

# Strategy practices to respond to organizational challenges with the lens of strategic design and strategy-as-practice

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## Abstract

**Context:** Organizations are trying to navigate turbulent waters facing difficulties to deal with such a complex, dynamic, networked, hyper connected and highly technologically disruptive environment. Many of the earlier research strategy assumptions are now irrelevant, and no longer seem to respond to the complexity, unpredictability, scope, scale, and speed of changes in the business environment. The research problem consists of the companies' difficulty in dealing with their challenges in this new environment, based on their current strategy practices. **Goal:** The research aims to design a framework with guidelines, from a conceptual modeling approach, to help medium-sized Brazilian companies established in the international trade ecosystem, to improve strategy practices, by focusing on facilitate alignment and engagement to respond to their challenges with the lens of strategic design and strategy-as-practice. **Methodology:** Design science research (DSR) with cross-sectional time horizon, and mixed methods for data collection and analysis within a pragmatic approach. The primary evaluation method will be action research. Prototype evaluation will be performed using the Strateegia, a platform focused on asynchronous communication that assumes design as a strategic tool. **Potential Contributions:** It is expected to contribute to the academic and practitioner communities, further investigating the phenomena, and helping those companies to improve their strategy practices to respond to their challenges in this new complex environment.

## Keywords

Strategic design, strategy-as-practice, conceptual modeling, complex environment.

## 1. Introduction

We are living in a chaotic, turbulent and rapidly changing business environment. One of the reasons for this changing world is the technological pace of change and its impact on society [1,2,3]. New marketplace business models based on digital platforms are opening new ways for radical changes in the organization of economic activities [4].

Corona virus pandemic and its profound consequences drastically impacted economies, people and companies, bringing important changes in consumer behavior [5]. Value global chains were broken worldwide [6].

The pandemic crisis has provided a sudden glimpse into a future world, where digital has become central to all businesses and where agile ways of working are essential to respond to changes in customer behavior [7]. The impact is absolutely enormous. Value chains are being reshaped and more than \$3 trillion are flowing to the companies best prepared to deal with the new situation [7]. There is a need for boldness to move quickly and learn fast [8,9].

Strategy, as a central concept of strategic management, considering the broader field of organizational research, plays a fundamental role for organizations that seek to answer these questions. A diversified range of streams and clusters of research comes from the growth and consolidation of strategic management research [10]. Onto-epistemological different positions coexist and "ways to create synergies that result in better answers to current and future canonical questions must be found" [11].

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Many of the earlier research strategy assumptions are now irrelevant, and some conventional wisdom no longer seem to respond to the complexity, unpredictability, and scope, scale, and speed of changes in the competitive environment [9,13].

The new situation, amplified since the pandemic crisis, requires new strategic approaches, review of existing practices, tools, techniques, and the need to revisit theories to try to respond to this disruptive and emerging situation [9,12,14]. This is the main motivation of this work.

A deep research on the cognitive and behavioral foundations of strategic management reveal that between 2008-2020, “social networks at the inter-organizational level and the environment, institutions and market phenomena at the contextual level came to the fore” [15].

Golsorkhi et al. [16] emphasizes strategy-as-practice (SAP) as a distinctive approach for studying strategic management, a alternative to the mainstream strategy research “via its attempt to shift attention away from merely a focus on the effects of strategies on performance alone to a more comprehensive, in-depth analysis of what actually takes place in strategic planning, strategy implementation and other activities that deal with strategy.”

It is worth mentioning the emergence of collaboration platforms in design, research, teaching or academia to facilitate processes of working and creating together [17,18], more specifically, a platform focused on asynchronous communication for building strategic transformation journeys, assuming design as a strategic tool. Neves et al. presented *strategia.digital* platform or *Strategia*, “the result of years of experience in creating, evolving and transforming business from design as a strategic approach in Brazil” [19].

Some scholars highlight new paths for strategic management that can be opened through design practices. Liedtka et al. argue that design thinking opens new frontiers for strategy development [20]. Knigh et al. called the integration of design thinking into the practice of strategic management as “Design-led strategy” [24]. The authors emphasized the pioneer work of Jeanne Liedtka [20,21] between design and strategy and its potential to enable a “more widely participative and more dialogue-based” approach to strategy. Miletto Tonetto et al. created a very new approach that they called pragmatic strategic design – PSD. These approach “privileges practice-based action, extrapolating mere technical approaches, favoring the design of product-service-systems”, and arguing about the failure of traditional strategic planning and the emergence of design management [22].

Golsorkhi et al. [16] and Sobel et al. [23] emphasized that Practice Theory, from diverse theoretical roots, provides a foundation of the Strategy-as-Practice field. This last article proposed a theoretical foundation of a conceptual framework for strategic design-as-practice, bringing together both concepts of strategy-as-practices and design-as-practice.

However, despite those theoretical foundations, no empirical work on this fusion was identified. There is a need for a more practical and clear integration between strategic design and strategizing, considering the “practice turn”.

The research problem consists of the difficulty of companies in dealing with their challenges in this new environment, based on their current strategic practices.

Our hypothesis is that most companies are facing some strategy issues, some challenges and/or dilemmas due to this new situation, and they are still employing the same previous cognitive mindsets [24, p.33], the same practices, tools, techniques or methodologies [25,26] to build their strategy, not being these ways the most suitable to respond to the complex, dynamic, networked and digital environment.

Based on earlier contextualization, it will be performed practice-oriented research from a conceptual modeling approach. This focus on practice “provides an opportunity to examine the micro-level of social activity and its construction in a real social context (...)” and will “allows one to move from general and abstract reflection on social activity to an increasingly targeted analysis of social reality” [16].

The purpose of this research project is to design a alternative solution: a framework with guidelines, from a conceptual modeling approach, to help those companies to improve strategy practices, by focusing on facilitate alignment and engagement to respond to their challenges, with the lens of strategic design and strategy-as-practice.

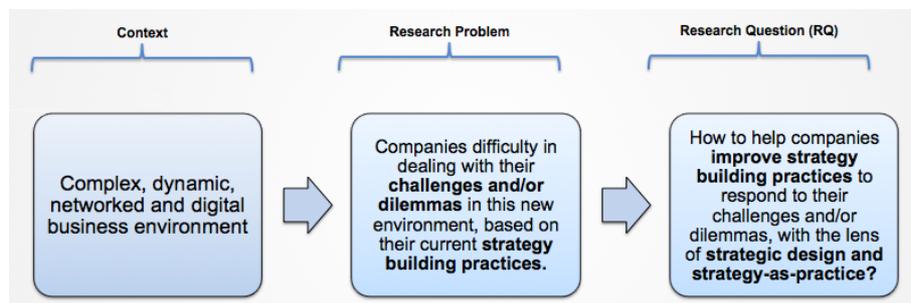
The research solution will be inspired by a conceptual modeling approach to build the framework with guidelines. Despite the variety of notions for conceptual model, for the purpose of this work, we

will adopt the following concept: “conceptual modeling is the activity of formally describing some aspects of the physical and social world around us for purposes of understanding and communication”, as Thalheim emphasizes on “reality and description of the world”[27].

The study will serve as a lighthouse to shed light on strategy practices. As a result of this framework with guidelines, practitioners and leaders of those organizations will be able to reflect on and improve their strategy building practices, facilitate alignment and engagement, increase their awareness about the difficulty in dealing with their challenges and/or dilemmas, in this new complex environment.

In order to better address the solution of the problem posed, a primary research question (RQ) was defined: **How to help companies improve strategy building practices to respond to their challenges and/or dilemmas, with the lens of strategic design and strategy-as-practice?**

Figure 1, summarizes the connection between the context, the research problem and the primary research question.



**Figure 1:** Context, research problem and primary research questions.

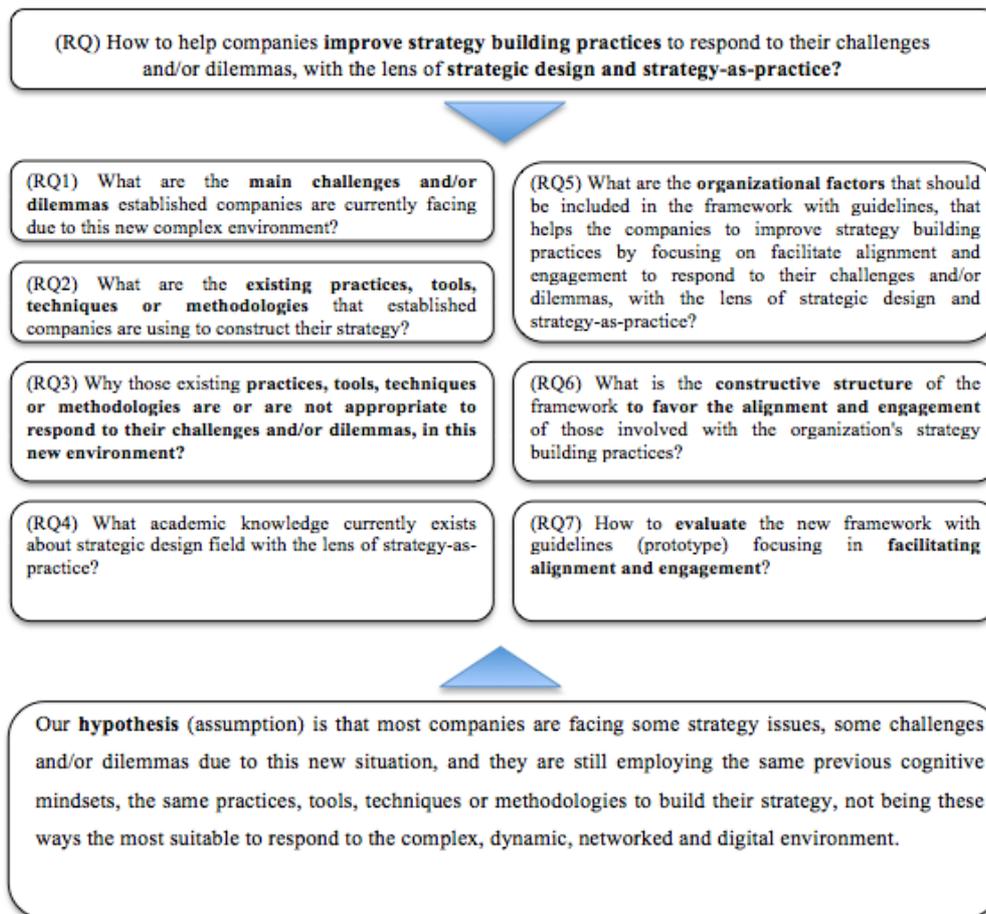
Seven others complementary research questions were formulated. Figure 2 summarizes the research question (RQ) together with the complementary questions and the hypothesis of this research thesis.

To address each research question, we will adopt mixed research methods for data collection and analysis, described in section 3, in order to investigate and evaluate the research problem and create the proposed solution.

The research problem appears to be relevant considering scope (a great number of companies are impacted), scale (the impact is huge, \$3 trillion, considering the worldwide impact, as we saw before), social (companies are closing operations, structural unemployment, and local inequalities) and will continue to be important over time (uncertainty, disruption and speed of change is the “new normal”).

As far as we know, no similar work has been detected in academic studies, considering its originality to propose a framework with guidelines, from a conceptual modeling approach, by focusing on facilitate alignment and engagement to respond to company’s challenges, with the lens of strategic design and strategy-as-practice.

The expected results of this work, is to contribute to the academic and practitioner communities, further investigating the phenomena of those companies' difficulties in dealing with their challenges, in this new environment, based on their current strategy building practices, and helping those companies to respond to their challenges and/or dilemmas, by means of the framework with guidelines, once: (i) the dramatic post-pandemic situation, as economies and markets are changing radically and will take time to recover; and, (ii) the ever dynamic changing of our complex networked society.



**Figure 2:** Research questions (RC), complementary questions (RQ1 to RQ7) and the hypothesis of this thesis plan.

This thesis plan is organized according to the following sections: (1) section 1 introduces the research problem, the research purpose, its contextualization, originality and potential contribution; (2) section 2 describes related works; (3) section 3 presents the work plan, including the research methodology and the work schedule; and, (4) section 4 highlights validity threads and potential limitations and with final considerations.

## 2. Related works

Here are some earlier works that could be related with this thesis plan, but do not have addressed a similar problem.

Miletto Tonetto et al. [22] created a very new approach that they called pragmatic strategic design – PSD. These approach “privileges practice-based action, extrapolating mere technical approaches, favoring the design of product-service-systems”, and arguing about the failure of traditional strategic planning and the emergence of design management. They described eight key characteristics of PSD. It is a theoretical approach with no empirical work associated.

Rasche & Seidl [28] raised a disruptive approach to strategy issues based on Niklas Luhmann's social systems theory [29]. The authors highlighted key concepts of Luhmann's theory regarding organizations as self-referential communication systems. It is a theoretical approach with no empirical work associated.

Knighth et al. [24] conducted a qualitative case study, where four practices captured the key ways in which design thinking was being integrated into strategy practice.

Meroni [30] proposed a deep reflection on the eight pillars that support the foundations of Strategic Design, as a discipline. It is a theoretical approach with no empirical work associated.

Liedtka was the pioneer to close the relation between design and strategy and its potential to enable a “more widely participative and more dialogue-based” approach to strategy [21]. Liedtka, & Kaplan have more recently presented arguments that design thinking opens new frontiers for strategy development [20]. It is a theoretical approach without associated empirical work.

Mackay et al. [31] argues that “processual understanding of the ‘practice turn’ is necessary for fully appreciating how the everyday operational, the socio-cultural and the strategic can be coherently linked together in an integrative framework for explaining strategy emergence” calling this approach Strategy-in-Practices (SIP). It is a theoretical framework with no empirical work associated.

Sobel & Schweitzer [23] published a work claiming for a conceptual framework of ‘strategic design as a practice’ that “consolidates and aligns design-led approaches with strategic management theory”. It is a theoretical framework with no empirical work associated.

Muniz [32] presented a framework for the evaluation of the use of multimodality in digital artifacts (Master's thesis, Universidade Federal de Pernambuco). It was created a framework for designing the interface of a digital artifact that was adapted to the **platform Strategia** through the creation of a journey containing kits with elements.

Lau [33] developed a framework with the support of which startups can effectively design their business model using design science research. The author proposed a framework for startups focusing on the business model, and not specifically on strategy building practices.

### 3. Work plan

This section will present the work plan, including the research methodology, with a plan for the evaluation/validation of results, and the schedule of work.

#### 3.1. Research methodology

As a guide to select the research methodology and the associated research methods to achieve the research goal, it was chosen two academic studies coming from software engineering research: Easterbrook et al. [34] and a recent one from Wohlin et al. that “provide guidance on which research methodology to choose in a given situation to ensure successful industry–academia collaboration in research [35]. Those choices were based on the research line: experimental software engineering.

The research methodology refers to the research approach with the various activities to methodologically and systematically addresses the central question of the research, with the respective justifications for the choices made. The research methods are the means to collect and analyze data, i.e., how the research activities are concretely conducted. Thus, different research methods may be used within a research methodology [35].

Based on the research problem, its contextualization, on the purpose of this research project and specifically on the primary research question (RQ), this thesis plan intends to use design science research (DSR) as the strategy methodology’s choice to design and conduct the research. This choice comes from the primary result of the research, which is the artifact that emerges from the design (in this thesis plan, a framework with guidelines, from a conceptual modeling approach) accompanied by knowledge about the design process [35].

The philosophy adopted to guide this study is pragmatism. Pragmatism argues that the most important determinant of the epistemology, ontology and axiology you adopt is the research question [36, p. 109]. For pragmatists, knowledge is judged by how useful it is for solving practical problems.

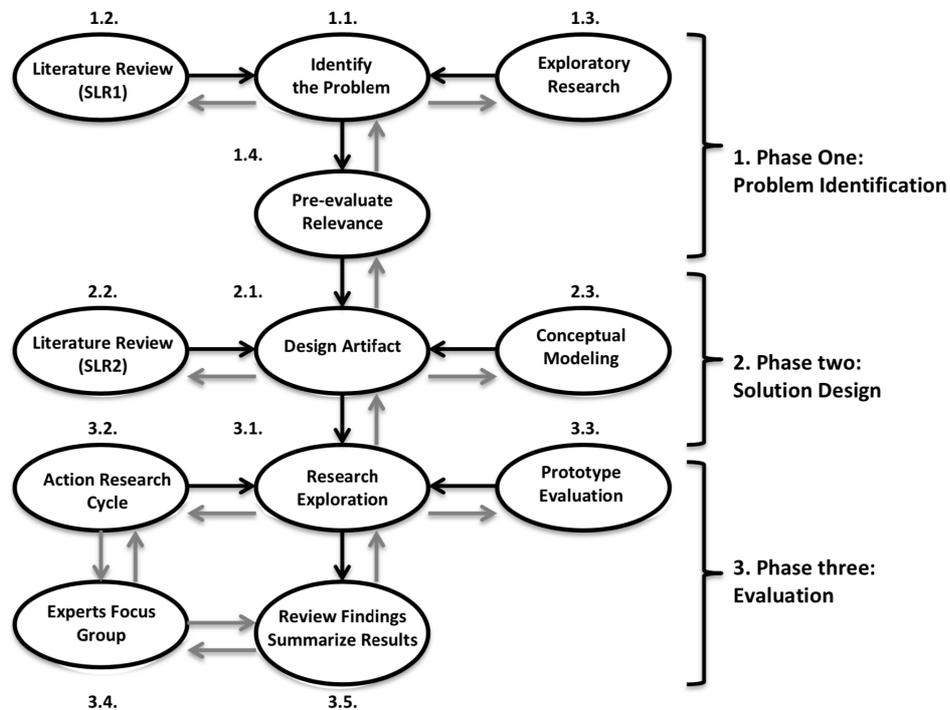
This thesis plan will consider deductive and inductive approaches always trying to shed light on the issue under study.

For data collection and analysis, mixed methods choices will be made coming from the pragmatism approach, where several methods can be employed to shed light on the research problem of this thesis plan.

It will be a cross-sectional study to collect data based on the primary and complementary research questions, over a short period of time.

The primary research question and seven complementary research questions presented in the introduction will guide the choice of the entire sequence of data collection and data analysis methods using design science research as a central strategy methodology.

Figure 3 represents the design science research methodology phases that will be applied on this thesis plan.



**Figure 3:** Design science research methodology process based on Offermann et al. [37] proposition adapted from Wohlin et al. [35].

This research process was based on Offermann et al. [37] proposition, and was chosen because it is synthesized from several other methods and maps well to the general problem-solving model we will adopt [35]. It's basically a three-phase model, with a few more iterations. The noir arrows represents links between the activities and the gray arrows represents possible paths. The ovals represent sub-phases or activities grouped into three main phases.

On phase one, the problem shall be rooted in literature and practice, and may entail some form of industry-academic collaboration to secure both. To support problem identification, a first systematic literature review will be conducted of scientific publications and reports from experienced professionals or consultants (experts) in the field. The search aims to find knowledge, both about the problem and potential solutions to the problem [35].

This phase may also encompass expert interviews (or focus group) or, more generically, exploratory research to help understand the identified problem, potential solutions and assess its relevance.

The second phase, solution design, is a creative design process to construct the artifact. It is not much prescribed, but for the guidance about taking existing solutions and state-of-the-art into account. For this purpose, a second literature review may be conducted, now focusing on scientific literature searching for solutions or new knowledge or inspiration. During this phase, a need for better understanding or a revision of the problem may be identified, thus iterating back to the problem identification phase. Divergent thinking and convergent thinking could be applied.

The primary outcome of this phase is, however, the artifact. In software engineering research, typical artifacts are tools, models or techniques, in which design knowledge is embedded [38]. In our case the artifact will be a framework with guidelines, from a conceptual modeling approach, to help established companies to improve strategy building practices, by focusing on facilitate alignment and engagement to respond to their challenges and/or dilemmas, with the lens of strategic design and strategy-as-practice.

The conceptual modeling approach, during this second phase, will be inspired on some relatively recent papers. Thalheim analyses some of the notions, systematize them, and discuss essential ingredients of conceptual models [27]. Delcambre et al. [39] presents a framework describing the field of conceptual modeling, “allowing researches to place their work in the field”. Mayr & Thalheim proposed a proper systematization with eight characteristics for a signature of a conceptual model [40].

The third phase – evaluation - starts by a research exploration, refining the research hypothesis (or assumption). The primary evaluation method will be action research, but may also embody expert surveys or focus group where the prototype will be evaluated. In this context, action research or focus group are seen as a research method within design research methodology. Also, here, the process may iterate back for deeper problem understanding or improved solution design.

In the final step, the results are summarized based on the research findings and published in workable formats. Intermediate results may also be published as they are obtained. This way, it will be possible to receive early feedback on the investigation.

### 3.1. Work schedule

It is important to highlight that this thesis plan could be considered just an initial planning and it will be a constant work in progress. Figure 4 summarizes the work schedule with the timeline and the main milestones, including a tentative month for the thesis defense.

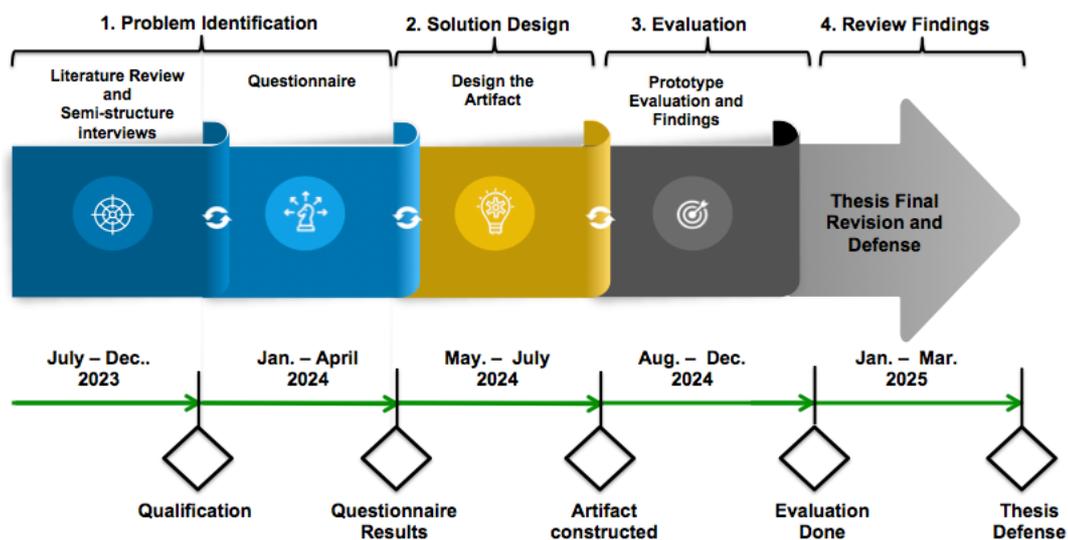


Figure 4: Work schedule.

## 4. Validity threads, potential limitations and final considerations

### 4.1. Validity threads and potential limitations

This study will be performed according to a detailed and planned methodology (DSR) and associated methods adapted from different authors as explained before.

A detailed planning of each method is being performed to produce a robust and unbiased foundation of knowledge to avoid factors compromising reliability, and limiting contribution.

Despite all care, as seen before, this thesis plan has its potential limitations.

Potential limitations could be associated with the choice and conduction of methods for each work’s phase, the choice of the locus of the study (in our case, medium-sized Brazilian companies established in the international trade ecosystem) with its practical limitations, and specially the evaluation of the framework with guidelines considering:

1. What to measure? The focus will be on alignment and engagement using *Strategia* platform [19];

2. The approach to use depends on the goal of the evaluation (in this thesis plan, alignment and engagement);
3. Possible time limit for the action research cycle, choice and number of companies for prototype evaluation, or expert focus group.

Further planning will consider deeper analysis at each data collection and data analysis to avoid bias in: (i) Questionnaire answers; (ii) Interviews; (iii) Data Interpretations; (iv) Researcher approach and experience; (v) Conceptual modeling approach; (vi) Action research cycle; and, (viii) Samples choices.

## 4.2. Final considerations

With this work, it is expected to contribute to the academic and professional communities by investigating even more deeply the phenomena of the difficulties of these companies in dealing with their challenges and/or dilemmas, in this new and complex environment, helping companies to improve strategy building practices, from a conceptual modeling approach, with the lens of strategic design and strategy-as-practice.

It is noteworthy that Ansoff believed in an epistemology of complexity. He planted the roots of systemic approaches and the design effort, against analytical reduction and positivism in the strategic issue of organizations [41]. Likewise, Mintzberg criticized the ideal of rationalist planning in strategy [42]. The dialogue of the titans referring to Ansoff and Mintzberg's discussions of the "design school" (not the same concept as design science) still has rich repercussions recently [42] opening opportunities to discuss existing challenges and new dilemmas and emerging approaches in strategy.

The future of the field needs to follow changes in society. A better understanding of the fundamental issues that bring solutions to real business practice problems in this turbulent and ever-changing environment opens up opportunities for future research. Conceptual modeling, strategic design, and strategy-as-practice are widely discussed in academia and practice. These themes "are coming to the fore", but the use of this knowledge is still far from reaching its full potential. The real world and circumstances defy models and theories.

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