Course Book

DIGITAL BUSINESS MODELS

DLMIDBM01_E

iu
INTERNATIONAL
UNIVERSITY OF
APPLIED SCIENCES

LEARNING OBJECTIVES

The **Digital Business Models** course book will provide readers with extensive knowledge of digitalization and its influence on innovation management and business models. It will also explain the origin of the business model and its different taxonomies.

The reader will learn about the difference between traditional and digital business model architectures and standard patterns in the elements of digital business models. A variety of conceptual tools will be introduced to assist in the designing of business models, and the most common elements of the digital business model will be discussed. Furthermore, the reader will gain an understanding of the difference between business model and strategy and the success factors for both.

The reader will learn the purpose of a business case and its most common elements, as well as understand the connection between business model and case. Additionally, the reader will learn about different revenue mechanics, the selection of a revenue model for the digital business model, and revenue strategies an organization can follow to ensure success and survival in the digital marketplace. Lastly, the course book provides a brief understanding of an organization's plan to win investors.

UNIT 1

INNOVATION MANAGEMENT AND BUSINESS MODEL DEFINITIONS

STUDY GOALS

On completion of this unit, you will be able to …

- understand the influence of digitalization on innovation management and business models.
- describe the origin of business models and how conceptualizations of business models have changed over time.
- explain a business model and the differences between business models, business model innovation, and digital business models.
- interpret taxonomies of digital business models and compare them to traditional business models.

1. INNOVATION MANAGEMENT AND BUSINESS MODEL DEFINITIONS

Case Study

Pets.com emerged during the dot-com bubble as an internet-based company. Similar to Amazon today, Pets.com focused on delivering products to customers and made ordering pet supplies convenient (Beattie, 2020). As an online pet supply store, the company offered access to a wide range of products and competed with brands like Petsmart.com (Beattie, 2020; "Pets.com lacks bite," 2002). Pets.com gained considerable attention during a short period because of their heavy emphasis on advertising, which included catchy slogans and their famous sock puppet mascot.

However, Pets.com's business model had a fundamental problem. Their model did not offer anything novel to customers and thus did not create value for them (Beattie, 2020). The company failed to convince consumers that it offered something that was inherently valuable or could uniquely satisfy their needs, and this led the company to sell products at prices below their costs ("Pets.com acks bite," 2002). Moreover, people found it more convenient to buy pet products from local pet stores and take them home immediately instead of ordering online and waiting for deliveries (Beattie, 2020). This was particularly the case because virtually all the supplies offered by Pets.com were available at local pet stores or other shops (Beattie, 2020).

With no or limited value creation for customers, the company struggled in terms of profit. Although Pets.com sold 35,000 sock puppet mascots during July 2000 alone, these sales did little to alleviate the company's dwindling profits, which were too low to sustain the massive marketing costs incurred by the company's aggressive campaigning (Olsen, 2002). A flawed and unsustainable business model, combined with struggling profits, caused the company to declare bankruptcy in November 2000 (Beattie, 2020).

Beginning at around the end of the twentieth century, full-service airline carriers (FSCs) like Lufthansa began to face significant competition from budget airlines like Ryanair, an Irish low-cost airline founded in 1984 (AltexSoft, 2020). Low-cost carriers (LCCs), which also include airlines such as EasyJet and Air Asia, have relied on innovative business models to disrupt the airline industry, and they offer flights that cost considerably less than those offered by FSCs (AltexSoft, 2020).

LCCs achieved the minimum cost target by reducing operating costs and making services like onboard meals and seat allocation optional and subject to costs additional to the price of a ticket. These companies use newer, more fuel-efficient planes to help reduce maintenance and fuel costs, and they purposefully cover shorter, more frequently used routes to boost their competitiveness (AltexSoft, 2020). Thus, innovative business models have helped LCCs disrupt the established airline industry and pushed incumbent firms to reinvent or adopt new business models in response.

To what would you attribute the failure of the internet-based company Pets.com, and why do you think that budget airlines have successfully challenged established companies? In the first case, Pets.com failed because not enough attention was given to understanding successful business models and how to create them. In the case of the budget airlines, we see that innovative business models can propel young companies to challenge the largest, most established firms. Hence, what exactly is a business model? This unit will define key terms relevant to business models, cover the history of business models, and discuss taxonomies of digital business models.

1.1 Basic Concepts of Innovation Management Regarding Digital Business Models

Innovation management and responding to digitalization have become important factors for companies wanting to stay competitive in the dynamic world. In recent years, companies have started to focus more on innovation management to actualize innovative ideas; enhance employees' innovativeness; introduce incremental and radical products to the market faster; and, most importantly, to embrace changes in business models, including the adoption of digital business models.

The importance of responding to these emerging changes is evident through many examples: For instance, it is estimated that The 3M Company earns more than 40 percent of their sales from new products (Shane, 2009). Dominant logistic companies, like DB Schenker, and industrial engineering companies, like ThyssenKrupp, have started to realize the potential of digitalization to offer innovative products and services, and they have thus transformed their business models according to these digital needs (Schallmo et al., 2019).

Innovation and Innovation Management

To understand how digitalization has affected innovation management and business models, it is important to understand what is meant by terms such as invention, innovation, and innovation management. Invention means the creation of something new (e.g., new products, processes, services, or business models), whether original or improved, while innovation concerns the commercialization of those inventions. Innovation can be either incremental (as an improvement to existing business models, products, processes, or services) or radical and disruptive (the introduction of new products, processes, services, or business models that completely change or replace existing business models and value propositions) (Glauner, 2018).

Digital cameras, Netflix, and **voice over internet protocol (VOIP)** are examples of radical and disruptive innovations. When the digital camera was introduced, it revolutionized the camera industry, resulting in the fall of traditional camera companies and the rise of new market leaders. Similarly, VOIP resulted in technologically advanced applications, such as

Voice over internet protocol (VOIP)
These protocols enable telephone or video communication over the internet. Skype is an example of a VOIP company.

Skype, that threatened the traditional business models of telecommunication companies like Germany's Deutsche Telekom. The disruption of VOIP to Deutsche Telekom's business model of providing access to traditional communication channels caused the company to embrace new technology in an effort to protect its customer base (Glauner, 2018).

Established telecommunications companies with traditional business models had made significant investments in older infrastructure and relied heavily on various types of hardware and software for their local and global networks. The introduction of VOIP caused these investments to become outdated as VOIP users only need internet access and make extra payments only for advanced features. These VOIP-based services shocked established telecom companies and forced them to reassess their business models.

Incremental innovation is exemplified in the introduction of new versions of smartphones. Many companies regularly introduce new versions of their smartphones that offer improvements to older versions, such as upgraded cameras, different screen sizes, and faster battery charging. These smartphones already exist in the market and follow linear improvement to add value for customers. Therefore, adding new features or improving existing characteristics does not lead to the creation of a new market, nor does it require existing players to transform their existing business models or value propositions. Glauner (2018) uses the metaphor of a game to explain this distinction: Incremental innovation requires the introduction of new or upgraded moves into a game (i.e., an existing system or infrastructure), whereas radical innovation requires changes to the rules of the game or even creates an entirely new game.

Innovation management can include the exploration of new ideas and business models, the exploitation of existing innovation and business models, or the successful creation of an organizational environment that encourages innovation. Glauner (2018) asserts that innovation management also seeks to improve team motivation and cohesion, diversity within teams, creativity, knowledge sharing, and mutual vision across the company. Through innovation management, organizations successfully introduce innovation into the market to gain sustainable competitive advantage. While other approaches, like total quality management or Six Sigma, focus on enhancing efficiency or cost-cutting measures into the process, innovation management gives organizations the opportunity to introduce new ideas that can transform a company or industry and ensure higher profitability in the market (Glauner, 2018).

Digitalization and Innovation Management

Global megatrends like digitalization have fundamentally shifted innovation options and are heavily influencing corporate innovation management efforts. Particularly, the advent of groundbreaking technologies such as the **Internet of Things (IoT)**, faster data connections, and **artificial intelligence** has forced companies to incorporate digital initiatives into their national and international business models (Kraus et al., 2018; Müller, 2019). Digitalization is distinct from digitization, which refers to the process of change from analog to digital form (Rachinger et al., 2019). In contrast, digitalization refers to the incorporation of digital technologies to change an organization's processes, systems, or business models to create new revenues or value-producing opportunities (Bouncken et al., 2019).

Internet of Things
The IoT enables interrelated computing devices that are embedded within technologies to connect and exchange data.

Artificial intelligence
This refers to a simulation of human intelligence by machines to think and act like humans.

Firms are increasingly engaged in incorporating digital technologies and digitalizing their business models. For example, artificial intelligence has made it possible to process large amounts of data in extremely short periods of time, while robots can increasingly solve complicated tasks without any human intervention (Hoerlsberger, 2019). These digital advancements have contributed significantly to the adoption of new business models in line with digitalization. Digital technologies consist of many categories, including digital platforms, big data and artificial intelligence, 3D printing, blockchain, and other processes linked to technology adoption, such as crowdfunding (Bouncken et al., 2019).

The digital revolution or transformation is the result of growing digitalization and is referred to as the fourth industrial revolution (Hoerlsberger, 2019). Müller (2019) documents that the German government introduced the concept of Industry 4.0 to ensure the future competitiveness of German industrial production and value creation process. Industry 4.0 is seen as the fourth historical iteration of a major revolution in industry.

In contrast to Industry 4.0, which largely focuses on the digitization of manufacturing and production, Industry 1.0 involved mechanization, a process that placed focus on industry instead of agriculture during the eighteenth and nineteenth centuries. Industry 2.0 involved the exploration of new energy sources such as fossil fuels, which led to the introduction of combustion engines and new manufacturing systems at the end of the nineteenth century. Industry 3.0 was characterized by the appearance of nuclear energy, the rise of electronics with transistors and microprocessors, the emergence of telecommunications, and the adoption of industrial automation in manufacturing (Hoerlsberger, 2019). However, the fourth industrial revolution is fundamentally different than others in that it requires the integration of digital technologies. This provides both opportunities and challenges.

Digitalization has opened up countless new prospects for development; however, it has simultaneously created major challenges for companies in terms of embracing the opportunities that are now possible. Since digitalization heavily influences the corporate manufacturing and value creation process, it is being discussed in several contexts, including innovation and technology management (Hoerlsberger, 2019), innovation management and business models (Bourreau et al., 2012), and the creation of innovative services and products (Kiel et al., 2017).

Innovation Management and Digital Business Models

Digitalization has opened new avenues for businesses, such as e-commerce websites for transactions (e.g., Amazon). These opportunities have both provided new openings for businesses and created new choices for the customers. Customers can easily find more alternatives, have more access to information, and can quickly move from one choice to another based on their selection criteria.

These emerging trends caused by digitalization require businesses to reevaluate their value propositions to address customer needs and capture value by providing new opportunities and services (Teece, 2010). To build a sustainable competitive advantage, companies must respond to these emerging trends through their innovation management and

by building good business models. Teece (2018, p. 40) explains that a business model "describes an architecture for how a firm creates and delivers value to customers and the mechanisms employed to capture a share of that value."

To profit from innovation management efforts, companies must excel not only in the launch of new products and services, but also in the introduction of improved and innovative business models, ones that address changing customer needs, business design options, and new technologies to yield higher profits (Teece, 2010). For example, the growth of the internet has revolutionized the music industry. In terms of opportunity, the internet has enabled music companies to rapidly share their recent music records with fans; however, it has also increased illegal digital downloading, which makes it difficult for music companies to capture real value from digital transactions. Individuals and businesses with easy access to the creative content of the music companies have raised questions to these companies about how to deliver and capture value from their innovations. Digital advancements, such as high-speed internet, have pushed many traditional companies to reassess their business models (Teece, 2010).

This digital disruption has not only devastated the innovation management and business models of the music industry, but many other industries have struggled to create suitable business models, including internet companies (Teece, 2010). Many companies during the dot-com bubble struggled because of their inability to execute viable business models. Eventually, their limited or nonexistent profits meant that they had to approach public markets for bailout packages. The failure of Pets.com during the dot-com bubble is a famous example of a company with an unsustainable business model, one that took the company on what is considered the quickest journey from an initial public offering to insolvency.

Pets.com appeared to have a flawed business model from the beginning, as they focused mostly on mass advertisement to attract customers to their platform rather than satisfying customers' needs and creating a mechanism to yield a profit (Beattie, 2020). Many other companies failed to survive the dot-com bubble because of their flawed business models; however, companies like Amazon and eBay survived this period by adapting their business models successfully.

Seeing the past failures of companies, emerging challenges, and shifting megatrends forces companies to design good business models. As Teece (2010) elaborated, a valuable business model encompasses **value propositions** that are meaningful to customers, minimize costs and risks, and permit business to capture value through the delivery of products and services, as this is critical to a company's success and gain in competitive advantages. Moreover, companies must consider the business model to be a task that requires continuous improvement. An enterprise may suffer if its business model is not properly evolved or adapted to the competitive environment.

Value propositions
This refers to the main benefits offered by products and services to meet customer needs.

Nowadays, successful companies pay great attention to digitalization. In particular, they take opportunities in digital technologies that offer sustainable competitive advantages. In contrast, firms that are reluctant to embrace digitalization jeopardize their growth and, potentially, their continued existence in the long term (Gimpel et al., 2018). Companies need to consider new business models for digitalization since their growth and perform-

ance depend on the configuration of activities for value creation and value capture (Bouncken et al., 2019). For example, companies may design digital business models to use digital technologies and provide solutions and services through digital platforms (Cennamo, 2019).

How should firms proceed to incorporate changes into their business models when they embrace digitalization or face challenges due to digitalization? Should a firm make changes to its business model gradually, following a well-defined pattern established for an old business model, or should it make abrupt changes (Bourreau et al., 2012)? To answer this question, Bourreau et al. (2012) used a deductive approach and analyzed data from the music industry, and the authors found that digitalization leads to sudden and dramatic changes to business models.

Bourreau et al. (2012) combined components of digital business models, how value is captured (through protection or transfer), and how value is created (meta-structural information) to propose five digital business models for the music industry. The five models elucidated by Bourreau et al. (2012) include the "hit and run business model," the "jingle bell business model," the "happy few business model," the "Netlabel business model," and the "consumerist business model." Incumbent firms transform their traditional logic to digital business models using these five approaches.

1.2 Business Models: Genesis—Definition —Relation to Innovation

Changing business dynamics, the advancement of technology, and the quest for sustainable business growth make clear the need to understand how businesses work and create value for distinct stakeholders (Zott et al., 2011). Particularly, the failure of companies such as Pets.com has further accentuated the need to comprehend business models.

The Origin of Business Models

The history of business models dates back to 1957, when Bellman et al. (1957) were the first to mention the term in an academic article. They use the term "business model" only once in the article, and not to define the essence of a business model (Bellman et al., 1957, p. 474); instead, the article discusses the formulation of simulation-based business games for training purposes. Afterward, the business model is passingly mentioned in two other academic articles (Jones, 1960; McGuire, 1965). Jones (1960) uses the term "business model" in the title of the article yet does not mention it in the text itself.

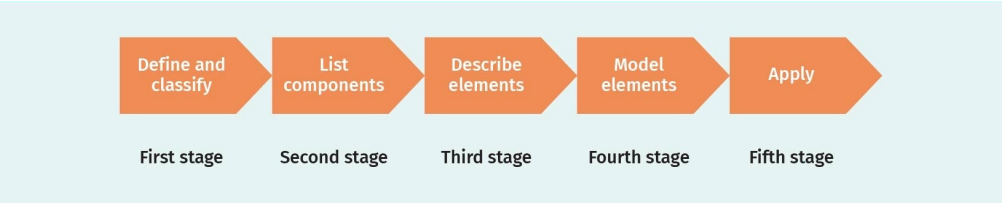
In subsequent years, the rise of business models is linked to technological developments and the emergence of electronic operations in business. It became a regular feature in business contests and gained its primary attention around the 1990s (Osterwalder et al., 2005). Initially, understanding business models was taken as an operative activity for the functional aspects of creating a suitable information system (Wirtz et al., 2016). Over time,

the conceptualization of business models shifted to providing integrative understandings of an organization and facilitating management in the decision-making process (Wirtz et al., 2016).

Scholars present the business model as a method of conceptualizing a company's structure (Al-Debei et al., 2008), one that can be broken down into different components. As the concept of business models further developed, different facets of business strategy were found to influence it. Business models are utilized to understand competitive structures and make strategic innovation decisions in businesses (Hamel, 2000). The influence of corporate strategy on business models increases awareness of their strategic components (Chesbrough & Rosenbloom, 2002).

Osterwalder et al. (2005) described five stages in the development of the business model concept. When the concept first gained importance, the first stage saw most researchers work to provide definitions and classifications of business models (Rappa, 2001). In the second stage, scholars started to discuss elements of the business model (Magretta, 2002). In the third stage, more attention was paid to describing elements of the business model in detail (Afuah & Tucci, 2002). In the fourth stage, researchers started to test proposed business models and elements more rigorously (Gordijn & Akkermans, 2003). Finally, in the ongoing fifth stage, business models are being applied to management decision-making processes. Over time, these stages could be extended to include research work published on digital business models taxonomies (Klos et al., 2021; Möller et al., 2019; Rachinger et al., 2019), digital business models components (Bock & Wiener, 2017; El Sawy & Pereira, 2013), and their application to business (Dellermann et al., 2017; Eickhoff et al., 2017; Remane et al., 2016, 2017).

Figure 1: Business Model Evolution



Source: Adeel Tariq (2022), based on Osterwalder et al. (2005).

The development and refinement of the business model concept lead to the term's overuse by business journalists, which resulted in an inadequate understanding of how a company creates and captures value. This gave critics of the business model more room to raise their concerns about the concept (Wirtz et al., 2016). In this regard, Porter (2001) describes how the definition of the business model lacks clarity and is often loosely conceptualized as how enterprises execute the business and create revenues.

Because of this, further refinements to the concept of the business model are necessary. Researchers have made efforts to describe it as an individual concept, separating it from other dominant business themes like strategy and innovation (Al-Debei et al., 2008). In particular, researchers have made an effort to differentiate between strategy and business models. Casadesus-Masanell and Ricart (2010) state that, while strategy and business

models are connected, they are distinct notions. A business model is the result of strategy, but it is not itself a strategy. While a strategy describes a company's vision, positioning, and long-term direction (Porter, 1980), a business model elaborates on the coherent execution of a strategy (Dahan et al., 2010).

An early example of business model innovation referenced by Teece (2010) involved Swift and Company, who revolutionized the meat packaging industry in 1870. Until this time, livestock in America was transported alive from stockyard centers (such as Kansas City) to East Coast markets, where animals were then butchered and sold by local slaughterhouses. Swift and Company sensed an opportunity. They realized that if the animals were slaughtered in the Midwest and then transported to other parts of the country, it would save transportation costs and improve the quality of the end product.

In fact, the implementation of this model did result in lowered shipping costs and made East Coast butchers unnecessary; however, as the new model required meat to be transported in refrigerated freight cars, the company faced the challenge of establishing refrigerated facilities to store the product near the point of sale. To address this issue, the company built a network of warehouses, often in collaboration with local intermediaries. Once customers started buying the refrigerated meat, which was as good as fresh meat and comparatively economical, the product attracted a huge market. Competitors like Phillip Armour saw the success of Swift and Company's model and imitated it accordingly (Teece, 2010).

As this example illuminates, the business models of companies transformed over time due to changing market dynamics and technologies. In recent years, this phenomenon has been particularly evident with the rise of the internet. Consequently, there has been a sharp rise in publications related to business models and the appearance of the terminology of business models in academic and executive journals.

Business Model Definitions

Organizations use the concepts of the business model to describe their companies in terms of what they do, what they offer, and how the offer is made (Ritter & Lettl, 2018). Recently, scholars have also described the business model as a source of innovation and competitiveness for organizations (Hossain, 2017). Understanding this requires an explicit elaboration concerning what the business model is.

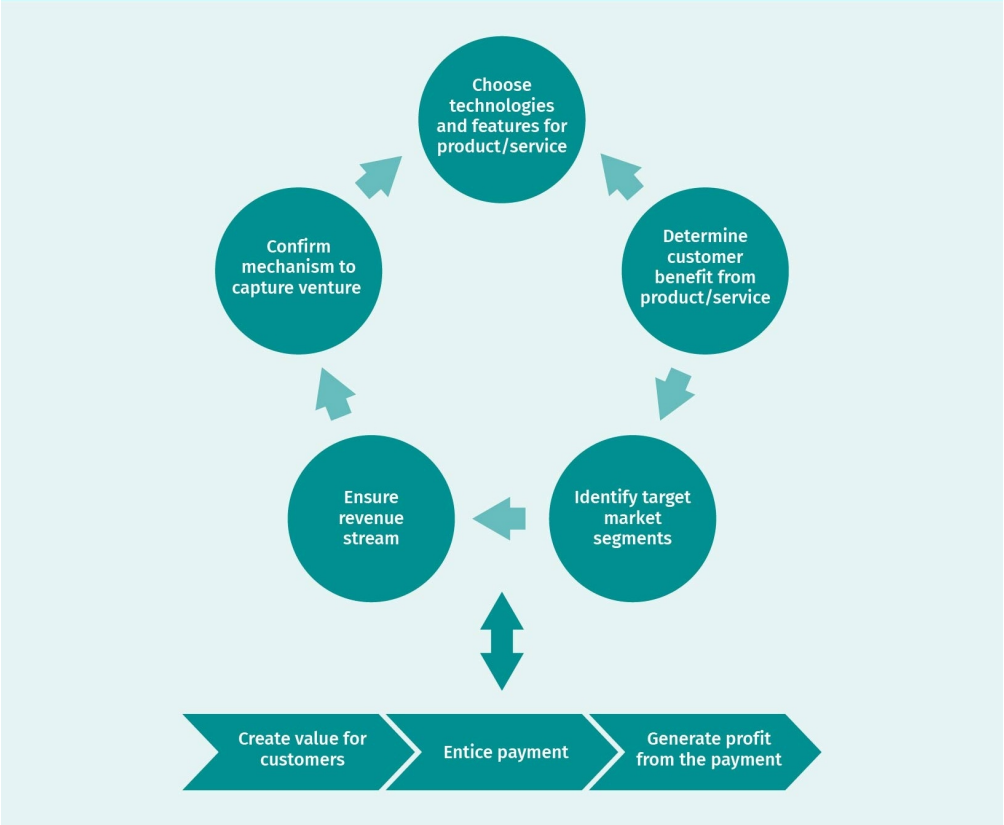
As the literature on business models continues to grow, scholars have increasingly disagreed about how exactly to define a business model (DaSilva & Trkman, 2014). Osterwalder et al. (2005) attributes the confusion concerning the concept of the business model among scholars to how various authors erroneously refer to business models when its underlying concepts are not actually referenced. They also argue that use of the term "business model" may refer to various and distinct meta-models such as (1) an abstract general model that can describe all real-world businesses, (2) a classification scheme that describes businesses with common characteristics (e.g., network industry), or (3) a real-world business model (e.g., BMW's business model).

Based on an analysis of 103 published articles, Zott et al. (2011) found that about 37 percent of the articles on business models do not define the concept at all. Moreover, only about 44 percent of these articles clearly describe underlying concepts and components of the business model, while 19 percent refer to the work of other scholars to define business models (Zott et al., 2011). Furthermore, they also stated that there is limited overlap in the definitions provided by different scholars, which makes developing a common conceptualization of the business model more difficult (Zott et al., 2011).

Different authors have offered various definitions of business models:

- Timmers (1998) depicts the concept as "an architecture of the product, service and information flow, including a description of the various business actors and their roles; a description of the potential benefits for the various business actors; [and] a description of the sources of revenues" (p. 2).
- Chesbrough and Rosenbloom (2002) suggest that the business model is "the heuristic logic that connects technical potential with the realization of economic value" (p. 529).
- Magretta (2002) provides a broader perspective of business models, arguing that the business model explains the way a business works. Specifically, the business model describes what value a business offers to its customers, how a business delivers value to the customers at a reasonable cost, and how a business creates profits from it.
- Casadesus-Masanell and Ricart (2010) state that "a business model is […] a reflection of the firm's realized strategy" (p. 195).
- The definition provided by Teece (2010) asserts that "a business model articulates the logic, the data, and other evidence that support a value proposition for the customer, and a viable structure of revenues and costs for the enterprise delivering that value" (p. 179).
- Rathmann et al. (2014) claim that a business model primarily depicts how a business creates value for various stakeholders and describes the value created for the company, including revenue.

Figure 2: Elements of the Business Model Design



Source: Adeel Tariq (2022), based on Teece (2010).

Recently, authors have largely relied on David Teece's definition of the business model. This definition aggregates the main elements of those made by various authors. These authors describe the business model as an architecture of value creation, delivery, and capture, or as the means by which a company provides unique value propositions to attract customers to its offerings, distributes those offerings to customers, and creates profit from customer purchases (Teece, 2010, 2018). Teece's (2010) conception of the key elements of a business model's design is depicted above.

1.3 Specifics of Digital Business Models and Comparison to Traditional Approaches

The emergence of Industry 4.0 has revolutionized the way companies operate. Specifically, it has led to the incorporation of digital technologies into the internal and external operations of businesses. This digital transformation requires companies to adopt, reinvent, and innovate business models according to a digital era wherein new digital business models are tied to competitive advantage (Johnson et al., 2008) and used as a structured management tool (Magretta, 2002).

IBM surveyed 765 managing directors who have participated in global business model innovation and discovered that financially successful companies paid more attention to business models than less financially successful companies (IBM Global Business Services, 2009). The increased focus on digitalization, combined with the emergence of the internet, has resulted in the creation of digital economies that have gained significant attention from scholars and policymakers (Acs & Mueller, 2008). In the digital economy, economic output is mainly or entirely obtained from digitalization, with a business model centered on digital products or services (Bukht & Heeks, 2017). The digital economy provides opportunities for companies to shift from **brick-and-mortar structures** to digital enterprises, a shift that can see the transformation of business models in various ways, including how revenues are generated (Veit et al., 2014).

Brick-and-mortar structures
In these traditional business models, an enterprise provides products or services to its customers, person to person, in owned or rented facilities.

A digital enterprise is defined as an enterprise that relies on the technology of its internal and external systems to gain competitive advantages. Digital enterprises rely on business models that are based on digital technologies and require the adoption of such technologies in all operations (Ansong & Boateng, 2019). Examples of such enterprises include Amazon and Uber, which utilize digital technologies for buying and selling and for ride-sharing services, respectively.

Digital business models have gained attention and importance over the past few years. Principally, business models help companies describe what they do, what they offer, and how their offers are made (Ritter & Lettl, 2018). These models also link business strategy to its operations (Osterwalder & Pigneur, 2002). Business model innovation should also be distinguished from business models in general.

Business model innovation has been described as a process by which business models that are new to a company or an entire industry are developed (Foss & Saebi, 2017; Schallmo & Brecht, 2010). However, some scholars refer to business model innovation as the innovation that results in the replacement or improvement of an existing business model (Rachinger et al., 2019). These innovative initiatives (e.g., creating a digital customer interaction interface) can result in changes to the value chain or to the value proposition offered to the customers or partners of a company (Wirtz, 2011). Business model innovation is a helpful method of describing how organizations replace, reinvent, or innovate their business models after embedding digital technologies into internal and/or external operations.

In digital business models, digital technologies require changes to three main business elements: value creation, value delivering, and value capturing (Teece, 2018). Moreover, digital business models are based on digital interfaces to share benefits among ecosystem partners, organizations, and individuals (Iansiti & Levien, 2004). Researchers have elaborated different means through which digitalization influences organizations and their business models: (1) organizations can optimize existing business models using digital technologies (e.g., cost optimization), (2) organizations can transform existing business models by reconfiguring or extending existing business models, and (3) organizations can develop entirely new business models (e.g., through the introduction of digital goods and services) (Loebbecke & Picot, 2015).

Weill and Woerner (2013) claim that a digital business model is different from traditional business models in the following ways:

- They have an internal ability to manage a customer's multiproduct experience, which is impossible or difficult with traditional business models.
- They contain business processes that require a dynamic approach to provide smooth and continuous services across channels.
- They provide customer data as a resource for the whole organization instead of restricting to one unit or area.

Based on these differences, Weill and Woerner (2013) identify three specific trends associated with the transition from traditional to digital business models:

1. Organizations are moving toward digitization to record customer experience, closely connect with collaborators to strengthen value chains, and effectively execute business processes.
2. There is an ever-growing digital generation, which causes customers and employees to increasingly demand a sophisticated digital experience in all their interaction with companies.
3. Digital tools, platforms, and applications have enabled customers to strongly voice their opinions, thereby have a stronger impact on companies via ratings, recommendations, or comments about their services.These trends are more evident where organizations are moving from a more physical space, in which the tangible, product-based model is more dominant, to a more digital space, in which intangible and service-based offers are key to customer orientation (Weill & Woerner, 2013).

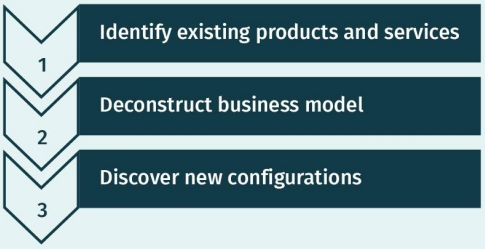
Consider famous newspapers like *The Wall Street Journal* and their physical world models: They produce their content (e.g., photos), develop them into a distinctive printed paper, and deliver that paper to customers using a sophisticated infrastructure. The close integration of these components was required to produce value for customers. However, in the new world of space, these components of contents, infrastructure, and packaging have transformed and split. In this digital world, *The Wall Street Journal* has transformed its old business model, which focused on taking content from various sources and delivering a final product to customers, to one that is oriented toward customer experience across various digital devices. As part of this change, the newspaper infrastructure has also shifted to internal and external digital platforms. Customizable contents are often emphasized by organizations to create different value propositions for different customers (Weill & Woerner, 2013).

Transformation from Traditional to Digital Business Models

To transform the existing business model of traditional companies into digital business models, Fichman et al. (2014) suggested that organizations follow four iterative processes: discovery, development, diffusion, and evaluation of impact. For the discovery phase of digital business models, Remane et al. (2017) recommended a three-step approach. First, a company should identify existing products and services, which requires defining products and services with the target market from a customer perspective and should include both non-digital and digital products and services (Remane et al., 2017). Second, the com-

pany should deconstruct the business model so that it is able to determine the difference between products and services and consider which additional components and characteristics of the business model are possible (Remane et al., 2017). Third, the company should discover new configurations of its business models to transform their existing business models and choose a model to construct (Remane et al., 2017). For example, in traditional business models, vehicle manufacturers restricted their operations to selling bikes, motorbikes, or cars; however, in digital business models, additional services have been included or introduced by new companies, such as bike-sharing, car sharing, and ride-sharing (Remane et al., 2017). The figure below illustrates the three-step approach to digitalizing the business models of an organization.

Figure 3: Discovering Digital Business Models



Source: Adeel Tariq (2022), based on Remane et al. (2017).

Small and medium-sized enterprises
These businesses have a quantity of employees or capital that falls below a certain limit.

Scholars have also reported their findings separately for the business model digitalization of incumbent firms (Klos et al., 2021), of **small- and medium-sized enterprises (SMEs)** (Müller et al., 2018), and of start-ups (Möller et al., 2019; Remane et al., 2016). Klos et al. (2021) argue that the successful digital transformation of an incumbent firm is more challenging than for start-ups because these firms may struggle to preserve core values during the transformation process. Based on interview and archival data from 15 cases, Klos et al. (2021) claim that a firm can perform a digital transformation by

- determining their digital strategy, which entails creating a clear responsibility for digital leadership.
- adapting their value proposition by creating digital services, enhancing digital communication, and expanding digital distribution channels.
- modifying their value creation process through technology integration, data utilization, establishing strategic partnership, and changing corporate culture.
- altering their value capture mechanism by adapting and extending revenue models, handling costs, and budgets.

Müller et al. (2018) assert that Industry 4.0 entails the digitalization of SMEs, and they claim that SMEs can enhance their value creation innovation by the digitization of processes for increased data availability and faster decision-making. SMEs can expect to broaden their value offers as they extend their product spectrum to provide higher quality, customer-tailored products and to include additional services. In terms of value capture

mechanisms, SMEs can benefit by creating automated online platforms for customers and suppliers, platforms on which customers can contact or place orders and suppliers can list their offerings.

Remane et al. (2016) used the business model categorization of Malone et al. (2006) to classify digital business models of technology-based start-ups in the US and claimed that business models have, overall, experienced a transformation, while the shares of intellectual landlords (e.g., software companies) have remarkably reduced, and the shares of contractors (e.g., limousine services) and physical brokers (e.g., car sharing) have notably improved. Researchers argue that the extent to which digitalization transforms traditional business models to digital business models depends on the industry (Teece, 2018). This process also takes time since business models are more context-specific than technology, and a company's resources and capabilities are also influential factors (Teece, 2018).

Types of Digital Business Models

Many researchers attribute the success of renowned firms like eBay, Amazon, and Dell to how they use emerging technologies to adopt new business models (Malone et al., 2006). This accentuates the need to comprehend digital business models meticulously as they impact overall business success. Business model research consists mainly of two distinguishable, yet interlinked, research streams. The first research stream discusses components of business models and digital business models (Müller, 2019; Osterwalder & Pigneur, 2010). The second stream discusses the types of digital business models and how they are distinct from traditional business models (Ansong & Boateng, 2019; Möller et al., 2019; Rachinger et al., 2019; Remane et al., 2016, 2017).

Malone et al. (2006) developed a taxonomy of business models (based on asset rights and types of assets) and proved its usefulness by linking it to the financial performance of over 10,000 US firms. The authors developed 16 business models based on four types of asset rights sold by creators, distributors, landlords, and brokers, and four types of assets: financial, physical, intangible, and human (Malone et al., 2006). The right to be sold defines what legal rights are given to the buyer after completing the transaction. The owner can completely sell the right to ownership of an asset, or the owner can confer the right to use an asset in a temporary manner (for example, renting a car), which sees the right of ownership revert back to the owner after the allotted time. In another case, the right to an asset is first secured to match the asset with the buyer. This can be seen in the case of a broker, who legally acquires it to first secure the right and then transfers it to the buyer.

A creator purchases raw material to manufacture products and sells them to buyers with the complete right of ownership, a model mostly followed in manufacturing firms. A distributor purchases a manufactured product and provides additional value-added services, such as transportation or repackaging, to sell it to someone else, such as a wholesaler or retailer. Malone et al. (2006) define a landlord as one who sells the right to use an asset for a specific time frame, including physical assets (e.g., cars, hotel rooms) or financial assets. Lastly, a broker is commonly used to describe a professional who matches buyers and sellers. A broker, unlike a distributor, does not acquire ownership of the assets, as seen in the cases of stock and real estate brokers. Malone et al. (2006) also discuss the physical, financial, intangible, and human assets to which firms sell rights. Physical items include long-

lasting items (e.g., houses) and non-durable items (e.g., food and clothes), whereas financial assets cover short-term assets like money or other assets that entitle the owner to future cash flows. Intangible assets comprise legally covered intellectual properties (such as patents and copyrights), knowledge, goodwill, and corporate reputation. Lastly, human assets include the time and efforts of personnel (Malone et al., 2006).

Remane et al. (2016) used Malone et al.'s (2006) classification scheme to observe the changes in digital business models of 524 technology start-ups from the mobility sector. They reported that 81 percent of these start-ups followed the landlord or broker business model in the digital economy. These firms thus give the right to use assets, and physical assets are the dominant category, followed by intangible assets (i.e., software).

Some scholars have proposed frameworks that are different from traditional business models. For example, El Sawy and Pereira (2013) developed VISOR, a framework for digital business models. The acronym stands for value proposition, organizing model, interface, service platform, and revenue model. In addition, Weill and Woerner (2013) proposed a business model based on three components: content (What is offered for consumption?), experience (How are offerings packaged for better customer experience?), and platform (How are offerings delivered to the customers?).

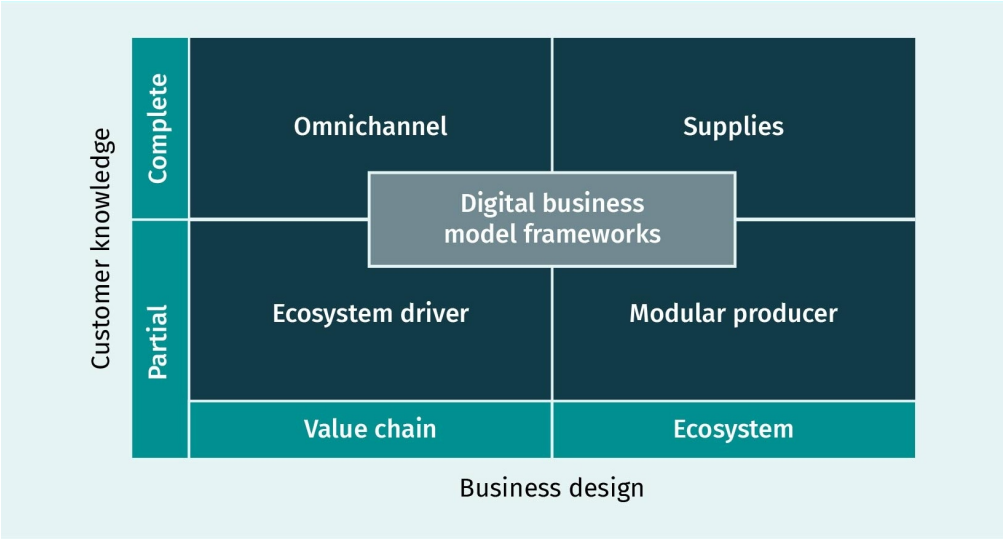
Osterwalder and Pigneur (2010) categorized five types of business models: unbundled, long-tail, multi-sided, freemium, and open. The unbundled business model describes that an organization consists of three distinct categories of businesses: client services, product innovation, and infrastructure businesses. All three types have different financial, competitive, and cultural priorities. These types may exist together in a single corporation, but they are unbundled into different bodies to avoid any conflict. In the case of a long-tail business model, a company believes in selling less or more by offering a large number of niche products that are each sold infrequently. Cumulative sales of such products and services can be attractive as a traditional model when most of a company's revenue is derived from a few best sellers.

In a multi-sided platform business model, multi-sided platforms connect two or more different but interlinked groups of customers or other participants. Such platforms are of more value to one group only if the other groups also participate. Embodied by companies like Facebook and Google, a multi-sided platform becomes more valuable as more users join the platform, a phenomenon referred to as "the network effect." In a freemium business model, customers get some basic features for free, yet must pay for advanced options, while non-paying customers are financed by other customer segments or by another part of the business model. Finally, in an open business model, an enterprise creates and captures value by cooperating with external parties. This may happen "outside-in" by exploiting outsider ideas or "inside-out" by sharing ideas with external parties. Examples of this model include Procter & Gamble's Connect & Develop model and GlaxoSmithKline's Patent Pools.

Weill and Woerner (2018) proposed four distinct digital business models. They argue that digitalization is pushing companies to transform their business models based on two dimensions. The authors claim that, firstly, companies are moving from a controlled value chain to more complex and network systems and that, secondly, their understanding of

and engagement with customers are improving. As shown in the figure below, the authors visualized the framework of a digital business model with a two-by-two construct in which each business model requires different capabilities.

Figure 4: Digital Business Model Frameworks



Source: Adeel Tariq (2022), based on Weill and Woerner (2018).

Supplier

In the supplier framework, companies produce goods that will be sold by other enterprises. These companies thus operate in the value chains of other major enterprises, and they have partial knowledge about their customers. Examples include companies that provide insurance via independent agents or mutual funds whose shares are sold via brokers.

Omnichannel

In this digital business model, companies provide their customers access to their products and services across multiple channels, including online and offline. This allows companies to provide their customers with better choices and a more complete experience, and they may control an integrated value chain for this purpose. In this context, some companies may move up the vertical axis by rethinking and remaking their relationship with the customer. For example, United Services Automobile Association (USAA) runs its business according to a philosophy that maintains the preeminence of member satisfaction for determining company success. Based on this philosophy, USAA transformed its offerings from products like insurance and car loans to engaging the life events of its customers. Through connecting to the USAA network on the phone or online, customers can register a life event, such as a marriage or car purchase, and USAA will offer an integrated package of products that address the needs associated with that event.

Modular producers

This term refers to a type of digital business model that fits in various ecosystems. With the goal of remaining competitive, companies that rely on this digital business model constantly innovate in order to offer the best products and services, while also ensuring that these offerings are among the highest quality and best-priced options available. For example, PayPal can operate in any virtual ecosystem and can adapt to any legal environment.

Ecosystem drivers

In the case of the ecosystem drivers framework, organizations create a digital ecosystem by developing a network of collaborators to create value for all the participants (Weill & Woerner, 2018). Companies with this business model earn significant profits, have higher revenue growth, maintain better customer experience, and more reliably innovate. Thus, enterprises aspire to become ecosystem drivers, as seen in the case of Amazon.

Bock and Wiener (2017) established a digital business model based on four main components that is referred to as V4, which stands for value proposition (digital offerings and digital experience), value network (digital platforms), value architecture (data analytics), and value finance (digital pricing). The authors also consider digital platforms to be a central dimension of digital business models (Bock & Wiener, 2017). Möller et al. (2019) follow Bock and Wiener's (2017) V4 classifications to understand the architecture of the business models used by logistics startups. Through an analysis of these companies, they identify the value proposition (key offerings, main customer value, customer segments, digital services, and tracking services), value architecture (logistics resources, service boundaries, key data sources, and platform types), value network (customer interfaces, mode of transport, geographic scope, and service boundaries), and value finances (pricing mechanism and revenue model). Through this study, Möller et al. (2019) developed the following architypes of logistics start-ups:

- a digital transport marketplace for regional trucking services
- digitally supported global and regional fulfillment and forwarding services
- optimization and visibility data services
- digitally supported warehouse service providers
- Software-as-a-Service (SaaS) providers for the management of logistics processes

Bourreau et al. (2012) proposed five digital business models based on digital business models, how value is captured (through protection or transfer), and how the value is created (meta-information structure). They followed Casadesus-Masanell and Ricart's (2010) definition of business models and posit that digital business models for the music industry have two main components: value capture strategy (which involves protecting and selling contents or complementary products or services) and a value creation strategy through the **meta-informational structure** (which includes *ex ante* selections and *ex post* promotions) (Bourreau et al., 2012). They used these two dimensions of digital business models (value creation and value capture) to propose five different digital business models for the music industry. In particular, they argue that in the music industry, the tradi-

Meta-informational structure
This recommendation system refers consumers to specific music content based on their preferences.

tional value capture mechanism may no longer be relevant as companies used to capture value through selling physical products (CDs, cassettes, etc.), yet new records are often limited to digital files easily reproducible at low costs (Bourreau et al., 2012).

To capture value in the digital environment, companies of the music industry can employ two strategies. The first strategy consists of digital right management protection, designed to protect and continue the sale of content. In this case, music companies can charge money through a **subscription-based model**, or they could charge per unit for the music and rely on copyright enforcement to prevent piracy. However, this strategy may lead to higher prices and low sales.

Subscription-based model
In this model, a company charges consumers a recurring fee at regular intervals for products and or services.

Alternatively, a music company could use a transferring value strategy, wherein value is captured through selling supplementary products or services. In this second strategy, company transfer value could take different forms. For instance, a music company can capture value through the sale of supplementary goods (T-shirts, lottery tickets, etc.), or through advertisement, which sees other firms or agents pay to benefit from a music company's audience (Bourreau et al., 2012).

Using meta-informational structure, companies can create value for digital consumers by providing them a limited set of music based on their preferences. Meta-information systems have two further dimensions: (1) *ex ante* selection, in which selection is done before production and works are selected to produce contents that have value to the customers, and (2) *ex post* promotion, in which the promotion of works is done after production, either through centralized modes (e.g., mass media like television) or decentralized modes (e.g., word-of-mouth or internet) (Peitz & Waelbroeck, 2005).

Digital business models in the music industry include the following:

- hit and run business model. In this model, value is extracted from the sale of physical goods (like CDs) or digital files. However, a massive campaign is run before publishing to ensure that sufficient revenues are generated immediately after the launch, which mitigates the effects of piracy (Bourreau et al., 2012).
- jingle bell business model. Promotion is centralized in this model, and the selection of artists is not made by professionals. The company does not fight against piracy; instead, they focus on the development of the market. Music is distributed almost free of charge, and money is generated through advertisements, such as advertising activities on TV programs. In this model, TV advertising revenue is much greater than the sale of digital music or CDs (Bourreau et al., 2012).
- happy few business models. In this model, companies extract the value of their work in more inventive ways. While they still earn income by selling protected products, they use various commercial strategies as well, including
  - bundling or streaming offers. This approach is often used for works that are not yet highly rated.
  - recommendations for individuals based on data analytics or community-based consumption.
  - temporal addressing. This approach involves offering works for no additional cost during a trial period (Bourreau et al., 2012).

- netlabel business model. The value of music is created and captured through promotion on decentralized media, such as social networks. New talent is discovered by the music production process, and music experts promote talent to provide the best balance between production and demand (Bourreau et al., 2012).
- consumerist business model. In this model, it is difficult to clearly distinguish between music professionals; occasional producers; amateurs; and sometimes even consumers, who can themselves become musicians. Moreover, this model continually evolves because of changing digital technologies. In this system, work is open to everyone to modify according to their taste. Therefore, anyone can become a contributor, and the concepts of production and consumption become mixed and lose their clear distinction (Bourreau et al., 2012).

This model can be compared to traveling. When traveling, consumers can make decisions about hotels and restaurants independent of agents. In this business model, digital music introduced by the company allows listeners to choose from different versions of a single song according to their mood. These versions can be distinguished based on instrumentation, style, or even language.

Bourreau et al. (2012) articulate how different companies may adopt different digital business models; however, the changes may be abrupt if a new business model is adopted suddenly. Though digitalization has challenged traditional business models, the way has been paved for businesses to generate new opportunities by embracing digital business models. This is exemplified in the cases of Uber, Apple, and Netflix, which are companies that have disrupted whole industries and earned incredible profits not only by offering new products and services, but by developing new digital business models (Dellermann et al., 2017). Similarly, Eickhoff et al. (2017) developed classifications of fintech business models based on digital technology components, value proposition, value delivering, channels, customers, revenue streams, and product and service offerings. Other researchers have also developed digital business model taxonomies for the mobility sector (Remane et al., 2017) and freight and logistics services (Meyer et al., 2018).

From the these examples, it is quite evident that digital business models are different from traditional ones, requiring companies to shift from traditional models of physical products and services to **digital products** and **services**, and to update their overall value structure (value creation, value delivery, and value capture). Remane et al. (2017) claimed that digital business models are distinct from the traditional business model in three ways. Firstly, digital products/services are reproducible at low cost and are more valuable to the user (e.g., smartphone apps) (Shapiro et al., 1998). Secondly, value in digital business models is established based on consumption (Vargo & Lusch, 2008). For example, smartphones are more valuable if they are used to access other services such as navigation and mobile payment. Thirdly, digital platforms are the essence of digital business models that share benefits among the multiple stakeholders involved (such as users and suppliers) (Iansiti & Levien, 2004). Other researchers argue that digitalization mainly influences value propositions, internal infrastructure management, and customer relationships (Kiel et al., 2017). In particular, this requires organizations to adopt changes to their products, services, and solutions according to digital needs since this can have a significant effect on customer relationships (Rachinger et al., 2019).

Digital products
These products are stored, distributed, and consumed in digital forms.

Digital services
These services are distributed to users in a digital format.

SUMMARY

Responding to digitalization and incorporating changes in innovation management have become important for companies to stay competitive in a dynamic world. Companies have started to focus more on innovation management to realize innovative ideas; enhance employee innovation; introduce incremental and radical products in the market faster; and, most importantly, embrace changes to their business models, which can include the adoption of digital models. Because of digitalization, companies must develop new business models as their growth and performance depend on the configuration of digital activities for value creation, value delivery, and value capture.

The history of the business model dates back to 1956, at which time the term first appeared in an academic article but was not well defined. During the 1990s, it became a regular feature of businesses; however, its initial understanding was limited to operative activities intended to create suitable information systema. Since that time, the conceptualization of business models has developed to provide an integrative understanding of an organization and facilitate management in the decision-making process.

The business model describes how organizations create and deliver value to their customers and how they capture value to generate profit. Business model innovation replaces or improves an organization's existing business model. Digital business models require the incorporation of digital technologies into three main elements: value creation, value delivery, and value capture.

Digitalization requires organizations to optimize or transform existing business models or to develop new ones. Scholars have offered taxonomies of digital business models based on industry.

UNIT 2

DIGITAL BUSINESS MODELS: DEFINITION AND ELEMENTS

STUDY GOALS

On completion of this unit, you will be able to …

- describe the elements of the business model and explain why the business model canvas is classified as a holistic business model.
- illustrate elements of the digital business model and their differences from traditional business models.
- explain the value architecture and value mechanics of the business model.

2. DIGITAL BUSINESS MODELS: DEFINITION AND ELEMENTS

Case Study

Google was founded in the early days of the internet, and its search engine quickly became famous (Bock & Wiener, 2017; Osterwalder & Pigneur, 2010). Google provides two main types of digital offerings: free online search services to internet users and targeted online advertising services to businesses (Osterwalder & Pigneur, 2010). The tracking of users' specific interests through their search history enables advertisements to be personalized to the specific user (Bock & Wiener, 2017). This is one of Google's prime strengths: data analytics capabilities that create improved search services for its internet users, while allowing the utilization of the collected user data to derive monetizable insights (Bock & Wiener, 2017). Google's multisided platform uses an auction-based pricing model to determine the cost of an advertisement. Cost can be determined, for example, based on the popularity of customer-defined keywords (Osterwalder & Pigneur, 2010).

From the case study above, what do you understand to be the key to Google's success? You may have noticed value proposition, customer experience, customer segmentation, data analytics, **multisided platforms (MSPs)**, digital pricing, and more. All of these are components of their digital business model.

Multisided latforms (MSPs)
Platforms that create value by connecting two or more customers or participants groups are called multisided platforms.

2.1 New Elements of Digital Business Models

With the advent of digital technologies, customers have access to a wide range of products and services anytime and anywhere, leading them to interact with companies more often. In a survey conducted to understand customers' inclination toward online channels, such as mobile apps, 72 percent of customers were found to be less likely to rely on traditional channels to interact with companies if they have access to digital applications (Weill & Woerner, 2013).

This attitude has pushed organizations to embrace digital business models and engage their customers over digital platforms. The challenge that organizations face is the need to shift away from traditional physical business models that are heavily dependent on places (for example, bookstores) and people (for example, marketing) in order to meet their customer's needs and expectations (Weill & Woerner, 2013). The changing dynamics triggered by digital technologies necessitate the development of a comprehensive understanding of the digital business model and its components.

Elements of Business Models

Researchers have produced several different conceptual tools to assist in the designing and describing of business models. Examples include the business model canvas (Osterwalder & Pigneur, 2010), the business model navigator (Gassmann et al., 2014), and other business model concepts developed by Al-Debei and Avison (2010), Mahadevan (2000), and Weill and Vitale (2001). A comparison of business model approaches and their number of components is provided in the table below.

Based on the emphasis of these various approaches, Morris et al. (2005) divided them into three categories: economic, operational, and strategic. The economic approach refers to how an enterprise creates profit and sustains its revenues. In this approach, key elements include income sources, pricing options, costing methodologies, profits, and projected volumes (El Sawy & Pereira, 2013).

The operational model describes how an enterprise's internal mechanisms and structures allow it to create value and remain competitive (Mayo & Brown, 1999). In this approach, firms create value with key elements, such as manufacturing; service delivering mechanisms; and the management of processes, resources, and knowledge (El Sawy & Pereira, 2013). Lastly, the strategic approach emphasizes the overall strategy of an enterprise's market position, integration across organizations, and growth opportunities. This approach encompasses the firm's strategy to create unique offerings; define customer segments; identify the tasks it will undertake or delegate to partners; organize its resources; and ultimately create profit (El Sawy & Pereira, 2013).

All these business models identify the same key elements: who the customer is and how value is delivered to them, the value proposition (the main benefits offered by the product or services), and the capture value (or revenue model). Moreover, researchers have agreed that the basic functions of the business model are value creation, delivery, and capturing with the general elements of value proposition, architecture, network, and finance (Bock & Wiener, 2017).

Table 1: Comparison of Business Model Approaches

Source	Number of components						
	3	4	5	6	7	8	9
Mahadevan (2000)	X						
Al-Debei & Avison (2010); Hamel (2000); Markides (1999)		X					
Timmers (1998); Viscio & Pasternack (1996)			X				
Chesbrough & Rosenbloom (2002)				X			
Hedman & Kalling (2003)					X		

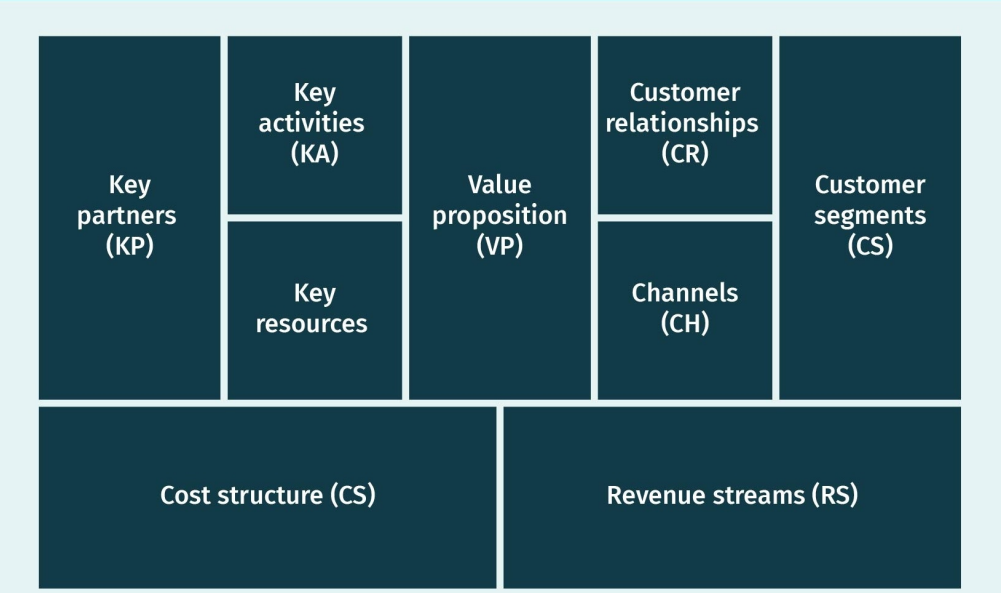
Source	Number of components						
	3	4	5	6	7	8	9
Weill & Vitale (2001)						X	
Osterwalder & Pigneur (2010)							X

Source: Adeel Tariq (2022), based on Morris et al. (2005); El Sawy and Pereira (2013).

As the table shows, researchers have proposed many different approaches to business models with as few as three components and as many as nine. However, most researchers have focused on the business model canvas developed by Osterwalder and Pigneur (2010) as an inclusive approach to generate a comprehensive view on the business models (Müller, 2019). The nine components according to Osterwalder and Pigneur (2010) are as follows:

1. Value proposition, the overview of products and services that meet the targeted customer's wants
2. Customer segment, the group of people a firm wants to serve
3. Channel, the medium with which a firm reaches and connects with its users for value proposition delivery
4. Customer relationships, the type of interaction a firm pursues with its customers
5. Key resources, the assets a firm needs in order for their business to function (physical, intellectual, human, or financial)
6. Key activities, the most significant activities that a firm must perform
7. Key partners, suppliers and essential associates whose participation is required in order to do business
8. Revenue streams, the cash generated from each customer segment minus expenses
9. Cost structure, the amount of money spent in order to make a business model work

Figure 5: Business Model Canvas



Source: Adeel Tariq (2022), based on Osterwalder and Pigneur (2010).

Under the business model canvas, Osterwalder and Pigneur (2010) specify different types of business models, such as

- unbundled business models, which stipulate three distinct business types: customer relationship, product innovation, and infrastructure, all with different economic, competitive, and cultural imperatives. They may exist singly, in a corporation, or unbundled from each other to avoid conflict.
- long-tail business models, where a company believes in selling “less of more” by offering many niche products, all sold in small quantities.
- multi-sided platform business models, where two or more different but interlinked groups of customers or other participants connect.
- freemium business models, in which the customer is given some basic features for free, while they must pay for advanced options.
- open business models, where an enterprise creates and captures value by cooperating with external parties. This may happen “outside-in” by exploiting outsider ideas or “inside-out” by sharing ideas with external parties lying idle in the companies.

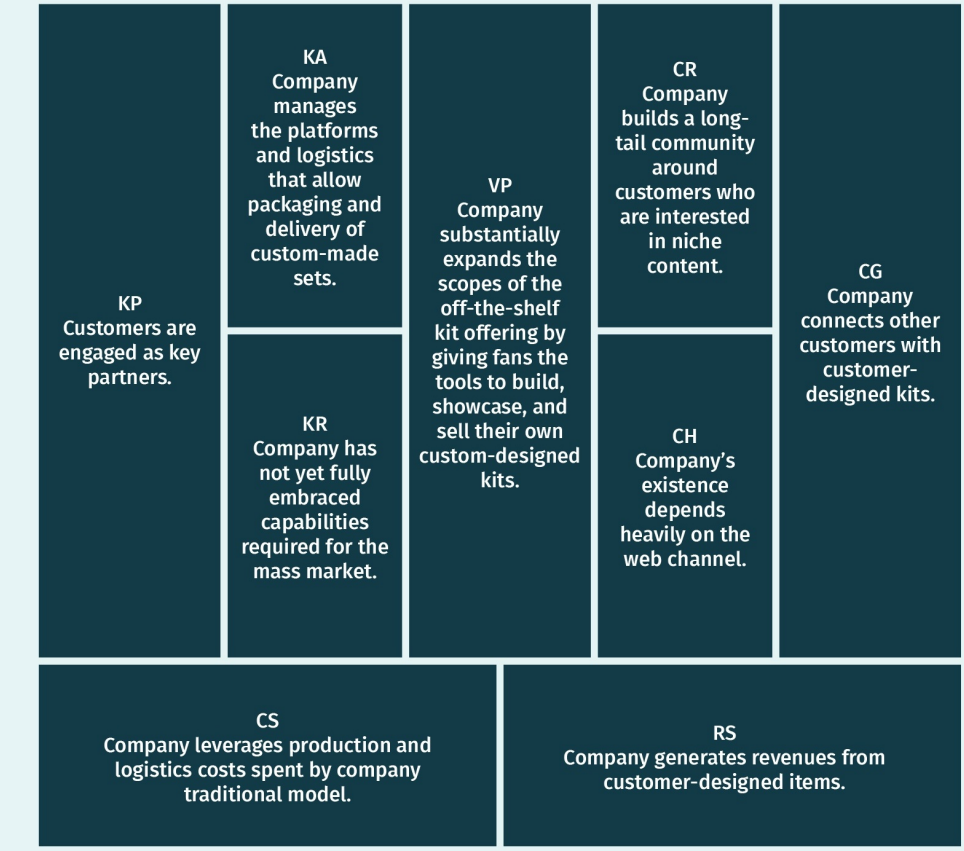
Osterwalder and Pigneur (2010) illustrate the long-tail business model using a case study from LEGO. LEGO, the Danish toy manufacturing company made famous for their system of interlocking bricks since 1949, transformed itself from a traditional business model to a long-tail business model. LEGO had created and commercialized kits with a number of themes including outer space, pirates, the Taj Mahal, and the Colosseum. Over time, however, their complex products, over diversification in its products lines, and escalating competition pushed LEGO to come up with innovative ways to meet its growth target. LEGO

approached this situation by licensing the right to use characters from blockbuster movies, such as Star Wars. Although this approach was expensive, it generated impressive revenues.

To seek further innovative paths toward growth, in 2005 LEGO experimented with customer-generated content. It launched the LEGO Factory, where customers use the LEGO Digital Designer software to create and design their own LEGO kits and order them online. This strategy helped LEGO transform its passive users into active participants. Moreover, the LEGO factory model requires the transformation of the supply chain infrastructure. However, due to low volume, previous infrastructure does not support the new model. As an alternative, LEGO adjusted existing resources and activities (Osterwalder & Pigneur, 2010).

LEGO also created the opportunity for its users to design and sell their sets online. Members have the opportunity to vote on their favorite sets. If the winning set idea is approved for production, the creator gets a one percent royalty on the net revenue. Though these users only contribute a small percentage of LEGO's total revenue, the move from a limited number of kits to innovative, user-generated product lines is a step towards the implementation of a long-tail business model at LEGO. A business model canvas for the LEGO use case is provided below (Osterwalder & Pigneur, 2010)..

Figure 6: Example Business Model Canvas



Source: Adeel Tariq (2022), based on Osterwalder and Pigneur (2010).

The business model canvas provides a comprehensive description of business model components. Due to digitalization, however, a number of changes have been observed in organization offerings, operations, structures, and revenue models. For example, vehicle manufacturers follow new digital business models for car sharing, taxi services, and parking services, all of which came about with the increased use of digital technologies (Remane et al., 2017). An understanding of digital-specific business models is therefore necessary.

Definition of Digital Business Model

Several scholars have provided different definitions of digital business models:

- "[A digital business model's] underlying business logic deliberately acknowledges the characteristics of digitization and takes advantage of them; both in interaction with customers and business partners and in its internal operations" (Bärenfänger & Otto, 2015, p. 18).

- "A digital business model is referred to as a distinct type of business model that exploits digital technologies" (Bock & Wiener, 2017, p. 1).
- "Digital business models rely on digital platforms to balance benefits among an ecosystem with multiple organizations and individuals involved" (Remane et al., 2017, p. 42).
- A digital business model has three main dimensions: contents, customer experience, and internal and external platforms (Weill & Woerner, 2013).
- "A business model is digital if changes in digital technologies trigger fundamental changes in the way business are carried out and revenues are generated" (Veit et al., 2014, p. 48).

These definitions identify digital value offerings (digital products and services) accessible through a digital platform (e.g., mobile apps or websites) to enhance customer experience (Möller et al., 2019). Moreover, they emphasize the shift from a non-digital value delivery approach to a digital one with the help of information technology (IT) empowered mechanisms (Möller et al., 2019). Digital business models also specify how key stakeholders, such as customers, suppliers, and other partners, connect with the firm through the digital interfaces (Teece & Linden, 2017).

Elements of Digital Business Models

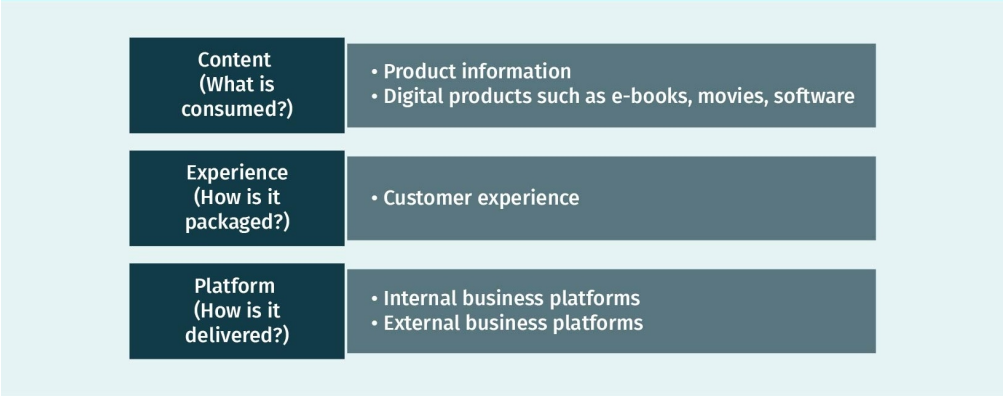
The key to success in the digital era is to connect with the customer both offline and online. Whether a start-up, an incumbent firm, or a small- or medium-sized enterprise (SME), an organization needs to design and strengthen a digital business model. Organizations that do not pay careful attention to their digital business model may jeopardize their stakes (Weill & Woerner, 2013). For instance, Netflix, which now dominates the video streaming business, was not so successful in its early business model design. Its mistake of dividing delivery methods between the post and its streaming platform, together with a significant hike in prices angered a large number of customers. As a result, Netflix faced a 79 percent drop in share price over four months (Weill & Woerner, 2013).

Digital business models have made it easier for enterprises to display their offerings, objective measures in order to be transparent for their customers (e.g., management costs for a mutual fund), and third-party ratings for their products. They have also made it easier for customers to compare offerings from different enterprises using web-based firms, such as TripAdvisor, as well as for enterprises to benchmark their products and services against competitors. On the other hand, digital business models also suffer from certain shortcomings as they can crash quickly because the consumer's switching costs in the digital world are much lower than traditional switching costs. Thus, digital business models are more obvious to concerned stakeholders, such as managers, in terms of transparency about digital offerings, customer switching cost, and third-party products ratings (Weill & Woerner, 2013).

According to Weill and Woerner (2013), the digital business model has three components: content, customer experience, and internal and external platforms. "Content" refers to products to be consumed by the customer. In the Amazon example, this can be digital products, like e-books, movies, and software, in addition to the physical products it either directly sells or brokers through third parties. "Customer experience" describes what a customer encounters when buying physical or digital products. With Amazon, customers

experiences include the digital platform and digital business processes such as a “one-click” system, delivery, and email notifications (Weill & Woerner, 2013). Amazon’s digital platform comprises both internal and external platforms. The internal platform deals with the customer data and business processes, such as customer analytics and finance. The external platform consists of the phones, tablets, laptops, or computers that consumers utilize for making a transaction, along with telecommunication and delivery networks.

Figure 7: Three Components of Digital Business Models



Source: Adeel Tariq (2022), based on Weill and Woerner (2013).

Weill and Woerner (2013) surveyed 139 companies across many industries. The survey assessed the effectiveness of their models based on content, experience, and platform. IT software and services industry topped the list in all three domains in terms of strongest effectiveness score, whereas energy, mining, and health were ranked lowest. Intriguingly, the companies with sound financial performance were found to have more effective digital business models.

Based on their findings, Weill and Woerner (2013) argue that for a successful digital business model, an enterprise must excel in content, customer experience, and platforms. But, where a company should first focus is dependent on its strategic goals. If the company goal is to earn digital revenue, the company should work to strengthen its digital content (information, products, and related data). If the company goal is to drive maximum revenue per customer, it should focus on enhancing and improving user experience. If the goal is to enhance effectiveness, then digital platforms should be emphasized.

Zott and Amit (2017) explain a business model as an arrangement of interlinked activities that describe how the enterprise performs business with its stakeholders. In other words, it is a set of business activities that meet the needs of the market. They argue that this activity system is based on three design elements:

1. Content (the activities to be performed). This can be referred to as the "what" of the activity system. For example, IBM shifted from hardware supplier to service provider, thus moving to a range of consultancy and other services as their content.
2. Structure (the interlinkage and arrangements of the activities). This can be thought of as the "how" of the activity system. A company may need to establish contacts with several partners in order to provide services and products to their customers. For example, Priceline.com built relationships with airline, credit card, and reservation system companies. By allowing the customer to bid on a price for their travel, they offer a complete reverse pricing system and a novel exchange mechanism for the parties who interact with them.
3. Governance (the "who" of the activity system). This describes who performs the activities (Zott & Amit, 2017).

Zott and Amit (2017) explain that these three elements of the business model are highly interconnected and need to be in line with the value creation and value capture goals of the firm, such as the revenue model of the company, which is referred to as the "why" of the business revenue model.

Additionally, Zott and Amit (2017) state that how the company decides to develop the right business model specific to their context depends on the four major, interwoven drivers of the business models. All four of the elements listed below enhance the value creation potential of the business model, and if used together can be a powerful tool for any company.

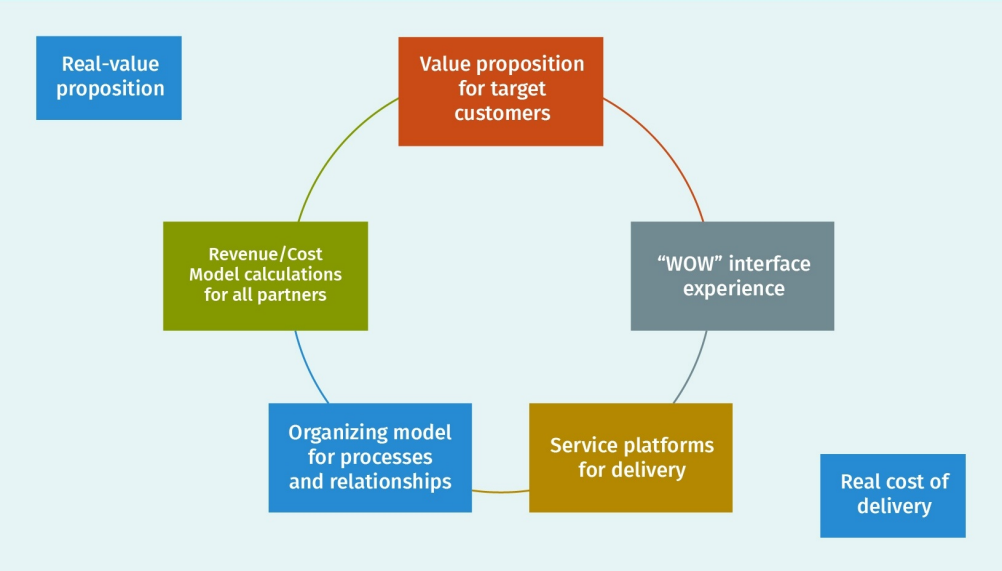
1. Novelty is defined as the degree of newness that a business models has embodied through the activity system. For instance, Airbnb's venture idea to rent out living space through a sharing platform was a novel business model.
2. Lock-in explains the elements of the business model that generate switching cost or provide benefits to the members, convincing them to continue transactions within the activity system. For example, a customer buying an Apple product may have higher preferences for integrated services like iCloud and may buy new electronics devices from the same company.
3. Complementarities refer to the value-improving impact of the interdependency among the business model components. For instance, eBay needed an efficient payment system for its platform in order to complete transactions between buyer and seller. The company acquired PayPal to facilitate transactions that otherwise would not have been possible and serve as a value-enhancing activity.
4. Efficiency involves the savings in terms of the cost generated through the interdependence of the activity system. For example, Walmart designed an activity system to support its low-cost strategy. The company designed logistical processes, such as cross-docking, to lower its costs compared to its competitors, giving Walmart an important competitive advantage (Zott & Amit, 2017).

El Sawy and Pereira (2013) categorized digital business model components into five main categories based on the literature. What they have named the VISOR model is a unified framework that re-categorizes business models into the following five components:

1. Value proposition is the overview of products and services that are designed to meet the targeted customer needs and explains why a particular customer segment is willing to pay a premium price for certain products and services. Customer willingness to pay for a product is linked with value creation: A product meets the unsatisfied needs of the customer or provides an alternate solution to existing needs.
2. The interface is the customer experience during the delivery or use of a product or service. The company product or service delivery success relies heavily on the customers' experience of the interface in terms of ease of use, comfort, and satisfaction. Ideally, the customer should be "wowed."
3. Service platforms are engines that in the delivery of the products or services. They are IT-powered platforms that enable shape, facilitate the business processes and partnerships that are required for the delivery of product and services, and refine the value proposition. Google's Android platform, for example, provides powerful technological tools for location search, mapping, and communication (El Sawy & Pereira, 2013).
4. The organizing model is the structuring of business processes, value chains, and parties' relationships for the efficient and effective delivery of products and services. Partners include the focal firm and linked companies that affect the focal firm value creation activities. The relationships are based on tangible flows, such as products, services, and profit, as well as intangible flows, such as knowledge. These flows are created for value activities such as value creation, value delivery, and value capture.
5. The revenue model is the disbursement of income and cost among business partners. In other words, it is how the business makes money with the combination of the value propositions, interface, value delivery, and organizing model.

El Sawy and Pereira's (2013) digital business model definition covers how an enterprise addresses customer needs; delivers maximum value to its customers in profitable and sustainable manners; and, as such, optimizes costs to value creation. They argue that a successful business model interconnects all components of the VISOR model to deliver the greatest value to the customer and increase customer willingness to pay for the value creation, while minimizing the cost through an optimum mix of interface experience, service platforms, and the organizing model.

Figure 8: The VISOR Model



Source: Adeel Tariq (2022), based on El Sawy and Pereira (2013).

Bock and Wiener (2017) advanced the discussion of digital business modes with the argument that most of the existing conceptualization does not take into account elements specific to digital business models or present elements specific to the business model **taxonomy**. To overcome this shortcoming, they developed a taxonomy of the business model related to both online and offline companies that consists of five key dimensions of the digital business models:

Taxonomy
The result of grouping objects based on the totality of their observable characteristics is called taxonomy.

1. Digital offering. The main offering of the digital business is an enterprise's digitized offering to its customer with the purpose to create value. Such digital offerings are divided into five categories: digital products, digital services, human services and complementary digital services, physical products and complementary digital services, and physical products with embedded digital technologies.
2. Digital experience. Customer experience while using or during the delivery of a product or service is referred to as the digital experience, either digital or physical (Weill & Woerner, 2013).
3. Value architecture/network. This describes digital platforms, comprised of a harmonized combination of digitized enterprise procedures, data, and infrastructure (Weill & Woerner, 2013).
4. Value architecture. This refers to data analytics and is considered one of the main capabilities for the identification of meaningful correlations and patterns in organized and unorganized data. It can be used to create accurate inferences (Loebbecke & Picot, 2015).
5. Value financing. Digital pricing and digitalization allow companies to collect thorough insights related to market supply and demand, as well as customer consumption patterns. This allows firms to offer pricing mechanisms based on the collected information (Bock & Wiener, 2017).

In the same way as with traditional business model components, different researchers have conceptualized different components for digital business models. Despite the differences, there are several similarities between all researchers' proposed digital business model components, albeit with different names. These are (1) digital offerings (digital products and services) or content, (2) interface (also called customer experience or digital experience), (3) digital platforms or service platforms, (4) organizing model or governance, and (5) revenue model or digital pricing.

2.2 Redefinition and Core Elements of Digital Business Models

A digital business model's "underlying business logic deliberately acknowledges the characteristics of digitization and takes advantage of them; both in interaction with customers and business partners and in its internal operations" (Bärenfänger & Otto, 2015, p. 2). This definition of the digital business model holistically covers the five common components: (1) digital offerings, (2) digital experience, (3) digital platforms, (4) organizing model, and (5) revenue model or digital pricing. Moreover, digital business models require that a business uses digital technologies to carry out value creation, value delivery, and value capture activities (Klos et al., 2021).

Ahmad et al. (2020) reviewed 20 digital business model-focused studies to establish their core elements. They categorized digital business model elements into six main categories. A synthesis of their research is provided in the table below.

Table 2: Elements of a Digital Business Model—A Concept Matrix

	Smart products	Digital smart services	Digitized processes	Ecosystem	Platform	Data analytics
Berman (2012)	X	X	X	X		X
Bock & Wiener (2017)	X	X		X	X	X
Kiel et al. (2017)	X	X		X	X	X
Remane et al. (2017)	X	X	X	X	X	
Teece & Linden (2017)	X	X	X	X		
Terrenghi et al. (2018)	X	X			X	X

	Smart products	Digital smart services	Digitized processes	Ecosys-tem	Platform	Data ana-lytics
Weill & Woerner (2018)	X			X	X	X

Source: Adeel Tariq (2022), based on Ahmad et al. (2020).

Smart Products

Researchers argue that smart products and the services connected and built upon them can create new business models (Ahmad et al., 2020). These smart products are the result of the shift from place to space as relying on physical products may not be sufficient for the digital world.

Digital Smart Services

One of the main differences between digital business models and traditional models is the offering of digital services. Digital services are offered either complementarily to products or as a pure service. They can be produced at low or marginal cost, and are regarded as essential elements of digital transformation (Klötzer & Pflaum, 2017). Take, for example, companies' offerings of digital financial services, both online and through mobile applications (Berman, 2012). Teece and Linden (2017) highlighted the importance of digital services as they meet the needs of the customers, either directly or indirectly, and capture the share of value for a sustainable business.

Digitized Processes

Digitized processes describe the optimization and automation of the existing processes through digitization, leading to increased efficiency and enhanced quality of products and services (Loebbecke & Picot, 2015). It reflects the business processes morphed into a digital form (BarNir et al., 2003). Increased digitization of business processes helps businesses to reduce the transaction costs of various activities, such as communication and information collection.

Ecosystem

An ecosystem can be defined as a system or structure that enables collaboration and knowledge sharing. It is empowered by information and communication technologies (**ICT**) (Corallo et al., 2007). Companies can form a digital ecosystem by building strong **complementary partnerships** with different players to develop new business models and compete with an expanding range of disruptors (Ahmad et al., 2020).

ICT
The acronym ICT is an extensional term used for information technologies, including all communication technologies.

Platform

An essential component to ensure communication and connection is a platform. A platform can display its complete potential when connected with an ecosystem (Ahmad et al., 2020). The platform is an essential and distinct component in the digital business model as it provides the foundation of ecosystem's collaboration, providing essential functionalities for firms' offerings and their execution (Ahmad et al., 2020).

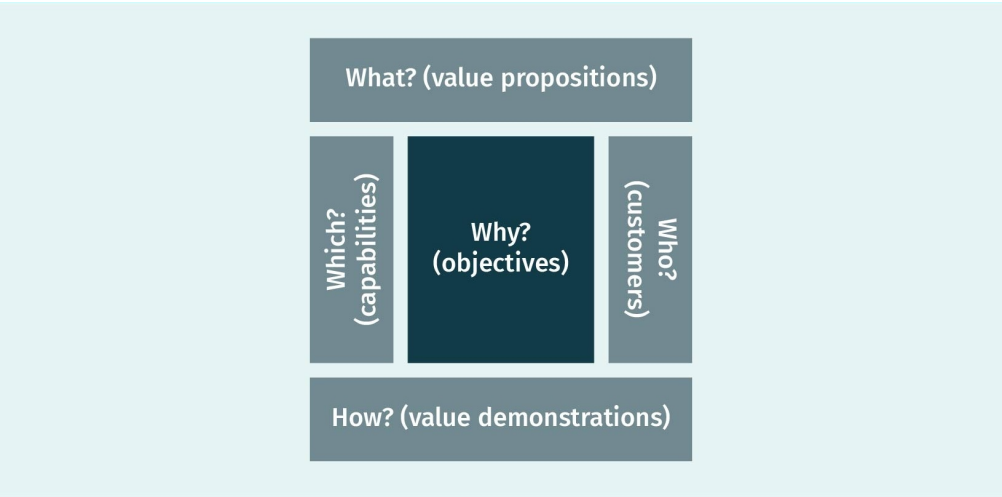
Complementary partnerships
When organizations with different strengths form a partnership to achieve common goals, it is considered a complementary partnership.

2.3 Value Architecture and Value Mechanics

The rise and fall of an enterprise is not only dependent on the elements of the business model, but also on elements of interdependence and alignment (Ritter, 2014). In a similar vein, Saebi et al. (2017) articulated that researchers have converged on elements of the business model in a value architecture, such as value proposition, customer segments, value chain, and measurements, and how these elements are linked. Sjödin et al. (2019) advanced this discussion by confirming that value creation and capture are aligned. The alignment of business model elements would warrant the suitability of value creation and value capture to each other and ensure better results from the business model innovation (Kranich & Wald, 2018; Sjödin et al., 2019).

Based on this confirmation, Ritter (2014) designed an alignment square to link different elements of the business model, as in the figure below. He explained that organizations able to achieve the right alignment of the business models elements would ultimately gain competitiveness. This task to align all the elements seems insignificant, but the alignment of all dimensions is an upheaval task for managers in order to gain excellence and growth.

Figure 9: Business Alignment Square



Source: Adeel Tariq (2022), based on Ritter (2014).

Why?	The objective of the enterprise existence or what enterprises want to achieve
What?	The benefits an enterprise offers to its customers
Who?	The enterprise's customers, specific individuals or groups. How many types of customer segments do enterprises target in their value offerings?
How?	The method used by an enterprise to reach (or describe its value offerings to) customers and convince them to buy its offerings
Which?	The **capabilities** an enterprise needs to ensure the appropriate answers to the above questions or to support the "who?," "what?," and "how?" questions

Capabilities
This refers to competencies, activities, or routines required by an organization to convert inputs into outputs.

To link together the various dimensions of their business models, organizations need to align the "who?" and "what?" square (aligning value proposition and customers), the "who?" and "how?" squares (aligning customers and **value demonstration**), the "which?" and "what?" squares (aligning value proposition and capabilities), and the "which?" and "how?" squares (aligning capabilities with value demonstration).

Value demonstration
Methods (model or technique) used by organizations to communicate and convince customers to buy the company's value offerings are called value demonstrations.

Ritter (2014) illustrates the business model square alignment (who-what, who-how, which-what, and which-how) with an example of a state-funded university. This list is not exhaustive and has captured only essential items related to each dimension:

- customers (students). Within this group, there are different types of customers. Some are studying on campus, and some are involved in distance learning. In addition, some students are pursuing undergraduate degrees, and some are postgraduate students. Moreover, students are in different stages—the early years of their degree program or the final year. There also important stakeholders involved, such as parents, families, government, corporations, and society.
- value proposition. The university may offer different degrees, such as bachelors, masters, executive programs, docotrates, and certifications.
- value demonstration. The university may communicate its programs through brochures, open house meetings on campus, their website, or other media.
- capabilities. The university requires different capabilities to manage admissions, program administration, graduation ceremonies, teaching staff, and the learning facilities.

In the what-who square, the university align students at different stages, such as in bachelor or master programs. In the who-how square, the university uses students and alumni recommendation systems, fairs, open houses, and websites to demonstrate value propositions to the customers. The university aligns the which-what square using the different administration, education, and learning facilities. Lastly, the alignment of the which-how square is done by applying resources to improve facilities for the different customer groups (such as bachelor, master, and doctoral students).

To achieve competitive advantage and growth, organizations must align their business model dimensions well. An organization that fails to effectively communicate its value offerings to its customers may render its value offerings useless and is unlikely to achieve its desired results.

SUMMARY

Organizations across the globe have increasingly focused on their competitiveness, requiring the understanding and incorporation of a business model. Different conceptual tools have been developed to assist users in designing business models. These models involve a varying number of components, ranging from three to nine, in order to describe business models. Examples of the business models include business model canvas, business model navigator, and several others.

As the digital era requires businesses to connect with the customer both offline and online, researchers have added several other important elements to create the digital business model. Though each provides a unique take, there are several similarities between the proposed components of digital business models, such as (1) digital offerings (digital product and services) or contents, (2) interface (also called customer experience or digital experience), (3) digital platforms or service platforms, (4) organizing model or governance, and (5) revenue model or digital pricing.

The success or failure of an organization is not only dependent on designing elements of the digital business model, but also on aligning the elements in order to gain the desired result in terms of competitiveness. To align elements of the business model, the organization must link its value proposition with customers, customers with value demonstration, capabilities with a value proposition, and value demonstration with capabilities.

UNIT 3

BASIC ARCHITECTURES, STANDARD PATTERNS, AND NETWORK INTEGRATION

STUDY GOALS

On completion of this unit, you will be able to …

- describe the architecture of the digital business models.
- illustrate the most commonly used elements in the different business models.
- understand and evaluate different network structures and their influence on the strategy.

3. BASIC ARCHITECTURES, STANDARD PATTERNS, AND NETWORK INTEGRATION

Case Study

LexisNexis is one of the largest legal information and research services providers in the world. By 2011, the company had a customer base spread over 100 countries, a handsome annual growth of over 10 percent, and revenues of $2.3 billion (Weill & Woerner, 2013). The operating environment around the company became highly digital, with even LexisNexis' parent company reporting a significant increase in digital content and expecting to soon be completely online (Weill & Woerner, 2013). Other emerging participants in the legal market, such as Google, also became famous. As legal information became more commercialized, even governments started to digitalize their records and make them available to the public. In response to the move from a traditional to a digital business model, LexisNexis upgraded its contents and customer experience, and developed a more flexible platform (Weill & Woerner, 2013).

To move from a traditional to a digital business model, a company needs to improve three main elements: content, customer experience, and platform (Weill & Woerner, 2013). But does this case study represent a complete list of elements of the digital business model, or are there more? For a deeper understanding, this unit will discuss the architecture and main elements of the business model, as proposed by a number of different scholars.

The digitalization trend has increased customer access to all products and services in a market, and customers are more vigilant than ever due to the copious amount of available information and alternatives. This requires companies to move faster in offering personalized products and services that are tailored to fit the needs of the customers (Pfisterer et al., 2016).

In the digital world, companies are not highly successful only due to their introduction of a good technology, product, or service. Success counts on their ability to wrap their offerings into a good business model that disrupts industries and leads to the enormous growth. For instance, Apple's success is not simply due to introducing game-changing technologies, but to combining hardware, software, and services in a model that increased customer convenience and resulted in superior profits (Johnson et al., 2008). Still, many companies find business model innovation difficult (Johnson et al., 2008) or expedite their efforts in designing digital business models without a cautious consideration of the results (Linde et al., 2020). Thus, an understanding must be developed about the architecture of digital business models to avoid a failure trap.

3.1 Basic Digital Business Model Architectures

Every organization that operates today is in the era of digital business, but simply updating their technology is not a viable solution. For instance, when Nokia responded to the technological shift in the camera industry, they did not adequately respond to the shift in customer's wants and expectations, leading to an irreparable loss for the company (Keen & Williams, 2013). Researchers have suggested various business model architectures to help organizations design their business models. The architecture of a business model describes the firm's logic or how the elements and processes of the business model are linked together to gain desired goals (Ruseva, 2015).

Traditional Business Model Architectures

Different researchers have suggested various traditional business model architectures; for instance, Osterwalder and Pigneur's (2010) business model canvas is the most adopted, consisting of nine elements that represent the architecture or logic of the business model. Other researchers have presented business model architectures based on integrated frameworks, such as Zott and Amit (2017), who describe business model frameworks focused on an activity-based system where activities such as novelty, lock-in, complementarities, and efficiency are the value drivers. These value drivers help companies to identify the right business model based on the market dynamics. Four components make up the architecture of the business model: content, structure, governance, and revenue model (the first three components being highly interdependent). Teece (2010) described the business model framework as an outcome-based system where the company is engaged in value creation and value capture to generate profit.

From the different business model architectures listed above, two basic groups can be formed: first, where the essential elements of the business model are provided and not specifically aligned (e.g., Osterwalder & Pigneur, 2010) and second, an integrated business model framework where the elements of the business model are highly interlinked or interdependent (e.g., Gassmann et al., 2014; Teece, 2010; Zott & Amit, 2017).

Some researchers have linked dimensions and processes of the business model, such as value creation, value delivery, and value capture, with elements of the business model, e.g., key activities, key resources, revenue stream, and price mechanism (Rohn et al., 2021). Thus, the architecture of the business model consists of elements such as key partners, key resources, cost structures, revenue mechanism, required technology, and customer relationship, along with processes such as value creation, value delivery, and value capture.

Digital Business Models Architectures

Over time, a shift has been observed in business model architecture; however, the transition does not represent a radical change. Even so, this shift means more emphasis is given to digital products and services, **personalization** of the products and services according

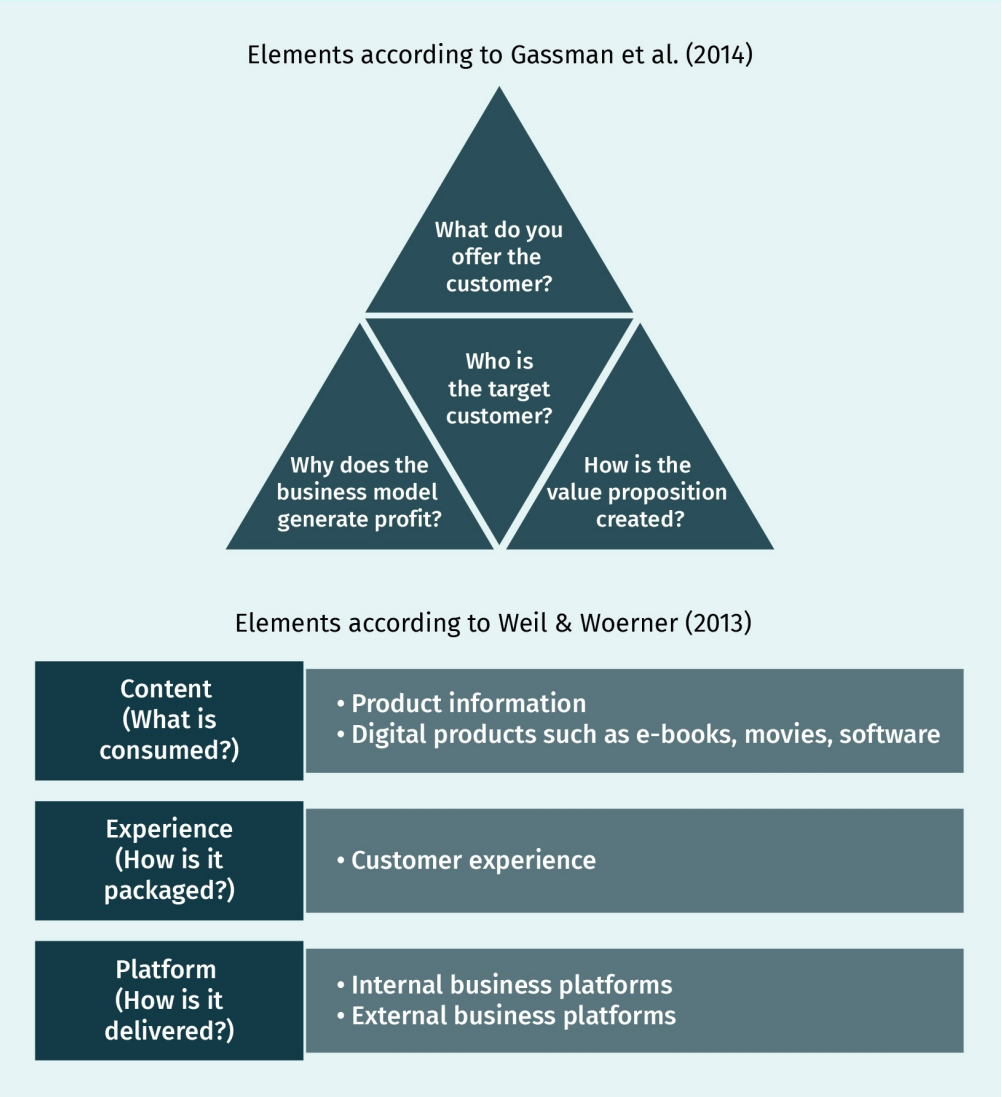
Personalization
Value proposition that is customized according to customer needs is referred to as personalization.

to the customer's changing needs, and inclusion of digital platforms or digital technologies. Researchers have developed digital business model frameworks where such elements are interlinked. For example, El Sawy and Pereira's (2013) VISOR framework specificies the digital platform as a central element of the digital business model. Similarly, Weill and Woerner (2013) identify and describe the platform as a central element of the digital business model architecture. Along the same lines, Bock and Wiener (2017) recommend a digital platform as a central element of the business model. Such a platform enables internal and external integration of the customers and other partners connected with the organization.

Digital business models proposed by Bock and Wiener (2017), El Sawy and Pereira (2013), and Weill and Woerner (2013) have also focused on other elements that are essential to describe architectures. For example, value creation (which focuses on the customer's needs and experience) is a vital element, as it's not only the products that create value, but the overall customer experience.

The figure below illustrates elements of the business model as proposed by Gassmann et al. (2014) (left) and Weill and Woerner (2013) (right). Both models add different elements to the business model; however, Weill and Woerner (2013) specifically identify a digital platform for internal and external integration of different participants, such as customer and suppliers. Gassmann et al. (2014) include components such as "target customer" and "offerings" as central elements, whereas Weill and Woerner (2013) recognize customer experience and digital platform as central elements of the digital business model.

Figure 10: Digital Business Model Architecture



Source: Adeel Tariq (2022), based on Gassmann et al. (2014); Weill and Woerner (2013).

In the same vein, Keen and Williams (2013) argue that there are two types of companies: **ultra-successful**, such as Amazon, Apple, Google, and Facebook, and **ultra-fade**, such as BlockBuster and Nokia. Ultra-successful companies sustained their pace and competitive advantage, while the ultra-fade companies have not. One main differentiator for the performance of both company types is a function of the value; successful companies understand that digital business is driven by value. Digital businesses are not just the function of technology, as seen by many of the companies relying on the internet alone during the dot-com bubble. This business model caused them to suffer and disappear from the competitive landscape. Digital business is driven by value. This value is determined by the user and is therefore relative and shifting. It is built on the adaptive ecosystem to include other valuable participants. Entrepreneurs must offer new dimensions of the value. Value archi-

Ultra-successful
Firms are considered ultra-successful when they reshape the competition within and across sectors and maintain their competitiveness.

Ultra-fade
An ultra-fade firm appears dominant but cannot maintain pace and competitiveness.

tecture should not be confined to products, services, and technology, but should be taken as a function, expanding the space to include customer experience. Companies such as Netflix use this strategy to disrupt existing mechanisms (Keen & Williams, 2013).

Wirtz (2019) explains that the digital business model can be categorized according to business-to-customer, or B2C (4C-Net Business Model) and business-to-business, or B2B (4S-Net Business Model). A company may follow a core business model, but there will likely be some overlap with the other business models as well. Wirtz (2019) categorized B2C (4C-Net Business Model) into four segments: content, commerce, context, and connection (the 4Cs). These are defined as follows:

- A content business model comprises the gathering, selecting, systematizing, compiling, and delivering of the contents on the domestic platform. The main aim of this model is to facilitate customers in assessing content easily, conveniently, and in a visually appealing form.
- The commerce business model consists of the initiation, bargain, and/or completion and settlement of the business transactions over the Internet. Examples include companies such as eBay and Amazon.
- In a context business model, companies do not provide their own content, but instead offer navigation aids and act as an aggregator of the contents on the internet. They mainly aim to reduce the complexity of the content they aggregate, enhance transparency, and improve the search results. This is primarily achieved by compiling, categorizing, and organizing the information available on the internet.
- The connection business model facilitates the establishment of linkages between different participants over the internet in a way which otherwise would not have been possible due to higher transaction costs and communication barriers. These linkages are highly required in the digital era.

Today's companies follow integrated business models across all the 4Cs due to the merging of different industrial sectors (Wirtz, 2019). For example, Google started its operations as a search engine context-based service, but now also offers products and services that are linked to the other 3Cs.

While the B2C model focuses on providing services to users and private clients, the B2B business model is based on transactions between companies (Wirtz, 2019). 4S-Net Business Model typology entails the most relevant B2B business models operating on the internet. Wirtz (2019) emphasized that, here, the rigid classification of models is not possible as companies may utilize several models simultaneously. B2B business models can be categorized into sourcing, sales, supportive collaboration, and service broker. These models are defined as follows:

- In the sourcing model, initiation and completion of the B2B business transaction is done from buyer to seller, between whom a direct relationship is required. An example is procurement management on the internet.
- In the sales business model, the company performs a similar task as in the sourcing model; however, initiation and completion of the transaction is done from seller to buyer, with the seller initiating the direct transaction.

- In the supportive collaboration model, an intermediary is not required, as this model promotes and encourages collaboration between different companies to attain common objectives through research and development, manufacturing, and sales. In this model, a direct relationship is established between companies.
- In the service broker business model, a service broker promotes transactions by sharing information and marketplaces. This model requires a third party or intermediaries in the transaction, and no direct relationship exists between the companies that are involved in the final transaction.

3.2 Standard Patterns in Business Model Elements

A pattern is defined as an established solution to a frequently occurring problem, which may also apply to other problems (Echterhoff et al., 2017). In a similar way, researchers have produced business model patterns containing elements that are implementable in different dynamics. For example, Osterwalder and Pigneur (2010) developed five different business models based on nine elements. Gassmann et al. (2014) proposed 55 business models based on the four elements (who, what, why, and how) for different industries and situations.

The Business Model Navigator

According to the 2014 book by Gassmann et al., *The Business Navigator*, a business model must be built or customized according to a specific situation and require a deep comprehension for creative imitation and recombination. For this purpose, a company does not need to start from scratch as most successful business models can be summed up using the business models patterns. Gassmann et al. (2014) further argue that these 55 business models can be used as a foundation to improve or create an entirely new business model. A brief overview of the most famous is provided below.

Add-on

In an add-on business model, the company's competitively priced core offerings are supplemented by several add-ons that are decisive in the final pricing. In this model, the customer pays more than the price that they had initially expected but can benefit from variable offerings adapted according to their specific needs. For instance, customers can start using the Amazon Web Services cloud computing structure for free. Once a customer has consumed the free space, they must pay for extra server capacities. Such a model is applicable in the software, information technology, and service industries (Gassmann et al., 2014).

Affiliation

In this model, affiliate offerings are designed to support others in selling their products and services, and revenue is generated from direct successful transaction. Affiliates can choose between pay-per-sale or pay-per-display compensation, and the company gets access to wide range of customers. For example, the razor subscription company Dollar Shave Club offers a commission for every subscription that comes through an individualized link designed to track which website has brought a customer to the Dollar Shave Club store. This model is applicable in the hospitality, e-commerce, and information technology industries (Gassmann et al., 2014).

Akido

Akido is a Japanese martial art method in which the strength of the attacker is used against them. As a business model, a company offers something that is opposite to the existing competition. The company uses this novel value proposition to attract customers who like ideas that go against the mainstream. The watch company Swatch followed the Akido strategy by setting themselves against other Swiss watchmakers, who focus on the expensive luxury products. Swatch instead offers high quality watches at the lower prices in order to increase their revenue (Gassmann et al., 2014).

Auctioning

In this model, a company provides products or services to the highest bidder at the end of an auction. In this way, a company generates revenue by selling at the highest price acceptable to the customers. At the same time, the customer can influence the price of offerings. MyHammer follows this model: Their customers quote a price for the services they require, allowing available workers to offer their services accordingly (Gassmann et al., 2014).

Barter

In this model, companies provide consumer goods without demanding money for them, and, in return, the consumer provides something valuable to the company. Such a transaction is valued differently by each party, and the transaction does not necessarily have to be direct. In 1972, PepsiCo become the first foreign company to sell a foreign product in Russia after the fall of the Soviet Union. It did so by offering their Pepsi-Cola drink to Russia in return for exclusive sales rights for Stolichnaya vodka in America (Gassmann et al., 2014).

Cash machine

In this model, companies have either a short cash conversion cycle or a negative cash conversion cycle. The customer pays the upfront cost before product is sold to them, and company is able to cover the associated expenses with it. This enhances the liquidity position of the company, meaning income can be used to pay off debt or invest in a fund. Amazon follows a negative cash conversion cycle, and its strong position enables it to pay to the supplier after it receives payment from the customer (Gassmann et al., 2014).

Cross-selling

In this model, companies offer products from the other industries that are not their main focus. Thus, a company can generate additional revenues by making a few changes to existing infrastructure and assets to meet more customer needs. Swedish company IKEA's main purpose is to sell furniture. In addition, it provides a range of services, such as home decoration (Gassmann et al., 2014).

Crowdfunding

In this business model, the entire business idea, project, or start-up is mainly funded by a crowd of investors who support the idea. If the project is successful, investors will receive a special advantage that is comparable to amount of money they have invested. To finance their programming software, Diaspora raised 200,000 US dollars (20 times more than their initial target) on Kickstarter, a platform that supports start-ups to fundraise from the general public (Gassmann et al., 2014).

Crowdsourcing

In this unique business model, a company seeks a solutions from the general public, typically via the internet. Contributors receive a small reward or have the possibility to win a prize if their solution is selected for sale or manufacturing. Such a positive interaction between a company and its customers strengthens their relationship and enhances company sales and revenues. LEGO is famous for using the crowdsourcing model to generate ideas for new products and services (Gassmann et al., 2014).

Customer loyalty

Customer loyalty is assured through incentive-based programs in addition to products and services. The purpose is to create an emotional connection with the customers by providing simple, rewarding incentives. In this way, customers find themselves more connected with companies. Companies such as Airbnb, Lufthansa, and Walmart follow this model (Gassmann et al., 2014).

Digitization

In this model, a company converts existing offerings into digital offerings, offering benefits over the physical forms, such as expedited and simpler distribution. Preferably, the digital offerings do not reduce the value of product and services to the customers. Companies follow this model to convert their offerings into digital variants for different benefits (Gassmann et al., 2014).

Direct selling

In this innovative model, a company sells a product or services directly to the customer rather than relying on intermediaries. This helps the company to avoid distributor costs, or other expenses associated with such a process. Such savings, generated through the

elimination of intermediaries, can be transferred to customers. In addition, direct selling can improve contact with customers. Dollar Shave Club, LEGO, and Ryanair follow this model (Gassmann et al., 2014).

E-commerce

In this model, a company relies on an online channel for the distribution of their offerings, thus reducing the costs related to physical infrastructure. This model is useful for customers as it provides them with higher availability and convenience. A number of small start-ups along with established companies, such as Swatch, IKEA, and Nintendo, follow this model (Gassmann et al., 2014).

Flat rate

In this model, a straight, fixed price is charged for a product or service irrespective of the customer's actual consumption of company offerings. This model generates benefits for the customer as they enjoy the advantage of a fixed cost structure. The company also benefits from constant revenue. Netflix, Spotify, and LinkedIn follow this business model (Gassmann et al., 2014).

Fractional ownership

This model entails the sharing of certain resources among several owners. For the company, this model is capital intensive, but only on an occasional basis. Customers enjoy the benefits of owning a product while contributing capital only when they use it. Mobility Carsharing use the fractional ownership model (Gassmann et al., 2014).

Razor and blade

In this model, the main product is cheap or free. The consumables that are required for use are sold at an expensive price. The low price of basic product encourages consumers to buy the products, whereas the following cross sales support the company margins. Mostly, these products are technologically linked to each other to further substantiate the effect. Nintendo, Apple (e.g., iPhone and Appstore), and number of other companies follow this model (Gassmann et al., 2014).

Freemium

In this model, the basic version of the product is given with the hope of eventually influencing the customer to pay for the premium version. The free version generates a large number of customers. The smaller number of customers paying for the premium version is the main revenue source for the company. Amazon Web Services follows this model (Gassmann et al., 2014).

Ingredient branding

In this model, an ingredient, component, and/or brand from a certain supplier is used in in the end product. The end product is further branded and marketed as including the ingredient, thus creating additional value for the customer. This provides positive linkages with the brand and enhances the attractiveness of the final product. Microsoft, Bosch, and Intel follow this model (Gassmann et al., 2014).

Layer player

In a layer player model, a specialized company produces and supplies the products and services limited to the delivery of one-value adding steps for the different value chains. This particular step for adding to the value chain is offered to a variety of independent markets and industries. This benefits the company in terms of economies of scale and special expertise, resulting in higher quality processes. Tetra Pak, Amazon Web Services, and Microsoft follow this business model (Gassmann et al., 2014).

Leverage customer data

In this model, value is created by gathering customer data and then preparing them accordingly for the usage of the third parties. Companies generate revenue in this mode either by selling the data directly to the interested third-parties or using them for their own purposes, i.e., to enhance the effectiveness of their marketing. Craigslist and the Amazon Store use this business model (Gassmann et al., 2014).

Long tail

In this model, instead of generating revenue primarily from succesful products, the majority of revenue is generated through a “long tail” of the niche products. If the company offers a larger variety of products with sufficient amounts of profit from the small number of individual sales, this can accumulate to a significant total revenue. Facebook, Google, and YouTube follow this business model (Gassmann et al., 2014).

Open business model

Here, a company collaborates with other partners in the ecosystem to create value for their customers. Companies work creatively with suppliers and customers to create value and extend the business. Companies such as Proctor & Gamble follow this business model to create value (Gassmann et al., 2014).

Orchestrator

In this model, a company focuses on the core competencies in the value chain system. Value chain system activities are outsourced and actively coordinated with others, thus reducing the cost and benefitting from the specialized suppliers’ economies of scale. In addition, the focus on core competencies increases the performance of the company. Nike follows this business model, enhancing its performance by taking advantage of supplier expertise (Gassmann et al., 2014).

Virtualization

Here, a company imitates the traditional physical product in a virtual environment, for example, a virtual workspace. Here the customer pays to access to the virtual services and has the benefit of interacting with processes from any location or device. Examples of virtualization include Microsoft Teams and Amazon Web Services (Gassmann et al., 2014).

In a similar way to Gassmann et al. (2014), Johnson and Lafley (2010) proposed different business models based on four elements (e.g., key resources). A number of other authors have proposed business models consisting of varying numbers of elements (Afuah & Tucci, 2002; Gordijn & Akkermans, 2003; Mahadevan, 2000; Markides, 1999; Rappa, 2001; Timmers, 1998). Because of a lack of agreement between researchers, the attempt on the part of many managers to understand what elements are most essential or to find any standard pattern can be confusing.

In *The Business Model Navigator*, Gassmann et al. (2014) argue that 90 percent of all business models are not novel and do not present anything new. They are simply a recombination of different existing patterns. In their efforts to identify common patterns, Echterhoff et al. (2017) identify 14 elements most commonly used in 74 different business models and divide these 74 models into six partial business models. These 14 key elements include customer segment, value proposition, market performance, marketing channels, customer relations, key activities, key resources, value chain structure, key partner, cost structure, revenue conception, benefits for operator, incentives for partners, and risks. Each business model consists of a different number of business model elements. For example, Gassmann et al.'s (2014) barter business model consists of a marketing channel, key activities, and key partners (Echterhoff et al., 2017).

El Sawy and Pereira (2013) reviewed different 21 studies in order to identify the standard pattern behind the elements on which business models are based. Thirty-two elements are typically mentioned by researchers; for instance, some emphasize competitive strategy, while others emphasize **marketing strategy**. As the 32 elements come from only 21 studies, the list is not exhaustive.

Marketing strategy
A firm's plan of action to increase sales by reaching prospective consumers and converting them into customers.

Based on a review of the literature, 16 elements are identified as those most used by researchers. Several of them are mentioned in the table below for illustration purposes. Out of the 16, revenue sources, products and/or services, value proposition, network of partners, pricing strategy, target market or customer segment, technology or IT infrastructure, strategic resources, and competencies/capabilities appeared in most of the business models. Other elements identified in the literature include profit model, cost structure, customer relationship, distribution/channel, customer interfaces, competitive strategy, and corporate governance. Most of the common elements identified are similar to the elements recognized by Echterhoff et al. (2017); however, their work also included risks, benefits for the operators, and incentive for partners.

Table 3: Business Model Elements

	Revenue sources	Pricing	Products/ Services/ Information flow	Value stream/ Offerings/ Proposition	Market/ Customer segment/ Target market	Linkages/ Network of partners/ Actors
Gordijn & Akkermans (2001)				X	X	X
Linder (2000)	X	X		X		
Dubosson Torbay et al. (2002)	X	X	X			X
Hedman & Kalling (2003)	X	X				X
Chesbrough & Rosenbloom (2002)	X	X			X	X
Osterwalder & Pigneur (2010)	X			X	X	X

Source: Adeel Tariq (2022), based on El Sawy and Pereira (2013).

A standard pattern among business model elements is that they can all be categorized according to value creation, value proposition, value delivery, and value capture. The distribution of the elements among the categories is shown in the table below.

Table 4: Standard Patterns in Business Model Elements

Value creation	Products/Services, channels, customer relationship, and customer segment
Value proposition	Value proposition and competitive strategy
Value delivery	Linkages/Network of partners, IT infrastructure/ technology, customer interfaces, strategic resources, corporate governance, and **core competencies**

Core competencies
A firm's core competencies are a harmonized combination of the resources and capabilities that distinguish it in the market and give it a competitive advantage.

Value capture	Revenue sources, cost structure, pricing strategy, and profit model

Source: Adeel Tariq (2022).

3.3 Networks and Differentiation Strategies

Fundamentally, networks consist of nodes and connections. In a business vernacular, a "node" represents actors (i.e., individuals and organizations) and "connection" represents the linkages among actors. This connection could be made of either direct or indirect linkages between organizations and shares content, access content, or serve other purposes (O'Donnell et al., 2001). Initially, network research was started with an argument that market and organization are two different means of organizing transactions (Powell, 1990). Researchers have adopted different levels of networks for their analyses, but most research falls into interorganizational networks and personal networks (O'Donnell et al., 2001). An interorganizational network is likely to consist of the organization as an actor, with formal linkages existing between actors. A personal network consists of individuals and informal linkages. These forms of networks are established to access or share strategic resources between organizations and network partners.

Organizations can achieve strategic resources either through market mechanisms or hierarchically organized structures (O'Donnell et al., 2001). In a market mechanism, the provider and the user engage in a transaction according to an established system so that transaction optimizes the benefits for the parties engaged. In this regard, Williamson (1975) argues that the market mechanism prevails when transactions are simple, nonrecurring, and do not require specific investment. In this case, the market decides on the conditions of the transaction between the provider and the user.

On the other hand, when transactions are complicated, repetitive, and need significant investment, they are likely to take place in hierarchically organized networks. Such organizations are likely to be **vertically integrated** and would comprise of a structure that internalizes most of the market functions into different hierarchies (O'Donnell et al., 2001). Thus, such hierarchies regulate the access provided to customers.

Vertically integrated
Organizations that are vertically integrated control or own all parts of the value chain, such as suppliers and retailers.

Engaging in such hierarchies helps organizations to avoid market-inherent inadequacies and the costs involved in a transaction. There are two reasons for this. The first is **bounded rationality**, where economic actors fail to cover all possible contingencies in a contract. When contracts are internalized, all such contingencies can be managed with a firm internal hierarchical structure. The second reason is "opportunism," where the actors in control of transactions prefer a structure that adds to their own advantage (Williamson, 1975). Thus, organizations engage in networks based on the type of transactions that are most efficient in terms of cost or to gain or provide access to resources (O'Donnell et al., 2001).

Bounded rationality
Decision-making is limited by the individual capacity or thought process, such as opting to "satisfy" rather than "optimize."

The two types of relational networks given above are criticized by some researchers on the grounds that economic conduct is rooted in the networks of interpersonal relations (Granovetter, 1985). In response to this, Powell (1990) argues that there is another, alternative type of network where firms are engaged in an mutually beneficial, open-ended, relational form of cooperation. Firms in these "cooperative networks" are interdependent and cooperate to achieve a specific purpose (O'Donnell et al., 2001).

Demil and Lecocq (2006) argue that another structure exists which is different from market, hierarchy, and network structures due to a specific legal agreement: an open license contract. This "bazaar structure" contrasts with others in that participants have limited control and weak incentives are offered, but it encourages the openness of an open-source community, which generates a number of positive effects on the cumulative transactions. An example of this type of project is the Linux operating system, which has been co-developed by millions of developers and received huge support from its users (Demil & Lecocq, 2006).

Researchers recognize market, hierarchy, and network as the most prominent structures; however, a number of new structures have surfaced over time (e.g., **shared economy**) (Acquier et al., 2017). Based on the type of network, a firm may have different types of flexibility to exchange resources and information. For example, an in-market network has high flexibility, a cooperative network has medium flexibility, and a hierarchical network has low flexibility (Powell, 1990). Similarly, in terms of commitment among the participants, a firm has low commitment in the market mechanism, and medium to high commitment in both hierarchical and cooperative networks (Powell, 1990).

Shared economy
In this economic model, a community-based online platform facilitates peer-to-peer transactions for sharing, providing, or acquiring resources.

Researchers have also tried to differentiate between the type of networks in entrepreneurial research for interorganizational and personal networks. An interorganizational network in entrepreneurial research is comprised of organizations operating in a market and is not specifically limited to small firms. These entrepreneurial firms rely on interorganizational networks as, without them, it is quite difficult for the firm to make an effective strategic adaptation. Most researchers have divided these networks into vertical and horizontal networks, but these two forms do not represent all types of ties that exist in an entrepreneur's interorganizational networks (O'Donnell et al., 2001).

Vertical networks are comprised of the actors (ranging from supplier to end-users) required in the value-adding or distribution system. Such a network is formed to organize the flow of resources. Although it may include a number of actors in the value chain, most of the focus of research on this network is limited to a dyadic buyer-seller relationship (O'Donnell et al., 2001). Horizontal networks either consist of the firms in the same industry or cover the relationship among expected or present competitors (O'Donnell et al., 2001).

Network Integration and Differentiation

Over the time, researchers have made significant progress in understanding network relationships in combination with other important dimensions (e.g., network and innovation) in order to explain the influence of the interorganizational network on the innovation performance of the firm (Najafian & Colabi, 2014), the network structure, and knowledge

transfer (Reagans & McEvily, 2003). An important branch of the literature discusses differentiation strategies based on the network structure. “Strategy” is concerned with understanding what set of actions make an organization successful in the market. It necessitates exploring the procedures required to enhance a firm’s effectiveness and competitiveness (Håkansson & Snehota, 1989). An organization may adopt different strategies for knowledge exchange, resource sharing, or competitive advantage.

Some researchers focus on a specific domain of an interorganizational network to understand their influence on strategy and performance. For example, den Hartigh and Van Asseldonk (2004) focus on a market network to understand its influence on a strategy. They found that a firm’s decision on the strategy that ultimately influences its performance is based on a market mechanism. A market mechanism is likely to include market conditions, i.e., the interdependency of the decision among network partners, as well as the network structure and market dynamics that include the pattern of innovation diffusion. Their argument is based on the premise that an organization is a part of an economic system that influences the decision of the actors engaged in such networks, although some firms can influence the market mechanism.

Liu and Wu (2011) report that when an organization enters a cooperative network with other participants to exchange key resources and information, the firm is likely to realize different opportunities through such networks and search for a strategy to differentiate itself in the market. This network structure may require the organization to adopt a different strategy to differentiate itself and gain a competitive advantage. For instance, a number of Chinese firms previously focused on the cost leadership strategy. Over time, they realized the non-sustainability of their strategic approach and adopted differentiation strategy based on innovations to stay globally competitive (Liu & Wu, 2011).

In terms of an owner’s personal network influence on the selection of competitive strategy, Ostgaard and Birley (1994) document that personal networks helped access critical resources that may not be internally available to new firms. A firm may follow six different types of strategies based on the resources required from the network: “marketing differentiation, product innovation, broad market segmentation, distribution, growth through outside capital, and differentiation through quality” (Ostgaard & Birley, 1994, p. 281). Such a resource base is critical to formulate and implement various differentiation strategies. Because of this, entrepreneurs may have different network approaches based on the strategy followed by their firm.

SUMMARY

Every organization that exists today is in the digital era, which requires a response to the rapid digital changes taking place. To deal with the challenge of digitalization, a firm may proceed hastily without a cautious understanding of the consequences. This issue is particularly pronounced when researchers have offered different business architectures for traditional and digital business models. The architecture of the business model describes the logic of the firm or elements of the business

model, which may or may not be aligned with each other. Two different architectures of the business model are provided in the literature: (1) where the essential elements of the business model are provided and not aligned and (2) an integrated business model framework where elements of the business model are highly interlinked or interdependent. In the digital business model architecture, more emphasis is given to digital products and services, personalization of the products and services according to the customer's changing needs, and inclusion of digital platforms or digital technologies into the business models in terms of the elements of the business model.

A number of scholars have presented different business models that consist of a different number of business model elements. Sixteen elements are identified as appearing in most business models: revenue sources, products/services, value proposition, network of partners, pricing strategy, target market or customer segment, technology or IT infrastructure, strategic resources, and competencies/capabilities. Most of the network research is divided into interorganizational and personal networks. Organizations choose different types of networks to exchange resources and information: market, hierarchical, and cooperative. The integration of a network influences a firm's differentiation strategy.

UNIT 4

SUCCESS FACTORS AND STRATEGY

STUDY GOALS

On completion of this unit, you will be able to …

- explain the difference between strategy and business models.
- demonstrate the success factors for both strategy and business models.
- indicate the relevant success factors for digital business models.
- categorize different strategy levels and their implementation in organizations.

4. SUCCESS FACTORS AND STRATEGY

Case Study

Telmore is one of the largest mobile network operators in Denmark, with offerings ranging from streaming, music, e-books, mobile data, and short message services (SMS). Frank Rasmussen and his team established Telmore in 1999 and entered the Danish market as a **no-frills** mobile virtual network operator in 2000 (Casadesus-Masanell & Ricart, 2010). The company's top management needed to choose a business model that fit with the company strategy of growth. Out of their options, Telmore selected a "rock bottom cost-structure," creating a simple low-price plan where customers are charged a low fee for SMS and telephone calls on all national networks with no subscription fee (Casadesus-Masanell & Ricart, 2010).

No-frills
In this business model, the company removes luxurious or non-essential features, keeping its offers simple and low-priced.

Telmore therefore agreed to work as a service provider on the TDC (Denmark's largest network operator) network, with charges of 0.50 Danish krone per minute (Casadesus-Masanell & Ricart, 2010). The selection of a simple business model based on low prices was aligned with company strategy, giving them a competitive advantage among a targeted customer segment interested in low, transparent pricing. Because of the linking agreement between TDC and Telmore, Telmore's business model selection influenced the TDC business model. Telmore's low price plan attracted customers from other competitors, benefitting the TDC. As a result, TDC also had to reconfigure its business model (its plan of action) to stay competitive in the market (Casadesus-Masanell & Ricart, 2010).

From the case study above, it is quite evident that strategy and business models are related and that a company's strategic choices influence its business model. In addition, partners and collaborators (external factors that lead to success) influence organizational choices when it comes to the business model. In this unit, we will learn in detail how strategy is linked with the business model and what factors lead to the success of digital business models.

4.1 Relationships between Business Model, Success Factors, and Strategy

Many established firms and start-ups have disappeared, or their business volumes have been reduced, due to their limited understanding of the competitive environment. This has raised the importance of strategy for organizations as they start to evaluate the competitive landscape of the market in order to establish their strategic position and sustain their **competitive advantage** (Casadesus-Masanell & Ricart, 2010). However, megatrends such as globalization and digitalization are strongly influencing the competitive dynamics and require firms to introduce innovative business models, along with a different strategy to compete effectively in the market.

Competitive advantage
These factors and attributes allow a company to outperform its rivals in terms of superior margins or sales.

Though there is a consensus among scholars that managers must have a profound understanding of business models to make their organization successful, there is limited agreement on the distinguishing features of competitive business models (Casadesus-Masanell & Ricart, 2010). But before describing the success factors of the business model, it is essential to distinguish and relate the concepts of "strategy" and "business model."

Strategy and Business Model

The terms "strategy" and "business model" are often used interchangeably, but they are not the same (Magretta, 2002). Where the business model elaborates on how the business works and creates and delivers value to its stakeholders, strategy describes the selection of a business model that the organization relies on to gain a competitive advantage in the market (Casadesus-Masanell & Ricart, 2010). A strategy describes the choices made by the management among different alternatives (Caves, 1984), or refers to a set of actions taken to accomplish a specific goal or gain competitive advantage (Casadesus-Masanell & Ricart, 2010).

Casadesus-Masanell and Ricart (2010) clarify that while a strategy leads to the selection of a business model, a business model is not a strategy. The strategy illustrates a company's vision, strategic positioning, and future directions (Porter, 1980), whereas the business model explains the implementation of the strategy (Dahan et al., 2010). Teece (2010) argue that, compared to strategy, a business model is more general and that a fit between both is essential to gain competitive advantage.

A simple example to explain the difference between strategy and business model is Ryanair, an Irish low-cost air carrier which was on the brink of bankruptcy in the 1990s (Casadesus-Masanell & Ricart, 2010). The company had to plan how to escape bankruptcy by transforming the business model from a full-service carrier to a low-cost carrier based on a no-frills business model. The company initially evaluated four alternatives to choose a competitive plan: (1) establish itself as a "**Southwest Airlines**" of Europe, (2) add a business class into existing services, (3) become an airline that brings traffic from the places not served by larger airlines, or (4) exit the market. Each of first three options required a different business model. Ryanair opted for the first strategy, requiring the execution of a plan of action, or strategy, to create a distinctive position through new ways of creating, delivering, and capturing value for its stakeholders, or a business model model (Casadesus-Masanell & Ricart, 2010).

Southwest Airlines
This US-based airline is considered to be the world's largest low-cost carrier.

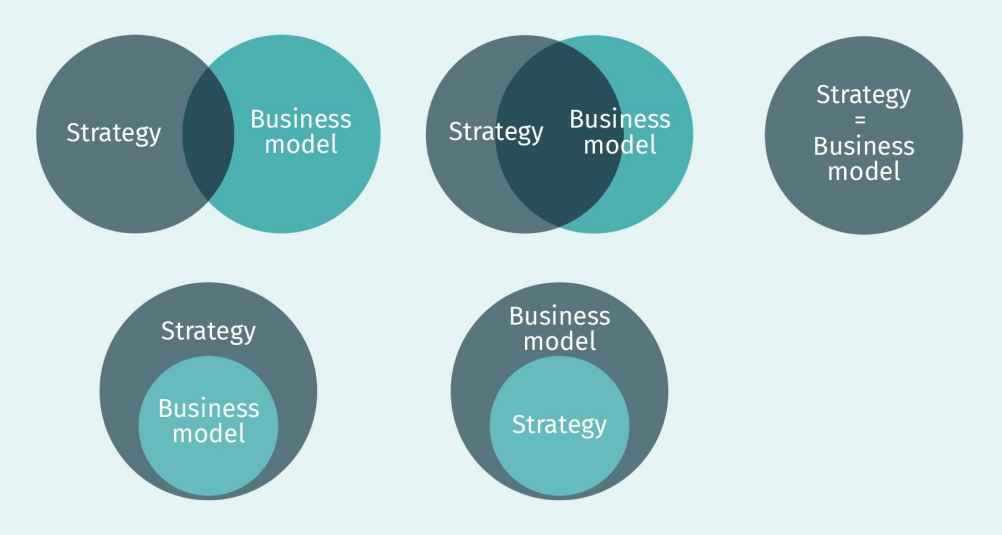
Both the terms "business model" and "strategy" are used by millions of web pages across the world. Such a wide usage of these terms has led to a loose conception of their meaning (Seddon & Lewis, 2003). Seddon and Lewis (2003) argue that examining the leading scholars' definitions of both terms show that there is an overlap between both terminologies. They proposed five different possible overlaps, as explained in the figure below:

1. In concept A, there is a little overlap between business model and strategy terminologies.
2. In concept B, there is more overlap between the meanings of both terms.
3. In concept C, the meaning of strategy is similar to the business model.

4. In concept D, the business model is a part of the strategy.
5. In concept E, strategy is a part of the business model.

Seddon and Lewis (2003) argued that asking the question, "Which of the five types of Venn diagram is correct?" is not helpful as the more one delves into a review of expert definitions for business model and strategy, the more likely one is to conclude that both terms are similar. Moreover, they assert that if both have the same meaning, business model terminology should not be used anymore, similarly to terms such as "new economy." However, Seddon and Lewis (2003) believe that there is a difference between both: Business models deal with the core logic of the business, and strategy deals with the competition.

Figure 11: Overlaps between Business Model and Strategy Concepts



Source: Adeel Tariq (2022), based on Seddon and Lewis (2003).

Seddon and Lewis (2003) argue that a business model is different from strategy and adds value. They explain the difference between business model and strategy as a difference in the level of abstraction and report that "a business model is an abstract representation of some aspect of a firm's strategy" (p. 3). According to their definition, a strategy is a large circle that contains smaller business model circles as, depending on the firm's strategy, there could be several business models. Thus, strategy has direct implications for the design of business models.

Considering the critical role of the strategy and business models in the success of several companies, such as Netflix, Dell, and Walmart (Magretta, 2002; Teece, 2010), it is important to understand the success factors that influence the business models and strategies. Success factors refer to a set of actions or activities that are important for the success of the firm or to achieve specific goals (Bullen & Rockart, 1981; Chou & Pramudawardhani, 2015); ignoring success factors could lead to losing the competitive advantage (Holotiuk & Beimborn, 2017). Success factors are different from the drivers as these refer to the motivation regarding the adoption of an action, activity, or set of actions (Chou & Pramudawardhani, 2015).

Research on factors related to the success of the business dates as far back as 1980, when Rockart (1980) studied success factors of the information system executives. Similarly, de Brentani (1991) identified factors that lead to the successful development of new business services. Over time, many studies have been produced related to success factors and different types of strategies (Brenes et al., 2008; Chin et al., 2008; Holotiuk & Beimborn, 2017; Mendoza et al., 2007), success factors, and business models (Karlsson et al., 2017; Labes et al., 2015; Langvinienė & Daunoravičiūtė, 2015; Long et al., 2018).

Labes et al. (2015) analyzed success factors in the past literature (de Brentani, 1991; Horsti et al., 2004; Leidecker & Bruno, 1984; Rockart, 1980; Schoeffler et al., 1974; Walther et al., 2012; Waterman & Peters, 1982) and identified eight success factors (business strategy, partner networks, resources and activities, cost, value proposition, distribution and customer relationships, revenue, and target markets) that were common among all. When they compared the eight success factors across the studies, business strategy was found to be the most common success factor, followed by resources and activities and value proposition. On the other side, revenue and target market were identified as the least common success factor in the past literature (Labes et al., 2015).

Success Factors and Strategy

Researchers have identified different success factors for strategy implementation at different levels. For example, Brenes et al. (2008) identified five success factors critical to strategy implementation in Latin American firms the chief executive officer (CEO) leadership strategy; the systematic execution; the form of corporate government required from strategy formulation, execution, and follow-up; the strategy control and follow up; and the strategy formulation). They were thus able to understand how more successful companies outperformed less successful companies. They established the CEO leadership strategy and systematic execution as the most prominent factors among the other key success factors.

Alamsjah (2011) uses a middle-level manager's perspective to identify key success factors for the strategy implementation; they argue that middle-level managers can execute strategy better than those higher up. Contrary to the study from the Brenes et al. (2008), they established that CEO leadership does not have an important role in strategy implementation; however, they need a clear direction from the top management. They identified 11 success factors for successful strategy implementation, where seven out of 11 factors are the most significant (corporate culture, clear strategy, communication, execution plan, people competencies, documentation, and performance management), and the remaining four factors were found to be the least significant (managing change, CEO involvement, organizational structure, and uncertain environment). Scholars have used the terms "strategy execution" and "strategy implementation" synonymously and put focus on them as they are necessary for the organization's success (Vigfússon et al., 2021).

Along the same line, Vigfússon et al. (2021) conducted a systematic review to identify success factors for the strategy implementation and delineate 18 factors that are critical to the success of strategy implementation. They relied on Pryor et al.'s (2007) 5Ps (purpose, principles, processes, people, and performance) integrated model to identify success factors, as given in the figure below. They illustrate that studies on the success factors of

strategy implementation have been conducted at the three different levels: corporate, business unit, and functional or operational levels. They further group the success factors according to Pryor et al.'s 5Ps model (2007):

- "Purpose" includes leadership styles, goal and objectives of the strategy, management styles, well-defined strategy, tactics implementation, and broad strategy formulation.
- "Principles" covers change management led by executives, shaping corporate culture, and organizational learning.
- "Processes" entails communication, timeframe settings, and existing resources.
- "People" includes shared understanding.
- "Performance" covers alignment and integration, monitoring strategy, staff accountability for task and action, and awards linked with implementation.

Figure 12: 5Ps Model of Strategy Implementation

Source: Adeel Tariq (2022), based on Pryor et al. (2007).

Success Factors and Business Models

While authors have conducted conceptual and empirical research to identify success factors of the business model, others have focused on understanding key success factors of business model innovation in general, such as Fibitz and Ulrich (2018). Still others have identified the success factors of business models in the hospital service industry (Langvinienė & Daunoravičiūtė, 2015), the food and beverage industry (Long et al., 2018), the wine industry (Gebauer & Ginsburg, 2003), and others such as agriculture biogas production (Karlsson et al., 2017).

Fibitz and Ulrich (2018) conducted a systematic literature review to understand what factors lead to business model innovation success and categorized success factors into internal and external factors. Internal success factors are

- learning capabilities
- knowledge management
- resources and capabilities
- leadership skills (strategy understanding and risk perception)
- management characteristics
- harmonization (employee satisfaction, brand reputation, and growth in revenues)
- organizational structure
- partnership and cooperation

External success factors are

- a stable economy
- reduction of market uncertainties
- improved regulatory framework and standards

Other researchers have produced success factors of business models specific to different industries. Langvinienė and Daunoravičiūtė (2015) presented success factors for a business model in the hospital industry and identified innovation, empowered employees, customer relationship management, technology, internal marketing, and value proposition as the most influential. Similarly, Long et al. (2018) described the critical success factors of the business model for sustainability as collaboration, continuous innovation, clear narrative, vision and profitability, the foundation of sustainability, and external events. Considering the increased importance of business models for sustainability, Karlsson et al. (2017) identified the success factors of the biogas production business models as long-term prospects, corporate strategy, **influential enthusiasts**, collaboration, business skills, experience, and the secure market.

Influential enthusiasts
These individuals believe in sustainable energy sources and are willing to take personal financial risks to achieve them.

Analyzing the key success factors among the different studies, a few overlaps are observed in the success factors of the business model and business model innovation. Key success factors that appear more than once are provided in the table below. Cooperation and market conditions are the most common success factors. Moreover, business strategy, leadership and management characteristics, and organizational culture are found to be common key success factors.

Table 5: Success Factors of the Business Model/Business Model Innovation

Number		Karlsson et al. (2017)	Long et al. (2018)	Langvinienė & Daunoravičiūtė (2015)	Fibitz & Ulrich (2018)
1	Partnership, cooperation, and collaboration	X	X		X
2	Market conditions and consumer trends	X	X		X

Number		Karlsson et al. (2017)	Long et al. (2018)	Langvinienė & Daunoravičiūtė (2015)	Fibitz & Ulrich (2018)
3	Long-term perspective (e.g., clear narrative and vision)	X	X		
4	Business strategy (e.g., strategy understanding)	X			X
5	Continuous innovation		X	X	
6	External factors		X		X
7	Profitability, growth in revenues		X		X
8	Employee empowerment and satisfaction			X	X
9	Regulations		X		X
10	Leadership and management characteristics				X

Source: Adeel Tariq (2022).

4.2 Relevant Success Factors of Digital Business Models

Digital transformation has enabled opportunities for companies to embrace digital technologies in their business strategies and business models. Embracing digital technologies increases a company's proximity to the potential customers and enhances network connectivity between concerned stakeholders. Consequently, the competitive advantage of a business does not rely on traditional models of infrastructure and control over limited resources (Rohn et al., 2021). The increased relevance of digitalization in today's competitive and fast-changing environment has captured scholars' attention, leading them to examine the relevant factors that are key to the success of digital business models. As a result, scholars have specifically focused on identifying factors critical to the success of digital business models. Understanding these factors is important for a firm's digital businesses models as many have faced difficulty in their survival, with some even disappearing from the business landscape (Yoon et al., 2018).

Rohn et al. (2021)

As the platform is one of the essential elements of digital business models (Ahmad et al., 2020; Bock & Wiener, 2017; Weill & Woerner, 2013; Zott & Amit, 2017), Rohn et al. (2021) use a qualitative research approach to identify the factors that led to the success of digital **platform-based business models** in the metal and steel industry. Some of the most com-

petitive companies in the world, such as car sharing platform Uber, use the platform-based business model. Rohn et al. (2021) divide success factors according to three dimensions of the business model: value creation, value capture, and value delivery.

Platform-based business models
In this model, companies create and capture value by facilitating interaction across a large number of participants, usually consumers and producers.

They further divide the success factors for the value creation dimension of digital platform-based business models into key activities and resources. Key activities essential for success are the creation of matches between sellers and buyers through an ecosystem. This ecosystem must be trusted by the participants. Facilitation of direct interaction between participants is also necessary. Key resources include establishing a suitable network size that will enhance interactions among participants. Information about the customers and product and a clear strategic focus to provide offerings that meet the customer needs are vital, along with leadership, management, and essential employee skills (e.g., developers) (Rohn et al., 2021).

Success factors for the value delivery dimension include a speedy platform that enables efficient and convenient trading processes between the participants. Organizations must also reduce the search time and transaction costs for the improvement of inefficient value chains as it also facilitates price comparison time on the platforms. Price transparency mechanism, automatic offer preparation, quicker mapping of customer needs, and shipping without charges as per customer needs are also critical to the success of the business (Rohn et al., 2021).

Value capture mechanism success relies on the pricing mechanism and key revenue streams. For success, a company may use mechanisms such as **fixed pricing** and **differentiated pricing**. A company may also use different revenue models, such as subscription-based (where organizations receive a recurring fee from customers after specific intervals) or commission-based revenue (where organization generates revenue by charging a commission for transactions) models (Rohn et al., 2021).

Fixed pricing
Prices of products and services are fixed and not subject to change based on bargaining.

Differentiated pricing
A company sets different pricing for different customers for the same products and services.

Rohn et al. (2021) state that the promotion of digital transformation internally and externally is a key factor for the success of digital platform-based business models. Internally, companies often face a challenge from their employees, as they may take digitalization as a threat to their jobs. As a result, it is imperative that a company meticulously addresses such fear among its employees. Moreover, the company should communicate such transition with external partners so that they can also change their traditional business practices and switch to digital platforms. Rohn et al. (2021) also mention platform architecture/openness as a success factor as the number of participants and a product's growth on the platform is subject to increase if a high degree of openness is granted. Such openness is essential for scaling up a business because it provides benefits to buyers, sellers, distributors, and other participants as participants expect more traffic, increased transaction speed, and a price comparison mechanism along with other benefits.

Rohn et al. (2021) described the strategic decision-making process as a key success factor of the digital platform-based business. Businesses can focus on the small or niche market at the start due to limited resources. As soon as they achieve a reasonable customer size and meet their viable needs, they can target a wider customer base for greater market penetration. Lastly, the authors emphasized the importance of start-up culture, as it is difficult to incorporate changes into established large firms suffering from long and detailed

decision-making processes and hierarchical structure. Such platform-based digital business should be established as a separate entity with short decision-making processes, specific structures and processes, and coworking spaces (Rohn et al., 2021).

Labes et al. (2017)

Since cloud computing is regarded as an essential part of digital transformation in the digital era (Cohen et al., 2000), Labes et al. (2017) identify the success factors of the **cloud provider** business models based on interviews with experts. The authors' classification is based on the factors they observed in the literature. They identify these factors as business strategy, distribution and customer relationship, value proposition, target market, cost, partner network, revenue, resources, and activities. Note that in the traditional business model, value proposition was considered to be the most important.

Cloud provider
This company offers cloud computing-based services and solutions to customers (individuals and businesses).

Yoon et al. (2018)

Yoon et al. (2018) provide additional commentary to business model success factor research, examining how success factors have evolved in the time of digitalization. They particularly focus on **unicorn enterprises**, as their valuation has exceeded billion dollars (e.g., Uber and Airbnb).

Unicorn enterprises
This type of private company has a valuation of more than $1 billion.

Hyperconnectivity

Yoon et al. (2018) recognize hyperconnectivity and creative innovation as the most important success factors of the business. Hyperconnectivity refers to the use of systems and devices to provide increased connectivity to social media and other information sources. Enterprises can use hyperconnectivity to harness the crowd's collective intelligence, enabling them to solve complex problems. Moreover, hyperconnectivity enhances an enterprise's value chain, adding advantages such as reduced financial risk, extensive access to ideas through customer, reduced time to launch a product, and service to the market.

Yoon et al. (2018) categorize hyper-connectivity into four factors (in order of importance), "crowdsourcing, open innovation, network effect, and platform" (p. 110). Crowdsourcing describes when a company sources, or collects, solutions to a problem, ideas, opinions, or other smaller tasks from a large or rapidly evolving group of people. Crowdsourcing examples include the LEGO crowdsourcing community. LEGO uses crowdsourcing to collect new product ideas and allows customers to design their own LEGO sets (Osterwalder & Pigneur, 2010). Crowdsourcing facilitates enterprises to source ideas from the public and is a more viable option for businesses using the increased connectivity to integrate customers within their ecosystem. A company can use the information and ideas collected from the crowd to make processes easier and ensure success.

In open innovation, an enterprise attracts ideas from the outside and also shares inside ideas not utilized by the company with outsiders. The digital era has changed the company offering landscape, shortening the life cycles of products and services. Using open innovation, a company can leverage their knowledge to explore ideas and innovate products and services. An example of a business that uses open innovation is the Valve Corporation (Gassmann et al., 2014). Network effect is a phenomenon where the increased num-

ber of customers enhance the value of a product or service for its existing users. The network effect helps to scale up a business as the value of a network increases with the number of participants. Yoon et al. (2018) recognize platforms as an important success factor; they enable companies to provide their offerings online, as well as connecting the ecosystem's participants.

Creative innovation

Creative innovation is important among the main success factors. It can be divided into long-tail, "less is more" innovation, disruptive technologies, and personalization success factors. Long-tail refers to offering many niche products. Here, the profitability of the company is more than other companies that provide a variety of offerings, because a company is likely to obtain greater profit margins (Yoon et al., 2018). In "less is more" innovation, a company provides only the necessary features in products and services, simply giving the customer what they expect. This enables companies to provide simplified products and services at a lower cost while providing customers with meaningful and memorable experiences.

Disruptive technologies describe technologies or innovations that change the way businesses or industries operate. Adopting such technologies or innovation ensures a company's survival, as it allows the company to introduce new products and services, create a new market, value network, changes the conduct of the businesses, and become more competitive. Personalization refers to offering customized products and services to different customer groups rather than relying on standard products and services. This helps companies attract new customers using network effects and platforms. Through personalization, companies can collect customer information that can be used to design new products and services. In the digital era, companies need to offer products and services that give customers a better experience, making personalization vital.

From a critical evaluation of the studies on the key factors of the digital business model, the similarity between the success factors mentioned by Labes et al. (2017) and Rohn et al. (2021) are clear. Both have considered internal factors such as key resources and activities; leadership management and employee skills, and, most importantly, business strategy and external factors (including partner networks, promotion of digitalization with external partners and customers relationships, and quicker mapping of the customer needs. However, Yoon et al. (2018) emphasize the factors that increase opportunities for an organization, such as crowdsourcing, open innovation, long tail, "less is more" innovation, and disruptive technologies.

Factors mentioned by Labes et al. (2017) and Rohn et al. (2021) could be regarded as more relevant to the success of the digital business model; however, the significance of the factors mentioned by Yoon et al. (2018) should not be discounted. These factors could be vital in providing opportunities to explore products and services valued by customers and to create a unique value proposition and define a clear business strategy. Despite their differences, these studies have highlighted the significance of business strategy directly or indirectly for the organizations as it helps to decide which business to compete in and how to compete within that industry to stay competitive or gain a competitive advantage.

4.3 Strategy Levels and Strategy Examples in the Context of Digital Business Models and Their Elements

The literature has highlighted organizational strategy as one of the most complex and significant concepts used in studying organizations (Beard & Dess, 1981). Corporate strategy specifically has higher importance for digital businesses to stay competitive in the market (Labes et al., 2017). Early researcher Hambrick (1980) recognized that strategy is important in order to deal with or provide direction related to important decisions such as

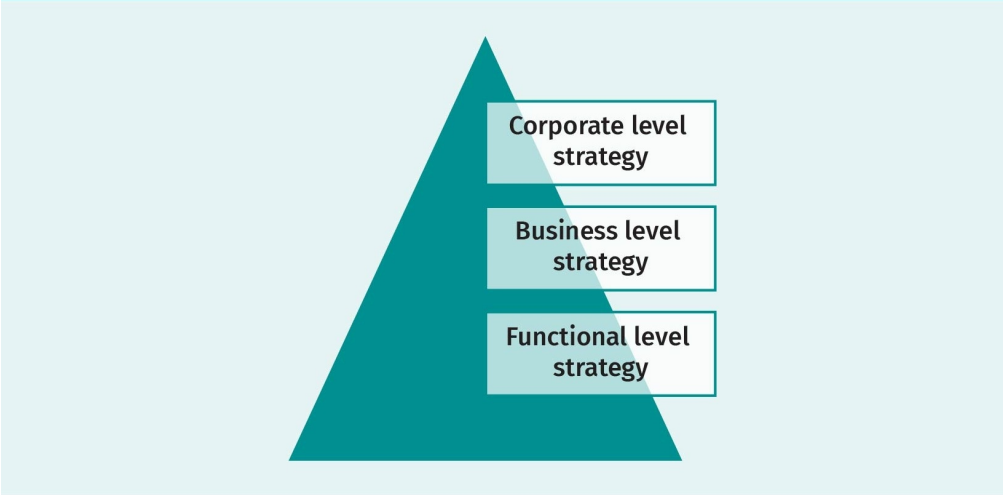
- corporate linkages with the external environment;
- strategy affecting the internal structure and processes; and
- corporate performance.

Strategy Levels

Three levels of strategies have been mentioned in the literature: (1) corporate-level strategy, (2) business-level strategy, and (3) functional-level strategy (shown in the figure below) (Beard & Dess, 1981). The corporate-level strategy describes the industries that an organization can compete in or what set of businesses an organization is a part of (Hambrick, 1980; Hofer & Schendel, 1980). At this level, organizations need to make major decisions such as the deployment of firm resources, sales, and other important indexes. Some firms compete in a single industry where other global firms may compete in a variety of industries (Beard & Dess, 1981). Major grand corporate-level strategies include

- growth. A company follows its growth track by expanding its product line and market reach.
- stability. A company takes a set of actions to maintain its current competitive position in the market.
- retrenchment. A company takes a set of actions to reduce diversity or the overall size of the operations.
- combination strategies. A company follows a combination of growth, stability, and retrenchment strategies.

Figure 13: Strategy Levels



Source: Adeel Tariq (2022), based on Beard and Dess (1981).

Business-level strategy deals with how an organization should compete within a specific business or product market industry. A business may have a specific business-level strategy for each industry to offer value to the customer and gain a competitive advantage (Beard & Dess, 1981). A firm may adopt cost leadership, differentiation, focused cost leadership, focused differentiation, or integrated cost/differentiation strategy.

In a cost leadership strategy, a firm takes a set of actions to manufacture products or services that meet customer needs at the minimum cost compared to its competitors (Hitt et al., 2014). Differentiation strategy focuses on a firm's actions taken to produce products and services that customers recognize as being different from other offerings in the market (Hitt et al., 2014). In focus strategies, firms produce goods or services with a focus on a particular competitive segment such as (1) a particular buyer group (e.g., university students), (2) products focused on a specific group (e.g., products for professional golfers), or (3) a different geographic region, (e.g., northern Germany) (Hitt et al., 2014).

In a focused cost leadership strategy, firms create products and services for a specific market segment at the lowest cost. IKEA follows this strategy by focusing on young buyers who desire style at the lowest cost. Similarly, in a focused leadership strategy, firms produce differentiated offerings for a specific market segment, such as laser tattoo removal services (Hitt et al., 2014). Finally, in integrated cost/differentiation, a firm takes a set of actions to pursue both low cost and differentiation strategy simultaneously. An example is the American retail corporation Target, whose slogan is "expect more, pay less" (Hitt et al., 2014).

Functional level strategy specifies what outcome the organization wants to achieve from a specific functional unit, such as the marketing and finance department (Hofer & Schendel, 1978). Organizations need to consider functional level strategies in different departments: finance, operations, human resources, marketing, and research and development departments (Hofer & Schendel, 1978).

Before the emergence of digitalization, the information technology (IT) strategy was considered to be a functional level strategy. It must align well with the business strategy such that business strategy provides direction for the firm IT irrespective of its critical role in shaping business strategy (Bharadwaj et al., 2013). This alignment view of IT strategy as a functional level strategy is visible in a number of studies such as Chan and Reich (2007). However, the emergence of digital technologies has transformed the way businesses operate, interact with customers, sell products and provide services, and participate in external networks with other collaborators (Bharadwaj et al., 2013).

Bharadwaj et al. (2013) recognize the new role of IT strategy as a digital business strategy, a fusion of IT strategy and business strategy, and not subordinate to business-level strategy.

Strategy Examples in the Context of Digital Business Models and Their Elements

Google's internet search engine can be used as a prime example to illustrate strategy and digital business model elements. The company's strategic choices are linked with the nature of the business and the industry in which it competes. Google's generic business-level strategy involves gaining a competitive advantage against other online advertising firms, such as Facebook and Twitter. To this end, the company mainly follows an intensive growth strategy at the corporate level. Through continuous improvements to its products and services, Google is able to maintain itself as a top company in the online advertising industry, heavily influencing the industry landscape (Thompson, 2019). The company's business-level strategy involves the differentiation strategy; Google differentiates itself from competitors by offering an innovative range of products, such as mobile applications and operating systems (Thompson, 2019).

In line with its strategy, Google has provided two types of digital offerings: free online search services and online advertising services. Google's digital offerings are offered to two different types of customers: internet users and advertising customers (Bock & Wiener, 2017). Google is always improving its search algorithm to ensure competitiveness over other search engine companies (Thompson, 2019). To enhance the digital experience (or customer experience), the company allows businesses to advertise to internet users based on their specific interests (personalization). Google links its activities with its customers and other external partners through a digital platform. Lastly, Google uses an auction-based pricing model to determine the cost of advertisement. For example, the cost of an advertisement is determined based on the popularity of the customer-defined keywords (Bock & Wiener, 2017).

According to German law, a single pharmacist is only allowed to operate four pharmacies. As a result, more and more pharmacists have joined collaborative networks, establishing service enterprises that deliver a range of services to pharmacies (Bock & Wiener, 2017). One such company ~~is wir leben – Service (WLS) which~~ is based on a likely growth strategy that offers a variety of services, such as human resources and procurement services, to 12 pharmacies in Northern Germany. The company's unique value proposition lies in offering digital services (referred to as "contents" in the digital business model) via the pharmacies' websites to connect patients and nursing centers needing prescriptions from physi-

cians (Bock & Wiener, 2017). In the same vein, WLS creates value for nursing centers with prescription management, which helps them collect follow-up prescriptions for different patients from different physicians (Bock & Wiener, 2017).

Services that enable the customer to have a follow-up prescription and medicine from home are quite valuable, particularly to elderly or immobile patients. To provide the unique value proposition of the prescription services, WLS designed and developed the digital platform OrderMed. Using this platform, patients can either pick up their medication on their own or have it delivered. WLS uses digital platforms to connect all the participants engaged in the prescription order and fulfillment processes (Bock & Wiener, 2017).

The two examples above clearly illustrate the importance of strategy to describe how organizations based on growth and differentiation strategies establish unique value propositions and design their business models accordingly. However, different organizations may follow different strategies based on a number of external factors such as **technological turbulence**.

Technological turbulence
This is the rate of technological development within an industry.

SUMMARY

Due to changing customer requirements, intensified competition, and global megatrends such as digitalization, organizations need to adopt a competitive strategy to stay ahead of the competition. Strategy describes the company's long-term direction, and the business model lays out the coherent execution of the strategy. Realizing the importance of strategy and business models, a number of studies sought to understand the success factors of both. Researchers have identified different factors important for the success of strategy implementation, such as the CEO's leadership strategy and clear communication. However, a variance is observed among the various suggested success factors because the studies have been conducted at different levels (e.g., different hierarchy levels such as the CEO or manager level, or different strategy levels, such as corporate or functional level). Researchers have highlighted market conditions and consumer trends, partnerships, cooperation and collaboration, long-term perspectives, and business strategy, among others, as additional success factors.

The key success factors of the digital business model include internal factors, such as key resources and activities, leadership management and employee skills, and business strategy. Important external factors include partner networks, promotion of digitalization with external partners, and customer relationships. Researchers have named three different strategy levels in the literature: (1) corporate-level strategy, (2) business-level strategy, and (3) functional-level strategy. Corporations may

adopt different strategies depending on the level. For example, Google adopted a growth strategy at the corporate level and a differentiation strategy at the business level.

UNIT 5

THE BUSINESS CASE AND SPECIAL FEATURES OF INVESTMENT PLANNING

STUDY GOALS

On completion of this unit, you will be able to …

- understand the significance and elements of the business case.
- explain the connection between the business case and the business model.
- describe different revenue mechanics for the business model.
- understand business model performance indicators.
- describe factors that influence investment planning.

5. THE BUSINESS CASE AND SPECIAL FEATURES OF INVESTMENT PLANNING

Case Study

As a key digital manager, you have been given the responsibility to identify digital products and services to support your midsize media company in competing against major industry rivals. Your top management asks you to use tools or a course of action to ensure that the opportunity you identify is worth investing in. For this purpose, you follow different steps, such as to survey customers and to interview key stakeholders to validate market segment, identify different alternatives, and collaborate with cross-functional teams in order to identify effects, associated risks, and possible future cash flows. Your financial calculations of cash flow show promising prospects for the identified opportunity; however, risk analysis shows that you may lose very quickly, as a competitor may imitate your idea (Sheen & Gallo, 2015).

From this case study, you can understand that whether you are working as a manager, employee, or in top management, you may identify different opportunities to help your organization in meeting its short-term and long-term objectives. Or, perhaps you will be asked to spot opportunities that can help your organization to compete with major competitors in the industry. In any case, you need to follow a course of action to improve and innovate business models, as well as identify suitable revenue models and investment plans in order to seize an opportunity. In this unit, we will discuss what course of action (business plan) you can follow to convince top management of your identified opportunity. We will also cover the different revenue mechanics and the features of investment for an organization.

5.1 Elements of the Business Case and Connection to Previous Concepts

In today's dynamic environment, organizations must respond to environmental signals, which may involve introducing new products and services to meet customer demands. As a contributor to the organization, managers may identify new opportunities to help their organization meet important goals or respond to changing environments (Maul, 2011). However, whenever managers identify such an opportunity, they may need to convince the company's leadership to invest in their idea. For this purpose, they need to follow a course of action to capture the opportunity and consider whether other available alternatives look more attractive (Maul, 2011). This is where the business case is important to help to realize a potential opportunity. A business case is a tool to spot and compare different valuable alternatives, to pursue identified opportunities, and then follow the opportunity that is likely to create the most value to the organization (Maul, 2011).

With an effective business plan, you may convince top management or other key stakeholders whose support you may need to implement your plan. A business case helps you to compare the strengths and weaknesses of different alternatives and identify risks before making a final decision (Maul, 2011). With such a practical approach, managers are likely to make a better decision and gain the trust of key stakeholders for the implementation of the most valuable opportunity.

The Business Case versus Business Plan

Sometimes confusion exists between the business case and other commonly-used organizational tools, e.g., the business plan. Business plan and business case may sound similar, but they differ in concept and application in small or large firms. A business case explores the possible consequences if a specific course of action or opportunity is pursued (Maul, 2011). For instance, if an organization wants to capture a new market for its sales, top management may ask a manager which of three alternative markets are more suitable for investment to meet organization goals. A business plan, in contrast, explains an organization's term planning, estimated revenues, expenses, strategy, and other necessary information. Managers mainly use the business plan to secure funding from investors or to plan the implementation of a strategy for the organization or unit (Maul, 2011). Moreover, the use of a business case is not limited to organizations; start-ups may also use one to identify a better opportunity, convince their key stakeholders, and support their argument that their identified opportunity will create the most value (Sheen & Gallo, 2015).

Main Purposes of a Business Case

Maul (2011) explains that a business case is similar to solving a problem. For instance, when a company doesn't have a sufficient number of employees to complete organizational tasks, using a business case helps to identify the most suitable solution to such a problem and convince the key stakeholders regarding the proposed solution. Scholars have formulated different purposes of the business case. Sheen and Gallo (2015) reported three main reasons:

1. Introducing new products or services—An organization wants to understand how the introduction of new products or services will add to the overall profitability of the organization. The responsible person will describe how the expected benefit or revenue is greater than the overall estimated cost (e.g., from manufacturing, marketing, and other essential costs).
2. Investment into new technology—When an organization is thinking about investing in new technology, such as an enterprise resource planning (ERP) system, they need to consider the impact on the whole organization. In other words, which department will see the benefits, and which department will incur the costs?
3. Improvement of company facilities—An organization may want to improve its existing facilities, such as the extension of the building, or the implementation of a green system into the organization. For this, an organization may need a business case to make a better decision.

Maul (2011) documents that organizations need a business case to

- demonstrate the value of proposed products or services for the organization.
- categorize projects according to their value or importance and remove the low value options.
- explain the value of new offerings to potential customers.
- attain access to resources to pursue a new opportunity or project.
- make a decision related to outsourcing a function.
- decide whether to spend money on attaining new capabilities or training employees.
- change the existing offerings.

There are several similarities between the use of the business case offered by both Sheen and Gallo (2015) and Maul (2011); however, Maul (2011) has offered the most extensive list related to the purpose of the business cases.

Elements of the Business Case

Several researchers have offered different business case elements. Some, such as Maul (2011) and Sheen and Gallo (2015), have offered general and more applicable elements of the business case. While Sheen and Gallo (2015) have referred to "elements" as "components," the terms can be used interchangeably. Maul (2011) has offered seven elements:

1. Define the opportunity. A manager must demonstrate the situation that their business proposal will influence or the business objective that they want to achieve through an identified opportunity.
2. Identify the alternatives. This step requires identifying different alternatives and choosing the best three to four options for analysis.
3. Gather the data and estimate time frame. The necessary information about identified alternatives is obtained and the time required for the implementation is estimated.
4. Analyze the alternatives. In this step, the influence the identified alternatives could have on the business objectives is analyzed.
5. Assess the risk of selected choice. A choice is selected based on the analyses performed and opportunities to lessen the risk associated with the selected choice are explored.
6. Generate a plan for implementation of the selected choice. Companies need to establish how they will achieve their milestones and goals using the selected choice.
7. Communicate your case. In the last step, a presentation should be developed to communicate the case to key stakeholders for their support.

Ward et al. (2008) propose a six-step approach to building a better business case for IT investment.

Step 1: Define business drivers and investment objectives

Business drivers refer to the current issues faced by the organization, for which the top management may need solutions. The business case should describe how the proposed investment is going to achieve organization investment objectives for all the business drivers. For example, a mobile company was experiencing an increased customer dissatisfaction due to increased competition and poor services. Since the company differentiation strategy was based on the service quality rather than competitive pricing, the company

decided to invest in call centers to improve the service quality and increase sales from new services. The objective of the company here is to increase service quality, increase sales of new services, and gather necessary service information for better services without increasing the number of staff in the call center (Ward et al., 2008).

Step 2: Identify benefits, measures, and owners

After building a consensus on the investment objectives, the manager must identify what benefits are expected after completing the project. Ward et al. (2008) describe the difference between investment objectives and benefits as follows: Investment refers to overall investment objectives, which are agreed upon by all key stakeholders, whereas benefits are gains delivered to a certain group of people. There may be three to four investment objectives, which may raise different benefits for different groups of people.

Ward et al. (2008) demonstrate the difference between investment objectives and benefits with an example of a company that established an electronic point of sale system. It provided different benefits to different groups; for instance, management was able to know real-time sales, customers were happy about more products and reduced checkout time, and employees found it easier to use. After establishing the benefits, it is important to determine two points. Firstly, how should the benefits be quantified? Secondly, who should be the owner of a specific benefit (Ward et al., 2008)?

Step 3: Structure the benefits

Ward et al. (2008) suggest structuring the benefits according to two factors: type of business change and existing or expected information about the benefits, i.e., the degree of explicitness. Type of business change can be further categorized into (1) perform new activities (do new things), (2) perform activities for improvement (do things better), and (3) stop performing activities (stop doing things). The benefits can be further categorized into (1) financial or economic, (2) quantifiable, (3) measurable, and (4) observable.

Step 4: Recognize organizational changes that allow benefits

As mentioned in Step 3, organizations may be involved in different types of changes. Top management is often more interested in benefits that are based on introducing new activities or innovation and reducing the waste in the organization by stopping certain activities rather than improving how they are carried out (Ward et al., 2008).

Step 5: Establish the explicit value of each benefit

After ascertaining the changes that enable the benefits, value must be assigned to each benefit before investing. Each benefit should be initially allocated to an observable row, and later moved to other rows of measurable, quantifiable, and observable benefits. These benefits are defined below:

- Observable benefits are assessed based on the opinion or judgment of an expert and are qualitative, subjective, and intangible.

- Measurable benefits are already identified and can be used to determine the baseline before investing in a project (Ward et al., 2008).
- Quantifiable benefits assign value to the benefit or can be placed easily (as with measurable benefits). Additionally, the magnitude of the benefits can be determined here. Ward et al. (2008) reported that half of the successful organizations participating believed that they effectively quantify the benefits, and 15 percent of the less successful organizations believed that they quantify benefits satisfactorily. 50 percent of the less successful organizations reported that they overstated the benefits to gain funding, while only 20 percent of the successful organizations claimed to overstate the benefits.
- Financial benefits can be expressed in financial terms. A benefit should only be stated as financial if it is possible to establish that the value. Financial benefits can be combined to calculate the **internal rate of return** or **pay-back period**. However, one should be careful about the underlying data used for financial calculations (Ward et al., 2008).

Internal rate of return
This financial metric is used to estimate the profitability of investments. It is a discount rate that makes the net present value of all cash flows equal to zero.

Pay-back period
This is the period of time required to recover the investment.

Step 6: Identify costs and risks

After identifying the benefits, it is most important to determine the cost and associated risk. The cost associated with IT is easy to determine; however, the cost linked with organizational change and business is difficult to determine, and managers often understate or do not include such costs. Afterward, organization can make a financial assessment of the proposed options. Considering that financial appraisal has been criticized for having several limitations, the final decision should not be solely based on the economic return. The organization should consider different types of associated risk, such as financial, technical, and organizational change risk. The risk of not realizing the business case should also be assessed and a plan to mitigate particular risk should be included (Ward et al., 2008).

Table 6: Framework for Developing a Business Case

	Perform new activities	Perform activities for improvement	Stop performing activities
Economic			
Quantifiable			
Measurable			
Observable			

Source: Adeel Tariq (2022), based on Ward et al. (2007).

In the same vein, Sheen and Gallo (2015) propose five steps for the business case: 1) prepare the business case, 2) consider relevant participants, 3) build the case, 4) crunch the numbers, and 5) communicate the business case.

Step 1: Prepare the business case

This requires identifying the business need to be solved. Here, managers do not need to worry about logical arguments or financial measurement. For example, imagine you need to create a business case for your workplace. You may need to solve a customer problem

about a particular product, or you may need to update the IT system to increase the efficiency of different departments. You may identify the problem yourself, or the manager may bring it to you as something they faced during routine processes or strategic planning. You need to understand how your company reviews and approves business cases: Does your company have a formal process for approving or declining the business case? Do key stakeholders evaluate the project individually or as collection of cases? Are the cases all reviewed at the end of the year or quickly reviewed as they come up? How much and what type of specific detail do stakeholders require? Do the stakeholders accept the complete project or only part of it (Sheen & Gallo, 2015)?

Step 2: Consider relevant participants

After identifying a business need, the next step is to get to know your audience. Relevant stakeholders, who may include your boss or your company's top management, have the authority to approve or decline the proposed business. You need to understand who has the real authority to approve your business case. The business case benefits both internal and external participants. You need to understand what your stakeholders want or they gain from the project (Sheen and Gallo, 2015).

Step 3: Build the case

Sheen and Gallo (2015) describe the third step as building the case to clarify the needs, build the cross-functional teams, consider alternatives, and think through the "how" at a high level. Here, you need to clarify which problems you are trying to solve and what opportunity you will pursue through your project. You may also need subject matter experts who provide detailed insight into your identified business need from a different perspective, such as people from the marketing, finance, and sales departments. Different alternatives for the identified goal should also be examined. The options should be examined in terms of which is more cost-effective, most efficient, or best synchronized with organizational culture. Ruling out less preferable options can be challenging.

Step 4: Crunch the numbers

You may need to make an effective outline of the resources and time required to complete the project and the expected benefits of the solution. Managers need to consider the cost and benefits associated with the business case and account for the risks. The return on investment (benefits divided by the cost) should be determined, as it gives a snapshot of a specific time. Companies also use other measures, such as **net present value**, internal rate of return, payback period, or a combination to determine the value.

Net present value
This is the present net worth of all cash flows occurring at a different time period in the future.

Step 5: Communicate the business case

Lastly, you need to communicate your business case to relevant stakeholders using a document or presentation using an existing or otherwise logical format.

Figure 14: Business Case Elements Comparison

Source: Adeel Tariq (2022).

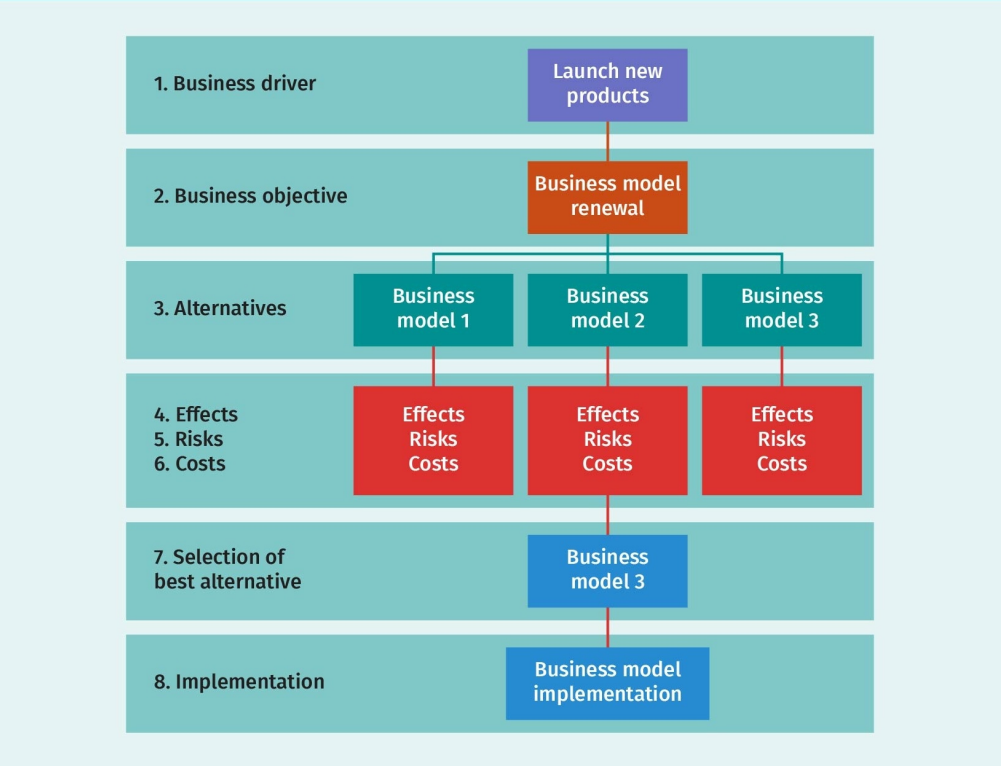
A comparison is made between elements of the business case in the figure above (Maul, 2011; Sheen & Gallo, 2015; Ward et al., 2008). All authors have named different elements of the business case; however, similarities and overlaps exist. All authors have emphasized identifying the business need (albeit with different terminologies), cost, and risk associated with the opportunity.

Meertens et al. (2013) compared the business case elements of Maul (2011) and Ward et al. (2008) and find that there is an overlap between elements. They identify eight elements based on the comparison, including (1) business drivers, (2) business objectives, (3) alternatives, (4) effects, (5) risks, (6) costs, (7) alternative selection, and (8) implementation plan. Business objectives are different from business drivers; the latter describes the opportunity that should be addressed, and the former describes the objectives that are aimed for (Meertens et al., 2013).

Connection between the Business Case and the Business Model

Meertens et al. (2013) report that organizations cannot rely on the same technologies indefinitely; even the best business models do not survive forever. Therefore, organizations need to adopt or innovate their business models to launch new products and services and for the better future performance of the organization (Meertens et al., 2013). By renewing their business models, organizations can explore further opportunities. For instance, a car manufacturer may need to choose their investment in car production based on alternative energy sources, such as electricity, biofuel, or hydrogen. Still, it is difficult to decide on a particular choice, as each alternative requires a different business model, and the success of the final product is unsure. Organizations need to design a business case for selecting the right business model for the identified opportunity. In line with this, Meertens et al. (2013) apply the business case method to the business model approach.

Figure 15: Business Case Connection to Business Model



Source: Adeel Tariq (2022), based on Meertens et al. (2013).

To illustrate, Meertens et al. (2013) visualizes the connection between business case and business model using a figure as given in the figure above. In the first step, they show that several factors cause the changes in the business model, such as intense competition, changing global dynamics, and product lives. In the second step, a business may define several objectives for the business model renewal, such as products or process and strat-

egy innovation. There could be different causes for the changes in the business model. In this context, the business objective is the change that the business wants to achieve through the change in the business model.

In the next step, organizations need to identify the different alternatives and different (digital) business models that can meet the identified organizational objectives. After that, the organization needs to take into account the effect, risks, and overall cost associated with each business model. Unlike other business case frameworks, here "effects" focus on both the negative and positive effects that each alternative causes. Risks associated with each alternative should be considered and a detailed risk analysis should be done to check all probabilities (Meertens et al., 2013).

After analyzing the effects and risks, managers need to consider all the costs and revenues associated with the different alternatives. This step is regarded as one of the most important, as the decision-maker may make a decision based on the numbers. In addition, managers should calculate the payback period and return on investment. Based on the analysis, the most suitable business model should be selected and an implementation plan developed (Meertens et al., 2013).

DEA Logic Company Case Study

Meertens et al. (2013) demonstrate the connection between business case and business model with the help of a company, DEA Logic, that sells products and services related to Dutch housing associations. They identify two main stakeholders in this case: DEA Logic and Dutch housing associations. The company's major product includes a C-Lock system and an access control system, both of which they want to sell to the housing associations. In order to do this, they need a new business model.

Dutch housing associations are non-profit organizations, they do not differ much from each other, and they operate within the boundaries set by the Dutch government. The main goal of the housing associations is to provide services such as building, managing, maintaining, and renting houses and apartments. Because they rent houses to low income individuals and families, the housing associations have more demand than supply, resulting in a waiting list (Meertens et al., 2013).

Meertens et al. (2013) explain that along with C-Lock systems, DEA Logic provides different internet protocol (IP) infrastructure solutions that suit Dutch housing associations, such as security, intercoms, and access. DEA Logic enters as a key partner with the housing associations as they make the apartments more secure and luxurious. This increases the suitable customer stream for each apartment along with the IP infrastructure and C-Lock system revenue in addition to the traditional rent revenue. Meertens et al. (2013) propose that the DEA Logic and Dutch housing associations partnership is a good example to describe the business case, developing two scenarios for this purpose as described here.

Business drivers

The housing association's main purpose is to build, manage, maintain, and rent apartments for low-income people, so they must design a system that reduces cost. The C-Lock system provided by DEA Logic serves the housing associations' missions (Meertens et al., 2013).

Business objectives

The following objectives can be pursued from the installation of new innovative solutions (Meertens et al., 2013):

- reduction in maintenance costs
- enhanced compatibility with the target tenant groups
- improved quality of the living environments
- increased tenant security
- luxury environment

Alternatives

The housing associations have two alternatives here. Firstly, they can continue with their traditional business model where they rely on monthly rent and subsidies from the government, and their main customers are people with low income. Secondly, they can have a new business model, where DEA Logic is their new key partner; C-Lock systems and IP infrastructure are included as key activities in addition to their other activities; the customer segment is extended to people who need extra care; and the revenue structure also includes infrastructure rent (Meertens et al., 2013).

Effects

Company will charge extra rent for using the IP infrastructure, but tenants can also opt for the non-standard C-Lock solutions from the housing associations (Meertens et al., 2013). It also reduces maintenance costs, such as renewing costs and time spent changing the name on door locks, keys, and digital nameplates. The system also increases the target group of customers to those who need extra care, as the system can be adjusted according to their needs. The security of the house is also increased as it is difficult to forget electronic keys (Meertens et al., 2013). This also increases the quality of living for the tenants. However, as there is no other such solution available as provided by the DEA Logic company, installing their system make apartment building dependent on DEA Logic (Meertens et al., 2013).

Risks

Two types of risks are involved with the IP infrastructure:

1. The technology is new and has, to date, only been installed in one apartment building.
2. There is no substitute for this technology, as only one company has developed this solution.

Both types of risk are interconnected, so there is a chance that the technology does not work or perform according to the expectations. In this case, the cost to bring the infrastructure back to its original condition would be quite high. The risk from the IP infrastructure solution is one and half times higher than the risk from the classic system (Meertens et al., 2013).

Costs

The cost difference between the current solution and IP infrastructure depends on two factors. The C-Lock system involves an upfront cost in addition to maintenance. A comparison is made between two scenarios: 100 apartment buildings with new systems and 100 apartment buildings relying on the old system. Because the cost for the DEA Logic solution varies by situation, several assumptions and raw cost estimates are used. They consider yearly construction costs, maintenance costs, and profit, in addition to the running costs over the next five years to calculate a breakeven point. Initially, the installation cost for the IP infrastructure is high; however, over time, the IP infrastructure and C-Lock solution is cheaper than the current alternatives (Meertens et al., 2013)

Alternative selection

Due to lower cost over time, more positive effects, and risk analyses, Meertens et al. (2013) suggest that IP infrastructure in combination with the C-Lock system is best. It provides many benefits, including a larger customer group, higher quality of living, more security for residents, and a luxury environment. However, the risk of a new system is comparatively high, though it can be reduced using the risk prevention option. Initially, the installation cost is higher; however, the maintenance costs over time are much lower. It also results in an estimated €70,000 IP infrastructure savings over five years (Meertens et al., 2013).

Implementation plan

After the selection of the best solution, the implementation plan has to be decided. Meertens et al. (2013) recommended a step-based approach for successful implementation. Steps are based on the Deming cycle, which is an iterative management approach for the control and continuous improvement of solutions, products, and processes.

In the first step of implementation, the project is planned. After the decision to construct the system is made, exact installation costs and system specifications must be decided upon. In the second step, the apartment building needs to be built and the C-Lock system and IP infrastructure must be installed. In the third step, it must be confirmed that the system is secure and works according to expectations. In the last step, the apartments need to be rented out to tenants. After implementation, problems and obscurities need to be analyzed, and the cycle starts again until the system is optimized (Meertens et al., 2013).

5.2 Revenue Mechanics, Revenue Planning, and Performance Indicators

Digital marketplaces have created several opportunities for enterprises to gain a competitive advantage; however, they have also created challenges for the organizations in ensuring that they meet the customer needs in a profitable way. As the revenue model is recognized as the main pillar of business model success, digitalization requires taking into account different revenue streams that an organization may choose (Shabanali, 2021). Moreover, the changing environment and shifting customer needs have created uncertainty, which is highly pertinent to comprehend the revenue sources for improved profitability (Gallaugher et al., 2001). Many companies during the dot-com era failed as they were unable to develop a suitable business model that would turn value delivered to customers into a sustainable revenue stream.

Revenue Mechanics and Revenue Planning

Schüritz et al. (2017) describe the revenue mechanism as how a business generates revenue through products or services. They observe that the terms "revenue mechanisms," "revenue models," and "profit formulas" are used interchangeably in the literature. Different scholars have proposed different revenue streams and models for the digital business models or internet-based revenue services.

Business model types

According to Wirtz and Lihotzky (2003), the emergence of the internet has created the development of a number of new business and revenue models for the **business-to-business marketing (B2B)** and **business-to-customer marketing (B2C)** models. They use the 4C-net-business model to differentiate four basic different business model types: content, commerce, context, and connection. Organizations focusing on online, content-based business models generate revenue through subscriptions for collecting, selecting, compiling, distributing, and/or presenting online content. Their value propositions to customers are based on providing convenient online access to information, education, or entertainment in a digital space in an attractive way. An example includes *The Wall Street Journal* news website (Wirtz & Lihotzky, 2003).

Business-to-business marketing (B2B)
In this strategy, organizations sell products and services to other organizations and businesses.

Business-to-customer marketing (B2C)
In this strategy, organizations promote their products and services to customers rather than other businesses.

Organizations relying on commerce-based business models bring the buyer and seller together for a trade transaction using electronic or digital platforms. They serve as a replacement to traditional transaction spaces, such as Amazon and eBay, and mostly charge for the transactions. Organizations can also build on a context-based business model where they earn revenues through collecting and structuring information available on the internet to enhance transparency and promote their offerings by providing their platform to other users. Their main objective is to reduce complexity. For example, Google and Yahoo earn revenue by selling advertisement space on their platforms to different businesses (Wirtz & Lihotzky, 2003).

Lastly, an organization with a connection business model covers the physical and digital network structures to enable the consumer's engagement in the networks, either on a physical or digital level. An organization may use different business models (such as hybrid or integrated approaches), enhancing their scope as they mature. An example is the financial app Fortune City. In all business model types, a company can generate revenue directly from the consumer or indirectly from other service providers who use organization services to provide value-added services to their users (Wirtz & Lihotzky, 2003).

Revenue streams

Gallaugher et al. (2001) report seven types of revenue streams available to the provider of information goods on the internet:

1. Online advertising. The provider of informational goods relies on online advertising revenues. Companies can rely on a low-cost strategy, and they often provide content for free. Such digital products do not incur the marginal cost or advertising restrictions. Companies add advertisements, which serve as their main revenue source.
2. Subscription fee for online content. The company charges a subscription fee for digital content shared with consumers. The subscription fee is charged recurringly after certain time intervals such as weekly, monthly, or yearly. An example includes *The Wall Street Journal*, whose customers are charged a subscription fee to fully access the website.
3. Online ordering for print publication. Since printed media offer certain advantages to the user, some companies earn revenue for print publication orders online. The user pays for the convenience and efficiency of physical products.
4. Syndication. The company provides products and services to other firms, and the acquiring firm then uses these products and services to create products and services with more value. Companies sometimes use syndication to pursue a distribution strategy that minimizes the cost while increasing the volume. The company generates revenue by acquiring content and aggregating it to be more profitable. An example of syndication includes online services and internet portals.
5. Per-unit fee for online content. The company provides the content without aggregation or bundling, instead charging the customer a per-unit fee based on consumption. This model is suitable for companies selling individual software units, individual news stories, or stock quotes in a way that the company can sell to different customer segment based on their needs and intents. Examples include per-article fees offered by magazines or scientific research article distributors. The company may charge different prices to different consumers.
6. Sale of additional merchandise. The company attracts the customer with digital content and uses their platform as a distribution channel to sell other products and services to the customer. An example of this revenue stream includes magazines that, in addition to regular news content, offer different services (e.g., travel services).
7. Affiliate programs. The content provider partner offers a banner advertisement or link that users can use to enter the advertising company. Users are traced from their site of entry so that revenues are shared with partners if the visit results in a sale. Vendors use affiliates as a more cost-efficient sales lead channel (in comparison to traditional advertisements). Most of the time, affiliates are paid for the sales that are generated through the users that click the link and make a transaction on vendor websites.

Similarly, Hamermesh et al. (2002) point out that entrepreneurs must understand revenue sources in order to create effective business models. They document four distinct revenue streams for business models:

1. Single stream. The company mainly relies on one revenue stream generated from a product or service.
2. Multiple streams. The company collects different revenue streams generated from different products and services. Each product and service is large enough to contribute significantly towards profit.
3. Interdependent. The company sells one product or service in order to collect revenue from another product or service. An example of this revenue stream is a company selling razors and razor blades.
4. Loss leader. The company collects revenue from multiple streams; however, not every stream is profitable.

Some products or services may not generate profit, but rather create traffic for other product and service purchases. An example includes stores that sell some products at a low cost to attract customers to the store for the purchase more products. Hamermesh et al. (2002) argue that a company can manifest one or more revenue streams into their business models, such as subscription- and unit-based models, depending on industry, customers, and products.

Cloud-based revenue streams

Eurich et al. (2011) focus on revenue streams for cloud-based platforms and claim that a business could have multiple revenue streams with different revenue mechanisms. They refer to the "platform" as a common entity that leverages operations of associated elements or services (Eurich et al., 2011) and the "cloud" as a large collection of easily usable and available virtual resources (Vaquero et al., 2008). They divided users of cloud-based services into two groups: service provider and service consumers. Service consumers are the end-users of the services, while service providers use the technical services of cloud-based platforms to create offerings (such as customer relationship management software). Since service providers use the services of the cloud-based platform, they are referred as "technical users." Thus, there are two different revenues streams for cloud-based platforms: for technical users and for service consumers (Eurich et al., 2011).

Cloud-based platform providers receive two types of revenues: direct and indirect. They receive direct revenues from consumers using subscription or other user-based revenue models and indirect revenues by claiming revenue from third-party developers, where their revenue is sometimes dependent on the performance of other service providers. Eurich et al. (2011) argue that these cloud-based platforms can be further differentiated using frequency and amount of revenue generation. They identify eight revenue models for cloud-based platforms: "subscription, transaction-based, revenue sharing, additional platform services, advertisements, affiliate services, admission fees, and download/upgrades of applications" (p. 3) and categorized them according to direct and indirect revenue streams and frequency (recurring versus nonrecurring).

Whereas subscription-based, transaction-based, and additional service (e.g., certifications or training) revenues fall into the "direct and recurring" revenue categories, admission fees and downloads refer to "direct and non-recurring" revenues. "Indirect and recurring" revenues cover advertisement and affiliate services, and "indirect and non-recurring" revenue includes revenue sharing. Based on these four types of business models, organization choose their revenue model to compete in the market (Wirtz & Lihotzky, 2003).

Eurich et al.'s (2011) suggestion of subscription revenue is similar to that of Gallaugher et al. (2001), where customers have to pay a fixed amount after a certain time interval in order to use to cloud-based platform services. In a transaction-based revenue model, customers are charged according to their usage of a service, rather than a fixed subscription fee. In the revenue sharing model, the cloud platform service provider charges a commission or percentage of revenue sharing for placing an application on the platform. Similar to Gallaugher et al. (2001), Eurich et al. (2011) describe the sale of additional merchandise model, where the company sells other cloud-based services, such as developer training materials and certifications.

The advertisement revenue model is also similar to Gallaugher et al.'s (2001) advertisement model, where a revenue fee is charged for placing an online advertisement on the platform. Through the affiliate service revenue model, service providers ask for revenue from the third party by embedding their platform or link on the platform. The provider also charges consumers a one-time admission fee for granting access to the platform and, lastly, the company also charges their customer to download or upgrade an application from the platform (Eurich et al., 2011).

Morkunas et al. (2019) argues that there are two main types of revenue: transaction-based revenues that are one-time payments and recurring revenues that result from ongoing regular payments. In addition, **blockchain technology** providers also earn money through software sales and services. Thus, a company chooses a specific or integrated revenue model based on their digital business model, critical for the success of the organization.

Blockchain technology
This system records information that is difficult to modify, hack, or cheat and is used as a digital ledger to record the digital assets.

Google's revenue model

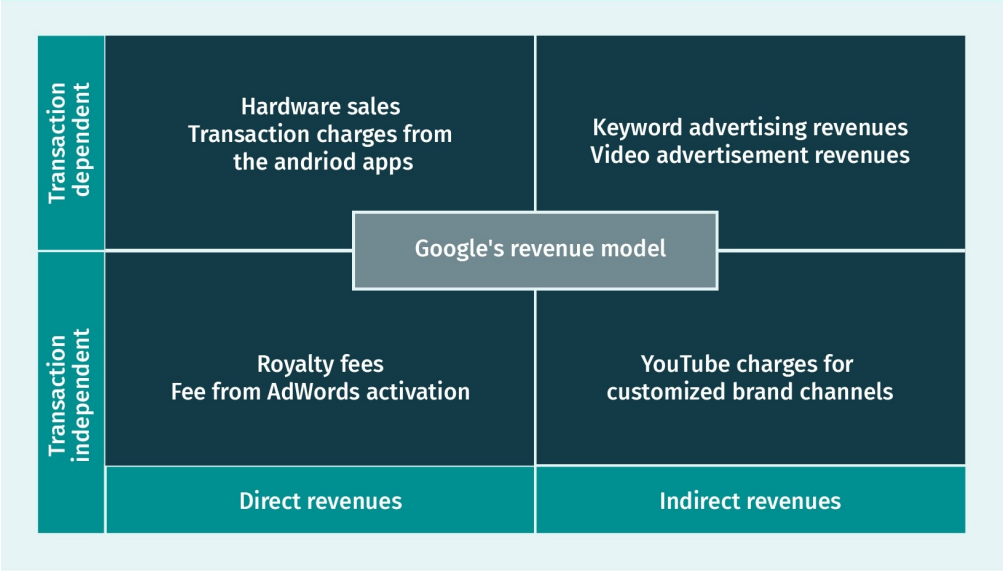
Wirtz (2019) explains different types of direct and indirect revenue that an organization may utilize based on 4C-Net (content, commerce, connection, and context) using Google's revenue model. Google generates multiple revenue streams, with the most important revenue source being advertising revenue created through integrated advertising solutions and keywords advertising through AdWords. Using AdWords, customers select the keywords that best describe their product or service offerings, and products or services appear in the search results. Additionally, customers can select the budget they would like to allocate for every click on the provided advertisement (Wirtz, 2019). Google evaluates advertisement quality and preference to advertise it based on the customer selection of cost-per-click and quality of the provided keywords. Google also gives the client the option to select a monthly advertisement budget and preferences, such as a network or language (Wirtz, 2019).

Google has also improved its keyword advertising to other services, such as Google Product Search and Google Mail. This enables advertising using various multimedia, such as videos and images, in addition to the usual text display. Furthermore, it also gives an option to integrate location data based on other services, such as Google Earth and Google Maps for advertisement (Wirtz, 2019).

Besides advertising revenue, Google also generates revenues from a variety of other sources, which accounted for ten percent of Google's total revenue sources in 2017. By comparison, Google generated 90 percent of its total revenue mostly from advertising revenue in the same year. Other revenue sources for Google include royalties that it charges for the use of software solutions with fee-based extended versions (such as Google Earth Plus). Google also provides server-based solutions that organizations can use for their document management and sells products such as smartphones (e.g., Nexus 6P). Despite the fact that smartphone sales create little revenue for Google, Google uses these smartphones as bearers of their Android software. The developer of an Android application receives 30 percent of the transaction fees from the sale of the application (Wirtz, 2019).

Such a wide variety of service offerings enable Google to collect different types of revenues that can be categorized into transaction-dependent and transaction-independent revenues. These revenues help Google to generate direct and indirect revenues, as explained in the figure below (Wirtz, 2019).

Figure 16: Google's Revenue Structure



Source: Adeel Tariq (2022), based on Wirtz (2019).

Lunn (2002) reports that to gain a competitive advantage, an organization should understand the importance of revenue and try to understand why some businesses survive in the digital marketplace and others fail. An organization must plan their revenue in order to enhance their chances of survival in the marketplace. Organizations can focus on five different revenue strategies to stay ahead of the competition (Lunn, 2002):

1. Look beyond transaction fees for generating revenues. With the advent of digital structures, markets have become more competitive and transaction fees have steadily reduced. In the digital marketplace, companies cannot rely only on transaction fees for their revenue. Once a marketplace becomes more profitable, market makers also derive their revenues from other sources.
2. Create speculative revenue strategies. A decrease in transaction-based revenue streams has created new revenue sources for organizations in digital markets. However, such uncertainty requires the company take a speculative position that gives them insights into the dynamics of the market and creates revenues in new ways.
3. Develop alternate billing strategies. Based on the reduction in transaction fees, it is critical for the organization to develop alternate billing strategies in the digital marketplace. For instance, a consultancy firm develops a report and announces that a successful digital marketplace service provider has identified 30 billing activities for the customers (such as order tracking, invoicing, and postings). The company then charges the customer based on their monthly activities rather than a transactional fee.
4. Attain revenue from other value-added services. The organization should make a plan to enhance its revenues by providing alternate value-added services based on main digital products and services. In addition to providing software and solutions to the customer, an organization can also generate revenues through providing consultancy to the customers.
5. Focus on the main clients. An organization should initially focus on the main clients, as this helps the company to generate revenues from the initial clients before getting distracted by focusing on the other revenues.

Performance Indicators of Digital Business Models

In the dynamic and fast-paced business environment, organizations are constantly innovating their business model to stay competitive to enhance their value creation for the customer, enhance existing value for the customer, and/or avoid replication of business models or offerings by competitors (Gilsing et al., 2021). A business model and business model innovation are critical to an organization's success, as they ensure the translation of organization strategy into an effective business plan. The evaluation of business models has a positive influence on business model innovation and innovation success (Schrauder et al., 2018).

As it is essential to evaluate the business model, researchers have developed both qualitative and quantitative tools to do this (Brea-Solís et al., 2015; Gilsing et al., 2021; Gordijn & Akkermans, 2001). Business model evaluation is referred to in the literature as performance indicators or key performance indicators (KPIs). Key performance indicators describe the performance assessment of the business model and are defined as using quantifiable constructs to assess and monitor the performance related to the objectives on which business model has been built (Gilsing et al., 2021).

The success of the KPIs in supporting the decision-making process is reliant on the timing in which they are applied to the business model innovation (Wirtz & Daiser, 2018). Gilsing et al. (2021) report that performance indicators used by the researcher to evaluate the

business model can be categorized into qualitative (Díaz-Díaz et al., 2017; Gilsing et al., 2020; Mateu & Escribá-Esteve, 2019) and quantitative techniques (Brea-Solís et al., 2015; Gordijn & Akkermans, 2001; Moellers et al., 2019).

Quantitative indicators for the performance evaluation of the business model include the economics of the business performance (such as variations or growth in profits, stock prices of the company, or return on assets). Zott and Amit (2007) evaluated the impact of the digital or internet-based business model design on the financial performance of the 190 publicly listed United States entrepreneurial firms. They used the stock market valuations, as it reflects the stockholder's expectations of future cash flows from the firm. They argue that realized measures of performance (such as return on assets, return on equity, and Tobin's Q) are not a suitable measure of performance evaluation, as higher uncertainty is associated with young and high growth-oriented firms, which may initially have negative earnings.

Other researchers have used growth rate to evaluate the performance of a business model. Wei et al. (2014) used firm growth measured as sales growth over the last three years to understand the combined effect of technological innovation and business model design on firm growth. Growth in sales indicates the extent to which the firm's offerings meet the needs of the customer and is therefore regarded as a reliable measure of performance of a business model (Wei et al., 2014).

A few other scholars have used other accounting measures for performance evaluation, such as return on total assets, return on equity, and return on sales volume for business model evaluation (Morris et al., 2013). Return on total assets, return on equity, and return on sales, on the other hand, are measures of a company's earnings performance and are calculated as earnings before interest and taxes (EBIT); this is divided by total assets, EBIT scaled by total equity, and EBIT scaled by net sales. Contrary to this, some researchers have used qualitative measures to evaluate performance of business models. Mateu and Escribá-Esteve (2019) use an eight-step evaluation method to assess the performance of the innovative or improved business model: (1) value creation conditions, (2) complete value proposition evaluation, (3) sufficient size of the market, (4) access to the potential customers, (5) willingness to make an effort, (6) affordable cost conditions, (7) superiority over competitors, and (8) entry barrier existence.

Similarly, Díaz-Díaz et al. (2017) developed the business model evaluation tool to analyze the business models of the smart cities, relying on in-depth expert interviews and case study methods. Gilsing et al. (2021) argue that business model innovation is a continuous improvement process, where a novel business model is continuously improved and developed over time. The application of quantifiable KPIs at the initial stages of the business model is not preferable, as initial phases of business models are characterized by high uncertainty and limited data availability (Gilsing et al., 2021). However, to make an effective decision, such KPIs should support the characteristics of the innovative process and quantifiable KPIs should be applied as the business model concretizes (Gilsing et al., 2021). Gilsing et al. (2021) claim that the majority of researchers focus on the quantifiable performance indicators to evaluate business models (Heikkilä et al., 2016; Moellers et al., 2019); however, these methods are subject to limitation since they offer limited guidance on the evaluation of the early-stage business model innovation.

5.3 Special Features of Investment Planning

A company needs to invest (in both financial investments, such as cash, and non-financial investments, such as human resources) to achieve positive outcomes. Investment for an improved or innovative digital business model depends on several factors such as revenue model, cost drivers, and key factors (Hamermesh et al., 2002). Hamermesh et al. (2002) explain that a company needs to consider several factors for investment:

- maximum financing needs—what are the all-out financing needs of the business model, and how many resources are required over time?
- positive cash flows—how long will it take to turn cash flows positive?
- cash breakeven—how long will it take to reach a **breakeven point**?

Breakeven point
At this point, total revenue equals total cost, with neither profit nor loss.

Hamermesh et al. (2002) also argue that different types of business models have different investment requirements. For software, a large investment is required at the outset in order to develop an initial software solution. If the product is successful, a small amount of investment is required later for sale, delivery to the customer, and customer services to capture revenues from software sales. In the case of a consultancy firm, a small investment is required at the beginning to establish equipment and infrastructure. More follow-on investments may be required to hire more personnel, rent or lease larger space, and build digital infrastructure.

Similarly, Morris et al. (2005) explain that an entrepreneur may pursue different types of ventures, and the differences among the types of ventures have implications for the competitive strategy, resources, firm performance, and other internal capabilities as the business model may need the entrepreneur's time, scope, and size, which could also be referred to as the business investment model. An entrepreneur may adopt four different types of investment models and decide on investment accordingly:

1. Subsistence. An entrepreneur needs to invest to the level that they can survive and meet their financial obligations.
2. Income. The entrepreneur's goal is to invest so that the business can generate an ongoing and stable income stream for the principals
3. Growth. Entrepreneurs must make a significant investment initially and in later stages.
4. Speculative model. An entrepreneur has a shorter period in which the main objective of the investment is to create enough value in the venture to sell it out.

Business angels
These investors or individuals provide capital for a business in exchange for a percentage of equity.

Moreover, for investment planning, entrepreneurs and managers have to understand the process they can use to convince **business angels** or investors. Sort and Nielsen (2018) claim that getting investor attention and receiving investment for venture or entrepreneurial projects is an arduous task, as the investment process follows several steps starting from identifying an opportunity and continuing the negotiation with the investor until the investment process is completed.

To attract investment from the investors, entrepreneurs mostly rely on their knowledge or follow a business plan to convince investors (Sohl, 2012; Sort & Nielsen, 2018). However, many researchers argue that a business plan suffers from limitations as it is an outdated method, not providing the information required for the investment (Karlsson & Honig, 2009; Mason & Harrison, 1996). In this regard, Sort and Nielsen (2018) find that entrepreneurs who use the business case to communicate with investors receive better feedback and can create more chances to win funding using the business model canvas.

Based on interviews with business angels, Paul et al. (2007) found that the investment process follows five stages:

1. Familiarization. An investor learns about the opportunity and meets the founders and their team.
2. Screening. Investors are involved in the initial and detailed screenings of the opportunity.
3. Bargaining. The structuring of the deal and agreement is considered by entrepreneurs and investors.
4. Managing. The investors take an active post-investment role in the business in which they have invested.
5. Harvesting. The investors either chalk out their exit strategy or their goal to build and increase the value of business.

The investor engages in the iterative assessment duringthe familiarization, screening, and bargaining stages. An organization or individual can execute investment planning for the business model investment following the approach suggested by Paul et al. (2007).

SUMMARY

Shortening product lives, intense competition, changing customer requirements, and disruptive environments require organizations to respond by identifying and implementing projects that ensure their future success. Managers may identify different opportunities than top management; however, to ensure that the project is worth investment, it should be based on a tool (business case) that justifies undertaking a project and its possible consequences. Different authors have documented different elements of the business case, but the most common elements mentioned in the literature include the business driver, business objective, alternatives, effects, cost, risk, selection, and implementation.

An organization may use different revenue mechanics: direct versus indirect, frequently occurring versus non-frequently occurring, single-stream versus multiple stream models, or models based on different revenue models (e.g., subscription fee-, transaction-, or advertising-based revenue). However, the selection of a revenue model should be based on the digital business model of the firm. A company can choose a single

source or integrated revenue model to ensure its success. This requires the company to carefully plan its revenue and seek revenue strategies to ensure success and survival in the digital marketplace. Researchers use both quantifiable measures (such as return on assets, return on equity, return on sales, stock prices, and sales growth) and qualitative measures to assess the performance of business models.

An organization's investment plan is mostly influenced by three factors: maximum financing needs, positive cash flows, and cash breakeven point. Business models have varying investment requirements, and a business may use a different strategy, such as a business case or business model, to win investors.