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ORIGINAL ARTICLE

Unveiling blind spots in consulting firms' disseminating discourse on digital transformation

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Abstract

Leading management consulting firms serve as key influencers in disseminating fashionable management ideas and aiding organizations through their change initiatives. Organizations often seek guidance from these firms to implement the management idea of digital transformation (DT), enticed by the potential benefits this idea promises. This study examines the reports of six leading management consulting firms to assess how they shape the disseminating discourse on DT. Applying the performance-structure-technology framework, we unveil several blind spots in the DT consulting discourse. Our document analyses reveal that leading management consulting firms, in their discourse on DT, neglect comprehensive strategic alignments in the form of people, competitive context, and technological methods and structures. This study contributes to the literature on change management, management ideas, and the broader information systems literature on DT by providing insights into the faddishness and semblance of leading consulting firms' discourse on DT, while also shedding light on the nuances of DT consulting and its potential for improvement.

Keywords Digital transformation · Consulting firms · Management fashion · Disseminating discourse · Performance-structure-technology framework

1 Introduction

The management idea of digital transformation (DT) (Sturdy et al. 2019) has recently been brought to the vanguard of change management initiatives (Imran et al. 2021; Lanzolla et al. 2020). A plethora of opportunities linked to DT, such as the reinvention of products, processes, and value chain relationships (Lanzolla et al. 2020; Mikalef and Parmiggiani 2022), has set this idea on the agendas of nearly all organizations (Imran et al. 2021; Vial 2019). As a result, investments in DT are

Extended author information available on the last page of the article

projected to reach 3.4 trillion U.S. dollars by 2026 (IDC 2022). This evolution of DT into a fashionable management idea (Kühl 2020; Piazza and Abrahamson 2020) has been largely spurred by leading management consulting firms (Anderson and Polasek 2021; Forth et al. 2020), such as McKinsey, Deloitte, and Boston Consulting Group (BCG). These firms shape the DT disseminating discourse and influence its adoption across various organizational contexts (Armbruster 2006; Larsson et al. 2020; O'Mahoney et al. 2021). However, despite the pronounced interest in DT from management consulting firms, organizations still struggle to implement DT, reflected in an alarmingly high failure rate of DT projects, reported to be as high as 84% (Libert et al. 2016). This challenge is not limited to smaller organizations but extends even to industry leaders like Nike, Ford, Procter and Gamble, and Lego (Davenport and Westerman 2018). It underscores the critical need for a comprehensive understanding of the DT disseminating discourse propagated by leading management consultancies.

The theory of management fashion emphasizes the nature of management ideas and the central role played by consultancies in the diffusion and adoption of such ideas (Abrahamson 1991; Piazza and Abrahamson 2020; Sturdy et al. 2019). This theoretical stance posits that many management and technological ideas (e.g., Six Sigma, Lean, DT) follow cyclical patterns akin to waves, wherein their popularity unpredictably waxes and wanes (Piazza and Abrahamson 2020). In this context of management fashions, management consulting firms serve as fashion setters (Piazza and Abrahamson 2020) that (co-)produce and disseminate management and technological trends to create demand for their services and subsequently to assist clients in adapting these trends to their specific contexts (Johanson and Madsen 2019; Jung and Kieser 2012).

Within the domain of management consulting, leading consultancies exert significant power due to their substantial financial and human resources which they leverage to commodify their ideas (Heusinkveld 2014; Sturdy et al. 2019). They disseminate these ideas to a wide range of private and public organizations encountering complex change endeavors, such as DT (Collins 2004; Krehmeyer and Freeman 2012; Lundin et al. 2015; O'Mahoney and Sturdy 2016). Consequently, these consulting firms' disseminating discourse (Piazza and Abrahamson 2020), conveyed in the form of different publications like white papers, plays a pivotal role in management fashion propagation and implementation in practice (Abrahamson 1996; Engwall 2012; Gibson and Tesone 2001). This holds particularly true in the DT context, which demands extensive assessment of existing organizational design paradigms (Lanzolla et al. 2020; Puranam et al. 2014) and a comprehensive transformation of organizational structure, capabilities, and behavior (Fisher and Connelly 2017; George and Lin 2017; Kronblad 2020). However, while management consultancy discourses are highly relevant for shaping organizational processes (Turner 1982), our understanding of the nature of consultancy DT disseminating discourse remains ambiguous (Pollach 2021).

Motivated by the challenges encountered in DT implementation and the outlined research gap, this study seeks to examine DT from the perspective of those disseminating it as a prominent fashionable management idea (Abrahamson 1996): leading management consulting firms. We thus pose the following research question:

How do management consultancies shape the disseminating discourse on digital transformation?

To answer this research question, we conducted a document analysis of the DT discourse disseminated by six leading management consulting firms: BCG, McKinsey, Accenture, Capgemini, Bain & Company, and Tata Consulting Services. By drawing on the Performance-Structure-Technology (PST) framework—a holistic taxonomic approach for understanding the coherence of DT (Monod et al. 2021; Monod 2020)—we examined 22 white papers, which present the consultancies' public discourse and provide the opportunity for a greater understanding of the DT consulting narratives (Bowen 2009). Our results reveal several blind spots in the consulting DT disseminating discourse. While their discourse focuses on customer centricity, holistic assessments, and agile development methods, it neglects crucial dimensions such as industry and workforce differentiation, formal organization transformation methods, and technological methods and structures. Our study offers a three-fold contribution to the literature on change management, management ideas, and the broader IS literature on DT. First, by reflecting on the symbolic aspects of management ideas and consultancy, we show that leading consulting firms tend to disseminate rather simplistic, ambiguous, and generic discourse on the contemporary management idea of DT. Second, we highlight the semblance of consulting discourse on DT, despite the perceived need for strategic differentiation among consultancies. Third, our work underscores the complexity and ambiguity surrounding DT, where organizations often grapple with varying interpretations. This ambiguity can lead to confusion, differing expectations, and diverse approaches to DT implementation across industries and firms. We advocate, therefore, for approaching DT consulting through the lens of a more holistic framework that considers structure, performance, and technology, as DT impacts all aspects of an organization.

The paper is structured as follows. Section 2 provides a brief overview of the literature on management consulting and management ideas and fashion. In Sect. 3, we present the research design and method and the application of the PST framework for examining the DT consulting discourse. In Sect. 4 we discuss our findings by elucidating blind spots in the DT consultancy discourses, followed by the discussion of the fad-driven and semblable consultancy discourse on DT, disregarding adaptation to new conditions posed by DT. In Sects. 5 and 6, we offer concluding remarks and suggest avenues for future studies.

2 Theoretical background

2.1 Management consulting

Management consulting is a thriving area of research due to its pivotal role in organizations, where critical decisions are often guided by these prominent change agents (Bouwmeester et al. 2022; Kipping and Wright 2012; O'Mahoney et al. 2021; Sturdy 2023). Rooted in diverse disciplines such as management, organizational development, strategy, and information systems, management consulting represents a heterogeneous phenomenon characterized by contesting definitions (Kirkpatrick

et al. 2023; Sturdy et al. 2021). This paper applies one of the early definitions, conceiving management consulting as "the professional service performed by specially trained and experienced persons in helping managers identify and solve managerial, [economic,] and operating problems of the various institutions of our society" (Higdon 1969: 306). In alignment with this definition, the extant literature converges on the role of management consulting firms, particularly large and renowned consultancies (Armbruster 2006), as knowledgeable solution-oriented experts (Sveningsson et al. 2020) who leverage their expertise to assist clients with facilitating change, solving unique problems, and providing legitimacy (McKenna 2006; O'Mahoney 2010).

In general, research has noted consultancies as mechanisms of organizational and societal change (Pollock and Williams 2010), which has sparked significant academic interest in understanding their role and influence (Kipping and Clark 2012; Kieser 1997; Bouwmeester et al. 2022). However, the literature on consulting is characterized by substantive controversy regarding the true nature, depth, and value of consulting (Armbruster 2006; Cerruti et al. 2019; Nikolova and Devinney 2012). On the one hand, the functionalist position optimistically stresses the knowledge-based and helping nature of the consultant–client relationship, portraying consulting firms as important change agents and contributors to significant economic growth (Poulfelt et al. 2017; Suddaby and Greenwood 2001). On the other hand, a critical perspective focuses on the faddish and symbolic nature of consulting (Clark 2004; Kühl 2020; Werr and Styhire 2002). This critical stance challenges the actual value of consulting, suggesting that it creates an impression of value by pushing standardized solutions (Ashford 1998) or, even worse, by creating unnecessary demand among anxious clients and generating solutions related to the latest management fads (Armbruster 2006; Collins 2004; Kiesler and Cummings 2002; Røvik, 2019; Sturdy et al. 2021). This paper considers these opposing perspectives when assessing how consulting firms publicly disclose their understanding of and advice on DT.

2.2 Management ideas, fashions, and fads

One way of understanding the wave of current interest in DT among practitioners, researchers, and consultants is to label the matter a "fashion." The theoretical lens of management fashions, initially conceptualized by Abrahamson (1996: 257), views management fashion as "a relatively transitory collective belief, disseminated by management fashion setters [e.g., consulting firms], that a management technique leads to rational management progress." Over the past three decades, this theory has been instrumental in explaining transience, persistence, and the overall trajectory of different management and technological ideas (van Grinsven et al., 2016), such as Big Data (Madsen and Stenheim 2016), enterprise resource planning systems (Benders et al. 2006), and Industry 4.0 (Madsen 2019). Notably, these fashionable ideas do not only serve organizational ends and rationality; they also provide legitimacy to anxious managers (e.g., Sturdy et al. 2019).

Theorizations of management ideas revolve around language or discourse associated with a particular idea more than the actual changes triggered by it (Piazza and

Abrahamson 2020). Because of this, scholars often examine fashions through on-desk bibliometric analysis and literature reviews (Madsen and Stenheim 2016; Madsen 2019; Oesterreich et al. 2020). Following this tradition, a bibliometric analysis suggests that DT does indeed qualify as a management fashion: a Scopus search on "DT" reveals an exponential publication growth since 2018, and a Google Trend search (Madsen 2019) mirrors a similar popularity dynamic of DT on the fashion demand side (i.e., among users) since 2017 (see Fig. 1).

Within the fashion-setting communities (Abrahamson 1991), management consulting firms are widely regarded as "supra-experts" (Sturdy et al. 2021) who actively produce and propagate management ideas (Armbruster 2006; Bouwmeester et al. 2022; O'Mahoney 2010; Kipping and Clark 2012). As aptly noted by Jung and Kieser (2012), "to speak about management without speaking about fashions seems to be as impossible as it is to speak about fashions without speaking about the consulting industry and its tremendous growth" (p. 328). Suddaby and Greenwood (2001) similarly assert that the commodification of management knowledge—its codification and abstraction into a packaged, portable, and commercially viable form—primarily transpires within management consultancies (Heusinkveld 2014; O'Mahoney et al. 2021). These consultancies generate and diffuse commodified fashionable ideas because they contribute to their reputation as innovative knowledge providers (Kiesler and Cummings 2002) while simultaneously creating demand for their services among managers who tend to be caught in a "vicious cycle" of management consulting (Heusinkveld 2014; Jung and Kieser 2012).

2.3 Fashion disseminating discourse of consulting firms

Echoing the critical view on management consulting, Jung and Kieser (2012) pose an intricate question central to our paper: "How can consultants as 'rational experts' in a seemingly rational business world create and foster fashions whose implementation is not only paradoxical, but perhaps might not even be reasonable to some extent?" (p.328). This question refers to the paradoxical aspect of the spread of management ideas, where their adoption may function more as a symbol of legitimacy rather than a targeted solution to specific organizational problems. To address this question, it is essential to delve into an important branch of

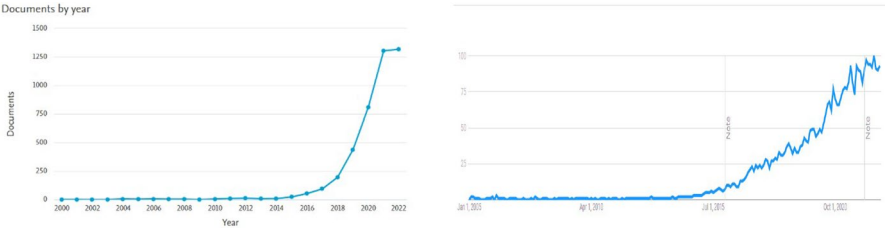

Fig. 1 Publications on "digital transformation" in the period 2000–2021 (to the left) (*Source*: Scopus. Search string: TITLE-ABS-KEY ("digital transformation") AND (LIMIT-TO (DOCTYPE, "ar")) AND (LIMIT-TO (LANGUAGE, "English")). Search interest on "Digital transformation" in the period 2005–2022. (*Source*: Google Trends)

studies on what has been termed the fashion disseminating discourse of consulting firms (Benders et al. 2019; Birkinshaw et al. 2008; Røvik, 2019; Sturdy et al. 2019; van Grinsven et al. 2020).

In a recent literature review (Piazza and Abrahamson 2020), stressed the importance of research on fashion discourse, depicting how fashion setters disseminate management ideas among potential users. Consulting firms "push" new management ideas through various channels in an attempt to get organizations of all stripes to adopt them (Abrahamson 1996; Jung and Kieser 2012; Piazza and Abrahamson 2020; Pollach 2021). These consultancies promote their business or ideas through books (e.g., *In Search of Excellence* (1982)), articles in academic journals, business-oriented newspapers, their own journals (e.g., *McKinsey Quarterly*), white papers, and periodic publications (e.g., *Bain Insights*, *BCG Publications*) (Engwall 2012). Traditionally, the dissemination and promotion of new management practices heavily relied on written or spoken language. However, in contemporary times, consultants increasingly utilize digital platforms to promote their new management ideas, such as through white papers on websites and social media channels like Twitter and LinkedIn (Madsen and Slåtten 2015), or via video streaming services such as YouTube and TED talks (Piazza and Abrahamson 2020).

Along with dissemination channels, research attention has attended to the "rhetorical ingredients" of commercially successful ideas (Jung and Kieser 2012; Sturdy 2017). Researchers have identified the role of elements such as creating a "burning platform," promising performance improvements, referencing known adopters, employing catchy labels, and allowing for interpretive space (Benders and Van Veen 2001; Kieser 1997), the latter of which referring to the ambiguity of promoted ideas that are open to multiple interpretations, facilitating their wide application across diverse contexts (Benders et al. 2019). Research has suggested that these rhetorical elements (Armbruster 2006) appeal to managers' distinct rational, political, and psychological "needs," thereby enhancing the viability of the consultancies' ideas (Heusinkveld 2014; Sturdy et al. 2019).

Nevertheless, considering the intensified competition in the management consulting market, scholars suggest that consulting firms might have to adjust their dissemination discourses by moving away from vague visions, all-embracing "buzzwords," universal concepts, and success stories of famous companies, towards more tangible, implementation-oriented rhetoric (Berglund and Werr 2000; Bouwmeester et al. 2022; Jung and Kieser 2012; Nikolova et al. 2009). Moreover, the advent of digital technologies in the 1980s and 1990s, along with the recent upsurge of DT, has necessitated that consulting on organizations could no longer be offered without leveraging IT expertise (Armbruster 2006; Heusinkveld and Benders 2005; Sturdy 2011). In this regard, previous research claims that one of the most important directions for future research concerns the future form and structure by which management fashions are disseminated by consultancies (Berglund and Werr 2000; Bouwmeester et al. 2022; Cerruti et al. 2019; Jung and Kieser 2012; Nikolova et al. 2009).

In this study, we focus on the commodified form of the DT idea, presented in publicly available white papers on DT by six leading consulting firms. Despite its limitations, this form of publication offers coherent visions, creates a demand for consulting services, and provides a "toolbox" for guiding potential adopters

in understanding and implementing fashionable management ideas (Benders and Van Veen 2001; Sturdy et al. 2019).

3 Method

This study adopts a qualitative deductive approach to explore the disseminating discourse on DT by leading management consultancies. Such research design is recommended when inquiries evolve based on the existing literature to frame the study of the data (Yin 2014).

Our research process evolved through several subsequent stages in its deductive thematic approach (Atkinson and Coffey 2004; Bowen 2009; Jupp and Norris 1993; Pearse 2019). The first stage comprises the derivation of a conceptual framework from the literature (Miles et al. 2014; Uysal and Tsetura 2015). We reviewed previous literature on DT dimensions (Vial 2019) and identified the PST framework—a holistic taxonomic approach for understanding the coherence of DT (see Fig. 2)—that was developed in the context of management consulting (Monod et al. 2021; Monod 2020). Below, we provide a detailed presentation of the rationale behind selecting the PST framework and describe its dimensions. The second stage required eliciting propositions from the outlined analytical framework. As a result, we developed a codebook grounded in these propositions (Crabtree and Miller 1992). Once the conceptual framing and coding matrix was established, the data was collected.

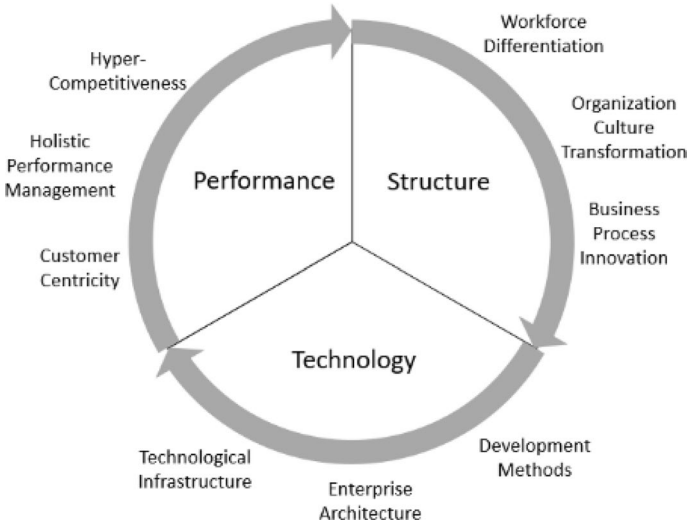

Fig. 2 The performance-structure-technology framework for digital transformation (Monod 2020; Monod et al. 2021)

4 Research sample and data analysis

This study examined the discourse on DT disseminated by leading international management consulting firms. A focus on large consultancies as "extreme cases" (O'Mahoney and Sturdy 2016) is theoretically and empirically insightful due to their unprecedented degree of influence over business organizations (McKenna 2006; Sturdy 2011; Suddaby and Greenwood 2001). These major players in the consulting market use their brand, extensive financial and human resources, broad industrial networks, organizational effectiveness, and a "one-firm" governance model to effectively package, disseminate, and translate management ideas (Armbruster 2006; McDonald 2013; O'Mahoney and Sturdy 2016). Consequently, they establish the legitimacy and timeliness of their discourse (Kipping and Westerhuis 2014), thereby attracting and shaping clients (Alvesson and Robertson 2006; Nikolova et al. 2009), including many Fortune Global 500 corporations and government agencies (Boussebaa et al. 2012). Not least, such consulting firms often determine "fashion trends," such as DT, across organizations (Piazza and Abrahamson 2020; Wang 2010).

In this study, we grounded our sample selection rationale of management consulting firms with two dimensions: revenue and prestige. Firms selected based on revenue represent market leaders in terms of financial performance, while those chosen for their prestige are industry leaders in terms of reputation and perceived excellence. First, based on the data from 2019, we analyzed the world's three largest management consulting firms by actual consulting revenue rather than overall revenue: Accenture (USD 17.3 billion), Capgemini (USD 15.5 billion), and Tata Consulting Services (USD 14.9 billion) (Consulting.com 2020). Second, we identified the three best strategic consulting firms in terms of prestige, a ranking composed by practicing consultants determining which firms are considered the most prestigious by those in the industry. McKinsey, BCG, and Bain & Company—often referred to as "The Big Three" (Sturdy 2023)—are three consulting firms that led the rank of consultancies by prestige in 2019–2021 (Consulting.com 2020; Maldonado 2021).

After identifying the sample, we further delved into the selection of our data set. Previous studies have emphasized that management fashion in the consulting context, specifically in large consulting firms, is a difficult area to research, as its subject matter is commercially and ethically sensitive and secretive (Boussebaa et al. 2012; O'Mahoney and Sturdy 2016; Strang and Wittrock, 2019; Sturdy 2009; Sturdy 2017). Therefore, in line with the previous studies exploring fashions based on public exposés of fashion setters' discourse (O'Mahoney 2011; Pollach 2021), our data comprises management consulting firms' text-based reports or white papers on DT. White papers are brief reports that provide information about a specific topic. Management consulting firms craft white papers to explain issues of interest to potential clients. That is, the consultancies position themselves as experts who understand current and future problems in business and who are prepared to provide solutions to those problems. While these white papers are neutral in tone, as in not overtly promoting the consultancies, and

while they dispense knowledge, they are not based on rigorous research. They therefore fall into what is referred to as "grey literature," sources for researchers that lie between credible research sources and potentially fully biased sources such as blogs, tweets or websites. Increasingly, though, the research field is admitting to their value, as shown by multiple research guidelines and literature reviews (Adams et al. 2017; Zhang et al. 2021; Fernández et al. 2023). This current study, however, is not concerned with the quality of the research, or lack thereof, embedded in the consultancies' white papers. Rather, the concern for this research is with the white papers' discourse as it reveals the consultancies' concerns with DT and how to appeal to potential clients.

Given that consulting firms are "social artifacts" (Orlikowski and Gash 1994: 179) and their material manifestations embody their "objectives, values, interests, and knowledge of technology" (Orlikowski 1992; Orlikowski and Gash 1994; Boland 1979; Hirschheim and Klein 1989), we selected 22 consulting reports on DT produced between 2013 and 2021 (see Table 1) as a basis for our analysis of the current DT consulting approach.

To analyze the data, we applied document analysis following the guidelines suggested by Bowen (2009) and Coffey (2014). Documents can be considered to be the "physical traces" of social settings (Webb et al. 2000) and hold considerable potential for studying organizational practices (Coffey 2014). At their core, documents contain text and images that have been recorded without a researcher's intervention. They are regarded as having the potential to inform and structure people's decisions on a daily and longer-term basis. Indeed, textual communicative reports are a vital way through which organizations such as consulting firms constitute reality (Bloomfield and Vurdabakis 1994). Documents are thus appropriate resources for addressing our research question by allowing us to focus on the content of textual communications by which consultancies make their "case" for management ideas. By applying document analysis of the top consulting firms' white papers, this study seeks to reflect the approaches to DT consulting, as well as to reveal common blind spots in the consulting DT disseminating discourse.

We analyzed 22 consulting reports on DT using the qualitative data analysis software NVivo 20. As a starting point, we created initial "nodes" or themes from the nine concepts presented in the PST conceptual framework (see Fig. 2 for details on dimensions). We then mapped the text of the whitepapers to the appropriate node/theme (Boyatzis 1998). This coding generated a qualitative dataset for each element in the PST framework. In the final stage of the deductive thematic research, we analyzed the items in this dataset. The stepwise results of this analysis are introduced below.

Before delving into the results, we present our selection rationale for employing the PST framework as our analytical framework in this paper and provide a brief, comprehensive description of the framework itself.

4.1 Performance-structure-technology framework

Numerous studies have reviewed the literature on DT transformation models and frameworks (e.g., Bellantuono et al. 2021; Bordeleau and Carsten 2019;

Table 1 Overview of management consultancies reports on digital transformation

	Consulting firm	Title of the digital transformation report	Year of publication
Consulting revenue	Accenture	Digital transformation: Re-imagine from the outside-in	2014
		World economic forum white paper digital transformation of industries	2016
		Digital transformation of industries demystifying digital and securing $100 trillion for society and industry by 2025	2016
	Capgemini	Digital transformation: a roadmap for billion-dollar organizations	2011
		Accelerating digital transformation: understanding and setting up a digital services unit	2013
		Transform to the power of digital	2017
		Digital Transformation review—12th edition	2019
	Tata consultancy services (Tata)	The digital enterprise: a framework for transformation	2013
		Digital age transformation through high-performing innovation engines	2016
		Taking a machine first approach to digital transformation	2018
Consulting prestige	McKinsey & company (McKinsey)	Digital transformation: the three steps to success	2016
		The seven decisions that matter in a digital transformation: a CEO's guide to reinvention	2017
		A roadmap for a digital transformation	2017
		Digital transformation: improving the odds of success	2019
	Boston consulting group (BCG)	The digital imperative	2015
		The digital CRO	2018
		A digital strategy roadmap to drive transformation	2020
		The evolving state of digital transformation	2020
	Bain & company (Bain)	A step-by-step guide to digital transformation	2018a
		The digital enterprise: moving from experimentation to transformation	2018b
		Scaling your digital transformation	2019
		Four winning patterns of digital transformation	2021

Dikhanvayeva et al. 2020; Hizam-Hanafiah et al. 2020; Crișan and Marincean 2023). Although these models are not interchangeable as they are used to address different types of problems, they may be considered as referring to three main conceptual categories: capability maturity (e.g., Fettig et al. 2018; Haag et al. 2018; Leone and Barni 2020), phases (e.g., Batz et al. 2018; Römer et al. 2017; Wank et al. 2016), and roadmaps (e.g., Issa et al. 2018; Pessl et al. 2017; Schallmo et al. 2017). Each of these approaches has its shortcomings: Roadmaps consider change as one-time rather than as "continuous" (Bordeleau and Carsten 2019; Weick and Quinn 1999); maturity models tend to assess a limited range of options, shortchanging either "transformational management capabilities … or an organization's digital foundation" (Teichert 2019); and phases are not universal enough in characterization to cover multiple types of industries (Teichert 2019). Relatively few models adopt a comprehensive approach that considers the multifaceted aspects of DT in terms of the business environment (Teece and Linden 2017), organizational structure (Fettig et al. 2018), and, of course, technology (Bordeleau and Carsten 2019).

In an effort to address these concerns, a holistic framework for DT—the PST framework—was adopted. Initially, the PST framework had been elaborated from a critique of management consulting discourse on DT (Monod et al. 2021; Monod 2020). As depicted in Fig. 2, the framework includes three dimensions: performance, structure, and technology. It focuses on the performance and technological dimensions of the organization in a digitally transformed world and meets organizational structure concerns (Bordeleau and Carsten 2019) through a consideration not just of the structure itself but in terms of the humans who are an inherent part of this structure. By relating different dimensions of technology, such as enterprise architecture, IS development or technological infrastructure, to a broad view of performance including hyper-competition and customer centricity, the framework overcomes the reductionism often found in the assumptions of consulting firms related to these two dimensions. In addition, the framework relates technology to performance indirectly through organizational transformation, including dimensions of business process innovation and workforce differentiation. These organizational dimensions are better suited to lead to greater understanding of the potential impacts of digital technologies on performance, and therefore provide a more objective analysis up to the organizational level.

4.1.1 Dimension: performance

The way to measure performance of DT varies by the type of organization and business. Most of the consulting firms highlight the requirements of a holistic performance management and the importance of customer centricity. However, most of them also neglect the dimension of hyper-competitiveness and dynamic capabilities. Therefore, these categories are introduced here as sub-dimensions of the performance dimension.

Hyper-Competitiveness. Hyper-competition (D'Aveni 1994) is the persistent "disequilibrium" in a competition that globalization and technological advances have wrought (Lindskov 2022), forcing organizations to innovate and advance continually. It includes dynamic capabilities (Teece 2007). Therefore, companies need to

focus on the creation of new strategic assets and to assess and reassess their context (e.g., size and type of industry).

Holistic Performance Management. Hyper-competition requires a broader view of performance, with less focus on efficiency and sustainable competitive advantage and greater focus on innovation, transient competitive advantage (Rindova and Kotha 2001) and flexibility (Datta 2020; Bennis 2013). A holistic performance system that accounts for hidden costs (Savall and Zardet 2008) and considers the organization as an organic entity with interrelated and equally essential components will address DT across the breadth of the organization (Andersen et al. 2006).

Customer Centricity. Hyper-competition and holistic performance management include such extensive attention to customers (Stuchlý et al. 2020) that they require their own sector of focus since customers are not simply consumers but rather value co-creators (Ramaswamy and Chopra 2014) who are at the center of services and product (co-)development (Kowalkowski et al. 2017). From smartphones to automobiles, products are no longer regarded as tangible goods but instead as the integration of different devices, functions, data, and stakeholders into systems of value co-creation (Svahn et al. 2017). Therefore, the perspective is shifting away from product-service offerings toward usage-based value (Schaffer et al. 2015) and, so, toward the customer (Rautenbach et al. 2019).

4.1.2 Dimension: structures

Workforce Differentiation. Human Resources (HR) are as essential to performance as to the structure of the organization (Berisha and Kutllovci 2015). Workforce differentiation (Becker et al. 2009) belongs to the "strategic HR" (Widyanty et al. 2020) or "strategic workforce" movement as opposed to the traditional view of HR (Lepak and Gowan 2010). The difference between traditional HR and workforce differentiation is that the latter consider the A-players as the source of performance of the company. Therefore, workforce differentiation focuses on rewarding, but also ensuring that these A-players are provided top management positions in companies (Becker et al. 2009). It is imperative to tie the quality of employees' performance directly to the overarching organizational strategy (Becker et al. 2001; Huselid et al. 2005).

Organization Culture Transformation. A key component in the DT of structures is the transformation of the culture of the organization (Weill and Ross 2004), especially crucial in unstable environments (Trushkina et al. 2020) and directly related to the competitiveness of the organization (Balaji et al. 2020; Upadhyay and Kumar 2020). Organizational culture is the set of shared beliefs and practices that become entrenched in the organization. Transforming the organization's culture does not simply mean creating a culture of DT or a digital culture but rethinking and reshaping the organization's culture to meet the demands of the digital world (Forsythe and Rafoth 2022).

Business Process Innovation. Business Process Innovation (BPI) highlights the importance of both technology and people for achieving performance improvements through processes (Davenport 1993). The current trends in BPI include the growth in importance of information technologies (Marr 2019) and a more comprehensive

range of enterprise, process, and implementation concerns. Enterprise-level concerns incorporate value chains, value networks, value chain diagrams, process maturity models, business process frameworks, cultural change management, integrated process measurement systems, and enterprise architecture. Process-level concerns include innovation, analyzing and modeling services, and complex processes. Finally, implementation-level concerns embrace standards, certification, and BPI systems (vom Brocke and Rosemann 2015).

4.1.3 Dimension: technologies

Technological Infrastructure. The infrastructure of the organization supports the technology and business capabilities that ensure the efficiency, scalability, reliability, quality, and predictability of core operations. It thus provides companies with operational excellence critical to their DT (Ross et al. 2006). Whereas these technological dimensions include the distinction between Service-Oriented Architecture (SOA), Software as a Service (SaaS), Platform as a Service (PaaS) and Infrastructure as a Service (IaaS), the fundamental concept of the relationship to performance is often neglected. SOA uses programmed components, called services, that can be linked together for tailored programs. For example, one SOA might connect a service for password resetting with one for profile changing. SaaS is a program subscription service to provide out-of-house program licensing and updates. PaaS is the external development of software platforms tailored to the companies' needs so that companies do not need to develop their own. IaaS houses data centers for companies, so that they do not need to establish or maintain their own. Although the higher level of SaaS allows flexibility and adaptation to customer needs through innovation, the lower levels of PaaS and IaaS are essential as the building blocks of operation efficiency and data processing.

Enterprise Architecture. Enterprise architecture (EA) creates a direct link between the internal organizational domain of information technology (IT) processes and skills, and the external one of the business arenas of IT scope, systemic competencies, and IT governance (Henderson and Venkatraman 1993: 474). EA can provide information to assist in decision-making about strategies in competitive markets, enrich understanding about necessary organizational capabilities for acting on these strategies, and ensure consistency of the strategies. A well-designed EA features the IT capabilities that are most critical to a firm's strategic objectives and makes use of them (Ross 2003).

Development Methods. DT efforts should consider the projects at hand and deploy the appropriate development methods to each situation. The two main types of development methods are the more traditional waterfall method, which follows a strict step-by-step process, and the agile methods, such as Scrum (Schwaber and Beedle 2002), Kanban and eXtreme Programming (XP) (Beck 2000), which focus on speed and simplicity. Agile methods have been shown to be more flexible and supportive of collaboration and less likely to fail than waterfall ones, but agile ones can be harder to use with more complicated, longer-term projects (Mishra and Alzoubi 2023).

5 Results

Drawing on the nine core concepts identified in the PST framework, this section presents the results of the analysis of 22 white papers on DT by six leading management consulting firms by consulting revenue (Accenture, Capgemini, and Tata) and prestige (McKinsey, BCG, and Bain). Supplementary Tables A2–A4 in Appendix A provide exemplary quotations from reports of each consulting firm for the nine concepts of the PST framework.

5.1 Dimension: performance

5.1.1 Hyper-competitiveness

Table 2 depicts that the three consulting firms neither refer to the hyper-competitive environment nor to the necessity of organizational ambidexterity during the DT process. Accenture briefly mentions the fear of pressure from start-ups as the latter "are attacking traditional markets" (Accenture 2016b: 4). Similarly, Tata notices that "competitive pressure" is experienced as the main driver for mobile initiatives in American banks (Tata Consultancy Services 2013). Bain, in its turn, focuses on the "wild" market environment with new rivals and disruptors, including a specific focus on "digital" rivals' speed and innovativeness in meeting customer needs (Bain & Company 2018; Bain & Company 2021; Bain & Company 2019). Additionally, none of the consulting firms mention the tensions in hyper-competition between efficiency and innovation and the shift from sustainable competitive advantage to transient competitive advantage.

Table 3 shows that consulting DT narratives differentiate by neither industry nor organizational size, age, and status when the consulting firms outline their DT roadmaps. Instead, they assume that DT impacts all industries without addressing them differently. Moreover, the consultancies do not distinguish between state-owned and private companies. Yet, regarding the size of the company, the consulting firms explain that the DT is more critical for large "non-digital" companies since, even though they possess a lot more "resources, assets, relationships, and data" (Boston Consulting Group, 2015: 3), their legacy exerts "a gravitational pull" (McKinsey, 2017b: 2), hampering their DT.

5.1.2 Holistic performance management

While Tata mentions holistic performance management when advising companies to implement a holistic digital strategy (Tata Consultancy Services 2013), four other consulting firms (Capgemini, BCG, McKinsey, and Bain) still focus on cost reduction as a common performance measurement. For instance, McKinsey claims: "Succeeding with a DT requires cutting budgets for legacy operations" (McKinsey 2019: 3). Yet, at the same time, according to these whitepapers, unilateral performance measurements should not be the sole focus of companies anymore. Bain underlines

Table 2 Performance dimension of the PST framework

		Accenture	Capgemini	Tata	McKinsey	BCG	Bain
Performance	Hyper-competitiveness	Fear of pressure from start- ups: "Attacking traditional markets" (Accenture 2016b: 4)	No mention	Cites 70% of American Banker Executive forum members noting "competitive pressure" as the main driver for their mobile initiatives (Tata Consultancy Services 2013)	No mention	No mention	Focus on the "wild environment" with new rivals and "digital disruptors" (Bain & Company 2018: 17) This competitive environment creates a challenge to "remain competitive" (Bain & Company 2021: 7)

Table 2 (continued)

	Accenture	Capgemini	Tata	McKinsey	BCG	Bain
Holistic Performance System	No mention	5 metrics: productivity, reduced cost, fast implementation, customer value, and labor productivity	Mentions "holistic digital strategy" in DT (Tata Consultancy Services 2013)	1 metric: Cost reduction "Succeeding with a DT requires cutting budgets for legacy operations" (McKinsey, 2017b: 6)	2 metrics: Cost reduction and close relationship with customers	There is a need for new performance metrics in addition to "traditional outcome metrics" (Bain & Company 2018: 36). In addition to the key performance metrics of "deployment of the digital solution," papers focus on business and customer satisfaction (Bain & Company 2018; Bain & Company 2019; Bain & Company and the World Economic Forum, 2018)

Table 2 (continued)

	Accenture	Capgemini	Tata	McKinsey	BCG	Bain
Customer Centricity	Extensive focus on the customer in all ways: experience, retention, attraction, etc	Identified as the most important factor "Instead of thinking about finding customers for their products and solutions, marketers need to think about finding products and solutions for their customers" (Capgemini 2017: 11)	Emphasizes importance of customers (Tata Consultancy Services 2013, 2018)	Identified as the most important factor "so much needs to change. Focus on customer needs rather than process and procedure, continuous customer feedback, comfort with testing and learning and hence with occasional failure, and collaboration—all are vital" (McKinsey, 2017a: 8)	Identified as the most important factor "companies list customer-facing initiatives such as digital marketing among their top business goals for transformation" (Boston Consulting Group, 2020b: 1)	DT must drive "real value for the customer" (Bain & Company and the World Economic Forum, 2018: 2). This requires "improved customer engagement," including a focus on customer differentiation (i.e., traditional vs. tech-savvy customers) and trust from the customer (Bain & Company 2021: 4), and "rediscovering" "raw" customer needs for digital products and services (Bain & Company 2021: 5). All papers focus on customer-centric design, ethnographic co-development, and a combination of physical and digital experiences

Table 3 Contexts for the hyper-competition dimension of the PST framework

		Accenture	Capgemini	Tata	McKinsey	BCG	Bain
Context	Differentiation by industry	Several industries are mentioned without clear differentiation of the approach	No distinction	No distinction	No distinction	Impact on several industries is mentioned but differentiation is missing	Main differentiation between "digital disruptors" versus "incumbents" (Bain & Company 2018; Bain & Company 2021; Bain & Company 2019). Despite providing a myriad of examples, there is no specific differentiation of DT approach by industry

Table 3 (continued)

	Accenture	Capgemini	Tata	McKinsey	BCG	Bain
Differentiation by age and size	Differentiation by sizes and ages refers to focus on how older, established companies need to hurry up and transform themselves digitally	Focus on large organizations, "In this report we share the findings from a global study of how 157 executives in 50 large traditional companies are managing —and benefiting from—DT" (Capgemini 2011: 5)	No distinction	Briefly mentioned: "While a digital start- up can disrupt the market, legacy companies shouldn't undervalue their own competitive assets or make the mistake of thinking the disruptors have all the cards" (McKinsey 2016: 1)	Briefly mentioned: "Large companies hold a lot of cards— including resources, assets, relationships, and data—those smaller competitors frequently do not have enough of. But they often do not fundamentally rethink their business model. Only rarely do they launch anything that might attack the current business" (Boston Consulting Group, 2015: 3)	Main differentiation between new "digital disruptors" vs. old and large "incumbents" (Bain & Company 2018; Bain & Company 2021; Bain & Company 2019)
Differentiation by status (state- owned/private)	No distinction	No distinction	No distinction	No distinction	Briefly mentioned: "19% of state-owned companies see digital technology as disruptive—where it is 38% for not state- owned companies" (Boston Consulting Group, 2020b: 2)	No distinction

the inefficiency of traditional historical performance metrics, and BCG, Capgemini, and Bain highlight the importance of customer satisfaction: "Priorities need to be set based on the areas—customer value, revenues, cost position, etc.—where digitization is likely to have the most positive impact" (Capgemini 2011: 36). Customer satisfaction, as also discussed below, can no longer be neglected throughout companies' DT as it represents a source of competitivity by directly and indirectly pushing companies toward innovation. However, none of the consulting firm reports address the importance of flexibility compared to productivity or suggest socio-economic approaches to management and hidden costs.

5.1.3 Customer centricity

Whereas customer centricity is claimed by all six consulting firms as the most important factor to consider in the organizational DT journey, none of them elaborate on the conceptualization of the consequences of this phenomenon, beyond proxies catching the customer experience by data analytics or of co-creation by McKinsey: "A focus on customer needs rather than process and procedure, continuous customer feedback, comfort with testing and learning and hence with occasional failure, and collaboration—all are vital" (McKinsey, 2017a: 8). Bain accentuates the value of customer-centric design and product and service co-development that require rediscovering "raw" customer needs. However, none of the consultancies reflect on the requirements for integration of different devices, functions, data, and stakeholders into systems of value co-creation or for shifting from product-service offerings toward usage-based value.

5.2 Dimension: structures

Table 4 presents the main results related to the structural dimension: workforce differentiation, organizational transformation methods, and BPI.

5.2.1 Workforce differentiation

Consulting firms identify rather vague ideas such as "test and learn practices" (McKinsey 2019: 4), "new digital roles" (Tata Consultancy Services 2018) or "doers versus dreamers" (Bain & Company 2018; Bain & Company 2019). None of them refer to the concepts of workforce differentiation or the placement of A-players in A-positions.

5.2.2 Organization culture transformation

Whereas all consulting firms claim the need for traditional organizational transformation, none of them compare the different methods for doing so. The ideas related to organizational issues oscillate between a status of "too vertical, too slow" (Capgemini 2017: 10), requiring a vague "continuous change monitoring" (Accenture 2016b: 33), and "collaboration across a broader ecosystem creat[ing] new

Table 4 Structures dimension of the PST framework

		Accenture	Capgemini	Tata	McKinsey	BCG	Bain
Structures	Workforce differentiation	Brief mentions of HR	Briefly mention HR through upskilling. "This upskilling plan is a joint effort with our HR department and our internal business partners" (Capgemini 2019: 70)	Promote "machine first approach" to set up employees for "new roles" (Tata Consultancy Services 2018)	Mention rewards and training: "employees are more likely to be rewarded for generating new ideas, taking appropriate risks, and following test and-learn practices as they pursue opportunities" (McKinsey 2019: 4)	Mention encouraging incentives: "A company's organization and culture must also support DT, with structures, governance, and incentives that promote speed, risk taking, and experimentation" (Boston Consulting Group, 2015: 1)	All papers focus on talent management ("the war for talent" (Bain & Company and the World Economic Forum, 2018: 27; Bain & Company 2018: 27) and HR management, such as new HR strategies of cross-functional and agile deployment, supporting winners. Bain (2018: 28) also argues for employee segmentation for differentiated value propositions and "doers" versus "dreamers" differentiation. DT strategy should be co-developed with digital leaders/digital "ambassadors" (Bain & Company 2018: 3)

Table 4 (continued)

	Accenture	Capgemini	Tata	McKinsey	BCG	Bain
Organizational transformation methods	Mentioned once in each document. "continuous change" (Accenture 2016b), "journey management" (Accenture 2016a), and "avoid brutal restructuring; learn healthy disengagement" (Accenture 2018)	Mentioned indirectly through co-construction, teamwork, and active participation: "when focusing on customer issues, you need the active participation of the Marketing, Sales and IT organizations. Similarly, the HR department must also be involved, given the importance of the people dimension in DT. DT requires a mix of skills which are often scattered" (Capgemini 2017: 10)	Lays out "critical activities" for implementation of organizational transformation (Tata Consultancy Services 2013)	Recommend more open, new codes	Support internal and external collaboration	Organizational and cultural transformation is discussed as a core element of DT, as well as the most challenging element (Bain & Company 2018). Bain accentuates the essence of flexibility, agility, empowering the front-line, new approach to teamwork, as well as multi-faceted strategic approach (Bain & Company 2018; Bain & Company and the World Economic Forum, 2018). Besides, papers accentuate the need for new ways of working and "decision-making" and partnership and collaboration (Bain & Company 2018: 23)

Table 4 (continued)

	Accenture	Capgemini	Tata	McKinsey	BCG	Bain
Business process innovation	No systematic BPI approach	No systematic BPI approach	No systematic BPI approach, though there is a mention of the need for a new one to support new products and services (Tata Consultancy Services 2018)	No systematic BPI approach	No systematic BPI approach	No systematic BPI approach

opportunities to address consumer needs" (Boston Consulting Group, 2020a). However, companies are left alone when it comes to the question of which method to use to implement these required organizational changes.

5.2.3 Business process innovation

Although the importance of cross-department collaboration is highlighted by McKinsey (2017b: 4) and Capgemini (2017: 10), consulting firms do not elaborate on the way methods such as BPI may solve this issue. Bain emphasizes the essence of flexibility, agility, empowering the front-line, a new approach to teamwork (e.g., agile, hybrid analytics), as well as a multi-faceted strategic approach (i.e., "Today forward and future back," long-term waves and short-term steppingstones). All the consultancies assume a direct relationship between digital technologies and the problem-solving of these organizational issues leading to performance, therefore bypassing the question of organizational transformation through BPI.

5.3 Dimension: technologies

Tables 5, 6, and 7 depict the technology dimension of consultancies' DT approach by debriefing their focus on technological infrastructure, enterprise architecture, and development methods.

5.3.1 Technological infrastructure

Based on our analyses, consulting firms only briefly and sporadically mention technological infrastructure (see Table 5). Possessing the core competencies for implementing technological infrastructure is necessary to execute companies' DT successfully. For instance, SOA is briefly mentioned by Accenture (2016b) while discussing various technologies: "Technology (SOA, APIs, social networks, infrastructure, and security)…" (p. 26). Regarding cloud services, SaaS applications are suggested by Capgemini when discussing the implementation of new technologies for the success of DT: "A medical device salesforce is replacing in-person interactions with digital interactions. When visiting a doctor's office, a salesperson leaves an iPad with video and other information on new products. The aim is to get the doctor's attention and gain a 10-min conversation when the salesperson returns to retrieve the iPad" (Capgemini 2011: 18). While IaaS technology is not mentioned, Capgemini (2019) refers to PaaS service: "… a cloud platform to develop machine learning and data analytics that help with operational improvements and making better data-driven decisions" (p. 29). Tata stresses that the better underlying applications adhere to the SOA concept, the easier it is to try new ideas on social and mobile interaction. However, none of the consulting firms relate either SaaS, PaaS, IaaS, or SOE to performance. This shows that the consultancies list the steps for a DT without tackling the technological infrastructure in detail.

Table 5 Technological infrastructure level of the technologies dimension of the PST framework

		Accenture	Capgemini	Tata	McKinsey	BCG	Bain
Technology: technological infrastructure	SOA	Mentioned: "Technology (service-oriented architectures (SOA), APIs, social networks, infrastructure and security)" (Accenture 2016b: 26)	No mention	Mentioned: "The better the underlying applications adhere to the service-oriented architecture (SOA) concept, the easier it is to try out new ideas on social and mobile interactions" (Tata Consultancy Services 2013)	No mention	No mention	No mention
	SaaS	Mentioned: "SAP's shift from selling software licenses to offering software as a service (SaaS), and Apple's launch of the iPhone" (Accenture 2016b: 9)	Mention applications on cloud, such as Salesforce, CRM: "we launched a worldwide CRM modernization program called ENGAGE with the goal of better serving our customers. The program is based on Salesforce cloud solutions and gives the sales, marketing, and customer services teams a 360° view and a better understanding of our customers. Now our staff can use one platform to access real-time customer data" (Capgemini 2019: 68)	Mention of need for "convergence" of multiple platforms to meet the needs of the digitized organization (Tata Consultancy Services 2013)	No mention	Mention of cloud in general as a leading technology "Innovations that were cutting- edge just a few years ago, such as robotic process automation, machine learning, artificial intelligence (AI), and cloud computing, are becoming mainstream" (Boston Consulting Group, 2018: 1)	No mention

Table 5 (continued)

	Accenture	Capgemini	Tata	McKinsey	BCG	Bain
PaaS	No mention	Mentioned indirectly: "We recently built a cloud-based data platform called 'Omnia.' Here, relevant data is made available, irrespective of its source or its point of creation in the value chain. The idea behind this platform is to move from silos of data across our value chain —such as development and production, transportation, marketing and trading —to one common data platform that orchestrates all our data" (Capgemini 2019: 29)	No mention	No mention	No mention	No mention
IaaS	No mention	No mention	No mention	No mention	No mention	No mention

Table 6 Enterprise architecture level of the technologies dimension of the PST framework

		Accenture	Capgemini	Tata	McKinsey	BCG	Bain
Technology: enterprise architecture	Business architecture	No mention	No mention	Brief mention of need to adjust decision making to address digital organization (Tata Consultancy Services 2013)	No mention	No mention	No mention
	Data architecture	No reference to data architecture but mention the crucial role of data in determining what to do, for the future and to draw customers	Data-driven policies: "Recent evidence points out, that organizations which adopt data-driven decision-making achieve a 5–6% higher productivity than those that do not. This significant boost in productivity can clearly separate winners from losers in most industries" (Capgemini 2017: 13)	No mention	No mention	No mention	Even though there is no direct mention of data architecture, there are several central references to data, data structure, data strategy, and data practices for capturing value for customers, decision making, and DT strategy, in general (Bain & Company 2018; Bain & Company 2021; Bain & Company 2019)

Table 6 (continued)

	Accenture	Capgemini	Tata	McKinsey	BCG	Bain
Application architecture	Mention: "Rethink architecture needs. Initiatives include segmenting into multiple speeds, simplifying legacy architecture and building an application program interface (API) layer to expose core data to faster-moving digital channels and ecosystem partners" (Accenture 2016b: 23)		No mention	No mention		No mention
IT infrastructure	"Companies can then align the parts of the business that customers do not see—internal operations and technology infrastructure—because these elements make or break the customer experience" (Accenture 2014: 6)		Refers to needed "unified data structure" (Tata Consultancy Services 2013)	No mention		No mention

Table 7 Development methods level of the technologies dimension of the PST framework

		Accenture	Capgemini	Tata	McKinsey	BCG	Bain
Technology	Development methods	No detail, but a concern: mentions Iterfall (a mix of iterative and waterfall development) and agile operations (Accenture 2016b: 24)	Agile and DevOps but no detail such as scrum, XP, Kanban, lean	Agile methodology	Agile Methodology	Agile methodology	Papers (Bain & Company 2018; Bain & Company 2021; Bain & Company 2019) briefly mention agile and agile principles without in-depth reflection. The "ethnographic research approach" for customer-centric development of products and services is briefly introduced (Bain & Company 2018: 16)

5.3.2 Enterprise architecture

Similarly, our analyses reveal that all six consulting firms only partially cover the different aspects of EA (see Table 6 for details). In terms of business EA, no consulting firm described it, except the technical concept of SOA, a particular instance of an EA. Instead of a more holistic reflection on EA, most of the consulting firms simply refer to the importance of data, such as "data-driven decision making" without reference to EA (Capgemini 2017: 13) or data structure, data strategy, and data practice (Bain & Company 2018; Bain & Company 2021; Bain & Company 2019). Only Accenture mentions application architecture, and Accenture and Capgemini address IT infrastructure, but without referring to its link with IT capabilities. Hence, we can state that in the white papers the six consulting firms have made no distinction nor detailed description of business architecture, data architecture, application architecture, or IT infrastructure.

5.3.3 Development methods

Table 7 depicts the results related to the development methods level of the PST framework. The white papers of each consulting firm we analyzed promote implementing agile methodologies as a development method for companies undertaking a DT. Agile methodology has gained popularity as its implementation improves productivity, as McKinsey (2019, p. 4) highlighted: "Respondents whose companies adhered to agile practices were nearly twice as likely to report that DT efforts had beat performance expectations. This kind of agility often manifests itself throughout the business." BCG (2015) also accentuates the various benefits of agile: "Agile methods successfully pioneered in software development … have shown real advantages through learning by doing, rapidly and frequently delivering working products inspired by real consumer needs, developing innovative delivery methods and value propositions, and adapting to changing requirements" (p. 1).

However, our analyses show that even though consulting firms agree upon the importance of implementing agile methodologies, they do not propose specific agile development methods such as Scrum, XP, Kanban, and Lean or discuss the distinction between these agile methods and the traditional IS development methods. In addition, they do not report on the importance of assessing the particular concerns for a specific development project in order to determine whether waterfall or agile methods would be most appropriate. Following the PST framework (Fig. 2) illustrating the need to embody development methods in DT, it would be essential to consider a full range of methodologies.

6 Discussion

This study aims to offer insights into how leading management consulting firms shape the disseminating discourse of fashionable management ideas like DT (Benders et al. 2019), whose implementation often fails expectations set by organizations (Pasupuleti and Adusumalli 2018; Borovkov et al. 2021). By drawing on the holistic

lens of the PST framework, this study provides insights into the dissemination of the management idea of DT (Piazza and Abrahamson 2020) in practitioner-oriented discourse communities of management consulting. Although any holistic framework may be considered as somewhat subjective, its value relies in its relevance for highlighting key dimensions that may be neglected in more reductionist approaches such as variance analysis. In this paper, the PST framework brings to light a number of blind spots in the DT consulting narrative.

Despite the claimed urgency for fashion setters to transit to more context-specific discourses (Jung and Kieser 2012; Nikolova et al. 2009; Berglund and Werr 2000; Bouwmeester et al. 2022), our findings indicate that consulting firms appear to operate under the assumption of DT universal applicability, irrespective of diverse cultural and institutional settings. While they direct some attention toward the specifics of Small and Medium Enterprises (SMEs) and manufacturing companies, the prevailing consulting discourse on DT describes companies as high-tech, large, highly digitalized, and project-oriented, such as telecommunications, software or pharmaceutical, where DT success stories are prevalent. Additionally, our results underscore the missing focus on hyper-competition and ambidexterity as new organizational forms in the DT consulting discourse. These findings align with prior criticism of consultancies for exploiting the interpretive space of ideas (Benders and Van Veen 2001) and their promotion without contextual considerations (Sturdy et al. 2019; Sturdy 2017).

Another blind spot in the DT consulting discourse pertains to the lack of a conceptualization of performance beyond the realms of cost savings or customer satisfaction. DT requires consideration of hyper-competition (D'Aveni 1994), the study of persistent "disequilibrium" in the state of competition brought by globalization and technological advances that force organizations to foster dynamic capabilities of innovation (Teece 2007). Hyper-competition analysis highlights the translation into a shift from efficiency to innovation and from sustainable competitive advantage to transient competitive advantage (Rindova and Kotha 2001) with a more holistic performance management that takes concerns like hidden costs into account (Savall and Zardet 2008). Moreover, whereas most of the consulting firms stress the importance of customer centricity, they neglect to describe dimensions of it in their white papers, such as the necessity to integrate different devices, functions, data, and stakeholders into systems of value co-creation (Svahn et al. 2017) and the shift from product-service offerings toward usage-based value (Schaffer et al. 2015). Hence, the concepts employed by consulting firms for performance analysis, including hyper-competition, holistic performance management, and customer centricity, seem to lag behind advances in change management research.

Our results further show that the consultancies' blind spots are more prominent at the individual and organizational level in the analysis of the structures. Although leading management consultancies are known for propagating human-related concepts such as "the war for talents" (O'Mahoney and Sturdy 2016), our document analysis reveals a lack of attention to workforce differentiation in DT. Moreover, whereas all consulting firms claim the need for traditional organizational transformation, they overlook the relevance of different methods for DT (e.g., Total Quality Management, Six Sigma, Lean, Organization Development, or Business Process

Reengineering) and bypass the question of organization culture transformation though Business Process Improvement.

It makes sense that the third dimension of the PST framework receives more attention in a DT context than the previous ones of performance and structures. However, despite the asserted urgency to focus on the interplay of organization, strategy, and technology in consultancies' discourse (Armbruster 2006; Pollock and Williams 2010), our results indicate that technologies remain ambiguous and fragmented in consultancy reports. For instance, while Accenture, Tata, and Capgemini briefly mention SOA, SaaS, PaaS, and IaaS solutions, none of the consultancies relate technological infrastructure to performance. Similarly, most of the consulting firms merely underscore the importance of data, without adequately considering the link of EA, IT infrastructure, and IT capabilities (Ross 2003).

Hence, our results indicate that the six leading consulting firms have an opportunity to further clarify and elaborate on essential components, such as business architecture, data architecture, application architecture, and IT infrastructure. Similarly, although the last component of the technology dimension, development methods, seems to receive more consulting attention, the DT consulting discourse focuses on using agile methodologies, rather than distinguishing between these methods and traditional IS development ones, or retaining a focus on people, prototyping, document avoidance and customer centricity for obtaining faster and more relevant outcomes (Fowler and Highsmith 2001). When they address technology, the consultancies appear to use terms that are attractive due to their currency in business but without the clarity of understanding what those terms might mean or how useful those technology might be for particular customers. This ambiguity in the technology dimension can potentially foster skepticism (Heusinkveld 2014) among fashion adopters and hamper the translation of DT in the local context (Røvik, 2019). That is, while it would not be expected that all consultancies would provide unified advice concerning how to manage technology in the context of DT, their approaches need to become more focused and more specific.

These findings regarding the consultancies' blind spots suggest that while the visibility of DT (Engwall et al. 2016; Sturdy et al. 2019) has indeed increased in terms of its exposure via digital channels, its internal visibility (i.e., the idea's essence and clarity) remains limited, marked by ambiguity and gaps. The current consulting DT disseminating discourse leads to a view that DT is a broad philosophy that is challenging to translate (Røvik, 2019). This ambiguity can ultimately add to client uncertainty rather than reduce it (Pemer et al. 2018; Sturdy et al. 2021).

Along with the identified ambiguity and broad interpretive space of DT in the consulting reports (Ansari et al. 2010; Benders and Van Veen 2001), our findings also bring to light the semblance of the DT consulting discourse. Given the growing demand from consumers, intensified competition in the management consulting market (Sturdy 2017; Suddaby and Greenwood 2001), the heterogeneity in consultants' backgrounds and specialization (Heusinkveld 2014), the increasing managerial skepticism towards vague management ideas (Jung and Kieser 2012; Nikolova et al. 2009) and the need to "de-fashion" their disseminating discourse (Piazza and Abrahamson 2020), it would be reasonable to expect that leading consultancies need to differentiate their approaches to disseminating DT. Surprisingly, our findings do not

reveal any discernible distinctions between the leading consulting firms' discourse and approach to DT (Boussebaa et al. 2012). Instead, our results suggest that the management consulting discourse on DT are notably semblable, similarly disseminating general concepts, success stories, and buzzwords.

Considering the faddishness, semblance, and the presence of multiple blind spots, this study suggests that the success of DT might hinge upon skillful management and articulation of the nine dimensions of the PST framework that are rarely described on a holistic level by consulting firms.

6.1 Theoretical implications

Our findings hold broader implications for theory. First, this study contributes to the literature on change management, on management ideas (Kühl 2020; Røvik, 2019; van Grinsven et al. 2020), and the broader literature on DT. It illuminates the underexplored landscape of disseminating discourse on DT within the realm of management consulting. In contrast with the optimistic functionalist view on management consulting (Suddaby and Greenwood 2001; Poulfelt et al. 2017) and DT (Kraus et al. 2022), this study provides critical insights into the nature of the management idea of DT and management consulting on DT (Clark 2004; Kühl 2020; Werr and Styhire 2002). While prior scholars have called for a rethinking of faddish consulting rhetoric (Kiesler and Cummings 2002; O'Mahoney 2010; Sturdy 2011), our research suggests that management consulting firms, paradoxically, continue to disseminate simplistic and general solutions to the latest management fashions such as DT in their publications. Since this study demonstrates that the DT dissemination consulting discourse aligns with the critical view on management consulting (Armbruster 2006; Benders et al. 1998), it suggests that consultancies have an opportunity to refine the clarity and internal visibility of DT. This would help ensure that the label more accurately reflects its contents and that the promised solutions are fully realized (Benders et al. 2019).

Second, our study advances the literature on management consulting and management fashions and ideas (Sturdy et al. 2021) by bringing into the focus the semblance of consulting discourse on DT, where consultancies disseminate similar discourse on management ideas like DT, often lacking discernable differentiation between them and exhibiting similar blind spots. The absence of theoretical or empirical examination of the (non-)differentiation of consultancy discourse is rather surprising (O'Mahoney et al. 2021), given the exponential growth in the consumption and popularity of management ideas, along with the fierce competition among consultancies (Strang et al. 2014; Sturdy 2017; Sturdy et al. 2019).

The strategy perspective on management consulting suggests that the management consulting firms' strategic position and differentiation are critical to securing their competitive advantage (Armbruster 2006; Porter 1985). Considering that consultancies operate in a strongly stratified customer-driven market, the strategic differentiation and a degree of "branding" and uniqueness in the global marketplace can signal their quality, reliability, association with a particular idea (Suddaby and Greenwood 2001). Such distinctiveness can subsequently improve the consultancies'

impression and reputation, which guide clients' purchase decisions (Armbruster 2006).

Nevertheless, our study reveals that the discourse of leading management consulting firms aligns more with the neo-institutional perspective on management consulting, where in complex and uncertain contexts there is pressure to maintain norms (Hassandoust et al. 2022). This pressure might cause the consultancies to elucidate the semblance of their discourse, with no discernible differentiation by brand, culture, or history. The question therefore arises: why do leading consulting firms follow a mimetic approach to DT? We can hypothesize the importance of an elitist element, wherein following and disseminating a semblable discourse on DT allows consultancies to collectively maintain their status in reputation rankings, setting them apart from lower markets and ensuring secure deals with high-status clients. Moreover, differentiation could be risky, given that commodified knowledge is easily imitable by competitors (Suddaby and Greenwood 2001). By spotlighting the faddishness, ambiguity, and semblance inherent in DT disseminating discourse, therefore, this study not only enhances our comprehension of the diffusion of a specific management idea of DT but also contributes to our critical understanding of the role played by specific actors—leading management consultancies—in the broad process of disseminating management ideas.

Third, this paper contributes to the IS literature and literature on change management by unveiling and discussing blind spots in DT consulting and arguing for a more holistic DT consulting approach aligned with the PST framework. Fink and Knoblach (2017) argue that the critical research on management ideas "neither addresses the effectiveness of management consulting nor aims to improve the success of (change) interventions" (p. 588). Moreover, relatively few models of DT comprehensively consider the multifaceted aspects of the business environment (Teece and Linden 2017), organizational structure (Fettig et al. 2018), and technology (Bordeleau and Carsten 2019). The PST framework can partly bridge these gaps, as it advocates for a more holistic, tangible, and pragmatic approach to management fashions (Hirschheim et al., 2012; Røvik, 2019), emphasizing the need to link change management with other disciplines such as organization studies, operation management, strategic management, HR, and information systems. Importantly, as the boundary between strategy consulting and IT advice blurs, consulting advice becomes highly dependent on IT skills required for consulting firms to keep pace with technological advancements. Therefore, aligned with the work of Ghosh et al. (2023), this study advocates for the value of holistic integration of all the elements within the three indispensable pillars—performance, structure, and technology—introduced by the PST framework in the consultancies' approaches to and their disseminating discourse on DT. The holistic integration of these dimension and elements in the DT consulting discourse aligns with the work of Matt et al. (2015) who claim that, in order to ensure a successful DT, companies should align it with other functional and operational components.

6.2 Practical implications

Turning to the practical implications of our study, our findings are particularly valuable for companies, consultants, and other actors implementing or interested in DT.

First, in light of the high failure rates of DT, it is evident that DT echoes a core challenge in the field of management fashions: ideas continue to be widely disseminated and recognized as ambiguous and often lacking material outcomes (Benders and Van Veen 2001; Walker et al. 2015), ultimately resulting in critique and skepticism. The prevalent trend of adopting a semblable and ambiguous consulting approach, as observed in their discourse on DT, necessitates a revaluation of consultancies' approaches to DT. There is a need for a more differentiated, holistic, and concrete approach to DT that accurately delineates the substance and value of fashionable ideas. This approach should encompass a thorough consideration of performance, structural, and technological aspects, thereby providing a comprehensive understanding of DT's and other management ideas' potential impact.

Second, to address the challenges posed by the current discourse on DT, organizations and consultancies might consider applying the PST framework. Our findings indicate that applying the PST framework in DT change management endeavors might be more likely to lead to a holistic consideration of expected performance improvements, hyper-competitiveness, hidden costs, and usage-based value. To establish DT as an organizational transformation, change agents might also be advised to emphasize the pivotal role of people involved in DT and select the more relevant organizational transformation methods accordingly. Eventually, practitioners should expand their technological approach to DT and incorporate aspects related to technological infrastructure and EA. Hence, the PST framework, when coupled with a thorough examination of potential blind spots, might aid local change agents in translating the fashionable management idea of DT (Ansari et al. 2010; Røvik, 2019; Sturdy et al. 2019) and decrease the number of blind spots stemming from the ambiguity and limited internal visibility of DT (Benders et al. 1998). However, this approach would necessitate improved DT awareness skills (Hanelt et al. 2021) of change agents regarding its contents, and presume that practitioners would need to be aware of different intertwined elements of DT and manage it as a blend of technical and social activities. The PST framework, along with the enhanced DT awareness skills, might thus prepare fashion followers by placing them in a better position to navigate the complexities of DT and reap its associated benefits. The problem raised by this paper is the lack of attention of consulting firms to numerous dimensions of DT due to a reductionist view of both performance, structure, and technology. The PST framework attends to missing dimensions that are required for contributing the success of DT through a more systemic approach.

6.3 Limitations and further studies

Our study has several limitations which open avenues for future research. One significant limitation pertains to the scope and scale of our study. Owing to large

consultancies' power in dissemination and legitimation of new ideas, we focused on six leading consulting firms. Yet, they represent only one type of agents shaping and disseminating management ideas (Suddaby and Greenwood 2001). Future studies could explore other sets of fashion setters, such as business schools, management gurus, and smaller consultancies. In particular, follow-up studies could turn to the construction and diffusion of fashions by more specialized promissory consulting firms, such as Gartner (Pollach 2021; Pollock and Williams 2010).

From a theoretical standpoint, the PST framework, while holistic, is not comprehensive. It does not consider such aspects as management competency, dynamic capability aspect (Teece 2007), the GRAI Grid for decision making (Doumeingts et al. 2006), or the Viable Systems Model for a comprehensive understanding of the organization (Espejo and Gill 1997). Future studies might consider building on the PST framework towards greater comprehensiveness.

Another important limitation of this study concerns its exclusive focus on white papers. White papers, while offering researchers first-hand access to consulting firms' rhetoric, are also socially constructed documents created for specific purposes, such as advertising consultancies' novel management ideas (Bowen 2009). White papers thus represent just a fraction of the consulting firms' repertoire of case- and industry-specific methodologies and reference models. Therefore, our findings should not be interpreted as limitations in the consulting firms' capabilities. Rather they highlight the limitations of their public disseminating discourse, which could mislead company management into believing that they are fully prepared for a DT, potentially resulting in lower-than-expected success rates. Moreover, given the revealed semblance of consulting approach evident in white papers, the process by which clients differentiate and select consulting partners remains enigmatic. Therefore, we encourage future studies to delve into and compare the DT discourse at the interpersonal level of interaction with clients, which is not publicly shared.

Our study predominately focuses on the consultancy discourse on DT. However, DT represents a large, complex change project or a fashionable management idea that can be operationalized with several fashionable sub-ideas, such as AI, blockchain, or digital twins. Further comparative studies might explore whether the consulting disseminating discourse differs between DT and other more specialized "digital" management or technological ideas.

Traditionally, the literature on management fashion and ideas portrays clients as "victims" or "marionettes" of consultants' rhetoric, manipulation, and impression management (Kipping and Clark 2012; Clark and Salaman 1998; Kieser 1997). However, this notion is increasingly being questioned due to the shifts in power and control between consultants and clients in the contemporary dynamic world (Fincham and Evans 1999; Heusinkveld et al. 2011; Sturdy 1997a, 1997b; Werr and Styhire 2002) where clients increasingly formalize, centralize, and rationalize their management of consulting projects and appear to be quite critical and distrustful concerning the consulting industry and "buzzword" panacea-concepts (Gill and Whittle 2007). Such developments provide exciting avenues for future studies that can explore the power dynamics in the fashion arena and take a closer look at how fashion consumers (i.e., managers) perceive the semblance of the management consulting discourse on DT and interactively co-construct it (Sturdy 2017).

Finally, future studies could verify and adjust the presented PST framework in various contexts, including both analyses of the DT consulting discourse and local organizational DT strategic change initiatives. Drawing on translation theory (Ansari et al. 2010; Røvik 2011), follow-up research might also delve into how the PST framework and blind spots could assist local translators (i.e., managers and middle-level managers) (Spyridonidis et al. 2016) in DT change management.

7 Conclusion

DT is often viewed as a fashionable management idea, yet its execution entails considerable complexity and requires careful management. Given that organizations commonly seek guidance from management consulting firms for their change management endeavors like DT, it is imperative to gain a deeper understanding of the comprehensiveness of the DT consulting discourse. Applying the PST framework, our findings highlight that leading management consulting firms neglect numerous dimensions of expected performance improvement, do not refer to the concept of workforce differentiation, largely fail to report different organizational transformation methods, and reduce the technological dimension to agile development methods without clearly articulating the different levels of infrastructure and EA. Moreover, our findings reveal faddishness, simplicity, and substantial semblance of the DT discourse disseminated by the leading management consulting firms. The practical implication of these findings suggests the consultants and practitioners might consider the PST framework holistically to increase the likelihood of DT's success.

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