

Massa, Lorenzo

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JOURNAL OF BUSINESS MODELS

Special Issue Guest Editorial
10th Anniversary of the Journal of Business Models

The Design of Business Models: what, how and why.

Lorenzo Massa¹

Abstract

Over the last decade, management and organisation scholars, practitioners and policymakers alike have increasingly paid attention to business models and variously highlighted the importance of designing them. However, what it means, in essence, to design business models, remains unclear. The received literature reveals a highly fragmented and heterogeneous picture, with different interpretations and implicit meanings of the term 'design', leading to varied perspectives on what, how and why business models should be designed. In this editorial I attempt to clarify the meaning of 'the design of business model' by providing a framework that will hopefully help synthesise, organise and clarify the multifaceted aspects of designing business models. Additionally, I highlight three emerging meta insights from the nine papers published in this Special Issue: 1) the (importance of) integration of design principles, 2) the need for specialised, context-dependent design methods and tools and 3) the potential of technology, particularly AI, to reshape business model design. These insights offer pathways for advancing the understanding and practice of designing business models that, combined with an appreciation of the different aspects of designing business models, will hopefully encourage and shape future research directions and cumulative progress in this field.

Keywords: Business Models, Design

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¹ Strategy, Organisation and Management (SOM) Group, Business School Aalborg University, Lorenzo.massa@business.aau.dk

Introduction

Numerous factors contribute to the widespread interest in business models. Business models play a pivotal role in creating value to customers and stakeholders (e.g. Teece, 2010; Zott and Amit, 2010), fostering competitive advantage (e.g. Casadesus-Masanell and Ricart, 2010), driving the commercialisation of scientific discoveries and deep technologies (e.g. Colombo et al., 2010), facilitating digital transformation (e.g. Appio et al., 2021), unlocking sustainability and social entrepreneurship (e.g. Seelos and Mair, 2007; Lüdeke-Freund et al., 2022), and enabling the diffusion of innovation (e.g. Massa and Tucci, 2021), including social innovation (Seelos and Mair, 2017). These are all matters of very strong practical importance.

Not surprisingly, over the last couple of decades, scholars (e.g. Sheperd et al., 2021; Snihur and Markman, 2023), practitioners (e.g. Collins et al., 2020) and public organisations (e.g. UK Design Council, 2007) alike have variously emphasised the importance of designing business models.

But what does it mean to design a business model?

A business model refers to the logic that a firm or other types of organisation use to create, deliver and capture value in economic, social and environmental forms (Zott et al., 2011; Massa et al., 2017 for reviews). Or, as Teece has put it, it denotes the ‘architecture of the value creation, delivery, and capture mechanisms’ of a firm or other types of organisations, not necessarily profit-oriented ones (Teece, 2010, p. 172). In broad terms, the design of business models can be simply conceptualised as the activity of bringing to the market and society such logics or ‘architectures’.

Thus, at first glance, the meaning of designing business models might appear straightforward, construed as the act of crafting ‘logics for value creation, delivery and capture’. This does not mean that the business models themselves are simple or that designing them is. Quite the contrary. Business models are relatively complex systems, sharing characteristics typical of Level Eight on Boulding’s (1956) nine-level scale of complexity (Anderson, 1999)

(see also Massa et al., 2018). In addition, the design of business models is in itself a complex process. Many attempts to change existing business models and design new ones fail (Christensen et al., 2016). And designing viable and scalable business models from scratch, a critical element for the success of startups, is a very challenging task (e.g. see Ricart, 2024 this issue). Although business models and the process of designing them are inherently complex, the essence of designing business models appears relatively straightforward. A simple definition is that adopted by the Business Design Lab¹ at Aalborg University (AAU) Business School, Denmark. It defines the design of business models as the creative act of crafting business architectures (or parts of them) to solve business and human problems at a profit. Definitions of this nature are relatively intuitive and generally easily understood, serving initial clarification purposes well.

However, upon close inspection of the received literature, including the contributions in this Special Issue, one realises that it is not that simple. The perception is that, in much of the received literature, the notion of ‘design’ is used rather metaphorically, and with different implicit meanings, leading to different interpretations of what is being designed, how it is

¹ The Business Design Lab (formerly Business Design Center) was a cross-disciplinary centre, a research, education and design initiative established at Aalborg University, focusing on projects at the intersection of business and design. It was conceived in 2011. The goal of the centre was to provide a space where researchers and students from different departments of the university and managers interested in the confluence between business and design could work together. Academically, it served as an incubator of new approaches and ideas at the intersection between business and design. During 2023, having achieved its objective of facilitating the progressive diffusion of its ideas across different areas of the business school, it was decided that the centre would be progressively closed. Termination of this project occurred at the beginning of 2024. During its years in operation, the Lab facilitated the development of dozens of projects and collaborations with companies, serving as a hub where innovative ideas at the intersection of business and design could thrive. It provided an environment conducive to exploration and innovation, fostering the exchange of knowledge and expertise among researchers, students and industry partners. It played a pivotal role in catalysing new approaches and methodologies in business design, which today are variously taught to students at AAU by the fellows of the centre.

being designed or even how it 'should' be designed (i.e. what are the validity criteria and purposes of design). Gaining clarity on these key aspects is critical if we are to lay down solid foundations for the development of a robust and rigorous comprehension of the phenomenon, subtending the design of business models to be able create knowledge for action that matters to practitioners in the field.

The lack of a unified conceptualisation of the design of business models is one of the drivers that motivated the selection of the focus for this Special Issue. In addition, further research is needed to elucidate the complex and multifaceted interconnections between business models and design. This editorial represents an attempt to fill this gap by providing a framework that will hopefully help synthesise and organise the different facets of designing business models and provide a starting point for future research. The framework aims to provide a conceptual tool for navigating the various aspects of designing business models, encompassing different meanings, design objects, processes, instances of business models and types of design projects. It is also meant to become a point of departure to inspire potential avenues for future research in the field.

Additionally, the papers in this Special Issue unveil three emerging meta insights, namely:

- The design of business models distinguishes itself from traditional notions of business model innovation (e.g. see Foss and Saebi, 2017) by embracing the principles and methodologies inherent in the broader field of design (e.g. Boland and Collopy, 2004; Brown and Katz, 2011).
- Designing business models necessitates specialised design tools and methodologies tailored to meet the unique structural and functional requirements of different instances of business models (e.g. ecosystemic, sustainable). Universal approaches are impractical and potentially misleading.
- Technology has the potential to considerably support the design of business models. Generative artificial intelligence (AI) is emerging as a pivotal force poised to significantly influence the contours of business model design across

various phases of its lifecycle. Simulation, particularly system dynamics-based, could serve as a tool for the design of business models, supporting digital forms of prototyping and managerial sense-making.

This editorial provides a concise overview of the significance of these insights for the design of business models and, drawing from each, offers initial indications of potential pathways for the advancement of this field.

The remainder of this paper is organised as follows. I start by exploring the design of business models, drawing a demarcation between design objects (what manifests as business design) and design processes (how business models are designed). I proceed by progressively illustrating different facets of the design of business models, pointing to distinctions, such as the design of business models in startups (business model design, BMD), the design of business models from scratch in incumbent firms (i.e. corporate venture building)(business model design in incumbents, BMDi) and the reconfiguration of existing business models (business model reconfiguration, BMR). Building on the consideration that the design of business models spans the three possible interpretations of the business model construct, namely business models as real entities, cognitive schemas and formal representations (Massa et al., 2017), I organise and synthesise different aspects of designing a business model into a framework and illustrate its meaning and significance for the design of business models. I conclude by commenting on the three emerging meta insights discussed above and their significance for the evolution of the field.

The Design of Business Models

The perspective taken in this editorial is that one way of clarifying the nature of the design of business models is by focusing on the different aspects of designing business models, including the design objects, processes, instances of business models and types of design projects. This section aims to offer a high-level overview, a clarification and organisation of these aspects.

The design object: Which objects manifest as business model designs

To begin, the literature as well as the contributions to this issue seem to suggest that different 'objects' can manifest as business model designs.

According to Amit and Zott (2015, p. 332), for example, business model design 'involves the conceptualization of a boundary-spanning activity system that includes the mechanisms that connect these interdependent activities and the identification of the party that carries out each of the activities within the system'. Casadesus-Masanell and Ricart (2010) add that, in practice, this manifests as committing to choices (i.e. there are strategic as well as tactical choices beyond activities) and articulating sets of choices that reinforce each other in a consistent manner by virtue of how the consequences of each choice interact with other choices. They point to managerial action in crafting and running business logics. Thus, a first interpretation of the design object is that it refers to the logics at the level of real businesses and organisations.

Lecocq et al. (2024, this issue) note that, most of the time, designing a business model is understood, perhaps implicitly, as something different, such as using a framework or other types of tools to support different tasks and activities involved in the process of crafting real business models. Put differently, this suggests, among other things, that the object of designing business models can be real operating business models at the level of existing firms as well as visual tools and conceptual frameworks. The design literature distinguishes between tangible design objects, which are the 'real thing' with a concrete existence, and conceptual designs, which are abstract representations or models thereof (McKim, 1968; Auernhammer and Ford, 2022). The business model literature also reflects this concept, drawing a distinction between business models as 'attributes of real firms' and business models as 'formal conceptual representations and descriptions' (Massa et al., 2017).

This important differentiation suggests that both conceptual models of the business model and operating business models at the level of real firms can

manifest as design objects in the design of business models. A straightforward corollary is that to avoid confusion, it is important to distinguish between them when discussing the design of business models. In this paper, I use the notions of *formal and conceptual models (conceptual designs)* and *real business models (firm- or organisation-level logics [for value creation and capture])* to refer to the former and the latter, respectively.

The design process: How business models are designed

The design of the business model involves (a) the design process(es). A design process refers to the activities and dynamics involved in creating business models. Given that business model designs can refer to distinct design objects, i.e. real business models as well as conceptual designs, and given that conceptual designs are designed themselves, there is a need to be specific. The design of business models can refer to two distinct endeavours: 1) the implementation of real-world business models and 2) the design formal and conceptual models. These endeavours differ in terms of processes, activities, dynamics, purposes and, consequently, validity criteria.

The Design of Real Business Models (attributes of firms or organisations)

The design of business models usually begins with an 'initiation phase' (Beausoleil, 2022; Lecocq et al., 2024, this issue). This phase is marked, among other things, by 'design antecedents' (Amit and Zott, 2015), which act as catalysis and triggers to kickstart the design process.

There are several factors that may help explain why managers of established firms, corporate explorers (Binns et al., 2022), intrapreneurs and founders might pay attention to the design of business models. These include *enablers*, such as technological change and technological advances (Chesbrough and Rosenbloom, 2002; Zott et al., 2011) or the acquisition of new capabilities (Seelos and Mair, 2007) and change triggers, such as external threats, new opportunities, competition, regulation and social and customer pressures (Casadesus-Masanell and

Zhu, 2012; Frankenberger et al., 2013). They also involve *drivers* rooted in forward thinking approaches, visions and purposes, such as goals (to create and capture value), inspiration from existing business model templates or stakeholder activities (Amit and Zott, 2015; Martins et al., 2015).

According to Baeusoleil (2024, this issue), in practice, the initiation phase is much more than the start of a project. When rooted in the discipline of design, an initiation phase involves conducting activities based on clarifying the goal(s) to attain (e.g. what would indicate success) and defining the problem(s) to solve to achieve such goals (e.g. what problems are we really trying to solve? For whom? etc.). It involves activities such as creating a project hypothesis, a project brief and a research plan to investigate the assumed problem.

Scholars generally agree that the act of designing business models involves a set of specific 'activities', a 'way' and even a 'process' (Auernhammer and Ford, 2022). Within the received business model literature, such a process has often been conceptualised as comprising different stages, steps or phases. For example, Frankenberger and colleagues (Frankenberger et al., 2013) have proposed the 4-I model, which points to initiation, ideation, integration and implementation as the four main stages of the process involved in innovating business models. Similarly, Bausoleil (2024; this issue) points to initiation, investigation, integration and implementation. Lecocq et al. (2024, this issue) suggest five stages, namely ideation, definition, elaboration, assemblage and test. Other scholars have proposed similar frameworks highlighting different stages (Wirtz and Daiser, 2018).

In a review of 20 studies on business model innovation processes, Wirtz and Daiser (2018) found that despite sometimes considerable differences (e.g. some studies propose three stages while others identify ten stages), most of them share similar stages, namely analysis, ideation, integration and implementation. Eventually, and anchoring in the design and design thinking literature, they propose seven stages to innovate a business model: analysis, ideation, feasibility, prototyping, decision-making, implementation and sustainability. Roger Martin

(2009), rooting in the notion of abductive reasoning, conceptualised the design of business as the process of moving across a knowledge funnel through three main stages characterised by increasing clarity and understanding. These are the mystery (and hunch), the heuristic and the algorithm. This perspective emphasises thinking and the process of gaining progressive clarity into figuring out logics (algorithms) to serve clients and capture value in doing it. Binns et al., authors of *Corporate Explorer*, propose ideation, incubation and scale, emphasising the process of creating new growth opportunities within established businesses and the importance of designing business models that scale. Other perspectives are possible, emphasising different phases and stages and even conceptual viewpoints.

Overall, the broad business model literature has offered several attempts to conceptualise the design of business models by pointing to the main phases and stages involved. The emphasis on building and anchoring on design concepts varies greatly, ranging from strong (e.g. Martin, 2009; Baeusoleil, 2024, this issue) to almost absent (e.g. Frankenberger et al., 2013).

Some authors suggest that this, namely, the conceptualisation of the design process as a number of stages and steps, is just a start. Designers rely on creativity, intuition and collaboration to address complex problems, leading to a process that is iterative, nonlinear and often unpredictable and characterised by considerable uncertainty. In addition, the design of business models involves the socially complex process underpinning collective sense-making and interpretation across organisational members (Ksouri-Gerwien and Poeppelbuss, 2024, this issue) and stakeholders and exchange partners (Amit and Zott, 2015; Vorbohle and Kundisch, 2024, this issue). The idea of a *relational business model* advanced by Ricart (2024, this issue) offers an example of the coordinative, cognitive and communicative complexities involved in crafting business models that need to orchestrate and align the actions of several exchange partners in a synchronised and mutually beneficial way. Such processes can have their starting points in situations where existing businesses perceive the need to solve certain problems, for example, a specific business or sustainability challenge,

or they perceive new opportunities for value creation that require new business model designs (Lüdeke-Freund et al., 2024, this issue).

Expanding on the acknowledgement of the intricate dynamics within the design of business models, several scholars have suggested that delving solely into high-level stages is insufficient. Social interactions as well as emotional experiences and language play a significant role in the sense-making and meaning-making processes that accompany the design of business models (Shepherd et al., 2021). Design, understood as an embodied practice of what designers do (Wittington, 1998), emphasises the significance of creativity, conflict resolution, negotiation, cognitive flexibility and modes of cognition (Auernhammer and Roth, 2023). It is as much a process comprising stages as an embodied set of microactivities that aim to establish 'new and purposeful change'.

However, in management, the term 'design' is often discussed in rather abstract terms as a relatively rationalised process (Auernhammer and Roth, 2023), without grounding the meaning (or the significance) of the term in the actual practice of designing (e.g. Brown and Katz, 2011). When this is the case, one of the risks is failing to understand the significance of design-related capabilities and crafts, creating misplaced expectations that can lead to frustration with the design effort or even failure. Bausoleil (2024, this issue) highlights several practices and capabilities coming from the field of design and design management, such as divergent or convergent thinking, visual thinking, storytelling and problem framing (or re-framing), which she argues play an important role in the actual design of business models. However, she suggests that the use of these practices and techniques is not necessarily a common practice in business model design projects in large organisations. Additionally, these skills are not commonly taught in business schools.

In essence, the business model literature and the contributions to this issue suggest that the process of designing business models can be examined at various levels of depth. At higher levels of abstraction, simplified frameworks outline the different stages and steps involved in the process, aiding

in understanding and communication. However, these frameworks may inadvertently suggest that designing business models is primarily a predictable, or even plannable, rational decision-making activity that can be simplified by means of stages. A closer examination of the design process reveals a more nuanced perspective. Designers and innovation leaders draw upon practices such as problem-framing and re-framing, storytelling, visual thinking and other activities involved in meaning-making and sense-making to progressively craft business models, reflecting a view of the process of designing business models as, partly, a creative act, driven by imagination, inspiration, the exploration of possibilities and the breaking of conventional boundaries.

Different instances of real business models and different instances of the design of business models

Thus far, for analytical clarity, I have approached the design of business models as a relatively uniform, albeit intricate, process. However, beyond mere definitions and semantics, two significant distinctions emerge when considering the design of firm-level business models.

The first distinction lies in the various instances of business models, which represent real-world business models characterised by diverse forms. These instances encompass exosystemic business models, multisided platforms and sustainable business models, each subject to distinct design requirements, as suggested by the contributions in this issue (e.g. see Corra' and Fazio, 2024; Lüdeke-Freund et al., 2024; Ricart, 2024; Vorbohle and Kundisch, 2024).

The second distinction pertains to differentiating between different instances of the design of a business model. Elaborating on the idea of business model innovation (BMI) (e.g. Foss and Saebi, 2017) with Chris Tucci, we proposed that BMI comprises two different instances: the reconfiguration of existing business models (termed BMR) and the creation of business models from scratch (referred to as BMD) (Massa and Tucci, 2013). I contend that this bifurcation is also useful when referring to the design of business models. Moreover, the process of crafting business models from scratch can be further categorised into two

sub-instances and corresponding processes. First, it encompasses activities centred on searching for and validating a scalable and viable business model for startups. Second, it involves the development of new business models with established firms, such as the case of Nestle with Nespresso or Barilla with Cucina Barilla. Elsewhere, we referred to the former as BMD and to the latter as BMDi (Massa and Tucci, 2021). Despite potential definitional disagreements or confusion stemming from labels,² each represents a distinct instance of the design of business models shaped by unique constraints, contexts and moderators.

For example, BMR emphasises cognitive barriers related to implicit mental models and structural barriers related to interdependencies among activities, which cause structural inertia (Massa and Hacklin, 2020) and conflicts with existing asset configurations (Chesbrough, 2010). As suggested by Kendling and Havemo (2024, this issue), the severity of these challenges is contingent upon the extent and nature of change involved in BMR (e.g. incremental, modular, integrated and transformational). Conversely, BMD is marked by attributes such as (considerable) uncertainty, the need for knowledge search and recombination and, in general, the liability of newness, demanding a different treatment from BMR. BMDi, on the other hand, is characterised by the complexities inherent in managing two business models simultaneously (Markides and Charitou, 2004) and the tensions between exploration and exploitation (O'Reilly III and Tushman, 2013), among other idiosyncratic attributes. In summary, the literature underlines the importance of treating various instances of business models differently to enhance our understanding of the overarching concept of the design of business models.

Table 1 offers a high-level overview of some of the differences between BMR, BMDi and BMD, adapted from Massa and Tucci (2021).

² I acknowledge that the use of words is perhaps unfortunate, and that referring to 'business model design or BMD' and 'the design of business models' as distinct things may lead to confusion.

The design of formal and conceptual models of the business model (conceptual designs)

Formal and conceptual models are designed themselves, with their design potentially influencing the overall design of business models. The design of conceptual models and frameworks has foundations in conceptual modelling and adjacent literature (like information systems) (e.g. see Szopinski et al., 2022) as well as the design literature (e.g. see McKim, 1968; 1972; Boland and Collopy, 2004). This literature offers very valuable insights that could help considerably advance our understanding of how to design conceptual models of the business models and how to validate them (e.g. Bitetti and Bedolla, 2024, this issue). However, insights from these domains have only begun to slowly penetrate the realm of business models, either remaining confined to disciplinary silos, notably e-business and IS, or making gradual inroads (Vorbohle and Kundisch, 2024, this issue). The design of conceptual models (and other tools) often unfolds in an ad hoc manner, largely guided by the individual author's interpretation of common sense principles. This makes it more difficult to reconcile, contrast and compare the different approaches offered and understand their tangible impact(s) during the design of business models.

In addition, tools and conceptual models are only partly tested in a systematic manner with regard to pragmatics, meaning the tasks, the contexts and the characteristics of the user (Szopinski et al., 2022). It could be that a framework that visually represents business models (but also other kinds of tools) has the potential to support certain activities or specific tasks involved in the design of business models. However, this potential does not ensure that it ultimately does or that it does in all conditions (Szopinski et al., 2022).

Designing business models involves individual- as well as organisation-level interpretation and sense-making. These are very complex processes, characterised by coordinative, cognitive and relational efforts. In addition, business models themselves are highly abstract entities. Characteristics such as these underscore the potential value of validation. Validation requires the testing of specific hypotheses in carefully designed experiments and other

Table 1.

Business Model Innovation and Change	Business Model Reconfiguration (BMR)	Business Model Design in Incumbent Firms (BMDi)	Business Model Design in Newly Formed Organisations (BMD)
	The reconfiguration of an existing business model	The creation from scratch of a business model which is new to the firm	The creation from scratch of a business model when none is in place
Examples	Hilti or Interface switching to a sanitisation business model (Jonsson et al., 2008)	Nespresso (Nestle), Cucina Barilla (Barilla) (Massa and Tucci, 2021)	(Early stage) startups (McDonald and Eisenhardt, 2020)
Qualifiers	<ul style="list-style-type: none"> Incumbent firms Cognitive and structural barriers (i.e. Chesbrough, 2010) Changing activities (e.g. Zott and Amit, 2010) Configurational fit (e.g. Siggelkov, 2002) Interdependencies (e.g. Lanzolla and Markides, 2021) 	<ul style="list-style-type: none"> Incumbent firms Conflict with existing business model (e.g. Markides and Charitou, 200) Exploration-exploitation (e.g. O'Reilly III and Tushman, 2013) Firm boundaries (e.g. Fjeldstad and Snow, 2018) 	<ul style="list-style-type: none"> Newly formed organisations/early-stage startups Customer development process (e.g. Blank, 2020) Disciplined entrepreneurship (Sull, 2004) Lean startup (e.g. Ries, 2011; Shepherd and Gruber, 2021) Discovery-driven planning (McGrath and MacMillan, 1995)

Table 1: BMR, BMDi and BMD (adapted from Massa and Tucci, 2021)

forms of empirical investigation (e.g. see Massa and Hacklin, 2020 for a discussion). Bitetti and Bedolla (2024, this issue) offer an example of an empirical study aimed at contrasting the effectiveness of using patterns for sustainable business model design (cf. Lüdeke-Freund et al., 2024, this issue) with more traditional patterns in an ideation experiment aimed at producing ideas consistent with creating more sustainable value. With reference to business model modelling languages (BMML), Szopinski et al. (2022) illustrated the possibility of research with conceptual models and research about conceptual models. Many possibilities exist to improve our understanding of the design of business models by crafting a research programme aimed at testing the value of different tools as well as conceptual frameworks and designs.

The use of formal models of the business model in the design of business models

Several authors have suggested that formal models of the business model operate as 'boundary objects' that support business models' sense-making or other activities that involve a broad range of cognitive, communicative and coordinative tasks (e.g. Doganova and Eyquem-Renault, 2009; Baden-Fuller and Morgan, 2010; Perkmann and Spicer, 2010). The key to understanding the interaction between business models as formal models and the design of business models is the idea of cognitive and linguistic schema. In the context of business models, *schema* are 'cognitive structures that consist of concepts and relations among them [the concepts] that organize managerial understanding about the design of activities and exchanges that reflect the critical interdependencies

and value creation relations in firms' exchange networks' (Martins et al., 2015, p. 105).

Rich literature exists on business models as *cognitive and linguistic schema* (see Massa et al., 2017 for a review) and business models as cognitive and linguistic schema represent the third interpretation of the BM construct that has been offered in the literature (Massa et al., 2017), in addition to business models as *real entities* and business models as *formal representations*. Shepherd and colleagues (2021) suggest that the physical instantiation of business models as conceptual models can play a critical role in supporting the sense-making, both individual and collective, that underpins the decision to change business models. This is not a necessary condition. Change may happen in the absence of such physical instantiations (e.g. analogical reasoning and conceptual combination; see Shepherd et al., 2021). Nonetheless, formal instantiation of business models can act as catalysis in the process of designing business models by providing 'a bridge between individuals by triangulating on

something in common, by facilitating a flow of information and knowledge, and [by] reducing the time required for sensemaking' (Grichnik et al., 2016, p. 4).

In synthesis, the intersection between formal business models and business model design can represent (another) fruitful area of inquiry and an opportunity to advance our understanding of the design of business models. The contributions to this special issue offer several insights, for example, the idea of digital forms of prototyping (Ksouri-Gerwien and Poeppelbuss, 2024) that speak to the use of formal models in the process of designing business models.

Summary of the literature on the design of business models

Figure 1 serves as a means to capture the diverse facets of the design of business models delineated thus far.

Designing business models spans three interpretations of business models: business models

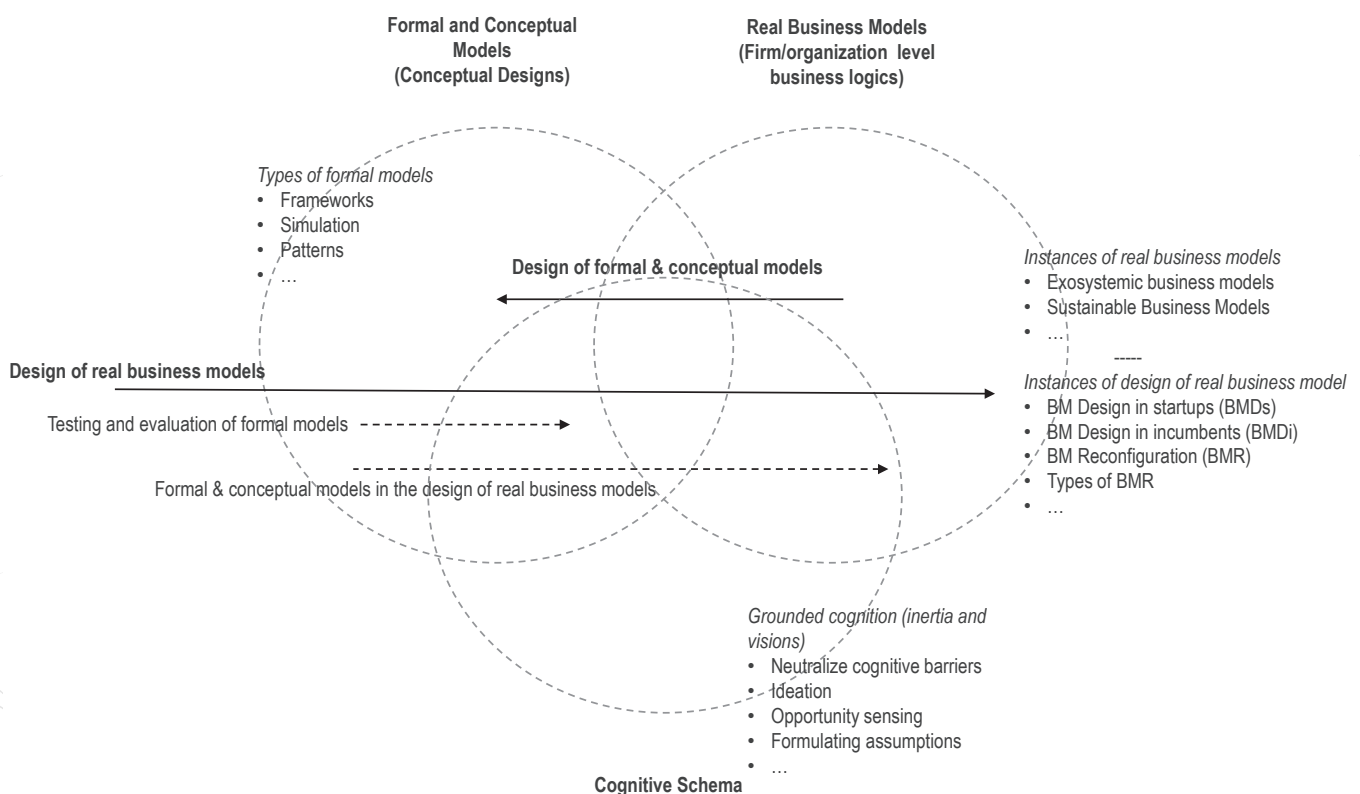


Figure 1: Business models design nexus: entities, cognitive schema and conceptual designs

as real entities, business models as cognitive (and linguistic) schema and business models as formal representations.

The design of business models may refer to both the process and the outcome of creating real operating business models (entities), as well as formal models (conceptual designs). This distinction underscores the delineation that has been proposed in the literature between business models as attributes of real firms and business models as formal conceptual representations. The cognitive and linguistic schema of the business model sit in between, conceptually mediating the relationship between formal models and the design of real operating business models, as illustrated by authors such as Shepherd et al. (2021). Formal models can help overcome the cognitive barriers and other inertial properties of cognitive schema. They can also support changing schemas during search processes that are driven by opportunity seeking and modes of cognition that are forward-thinking and inspired by visions.

The design of formal models refers to the process of crafting visual tools and other business model frameworks. The domain of conceptual modelling and the broader design literature can offer useful theoretical foundations and guiding principles.

Testing and evaluating formal models involves assessing hypotheses regarding the efficiency and effectiveness of utilising these models to accomplish specific tasks in the design of business models. Given that business models are relatively abstract entities and that designing business models involves a socially complex process of sense-making and meaning-making, testing the use of frameworks and tools for business models in rigorously designed experiments and other forms of empirical investigation emerges as an important activity in research on the design of business models.

The design of real business models refers to the activities and dynamics involved in crafting the logics of real firms and other organisations. A way to capture this process is by abstracting it into a framework delineating the high-level stages and steps

involved. There are several proposed frameworks listing different stages and steps. These frameworks have many merits and can offer great support for the design of business models. However, real design processes, intended as embodied practices illustrating what designers do, are much more complex, revealing the importance of capabilities, skills, modes of cognition and micro-practices that play important roles in the design of business models. Exploring the micro dynamics of designing business models not only helps in understanding the intricacies of effective business model design but also lays the groundwork for developing pedagogical interventions. By understanding the detailed processes and dynamics involved in business model design, educators can develop more effective courses to train students and future managers, incorporating essential skills such as divergent or convergent thinking, visual thinking, storytelling or problem framing that, as of today, are not generally part of the curriculum of business schools.

Finally, the design of business models encompasses creating various real-world models with diverse forms, such as ecosystemic business models, multisided platforms or sustainable business models. It also entails designing within different real-world contexts, such as reconfiguring and innovating existing business models and crafting new models from scratch. This suggests resisting the temptation of finding a universal solution and embracing forms of contextual and contingent thinking and action. Hopefully, the framework offered in this editorial could serve as a starting point and a launchpad to steer future research endeavours towards a more contextual study of the design of business models.

Emerging Meta-insights and Future Research Areas

The preceding section aimed to provide a high-level overview of the various aspects involved in designing business models, laying a foundation for a framework to guide the study as well as the practice of designing business models. The papers featured in this Special Issue offer several insights into the

different facets of designing business models. However, taken individually or in thematic clusters, they also unveil a few emerging meta insights, namely 1) the centrality of designing and designerly ways of thinking, knowing and doing, 2) the importance of embracing a contingent approach to the design of business models that would recognise the variety of business model instances and 3) the role of digital technologies in shaping the nature of the design of business models. These insights can help reveal some possible avenues for the evolution of this field.

1. The idea of the design of business models distinguishes itself from traditional notions of business model innovation by embracing the principles and methodologies inherent in the broader field of design.

Beausoleil's contribution (2024, this issue) highlights, among other things, the distinction between traditional business model innovation (see Foss and Saebi, 2017 for a review) and the design of business models, emphasising the fusion of business concepts with design principles. The design of business models, according to this view, is as much about business models as it is about design, incorporating design mindsets, methodologies, principles and governing ideas (Beausoleil, 2022). The concept of 'design' (or 'designing') is not understood metaphorically (as in many business model papers) but is rather infused with the meaning of a practice entailing modes of cognition that prioritise fluidity, creativity and the interplay between divergent and convergent thinking, which are reflective of how designers think and know (Cross, 2006). Beausoleil also underlines the centrality of design methods, tools and approaches to problem solving, such as problem framing (and reframing), ethnographic research, storytelling, prototyping, user and customer journey mapping, design thinking workshops and sprints. She offers an overview of how the Rotman School of Business at the University of Toronto created and evolved a whole curriculum at the intersection of business concepts and standard education and design methods and relative pedagogy.

This juncture between design as a broad field traditionally developed outside of standard management

research (Gruber et al., 2015) and business (models) may constitute an important area for research, practice and the future of business education.

2. Designing business models necessitates specialised design tools and methodologies tailored to meet the unique structural and functional requirements of different instances of business models.

Business models manifest in varied forms, encompassing diverse structural requirements, and exhibit different functional aspects (e.g. see Zott and Amit, 2013 for a discussion on the linkages between business models and organisational forms).

While there may be a natural desire to converge on a singular perspective and even a universal language to visually describe business models, the diverse array and richness of business models, coupled with the multifaceted nature of designing them, suggest that a one-size-fits-all approach is likely impractical and potentially misleading. The diversity of business models calls for the development and utilisation of specialised tools that can guide designers in considering the specificities of each instance of business model design. The contributions in this issue highlight two significant instances: business models for sustainability and exosystemic business models.

Business models for sustainability

Business models for sustainability diverge from conventional profit-driven counterparts by embracing a holistic approach to value creation, integrating social and environmental dimensions alongside economic objectives. Unlike traditional models focused solely on customer and shareholder value, sustainable business models adopt a triple bottom line perspective (Elkington, 1997), striving to optimise economic, social and environmental outcomes for various stakeholders. This requires the use of specialised design tools tailored to address the intricate interplay of economic viability, societal well-being and environmental stewardship inherent in sustainable business models.

Cora' and Fazio (2024) propose the Design Driven Business Model Innovation Canvas (DDBMIC),

incorporating principles like *planet*, *network* and *prosperity* to guide the creative exploration of sustainable business models. Lüdeke-Freund and colleagues (Lüdeke-Freund et al., 2024) introduce the Sustainable Business Model Design (SBMD) framework, founded on patterns for sustainable business model design (Lüdeke-Freund et al., 2018; Lüdeke-Freund et al., 2022), which emphasises the core of solutions to enduring and recurrent ecological, social or economic problems that arise when an organisation aims to create sustainable value. Bitetti and Bedolla (2024) examined the cognitive effects of patterns for sustainable business model design, finding significant evidence of the benefits associated with using specialised tools during the initial design phases to support the generation of ideas aligned with sustainable value creation.

These contributions highlight the importance of conducting more work on the design of sustainable business models, with a specific emphasis on the distinct aspects and requirements of designing more sustainable business models.

Ecosystemic business models

Ecosystemic business models, that is, business models characterised by value (co-)creation among multiple stakeholders within an ecosystem, also stand apart from traditional firm-centric models. One of the key distinctions lies in the complex interdependence among stakeholders. Unlike firm-centric models, where value creation and capture are internalised, ecosystemic models require alignment, orchestration and fair reward distribution among stakeholders.

Similar to designing sustainable business models, designing ecosystemic models demands unique tools and methodologies that allow for the simultaneous consideration of one's own business model and that of ecosystem partners. Standard business modelling tools and frameworks that focus on representing business models in isolation may be inadequate. Vorbohle and Kundisch (2024; this issue) analysed a real-world example of a business ecosystem from the maritime logistics industry, highlighting five significant design challenges for exosystemic business models, setting apart the design of such business

models from the design of more conventional firm-centric business models. They offer a critical analysis of these challenges and deduce the implications and functional design requirements for business modelling tools from a conceptual perspective. Overall, the design of ecosystemic business models could represent a fruitful area of inquiry or even increasing practical relevance, given the advances in digital technologies as enablers of such business models. Conducting research in this area could also offer the opportunity to develop tools and methodologies tailored to the unique design requirements of this instance of business models.

3. Digital technologies have the potential to considerably support the design of business models. Generative artificial intelligence (AI) is emerging as a pivotal force poised to significantly influence the contours of business model design across various phases of its lifecycle. Simulation, particularly system dynamics-based, could serve as a tool for the design of business models, supporting digital forms of prototyping and managerial sense-making.

Digital technologies could play an important role in shaping the design of business models.

Generative artificial intelligence

Generative technologies are technologies that rely on vast amounts of data sets collected and analysed thanks to AI to produce content (text, images, video or other kinds of media) in response to user inputs (called prompts). Generative technologies are changing the way knowledge is conceived, created, structured and shared. Given that the design of business models is a cognitively dense process, it is reasonable to expect that generative AI will impact the lifecycle of business model design in various ways. According to Lecocq and his coauthors (2024) there are six major changes that generative AI could catalyse soon in the business design process. These are data generation and analysis, idea generation, flexibility in the design process (catalysed by the ability to zoom in and out during the design phase), support for analogical reasoning, critical thinking and

blurring the boundaries between conceptual design and implementation.

While generative AI-powered changes such as these could make designing business models more efficient, there are risks involved. In addition, generative AI alone may not be able to fully supplant entrepreneurial intuition. According to Lecocq et al., intuition inherent in entrepreneurial thinking remains indispensable for navigating uncertainties, uncovering unique opportunities and aligning business models with organisational objectives. Independent of considerations like these, however, it seems reasonable to state that generative AI will represent an area of increasing importance for advancing the theory and practice of designing business models.

System dynamics computer simulation

Ksouri and Gervent (2024, this issue) discuss the potential of computer simulation in aiding the design of business models for incumbent firms. Computer simulation, particularly when grounded in the principles of system dynamics (SD) and its content, has the potential to support designing business models. Rooting in action research, they collected evidence of the potential value of simulation, particularly SD-based ones. Simulations can empower organisations to engage in scenario planning, parametric testing and what-if analyses related to different choices of business models. Compared to spreadsheets, SD modelling and simulation offer dynamic visual representations, reducing business model complexity and aiding cognitive tasks during design and decision-making. Furthermore, computer simulations have the potential to contribute significantly to managerial sense-making by providing a dynamic and visual representation of the intricate interdependencies within the business model.

The use of computer simulation could become an important area of future research, particularly in conditions of relatively low uncertainty (low assumptions-to-knowledge ratio) that would allow the building of reasonable models. This condition is encountered, for example, in projects involving more incremental reconfigurations of existing business models. Research could help us better understand both the contextual and operational factors affecting the value of employing different kinds of computer simulations in the design of business models.

Conclusions

In very general terms, the design of business models refers to the design of the logics of value creation, delivery and capture that firms, or other organisations, operate as they go to markets and society. This special issue reveals that the concept of designing business models encompasses complexities that extend beyond such general understandings, illustrating diverse interpretations and implicit meanings of design that lead to varied perspectives on what, how and why business models are or should be designed. Understanding these complexities is crucial for fostering cumulative progress in the field and deepening our comprehension of what it truly means to design business models. It is my hope that this editorial, along with the insights from this special issue, which marks the 10th year of the *Journal of Business Models*, can serve as a foundation to steer and guide further research in this domain and the creation of knowledge for action. This knowledge could support visionary managers, corporate explorers and entrepreneurs in crafting business models that drive positive change across diverse contexts and industries.

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