply (usually requiring certification by the standards body or an accredited provider, as with ISO 20001)
- ethical standards they have either defined or adopted from an industry association.

The ITIL story: Governance, risk, and compliance

Dave: *Although it is common to see 'governance, risk, and compliance' functions within organizations, they are actually three distinct but interrelated concepts. One way to visualize this is to think of them in terms of trains. 'Governance' is the railway track, which is designed and carefully laid down to let a train run at high speed in one direction at a time. 'Risk' is about identifying and managing potentially dangerous conditions so that the train does not crash. 'Compliance' is about ensuring everyone is working within the constraints set by governance and risk so that the train continues to function properly.*

12.2 Structuring the organization

Since the initial hierarchical organizational structures for service providers were established, many changes have occurred within organizations. The increasing business challenges of time to market/value, dramatic changes in ways of working, and the increasing adoption of complementary frameworks (such as Agile, Lean, and DevOps) have made it more difficult to maintain a unified, strategic focus.

The parts of the organization that are transforming and adopting new ways of working are often not the primary revenue-generating areas. This leads to even more potential separation, and a lack of alignment with the organization's larger purpose and strategic goals.

There has also been a shift towards a product model, rather than a waterfall-based project management focus. Although this has many benefits, the ability to maintain a focus on overall customer value and positive outcomes can be viewed as the job of sales and marketing, customer success management, or product management, not the product team.

Customers now expect to be delighted, not just satisfied. They have adopted 'app mentalities', which come with increased expectations of how products and services are delivered and supported. Many product teams do not maintain a 'you build it, you own it, you run it' end-to-end focus. These teams have also become largely decentralized, focusing on more agile ways of working and becoming more autonomous and self-organized. Decision-making is often pushed to the lowest possible level. Communities of practice enable cross-team visibility, along with experimentation and learning. Those communities can be role-based or topic-based, and are usually informal.

Organizations will continue to struggle if they do not have the appropriate strategic alignment, focus, and accountability needed to support the digital strategy and organizational change management. From a service management perspective, digital leaders need to ensure a common understanding of value, outcomes, costs, and risks. They also need to increase collaboration and partnering with consumers to enable value co-creation. There cannot continue to be siloed work or a large separation between IT and the business.

Another critical success factor in an organization's digital transformation journey involves the need for executive leadership to be open to learning new things and ways of working. There is a big opportunity to foster sharing and collaboration, ensure alignment with the overall strategy, enable feedback loops, and show the best ideas to leadership so they can be appropriately supported and funded.

12.2.1 Types of IT service providers

The role of the IT service provider is changing. This change is accelerated in digital organizations, where many aspects of managing technology have been taken on by a business unit or development team.

These changes are described in *ITIL®4: High-velocity IT* and illustrated in Figure 12.1.

Figure 12.1 shows how an IT function can operate as a service provider in organizations with different requirements for technology management:

- **Decentralized IT** In a decentralized structure, each business unit has an integrated IT function and manages IT services.
- **IT as a centralized service provider** An IT department acting as a centralized service provider serves multiple business units, and manages most of its IT services itself.
- **IT as a shared service integrator** An IT department acting as a centralized service integrator (or service broker) serves multiple business units and combines its own services with those acquired from external service providers.
- **Integrated IT** When IT is integrated with them, business units focus on managing digital business services.

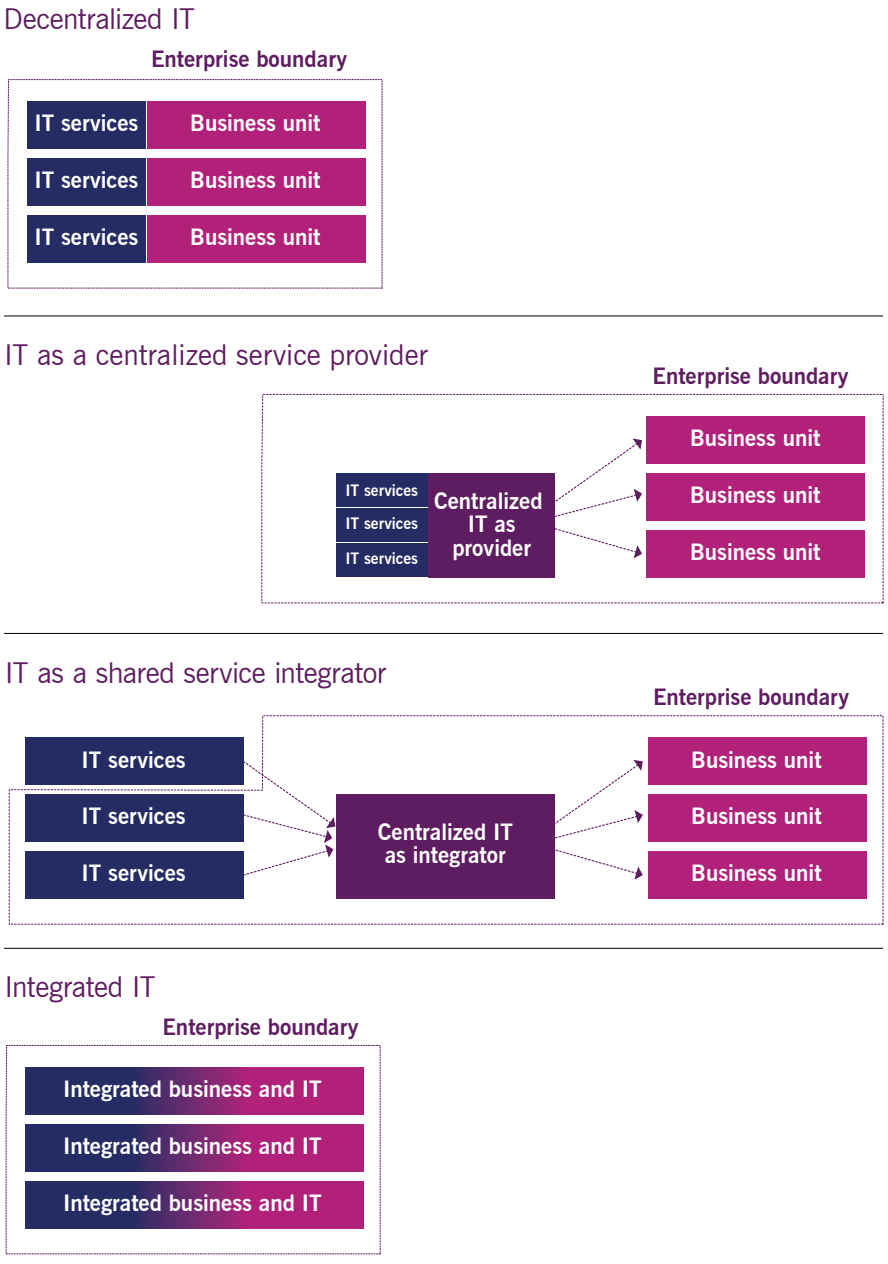


Figure 12.1 Examples of sourcing options for an IT function

12.2.2 Variables of organizational structure

Rather than suggesting a set of alternative organization diagrams, it is helpful to consider the factors currently influencing organizational structures. These are described in detail in the ITIL workforce and talent management practice guide.

The most important variables are the type of hierarchy in the organization, the sense of community, and the link to consumers and the market. The types of organizational structure that emerge as a result of the interaction between these variables are shown in Figure 12.2.

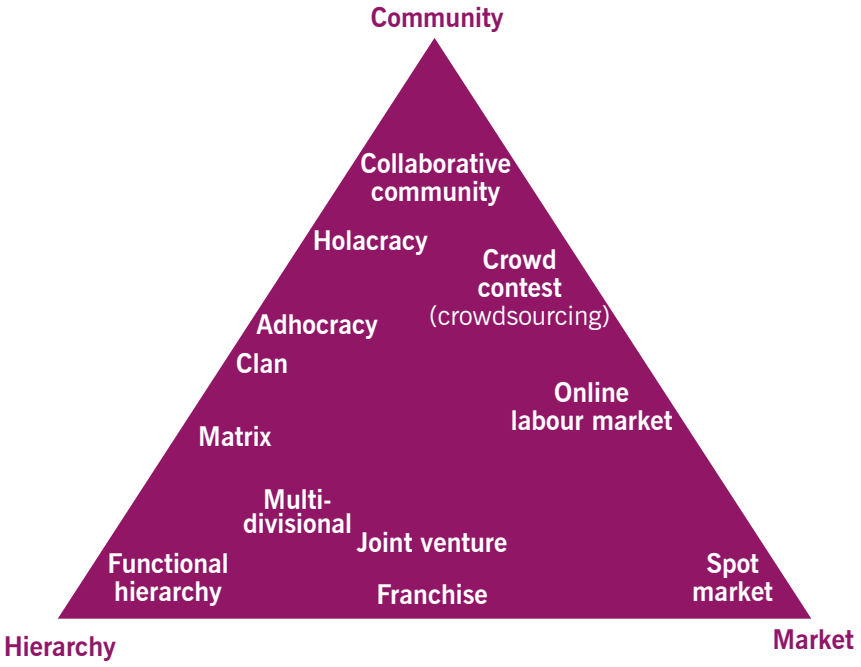


Figure 12.2 Examples of hybrid organizational structures

12.2.3 The role of the service management office

Many organizations have established a service management office (SMO). In some organizations, the SMO combines the role of a centre of excellence with that of a management body. In these cases, it provides a means to develop, oversee, and support the parties involved in service management and most of the components of the SVS. It can define and maintain the policies, principles, guidelines, and controls for service management, and mentor and enable those people applying them in the organization.

An SMO can monitor the performance and conformance of management activities against the direction provided by governing bodies, and can examine the activities in aggregate to ensure that they are fit for purpose and use. Often, SMOs of this type are formalized and have significant authority to drive service management in the organization.

In other organizations, SMOs are less-formal teams focused on continual development of the organization's management practices. Team members act as practice leads and coaches, ensuring that management practices are effectively and consistently applied and integrated in the context of the value streams. They also monitor the development of established and emerging practices in the industry, ensuring that the organization adopts relevant innovations, and that its practices are relevant and up to date.

The evolution and future state of the SMO in this expanded role should support the following key objectives:

- **Leadership for digital strategy and digital transformation** This function provides formally recognized, strategic organizational structure and drives positive culture change. It should promote the organization's strategic vision, mission, and goals.
- **Strategic alignment and accountability** This function can also work to ensure alignment and accountability across teams, communicating and providing feedback loops for key strategy and transformation efforts. The function can mentor and coach team leaders on developing their vision and aligning it with measurements, OKRs, CSFs, and KPIs. In this way, the SMO will provide visibility upstream and downstream within the

organization, and help with communicating and clarifying the strategic portfolio and the associated investment decisions.

- **Provide structure/standards/governance for the communities of practice** This function can provide leadership to the communities of practice in an organization, and work to establish them and empower them to be successful. The SMO can encourage effective sharing, transparency, automation, collaboration, and communication within and across teams, as well as among communities of practice.
- **Align best practices, frameworks, and guiding principles** Culture can differ within teams and between parts of the organization. Teams with a decentralized, self-organizing approach will gravitate towards what works best for them without necessarily focusing on the overall strategy. The SMO can identify the commonalities across cross-functional teams, and promote a common, unifying approach and culture while allowing differences where they are needed.
- **Lead and facilitate value stream mapping** The SMO is ideally placed to mentor and coach teams on utilizing value chain activities to create high-level value stream maps (for more information, see *ITIL®4: Create, Deliver and Support*).
- **Ensure a strong focus and understanding of continual improvement** This should be part of everyday work activities.

To achieve these objectives, an SMO should ensure that the following critical success factors related to digital strategy and transformation efforts are understood and aligned across the organization:

- vision, leadership support, and outside-in perspective
- increased focus on customer experience, value co-creation, and outcomes
- systems and design thinking, integration horizontally across value streams, and breaking down silos
- strong emphasis on continual improvement as a feedback loop into strategic direction
- support for agile practices in the organization (ITIL, Agile, DevOps, Lean, etc.), rather than bureaucratic imposition of policy and procedure.

The ITIL story: The role of the SMO

Dave: *At Axle Car Hire, the SMO acts as a 'centre of excellence' to the rest of the organization. It sets out enterprise-wide constraints and policies, and ensures that everyone adheres to them through the use of common tools and platforms. It also advises individual teams on how best to organize themselves, and to use specific tools and capabilities while remaining compliant with relevant policies.*

The SMO provides a centralized reporting, coordination, and service risk mitigation function to the services we manage internally or on behalf of our consumers. The SMO tailors its approach according to which service team it is working with, whether it is our established e-bike rental service, or our soon-to-be-launched food delivery service.

12.3 Transitioning from traditional to new organizational structures

> *When a flower doesn't bloom, you fix the environment in which it grows – not the flower.* Alexander den Heijer

Achieving transformation without changing the organization's structure is impossible. In a digital organization, those changes will involve moving away from a hierarchical, top-down structure with rigid procedures and methods. The organization will need to become more flexible, with authority vested in the resources performing the work.

To be effective, an organization must realize that:

- an organization is an open system, and relationships with other systems cannot be ignored
- its strategies continually evolve, and so should the strategy for human resources
- digital technologies change the way organizations work and the skills they need
- decisions should be driven by guiding principles, values, and beliefs, not rules
- the organization should recognize and embrace complexity, and complexity-driven problem-solving and self-discovery
- organizational agility, adaptability, and efficiency should be enabled by the organizational structure and management practices
- workforce and talent management is everyone's responsibility, including teams and leaders.

The transformation cannot be limited to rearranging the teams into a new formal structure. Cultural changes and relevant guiding principles are the most important aspects. An organizational structure enables (or discourages) new ways of leading, working, and communicating, but it cannot achieve the transformation. A more effective approach is to reorganize as part of a wider transformation. Organizational changes are better accepted by teams when they see how the changes contribute to value creation.

When considering a change as part of a wider transformation, leaders cannot ignore the other three dimensions of service management:

- New ways of working most likely include reviewed and redesigned value streams (typically from more fragmented workflows to more holistic, end-to-end streams).
- A new organizational structure and more holistic value streams usually benefit from digital means of communication and more advanced ways of automation (as described in section 5.2.2.2).
- Digital organizations are largely integrated into a service relationship network, with third-party resources and services involved in the organization's value streams, and its resources and services actively participating in cross-organizational value streams that are developing in the ecosystem.

Finally, organizational transformation is unlikely to be a finite project or programme. Rather, it becomes a way of life, an ongoing activity of adjustment and evolution that supports the organization's ongoing development, strategy, and architecture. The idea of transitioning from 'a current state' to 'a target state' is being replaced by the idea of ongoing sustainable transformation.

This evolution is supported by ITIL's practices. Relevant guidance is provided in the ITIL practice guides, the most relevant being those on organizational change management, workforce and talent management, and relationship management. Other relevant practices include architecture management, project management, change enablement, and supplier management. Further information can also be found in *ITIL®4: Create, Deliver and Support* and *ITIL®4: Direct, Plan and Improve.*

CHAPTER 13

CONCLUSION

13 Conclusion

This publication has explored the key elements of an organization's digital and IT strategy in today's volatile, uncertain, complex, and ambiguous world. It has examined the continual nature of strategic planning and the need to validate and adjust an organization's strategic direction accordingly.

Because of the continual need to plan, validate and adjust, the ITIL continual improvement model has been used as a vehicle for the organization's strategic journey, from understanding the vision, to reviewing the strategy and adjusting the direction. Digital transformation has also been examined as a vital component of the digital and IT strategy.

The guide has covered a number of important concepts and useful tools, such as business and operating models, positioning tools, and value-driven strategic approaches. It has also explored four universal strategic capabilities which can be applied at every step of the strategic journey: digital leadership, management of innovation, strategic risk management, and structuring for digital business. In addition, it has reviewed and adopted some of the key concepts originally introduced in the other ITIL 4 publications (see below).

To get the most out of *ITIL®4: Digital and IT Strategy*, it should be studied alongside the ITIL practice guides, which are available online and provide detailed practical recommendations for all 34 practices. They include hands-on guidance that can be applied in the context of all ITIL 4 publications. Of particular relevance to this publication are the guides on architecture management, measurement and reporting, portfolio management, risk management, strategy management, and workforce and talent management.

All ITIL publications are holistic and focused on value. They address the four dimensions of service management and help to manage resources in a way that enables value creation for the organization, its customers, and other stakeholders.

ITIL®4: Create, Deliver and Support provides guidance on the cultural and team management aspects of product and service management, and an overview of the various tools and technologies that support service management. It demonstrates how to integrate management practices into end-to-end value streams.

ITIL®4: Direct, Plan and Improve provides guidance on aligning product and service management with today's business requirements, driving successful organizational transformation, and embedding continual improvement into an organization's culture at every level.

ITIL®4: Drive Stakeholder Value contains guidance on establishing, maintaining, and developing effective service relationships. It leads organizations on a service journey in their roles as service provider and service consumer, helping them to interact and communicate effectively at every step.

ITIL®4: High-velocity IT provides detailed guidance on comprehensive digital transformation and helps organizations to evolve towards a convergence of business and technology, or to establish a new digital organization.

END NOTE: THE ITIL STORY

End note: The ITIL story

Axle Car Hire successfully launched a pilot programme of the food delivery service in the Bay Area. A new app was developed and used for this launch, which was a partial success, enthusiastically adopted by residents of major cities and towns. First-year targets for new customer signups and completed deliveries were achieved within eight months and six months respectively, showing good levels of repeat business.

Despite its overall success, the service did not get much traction in suburban or rural areas. This was attributed to the lower number of restaurants to choose from, and the greater distance between restaurants and diners. As a result, Axle Car Hire's executive leadership team modified the business case for the food delivery business to focus the team on developing a better service to urban diners, from developing new features to rebranding the service. The team also initiated the next phase of the strategy: to launch the service in ten major cities across the USA.

The board of governors also asked Anya to investigate the viability of running the service in the UK, Brazil, and India. Anya asked Luna to lead these efforts, as recognition of her success with the pilot service. Following the direction of Axle's digital strategy, the team is ready to expand the food delivery service and face new challenges.

FURTHER RESEARCH

Further research

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GLOSSARY

Glossary

absorptive capacity

An organization's ability to recognize the value of new information, embed it into an existing knowledge system, and apply it to achieve the intended business outcomes.

business case

A justification for the expenditure of organizational resources, providing information about costs, benefits, options, risks, and issues.

business model

A formal description of how an organization should be configured to create value for customers based on its strategy.

business strategy

How an organization defines and achieves its purpose.

communication technology

Technology that enables information technology (IT) and operational technology (OT) to be highly mobile and accessible to organizations, consumers, and other stakeholders. Sometimes seen as a component of either IT or OT.

compliance

Both the act and result of ensuring that a standard or set of guidelines is followed, or that proper, consistent accounting or other practices are being employed.

critical success factor (CSF)

A necessary precondition for the achievement of intended results.

customer journey

The complete end-to-end experience that service customers have with one or more service providers and/or their products through touchpoints and service interactions.

cybersecurity risks

Risks of exposure or loss for an organization resulting from a cyber-attack or a data breach.

demand

Input to the service value system based on opportunities and needs from internal and external stakeholders.

digital business

Activities that use digital technology, enabling an organization to fulfil its purpose.

digital disruption

A fundamental shift in an organization's operation caused by the development of digital technology.

digital organization

An organization that is enabled by digital technology to do business significantly differently, or to do significantly different business.

digital strategy

A business strategy that is based all or in part on using digital technology to achieve its goals and purpose.

digital technology

Technology that digitizes something or processes digital data. Digital technology refers to information technology (IT) and the parts of operational technology (OT) that have been digitized. *See also* digitization.

digital transformation

The use of digital technology to enable a significant improvement in the realization of an organization's objectives that could not feasibly have been achieved by non-digital means.

digitization

The process of transforming something (e.g. text, sound, or images) from analogue to digital form by expressing the information in binary digits.

discontinuous innovation

An innovation that completely replaces what came before.

disruption risks

Risks that can disrupt the organization's operating or business model.

ecosystem disruption

Disruption that occurs when digital technology introduces a change that impacts organizations across multiple industries and markets.

employee fulfilment

The feeling that people have when their work aligns with their intrinsic motivation and provides them with a sense of purpose.

engagement risks

Risks that originate from an organization's stakeholders, including its suppliers and partners, consumers, and employees.

governance

The means by which an organization is directed and controlled.

indicator

A metric that is used to assess and manage something.

industry disruption

Disruption that occurs when digital technology introduces a change that impacts a specific industry (e.g. manufacturing, finance, retail, or mining) or a group of related industries (e.g. e-books and self-publishing, which have disrupted printing, publishing, and retail).

information technology

The application of digital technology to store, retrieve, transmit, and manipulate data (data processing), often in the context of a business or other kind of organization.

innovation

The adoption of a novel technology or way of working that has led to the significant improvement of an organization, product, or service.

innovation risks

Risks introduced by the organization's innovations.

Internet of Things

The interconnection of devices via the internet that were not traditionally thought of as IT assets, but now include embedded computing, capability, and network connectivity.

ITIL continual improvement model

A model which provides organizations with a structured approach to implementing improvements.

ITIL guiding principles

Recommendations that can guide an organization in all circumstances, regardless of changes in its goals, strategies, type of work, or management structure.

ITIL service value chain

An operating model for service providers that covers all the key activities required to effectively manage products and services.

Kanban

A method for visualizing work, identifying potential blockages and resource conflicts, and managing work in progress.

key performance indicator

An important metric that is used to evaluate the success in meeting an objective.

market disruption

Disruption that occurs when digital technology introduces a change that impacts a particular market or market segment.

metric

A measurement or calculation that is monitored or reported for management and improvement.

objectives and key results (OKR)

A framework for defining and tracking objectives and their outcomes.

operating model

A conceptual and/or visual representation of how an organization co-creates value with its customers and other stakeholders, as well as how the organization runs itself.

operational technology

The application of digital technology for detecting or causing changes in physical devices through monitoring and/or control.

opportunity

A situation that allows an organization to expand its existing operation, either by introducing new products and services or by moving into a new market.

organizational agility

The ability of an organization to move and adapt quickly, flexibly, and decisively in response to events in the internal or external environments.

organizational resilience

The ability of an organization to anticipate, prepare for, respond to, and overcome adverse events in the internal or external environments.

parallel operating model

An approach to executing digital strategy while maintaining a steady state.

performance

A measure of what is achieved or delivered by a system, person, team, practice, or service.

portfolio

A collection of assets into which an organization chooses to invest its resources in order to receive the best return.

product

A configuration of an organization's resources, designed to offer value for a consumer.

resource

A person or other entity that is required for the execution of an activity or the achievement of an objective. Resources may be owned or employed by an organization, or contracted from a third party.

risk

A possible event that could cause harm or loss or make it more difficult to achieve objectives. Can also be defined as uncertainty of outcome and can be used in the context of measuring the probability of positive outcomes as well as negative outcomes.

service

A means of enabling value co-creation by facilitating outcomes that customers want to achieve, without the customer having to manage specific costs and risks.

service management office (SMO)

A group or department that functions as a centre of excellence for service management, ensuring continual development and the consistent application of management practices across an organization.

service offering

A documented agreement between a service provider and a customer that identifies both the services required and the expected level of service.

service value system (SVS)

A model representing how all the components and activities of an organization work together to facilitate value creation.

sustainability

A business approach focused on creating long-term value for society and other stakeholders by addressing the risks and opportunities associated with economic, environmental, and social developments.

value

The perceived benefits, usefulness, and importance of something.

vision

A defined aspiration of what an organization would like to become in the future

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Lead editors

David Cannon

David has been a service management practitioner and consultant for more than three decades. During that time he has seen the industry go through at least four technology-enabled shifts. David focused on understanding the core management disciplines that enabled organizations to successfully navigate each shift. He has contributed to ITIL by reviewing books in v2, co-authoring *Service Operation* (2007) and authoring *Service Strategy* (2011). He has led consulting practices at Hewlett-Packard, BMC Software and Forrester Research, supporting the definition and implementation of strategy at all levels in more than 250 organizations. David is a co-founder of *it*SMF International, and recipient of the *it*SMF Lifetime Achievement award.

Erika Flora

Erika has a passion for improving how organizations manage their work flow, helping them to deliver great products and services, and better serve their customers. In 2006, she founded Beyond20, a digital transformation consulting and training firm that uses ITIL, DevOps, Agile, Lean, and other best-practice frameworks. Working with leaders in global organizations as a digital strategy facilitator and coach, she has led several successful technology implementation initiatives over the years, and has helped organizations find more success with their digital transformation efforts. She is an avid blogger, speaker, and advocate of expanding opportunities for women and minorities in technology.

Authoring team

Mark Bradley

Mark has nearly three decades of experience in designing and implementing ITSM solutions, focusing primarily on processes, tools, and technologies within service management. He holds an innovative track record in product strategy, execution, and new product development, and is currently senior product manager at Motorola Solutions. Mark has implemented ITIL guidance throughout his career and has gained extensive knowledge in multinational organizations as they work towards ITSM digital transformation. Mark is a contributing author of *Implementing Service and Support Management Processes: A Practical Guide* (2005) and a frequent industry speaker. He tweets as @SyscoKid87.

David Crouch

David serves as senior adviser and trainer for Beyond20 where he teaches and helps clients address their business and IT challenges. He created the digital positioning model, the world's first model that explicitly ties digital business with ITIL practices, and the world's first dictionary of digital business (www.beyond20.com/dictionary-of-digital-business/). Prior to Beyond20, David spent 20 years working at Johns Hopkins University

in the central information technology department where he served both university and health system customers in a variety of roles, including IT finance, business analysis, project management, and service management.

Pavel Demin

Pavel is an IT management consultant, lecturer, and co-author of several publications on IT service management. During his 10 years in IT management, Pavel has worked as a quality manager, trainer, auditor, and consultant. He currently specializes in IT management system assessments and IT financial management.

Brian Flora

As a pioneer in internet-based commerce, Brian began his career in IT by founding Cyclepath.com in 1995 while still a student. As one of the first ecommerce retail businesses, Cyclepath sold bicycles online and shipped them to a global customer base. Brian later went on to work for other internet start-ups, including GoDaddy.com. As system architect and eventual IT director, he managed the delivery of 24×7 high-availability mission-critical IT services during GoDaddy's phenomenal four-year growth period. In 2006, he co-founded Beyond20 and has since helped plan and execute digital transformation programmes for numerous organizations across many industries and sectors.

Chris Gallacher

Chris is an IT and service management professional with more than 20 years' experience, having worked both as a practitioner and consultant covering both the public and private sectors. Currently he works as a principal consultant at Forrester Research where he advises clients on ITSM best practices, with a particular focus on enhancing customer and employee experience. He is a certified ITIL and Lean expert and regularly presents at industry conferences.

Dmitry Isaychenko

Dmitry is a managing partner at Cleverics, which focuses on professional services in an IT management domain in Russia and in the Commonwealth of Independent States. He has more than 15 years' experience working as a consultant. Dmitry is co-author (with Pavel Demin) of the book *Metrics-based Service Management* (2020), as well as several ITIL 4 publications. He has also created several software products which help organizations to manage their IT departments.

Roman Jouravlev

Roman works at AXELOS as a portfolio development manager, responsible for the continual development of ITIL. He joined AXELOS in 2016 after working for more than 15 years in ITSM, mostly in Russia, as a trainer, consultant, quality manager, and (many years ago) service desk manager. Roman has authored and translated several books and many articles on IT service management.

Richard de Kock

Richard is an award-winning business and IT strategy and management consultant who has worked across the world with organizations of all sizes and industry verticals. Richard has an MSc degree in service management and multiple certifications in governance, Lean, Agile, and organizational change management. He is an industry author and has contributed to several bodies of knowledge in the IT management domain, as well as formal research on digital transformation. Richard currently works for Microsoft®, specializing in the modernization of

organizational strategies, operating models, and cloud capabilities using innovative technology to ensure a sustained competitive advantage.

The ITIL storyline

Akshay Anand

Akshay is a product ambassador at AXELOS, working on the development of new guidance and research within the ITSM portfolio. With experience from the US, UK, and India, he previously advised Fortune 100 clients on their ITSM capabilities, implemented toolsets such as Remedy and ServiceNow, and headed up global ITSM activities at Macmillan Publishing. More recently, Akshay has focused on bringing together Agile development teams and ITSM professionals to address the challenges posed by emerging technologies. He tweets as @bloreboy.

Katrina Macdermid

Katrina is an ITIL 4 global ambassador, author, and creator of an innovative integrated framework, human-centred ITIL service design. She is an ITIL Master, with a solid background in designing and implementing IT operating models that put customer experience at the heart of all ITIL processes. Katrina has been responsible for the successful implementation of key strategic programmes and integrated service management in some of Australia's largest and most iconic organizations. She is a well-known conference speaker on human-centred ITIL service design.

AXELOS ITIL 4 architect team

Akshay Anand	Product ambassador ITSM
Philip Hearsum	ITIL portfolio manager
Roman Jouravlev	ITIL portfolio development manager
Margo Leach	Chief product officer
José Carmona Orbezo	Head of marketing and product management

ITIL 4 lead editors

Dinara Adyrbayeva	ITIL 4 practice library
Lou Hunnebeck	*ITIL®4: Direct, Plan and Improve*
Christian F. Nissen	*ITIL®4: Drive Stakeholder Value*
Barclay Rae	*ITIL®4: Create, Deliver and Support*
Stuart Rance	ITIL 4 examinations
Mark Smalley	*ITIL®4: High-velocity IT*

Project team

David Atkins	Content delivery and production manager
Rachida Chekaf	Head of translations
Sarah Conner	Senior production editor
Adrian Crago-Graham	Head of PMO
Ricky Elizabeth	Brand and design manager
Joanna Fejklowicz	Project manager
Emily Holbrook	Commissioning editor: ITIL supplementary content
Amy Metcalfe	Project editor
Solmaz Purser	Project editor
James Robertson	Senior qualifications and assessment specialist
Craig Smith	Managing editor
Charlotte Speller	Product management lead, IT & Digital
Zara Swale	Qualifications and assessment specialist
Tom Young	Commissioning editor: ITIL core content

Contributors

Craig Bennion, Darya Ber, Joseph Caudle, Mauricio Corona, Marie DiRuzza, Dmitry Ermakov, Douglas Fidler, Ann Gerwitz, Signe-Marie Hernes Bjerke, Jessica Hinkal, Robin Hysick, Kakeru Iikubo, Gretta Jensen, Jeff Jensen, Antonina Klentsova, Viktor Martovitski, James Monek, Mitch Pautz, Hillary Rosenfeld, Greg Sanker, Avinash Singh, Chris Whitehead.

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The pace of evolution in the digital world has never been so fast. Organizations must be flexible and adapt to an ever-changing environment if they want to keep providing value to their customers and remain competitive in the marketplace.

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ITIL® 4: Digital and IT Strategy supports IT and digital leaders in influencing and driving strategic business decisions by helping them to:

- create an appropriate digital strategy aligned with the wider business goals
- understand how business and IT leaders across the globe are responding to digital disruption by reshaping corporate strategy, adapting processes, and even repurposing entire business models
- explore the use of the ITIL 4 framework to support organizations on their digital transformation journey, addressing service management challenges and utilizing new technology.

The book also explores how ITIL 4 can be integrated with emerging practices and new technologies to meet new internal and external challenges.

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