

# Defining the Business Model in the New World of Digital Business

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## ABSTRACT

Recent rapid advances in ICTs, specifically in Internet and mobile technologies, have highlighted the rising importance of the Business Model (BM) in Information Systems (IS). Despite agreement on its importance to an organization's success, the concept is still fuzzy and vague, and there is no consensus regarding its definition. Furthermore, understanding the BM domain by identifying its meaning, fundamental pillars, and its relevance to other business concepts is by no means complete. In this paper we aim to provide further clarification by first presenting a classification of definitions found in the IS literature; second, proposing guidelines on which to develop a more comprehensive definition in order to reach consensus; and third, identifying the four main business model concepts and values and their interaction, and thus place the business model within the world of digital business. Based on this discussion, we propose a new definition for the business model that we argue is more appropriate to this new world.

## Keywords

Business Model, Digital Business, Information Systems.

## INTRODUCTION

The Business Model (BM) concept has become one of the most important domains in the field of Information Systems (IS), thanks to recent rapid advances in Information and Communication Technologies (ICTs). Unlike the previous traditional world of business which is characterized by stability and low levels of competition, the emerging world of digital business is complex, dynamic and enjoys high levels of uncertainty and competition. For instance, designing a business model for a Cellular Network and Telecommunication Operator (CNTO), as a part of a value network, is a complex undertaking and requires multiple actors to balance the varied and often conflicting requirements (Haaker et al., 2006). Moreover, rules that governed the traditional world of business are questioned in this emerging world of digital business. For example, a huge investment was needed to establish a traditional business. Traditionally, this investment was considered a strategic barrier to entry. However, Internet and mobile technologies have offered new ways of doing business, such as e-commerce and m-commerce, which do not have such a high barrier to entry. The need for physical assets, to give just one example, is far less evident. Porter (2001) argues that a flood of new entrants has come into many industries since the Internet has reduced barriers to entry.

Traditional business managers are more experienced in translating the business strategy directly into business processes. In the more complex and sometimes unique digital business, the business model needs to be explicit and a BM which offers a new layer of appropriate information and knowledge to support digital business managers has become a necessity. This explains why BM research has risen to prominence since the end of 1990s with the advent of IT-centered businesses (Osterwalder et al., 2005). Nevertheless, a definition for the business model is "murky" at best (Porter, 2001). Researchers in this area have depicted the BM concept from different perspectives. To give only two examples, Linder and Cantrell (2000)

depict the business model as a tool that explains how business organizations generate revenues, whilst Andersson et al. (2006) depict the business model as a tool that makes the business actors' relations more explicit. In other words, the IS-related literature reveals a clear lack of consensus regarding a BM definition and meaning (Stähler, 2002).

Research into business models in the information systems field has been mainly concerned with e-business and e-commerce. There have been attempts to develop convenient classification schemas. For example, definitions, taxonomies, and classifications into IS-related business models have been drafted specifically for electronic markets and internet commerce (see Afuah and Tucci, 2001; Alt and Zimmermann, 2001; Gordijn and Akkermans, 2001; Pateli and Giaglis, 2003; Gordijn et al., 2005) and some researchers have applied the concept of the BM into other domains, including the information systems (see Hedman and Kalling, 2003) and the mobile technology sectors (see Haaker et al., 2006; Kallio et al., 2006).

Nevertheless, attempts to understand the business model concept by identifying its meaning, place within business organizations, elements and boundaries are by no means complete and our understanding is not yet well developed. As Seppänen and Mäkinen (2005) have argued, there is a need for an unambiguous definition. Further, Pateli and Giaglis (2004) not only emphasise the need to clarify the relevance between the business model concept and other related concepts such as business strategy and business processes, they also list the business model definition on the top of their proposed agenda for future research on business models. This is particularly pertinent for the IS field (Osterwalder et al., 2005) although consensus and understanding are more generally needed since the BM represents a framework or a foundation on which researchers will be able to apply in different industries and in different contexts. Moreover, clarifying the fundamental pillars of the business model more precisely, as well as adding a comprehensive definition to the body of the BM domain knowledge, provides – potentially at least - a more solid base for future researchers on this important topic.

The remainder of this paper is structured as follows. In the next section, we highlight the different viewpoints of authors within the IS field researching into business models and a table is constructed showing the different views. We then present the four main concepts and values and their interaction which position the BM within the organization. This analysis helps us to form guidelines for developing our more comprehensive definition which we hope will lead to the desired consensus.

## THE BUSINESS MODEL CONCEPT

The digital era has meant that the availability of appropriate levels of information and knowledge have become critical to the success of the business. Organizations need to adapt in order to survive and succeed as their business domains, processes and technologies change in a world of increasing environmental complexity. Enhancing their competitive positions by improving their ability to respond quickly to rapid environmental changes with high quality business decisions can be supported by adopting suitable business models for this new world of digital business. However, the business model concept is still considered an ill-defined 'buzzword' (Timmers, 1998; Seppänen and Mäkinen, 2005). In this section we attempt a first level of clarity by presenting a classification of selected definitions of the business model concept along with their basis (Table 1).

Author	BM Definition	Basis of the BM Definition
Timmers (1998: 4)	<ul style="list-style-type: none"> <li>• An architecture for products, services and information flows, including a description of various business actors and their roles;</li> <li>• A description of the potential benefits for the various business actors; and</li> <li>• A description of sources of revenues.</li> </ul>	Product architecture, Value proposition, Revenue sources.
Venkatraman and Henderson (1998: 33-34)	Strategy that reflects the architecture of a virtual organization along three main vectors: customer interaction, asset configuration and knowledge leverage.	Organization architecture, Organization strategy
Rappa (2000: Online)	A BM is the method of doing business by which a company can sustain itself, that is, generate revenue. The business model spells out how a company makes money by specifying where it is positioned in the value chain.	Revenue sources.
Linder and Cantrell (2000: 1-2)	The organization's core logic for creating value. The business model for a profit-oriented enterprise explains how it makes money.	Value proposition, Revenue sources.
Petrovic et al. (2001: 2)	A business model describes the logic of a "business system" for creating value that lies beneath the actual processes.	Business logic, Value proposition.

Author	BM Definition	Basis of the BM Definition
Amit and Zott (2001: 4)	A business model depicts the design of transaction content, structure, and governance so as to create value through the exploitation of new business opportunities.	Value proposition.
Torbay et al. (2001: 3)	The organization's architecture and its network of partners for creating, marketing and delivering value and relationship capital to one or several segments of customers in order to generate profitable and sustainable revenue streams.	Value proposition, Collaborative transactions.
Stähler (2002: Online, 6)	A model of an existing business or a planned future business. A model is always a simplification of the complex reality. It helps to understand the fundamentals of a business or to plan how a future business should look like.	Current and future business reality simplification.
Magretta (2002: 4)	The business model tells a logical story explaining who your customers are, what they value, and how you will make money in providing them that value.	Value proposition, Revenue sources.
Bouwman (2002), <i>source:</i> Camponovo and Pigneur (2003: 4)	A description of roles and relationships of a company, its customers, partners and suppliers, as well as the flows of goods, information and money between these parties and the main benefits for those involved, in particular, but not exclusively the customer.	Collaborative transactions, Value proposition.
Camponovo and Pigneur (2003: 4)	A detailed conceptualization of an enterprise's strategy at an abstract level, which serves as a base for the implementation of business processes.	Intermediate theoretical layer.
Haaker et al. (2004: 610)	A blueprint collaborative effort of multiple companies to offer a joint proposition to their consumers.	Collaborative transaction, Value proposition.
Leem et al. (2004: 78)	A set of strategies for corporate establishment and management including a revenue model, high-level business processes, and alliances.	Organization strategy.
Rajala and Westerlund (2005: 3)	The ways of creating value for customers and the way business turns market opportunities into profit through sets of actors, activities and collaborations.	Value proposition, Collaborative transactions.
Osterwalder et al. (2005: 17-18)	A business model is a conceptual tool that contains a set of elements and their relationships and allows expressing the business logic of a specific firm. It is a description of the value a company offers to one or several segments of customers and of the architecture of the firm and its network of partners for creating, marketing, and delivering this value relationship capital, to generate profitable and sustainable revenue streams.	Business logic, Value proposition, Organization architecture.
Andersson et al. (2006: 1-2)	Business models are created in order to make clear who the business actors are in a business case and how to make their relations explicit. Relations in a business model are formulated in terms of values exchanged between the actors.	Collaborative transactions.
Kallio et al. (2006: 282-283)	The means by which a firm is able to create value by coordinating the flow of information, goods and services among the various industry participants it comes in contact with including customers, partners within the value chain, competitors and the government.	Value proposition.

**Table 1. Selected Scholarly Definitions of the Business Model Concept**

Our analysis reveals that the IS-related literature contains a wide variety of different views regarding the business model. Authors mean different things when they write about business models (Linder and Cantrell, 2000). Further, some researchers have defined the business model based only on its components or even one or some of its components (for example, Magretta, 1998, 2002; Rappa, 2000; Bouwman, 2002; Rajala and Westerlund, 2005). This suggests that the term is still fuzzy and vague and still in its conceptualization phase, despite its perceived importance.

## GUIDELINES TO DEVELOP A CONSENSUS FOR THE BUSINESS MODEL

As we have seen, despite the increasing emphasis on the importance of the business model to an organization's success, there has been a lack of consensus regarding its definition and its meaning (Kallio et al., 2006). Researchers in this area have depicted business models from different perspectives. Through an analysis of definitions of the business model in the IS literature presented in the previous section, we propose the following reasons and guidelines for establishing a BM as a second level of clarity. These can be used as a basis on which to develop a more comprehensive definition later.

- 1) ***A way in which organizations create value*** (Amit and Zott, 2001; Kallio et al., 2006) with two different approaches for the value proposition:
  - a) The ways in which an organization, along with its suppliers and partners (business actors) creates value for its customers (Magretta, 1998, 2002; Petrovic et al., 2001; Torbay et al., 2001; Stähler, 2002; Osterwalder et al., 2005; Haaker et al. 2006).
  - b) The ways in which an organization, along with its stakeholders (business actors), create value for each party involved (Bouwman, 2002; Stähler, 2002; Haaker et al., 2006; Andersson et al., 2006).
- 2) ***A way in which an organization generates revenue*** (Timmers, 1998; Magretta, 1998, 2002; Rappa, 2000; Linder and Cantrell, 2000; Torbay et al., 2001).
- 3) ***An abstraction of the existing business and a future planned business*** (Stähler, 2002). This suggests that the organization's business models should encompass future business outlooks.
- 4) ***An architecture for the organization, including its assets, products, services, and information flow*** (Venkatraman and Henderson, 1998; Timmers, 1998).
- 5) ***As business logic relating to the ways in which businesses are being conducted*** (Petrovic et al., 2001; Osterwalder et al., 2005).
- 6) ***A way in which an organization enables transactions through the coordination and collaboration among parties and multiple companies*** (Amit and Zott, 2000; Bouwman, 2002; Haaker et al., 2006).
- 7) ***An organization's strategy or set of strategies*** (Leem et al., 2004; Kallio et al., 2006)
- 8) ***An interface or a theoretical layer between the business strategy and the business processes*** (Camponovo and Pigneur, 2003; Tikkanen et al., 2005; Rajala and Westerlund, 2005; Morris et al., 2005).
- 9) ***A conceptual tool, a business abstraction, and a blueprint*** (Stähler, 2002; Haaker et al., 2004; Osterwalder et al., 2005).
- 10) ***A way of understanding a single organization or a network of organizations*** (Bouwman, 2002; Haaker et al., 2006).

In order to enhance our understanding of the business model concept, to validate the previously mentioned arguments, and to resolve the conflict in the IS-related literature regarding the BM concept (see points 7 and 8 above), we suggest a third level of clarity in the next section, mainly through identifying the business model's place in the new digital business organization and in particular introducing the four main BM concepts and values and their interaction.

## THE EVOLUTION AND PLACE OF THE BUSINESS MODEL WITHIN THE NEW WORLD OF DIGITAL BUSINESS

Business model researchers are attempting to determine its meaning, boundaries, components, and relationships with other business aspects, such as business processes and business strategy. There is already some consensus regarding the differences between the business model and the process model (Pateli and Giaglis, 2003; Morris et al., 2005). However, the debate on the difference between the business model and business strategy has not been resolved (Porter, 2001; Stähler, 2002; Pateli and Giaglis, 2004). Some researchers see them as identical and use the terms interchangeably: Kallio et al. (2006) depict business model components as a set of business strategies. Other researchers suggest that even though both concepts are related, they represent different levels of information, useful for different purposes. They see the business model as an interface or an intermediate theoretical layer between the business strategy and the business processes (Osterwalder, 2004; Tikkanen et al., 2005; Rajala and Westerlund, 2005; Morris et al., 2005). Magretta (2002) argues that the business strategy explains how

business organizations hope to do better than their rivals, whilst the business model describes how the pieces of a business all fit together.

The main reason behind this confusion is the shift that the business world experienced from the traditional way of doing business to the new way of digital business, which is engulfed with high level of complexity and rapid change (see figure 1). This new world of digital business has created a gap between the business strategy and business processes. Translating business strategy into business process has become much more of a challenge.

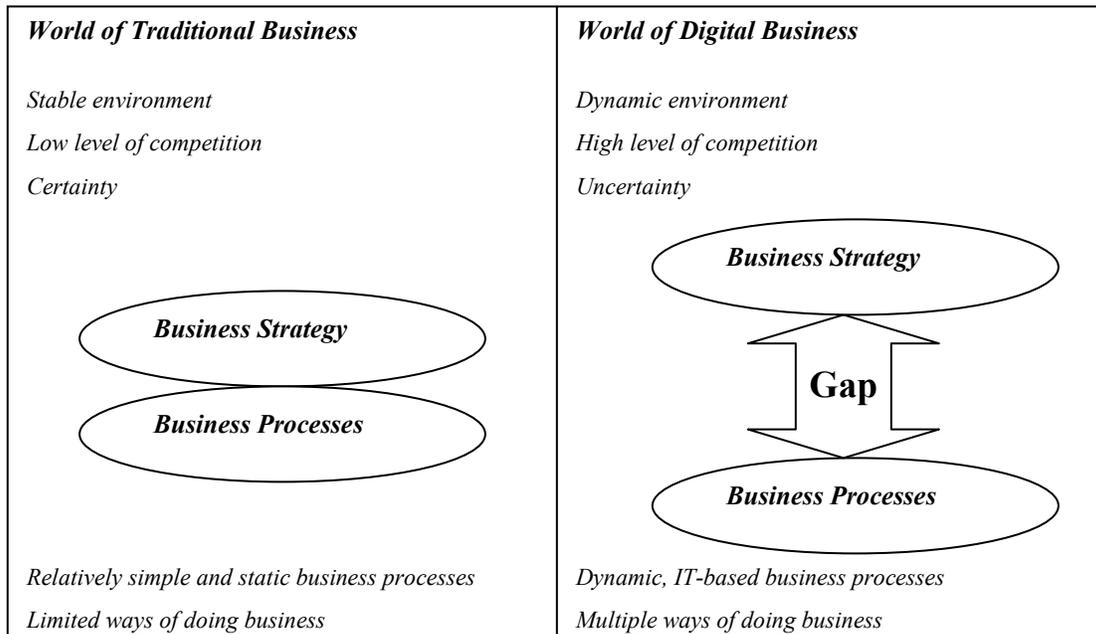
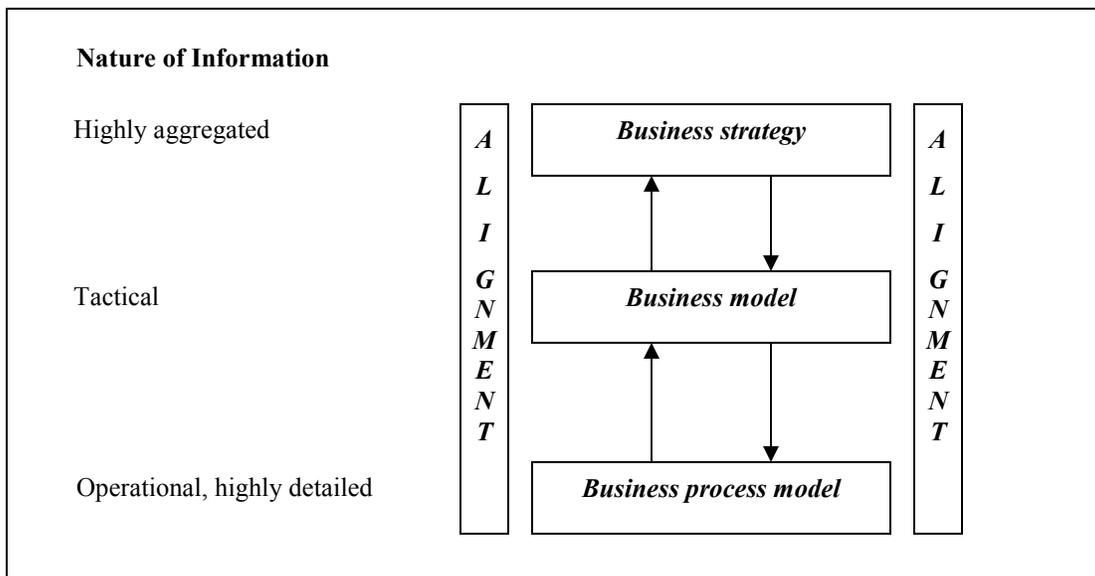


Figure 1. Comparison between the World of Traditional and Digital Business



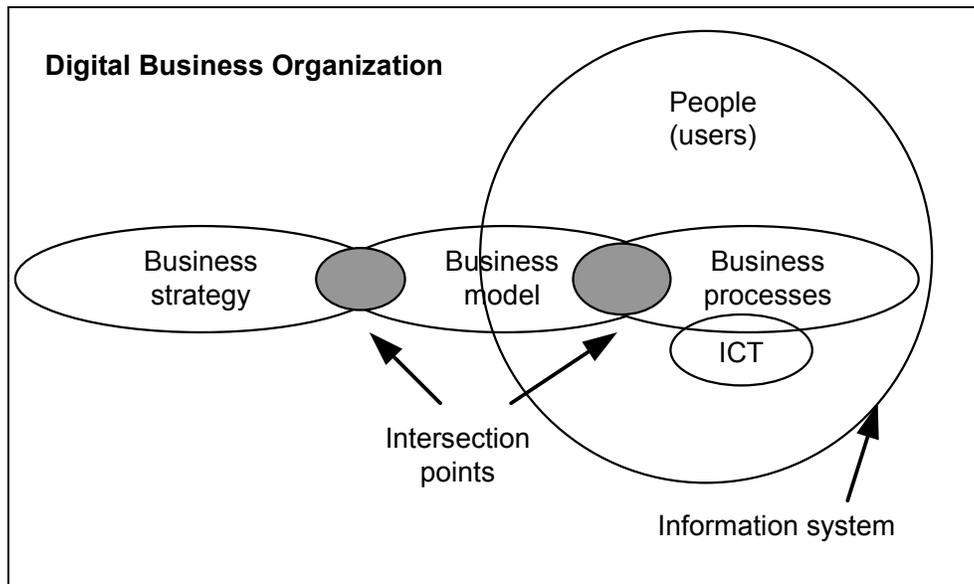
**Figure 2. Digital Business Layers**

Accordingly, the business model has risen to prominence as a conceptual tool of alignment to fill the gap that has been created in this world of digital business. Using the business model facilitates the fit between business strategy and business processes since it represents an interface or an intermediate theoretical layer between them (see figure 2). Furthermore, the business model enhances digital business managers’ control over their business, and enables them to compete better due to the appropriate and necessary level of information that the business model provides. This level of information also extends digital business managers’ knowledge of how the business organization will adapt their strategy, business model, and business processes to cope with the complex, uncertain, and rapidly changing digitalized environment. Thus, there are improvements in the organizations’ abilities in achieving their strategic goals and objectives. This is because the information that the business model offers is neither highly aggregated, which it is in the case of business strategy, nor highly detailed, which it is in the case of the operational business process model.

The business model is by no means independent; it intersects with the business strategy as well as the business processes. Thus, it creates a unique strategic operational mix (see figure 3). These intersections represent two crucial transitional points to be followed by business organizations in this new world of digital business:

**1- Business strategy to business model:** this is depicted by the first intersection point which represents the first transitional stage. According to Porter (1980), business strategy is a way by which a business organization positions itself within its industry through adopting one of the following generic strategies: cost leadership, differentiation, and focus. However, at this stage the business organization translates its broad strategy into more specific business architectural and financial arrangements needed in order to achieve the strategic goals and objectives of the business. Moreover, the business model in the first intersection point is dependent on and derived from the business strategy.

**2- Business model to business process model:** this is the second transitional stage represented by the second intersection point. At this stage, the business model acts as the base system from which the detailed operational business process model should be derived.



**Figure 3. Business Model Intersection Points**

For businesses to survive and to succeed in this new world of digital business, the business strategy, business model, and business processes should be recognized and treated as a harmonized package. Furthermore, this package should be reviewed continually to ensure its consistency with the external environment.

### **PROPOSED DEFINITION FOR BUSINESS MODEL**

Our literature analysis has shown a fuzzy and an inconsistent understanding of the business model concept in general. Researchers have not aligned themselves with any business model definition since no one definition is comprehensive. We have followed a systematic methodology to deduce a definition for the business model using the following three principles:

- 1- *The definition should be comprehensive and general.*
- 2- *It is not sufficient to define the business model only in terms of its components.*
- 3- *The business model is defined for a single organization.*
- 4- *The definition should synthesize the different points of view presented in earlier research.*

Osterwalder et al. (2005) defined a ‘model’ as a “simplified description and representation of a complex entity or process”. Others have argued that it is an abstraction, simplification, and /or representation of the reality (Stähler, 2002; Haaker et al., 2006). Since we are here concerned with the world of business, the following provides a starting point:

***The business model is an abstract representation of a business.***

Many ways could be used to represent a real entity such as a business. A representation could be done conceptually, textually, and/or graphically. Interestingly, the majority of researchers considered the business model a concept. Neuman (2003) suggests that the concept is an idea which could be expressed as a symbol or in words (Lambert, 2006). Thus the definition of a business model has been enhanced as follows:

***The business model is an abstract representation of a business, be it conceptual, textual, and/or graphical.***

As for the term business, Peter Drucker is one of those who have defined what it is by asking several questions about the basics of a business, along with business customers and their wants and needs (Stähler, 2002). Economists depict a business as a production system that adds value to the environment (March and Hevner, 2007). Parkin (2000) argues that the overall goal of the business is to maximize its long-term value. Drucker (1999) argues that the next information revolution underlies the new definition of a business organization as the “creation of value and wealth”. Moreover, he is questioning for whom the business organization is actually creating value. However, many researchers have not yet distinguished between the business goals and the means by which they are achieving their goals and objectives. Organizations are conducting their business to achieve different goals and objectives based on their classification, for example, whether it is a business-oriented (for-profit) or governmental (not-for-profit) organization. Creating value for customers is only one of the means by which organizations achieve their objectives and goals. Therefore, the business model definition has been extended as follows:

***The business model is an abstract representation of an organization, be it conceptual, textual, and/or graphical, of all arrangements that are needed to achieve its strategic goals and objectives.***

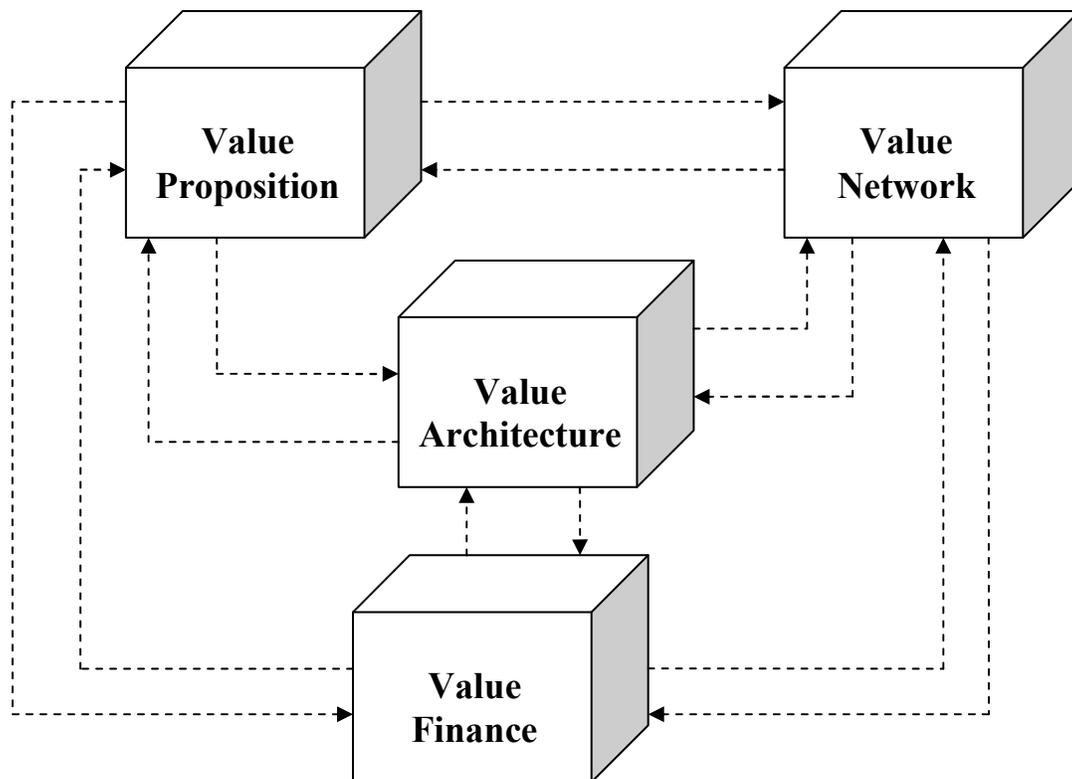
As we saw, most researchers have defined the business model concept based only on some of its components. [Reference withheld] (2008) provide a more inclusive view that includes value proposition, value architecture, value network, and value finance (see figure 4). Accordingly and by taking efficiency factors into consideration, the business model definition has been updated as follows:

***The business model is an abstract representation of an organization, be it conceptual, textual, and/or graphical, of all interrelated architectural, co-operational, and financial arrangements designed and developed by an***

*organization, as well as all products and/or services the organization offers based on these arrangements that are needed to achieve its strategic goals and objectives.*

Abstraction implies simplification. This means that the BM cannot represent all aspects and/or details related to the organization but represents the business hallmarks. Thus the word “core” has been added to the definition.

*The business model is an abstract representation of an organization, be it conceptual, textual, and/or graphical, of all core interrelated architectural, co-operational, and financial arrangements designed and developed by an organization, as well as all core products and/or services the organization offers based on these arrangements that are needed to achieve its strategic goals and objectives.*



**Figure 4.** V<sup>4</sup> Framework Representing The Business Model Pillars (Adapted from Al-Debei et al., 2008).

Further, the business model is not only designed and developed for existing businesses, but also for future planned businesses (Stähler, 2002). Accordingly, a definition of the business model is finally presented as shown in Figure 5.

*The business model is an abstract representation of an organization, be it conceptual, textual, and/or graphical, of all core interrelated architectural, co-operational, and financial arrangements designed and developed by an organization presently and in the future, as well as all core products and/or services the*

**organization offers, or will offer, based on these arrangements that are needed to achieve its strategic goals and objectives.**

**Figure 5. The Business Model Defined**

This definition has the following characteristics:

- 1- ***It is comprehensive and general:*** the business model interrelated components have been included as they depict the value architecture, value network, and value finance business model. The value architecture component revolves around organizational resources and capabilities as well as their configurations; the value network component represents the external arrangements which revolve around the communication and collaboration the organization needs and conducts with other businesses in its value chain or value network in order to be able to offer its products and/or services. The value finance component revolves around the financial arrangements the business organization conducts for its value proposition and value architecture. The value proposition component is also depicted through the inclusion of all core products and/or services in the definition.
  
- 2- ***It demonstrates the flexibility of the business model representation:*** there is no single way for a business organization to describe its actual business model. Representing the business model is a flexible process; since it could be represented conceptually in an oral way, textually in a document, graphically for visual aid purposes, or by using a mixture of these. These means of representation are all mentioned in the definition.
  
- 3- ***It identifies the location of the business model within the digital business organization:*** this is mainly achieved through the nature of information the business model delivers. Unlike the process model (which provides highly detailed and operational information regarding the business processes) and the business strategy (which provides highly aggregated information concerning how a business organization does better than its competitors), the business model offers an intermediate level of information which is necessary to digital business managers. In other words, it represents the business model concept as an intermediate layer between the business strategy and business processes. The inclusion of “strategic” in this definition shows that the business model mainly serves the strategic level of different business organizations.
  
- 4- ***It represents the importance and the reasons behind designing and developing the business model:*** this requirement is achieved through emphasizing the kind of arrangements needed to offer the desired value proposition in order to achieve an organization’s strategic goals and objectives.

It is hoped that this generic business model definition which takes account of different views enables the consensus that is not yet apparent.

## **CONCLUSIONS AND FURTHER RESEARCH**

This paper is part of ongoing research in the area of the business model for digital businesses in general, and more specifically for cellular network and telecommunication operators. Our analysis reveals that the business model concept is relatively young and has been used in various contexts. Its definition, place within the business organization, and boundaries have not been properly defined. Furthermore, our analysis reveals that the business model concept has often been determined subjectively by different researchers based on their perceptions and intuition.

This paper attempts to clarify the business model concept. The authors have reviewed the IS-related literature on the business model, classified the business model definitions, extracted guidelines on which to develop a more comprehensive and general business model definition, and identified the place and the need of the business model within the world of digital business.

Furthermore, the authors have proposed a new comprehensive definition which attempts to take into account the different views expressed in the IS literature.

The business model is an essential intermediate layer between business strategy and business processes in this new world of digital business. The business model is derived directly from the business strategy, and on which the business processes should be derived. For business organizations to survive and to succeed, a well designed business model that ensures the alignment between business strategy and business processes is needed. Moreover, a business model for a digital business should be reviewed continually to ensure its fit with the complex, uncertain and rapidly changing external environment.

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