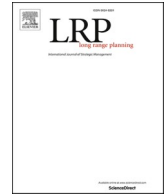




ELSEVIER

Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

Long Range Planning

journal homepage: www.elsevier.com/locate/lrp

Corporate decline and turnarounds in times of digitalization

Vincent L. Barker III^a, Johannes Luger^{b,*}, Achim Schmitt^c, Katherine R. Xin^d

^a *Learned Professor of Business Administration, School of Business, University of Kansas, Lawrence, KS, USA*

^b *Department for Strategy and Innovation Copenhagen Business School Kilevej, 14A, 2000, Frederiksberg, Denmark*

^c *EHL Hospitality Business School, HES-SO, University of Applied Sciences and Arts Western Switzerland, Route de Cojonnex 18, 1000 Lausanne, 25, Switzerland*

^d *Professor of Management, Bayer Chair Professor in Leadership China Europe International Business School (CEIBS), 699 Hongfeng Road, Shanghai, 201206, China*

ARTICLE INFO

Keywords:

Corporate turnarounds

Digitalization

Crisis and decline

Artificial intelligence

The constant evolution of digital technologies in nearly every aspect of human life requires almost any firm to rethink its current business practices. Traditional industries transform or merge, offline businesses turn into online ones, business models change, and new companies emerge while some corporate icons disappear (Lavalley et al., 2011). This digitalization trend, known as the 4th industrial revolution (Schwab, 2017), has such broad impact because it describes a general-purpose technology (Brynjolfsson and McAfee, 2017) affecting industries, firms, and consumer behavior. It allows firms to optimize existing business processes (Verhoef et al., 2021), modifies the firm's organization design (Birkinshaw, 2018), and adjusts value creation activities up and down the entire industry value chain (Rossi et al., 2020). Hence, digitalization not only encompasses efficiency gains but can also lead to industry- and organization-wide changes resulting in new business models that re-define, re-develop, and extend existing value propositions (Jacobides et al., 2018).

Whereas digitalization provides ample opportunities for organizational entrepreneurship to define new or modify existing business models (Bouncken and Barwinski, 2020), the flipside of the coin is that it also represents key challenges for incumbent firms. In fact, the constant evolution of digital technologies makes it more difficult to sustain previously established 'rent-mechanisms' (Amit and Schoemaker, 1993), as certain industries' business logics risk becoming obsolete, along with the resources and capabilities of firms in that industry. Digitalization thus adds a layer of complexity and demands greater agility with regards to strategic foresight, planning, and control (Volberda et al., 2021). For incumbents, digitalization often requires walking a tightrope between leveraging existing business relationships and creating new possibilities for doing business (Christensen et al., 2016). It disrupts a firm's environmental landscape, requiring firms to adapt and align towards new business realities in a short amount of time (Tece, 2010).

The COVID-19 pandemic, resulting in unprecedented global contact restrictions, has further accelerated industry alterations, as it has been forcing companies to respond and deal with digital transformation efforts in an accelerated manner. For example, consumers' rapid behavioral change towards digital fitness applications, such as live-stream workouts and digitally connected cycles or treadmills,

* Corresponding author.

E-mail addresses: vbarker3@ku.edu (V.L. Barker), Jlu.si@cbs.dk (J. Luger), Achim.Schmitt@ehl.ch (A. Schmitt), katherinexin@ceibs.edu (K.R. Xin).

<https://doi.org/10.1016/j.lrp.2022.102211>

Received 13 November 2021; Received in revised form 22 March 2022; Accepted 1 April 2022

Available online 7 April 2022

0024-6301/© 2022 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

has severely affected traditional fitness and sporting goods industries after the pandemic's outbreak. Several fitness giants, such as Gold's Gym International, 24 Hour Fitness, and Town Sports International, were incapable of digitally transforming their prior investments in physical assets (i.e., rent, fitness equipment, etc.) and thus needed to file for bankruptcy. Similarly, other industry giants, such as JC Penney, J Crew, Guitar Center, Furla USA, and Century 21 Department Stores, needed to file for bankruptcy as they were caught unprepared by the pandemic's reinforcement effect of buying goods via established distribution networks of online retailers (i.e., Amazon or Alibaba). These examples emphasize the need for business models that build on some level of access to digital technology and data, instead of focusing solely on traditional 'offline' assets. And nothing suggests that this digitalization trend will slow down soon. Given that a high degree of environmental uncertainty and volatility also fosters firm decline and turbulence (McKinley et al., 2014; Ndofo et al., 2013; Trahms et al., 2013), it is not surprising that some industry experts foresee a continued "shake out" of industries and market players.

These changes and challenges will undeniably impact the business practice and knowledge regarding corporate turnarounds, which refer to the recovery of a firm's financial performance after an existence-threatening decline situation (Hofer, 1980; Schendel et al., 1976). However, compared to previously studied decline and turnaround contexts, such as economic crises or environmental scarcity (Grinyer and Spender, 1979; Schmitt et al., 2016; Chowdhury and Lang, 1993), the context of digitalization shows some unique features that are likely to substantially change our current understanding of established turnaround wisdom. First, while digitalization affects a large variety of firms, it affects them in vastly different ways. Some firms (e.g., banking and financial institutions) may use digitalization to substitute for existing resources and capabilities, while others (e.g., manufacturing) will require digitalization to complement such resources and capabilities. These digital adaptations can trigger a firm's decline, as it calls for rethinking of large parts of its operations and business models (Atluri et al., 2017). In addition, for most firms, the digitalization process necessitates strategic renewal strategies that may look like turnaround recovery strategies, not in times of scarcity and resource limitations (Schmitt et al., 2016), but in times of prosperity and growth. Some studies (Ndofo et al., 2013) have emphasized that most prior turnaround research has its foundations in mature and/or declining industry contexts (Filatotchev and Toms, 2003; Grinyer and Spender, 1979; Schendel et al., 1976) that fail to provide comprehensive answers to successfully steer turnaround strategies in dynamic and growing industry environments. Finally, because it is different from prior turnaround contexts, the digitalization context is likely to have substantial consequences for firm boundaries (Afuah, 2003) increasingly blurring industry frontiers, and merging and expanding some industries, while downsizing or erasing others. In sum, digitalization presents a unique context to advance our current theoretical understanding of corporate decline and turnaround.

The need to incorporate digital technologies within the context of corporate turnarounds suggests that we first need clarity regarding both concepts. In what follows, we thus first define the notion of corporate turnarounds and elaborate on important characteristics of this phenomenon. Then, we provide an overview of digitalization's main impact on industries, firms, and consumers. Subsequently, we identify the digital transformation's consequences for corporate turnarounds, followed by an overview of the articles included in this special issue. We conclude by suggesting avenues for future research.

1. Understanding corporate turnarounds

Corporate turnarounds have been an academic research niche for longer than four decades. Despite this long history, there is still disagreement regarding a universal definition of the phenomenon. As a general working definition, turnarounds describe a dynamic process leading firms from a survival-threatening decline situation to a period of sustained success. Practitioners often consider corporate turnarounds as a firm's attempt to avoid bankruptcy. However, extant turnaround research (for recent reviews consider: Trahms et al., 2013; Schweizer and Nienhaus, 2017) still contains disagreement regarding the exact boundaries of the phenomenon. This situation is surprising, given that early turnaround research called for greater clarity on how to delineate turnaround firms from other firms suffering from recessions or mild forms of decline (Barker and Mone, 1994; Pearce and Robbins, 1993). Hence, we begin by clarifying and defining corporate turnarounds from our perspective.

A first element of such a definition needs to address the decline's severity or the delineation of an existence-threatening situation. Scholars (e.g., Arogyaswamy et al., 1995; Hofer, 1980; Sheppard and Chowdhury, 2005) generally define turnarounds as recovery from a 'survival-threatening' performance decline situation in which the firm is 'sustaining resource losses that will cause the firm to fail if unabated' (Arogyaswamy et al., 1995: 497). This has led some researchers in the field (e.g., Robbins and Pearce, 1992; Morrow et al., 2004; Bruton et al., 2003) to identify turnaround situations as consecutive years of declining performance measured by ROI, ROS, and/or a combination of both. However, such measures, if not complemented with others, risk becoming detached from the previously voiced theoretical arguments (i.e., survival threatening situation), and hence risk construct validity. Consider firms with temporary mild performance drops, as well as stagnating firms with performance that is significantly above break-even, in reference to firms that are in need of turning around. To illustrate, a firm whose ROI (and/or ROS) drops from 25 percent to 10 percent in two consecutive years would still be considered a turnaround candidate. Yet, these firms might find themselves in a very different situation compared to firms experiencing resource losses threatening its survival (i.e., what the theoretical construct suggests). In this respect, Grinyer et al. (1988) argue that mild recessions or stagnating performance situations differ substantially from turnaround situations. For these firms, which do not face survival-threatening situations, yet are included in the definition of a turnaround, there is a risk of drawing wrong conclusions. Hence, turnaround situations need to include firms that find themselves in situations in which they experience *actual resource scarcity*.

Second, prior turnaround studies vary in terms of the nature of decline. Some studies (Bibeault, 1982; Hambrick and Schecter, 1983) define turnarounds as situations of absolute decline, or decline irrespective of industry decline. This limitation makes it difficult to locate the cause of decline as being either firm- or industry-specific. Conversely, others (Robbins and Pearce, 1992; Barker and

Mone, 1994) define turnarounds as characterized by both absolute decline and relative decline. Relative decline – in which the decline is relative to the industry – has been described as a reliable firm-specific resource misalignment indicator (Arogyaswamy et al., 1995). Several scholars have argued that firm-specific resource misalignment is a general turnaround situation characteristic (Mone et al., 1998; Pearce and Robbins, 1993; Weitzel and Jonsson, 1989). For example, Sheppard and Chowdhury (2005) argue that ‘failure is not typically the fault of either the environment or the organization, but rather it (...) is [caused by] the misalignment of the organization to the environment’s realities’ (Sheppard and Chowdhury, 2005: 240). Therefore, we suggest that research on turnarounds should focus on situations of decline in which firms face *resource misalignment*.

Both *resource scarcity* and *resource misalignment* allow us to delineate turnaround firms from other firms experiencing decline, such as sharpbenders (Grinyer et al., 1990) or firms suffering from temporary performance shortfalls. Firms manage to successfully reverse a survival-threatening decline when they regain financial stability by returning to or exceeding the pre-downturn performance level. Given that organization-wide turnaround initiatives require time to take effect and show certain performance fluctuations, models that have argued for a one-year evaluation period (Morrow et al., 2007) might fall short in fully assessing the corporate turnaround’s effectiveness. A period of three consecutive years of positive firm performance (Barker and Duhaime, 1997; Bruton et al., 2003) is generally suggested to evaluate the turnaround firm’s outcome; although we explicitly acknowledge that, on the flipside, such a prolonged timeframe also presents the downside of an increased level of noise.

1.1. Corporate turnarounds and digitalization

Given the recentness and breadth of the phenomenon, there are multiple working definitions of digitalization. Most of these definitions contain the terms *technology* and *data*, and speak of *analysis* as well as far-reaching *transformations* by affecting human behavior, business processes, value creation and capture (Björkdahl, 2020; Kronblad, 2020; Srai and Lorentz, 2019; Reis et al., 2019). As mentioned before, digitalization can be considered as a general-purpose technology (Autio et al., 2021) and, similar to the steam engine or electricity centuries ago, can transform the very nature of business and society (Yoo et al., 2010). Given their increased use in organizational and non-organizational contexts, digital technologies – such as the Internet of Things (IoT), machine learning, smart devices, and artificial intelligence – have become an integral part of our lives that continue to blur the lines between the former hard distinctions of a digital and physical world.

From an economic perspective, digitalization can be considered as a means to increase a firm’s internal efficiency while simultaneously increasing its effectiveness through new ways of creating, delivering, and capturing value for customers (Autio, 2017). The constant evolution and sophistication of digital technologies not only enable progress and development, but they also modify industry boundaries, change the competitive forces in markets, and force firms to permanently consider the value proposition to critical stakeholders. These uncertain and disruptive environmental conditions increase the likelihood of decline (McKinley et al., 2014) and the need for corporate turnarounds. However, before we provide managerial guidance on how to deal with these circumstances, we first need to better understand how digitalization allows firms to transform value creating activities across various industries.

1.2. The principles of digitalization

Digital technologies have been considered to change the ‘rules of the game’ (Volberda et al., 2021), either by transforming entire economies, industry sectors, consumer behaviors, or the actual business model or functioning of a firm. The currently ongoing shift from operations and transactions in the physical to the digital world enables us to compare and identify certain fundamental differences and implications for firms navigating the digital era. First, digitalization modifies and changes the competitive market dynamics within and across industries (Krakowski et al., 2022). Whereas firms formerly contributed value-adding activities in a linear sequence along the industry value chain (Porter and Millar, 1985), digital value creation processes are based on multiple stakeholders who co-create value for themselves and for others (Barret et al., 2015; Yoo et al., 2012). Connected via a common interest to create and sustain value around a digital platform, these stakeholders build solutions and contribute to a digital business ecosystem that spans traditional industries. Companies like Google, Garmin, or Map Quest, for instance, provide not only road maps that help consumers to navigate to a specific destination but also a digital ecosystem for restaurants, gas stations, and hotels to distribute their services to consumers. As a consequence, the digital platform – not the road map industry – characterizes the central element of value creating activities (Gawer and Phillips, 2013; Yoo et al., 2012). Owing to the interdependencies inherent in these platforms, firms are increasingly shifting their competitive attention and behavior towards co-opetition and co-creation strategies (Hannah and Eisenhardt, 2018) that allows them to develop and integrate new devices, services, networks, and products in these digital ecosystems (Adner and Kapoor, 2010; Yoo et al., 2012).

Second, digitalization impacts consumer preferences and the customer journey expectations for online and offline purchasing behavior. For instance, a growing number of studies (e.g., Benner and Waldfoegel, 2020; Brynjolfsson et al., 2010; Tan et al., 2017) find that the greater variety of products available via digital technologies counterbalances the existence of certain bottlenecks and gatekeepers in a distribution network, leading to an increase in purchases of less popular products rather than of a concentrated group of blockbuster products. Moreover, digitalization allows consumers to become more connected, informed, and empowered about products (Verhoef et al., 2021), which enables them to lower information asymmetries regarding quality, price, and availability. Additionally, purchasing decisions are less influenced by traditional marketing and sales communication strategies, but rather by other customers sharing product reviews and customer experiences (Verhoef et al., 2017). Digital technologies also enable active exchanges and interactions between organizations and consumers throughout the value creation process, resulting in customized products and innovation (Barret et al., 2015). If firms cannot adapt to these changes, they become less attractive to customers, and are likely to be

replaced by firms that do leverage such technologies.

Third, digitalization alters the economics of production which impacts the firm’s size and scope (Birkinshaw, 2018). In comparison to physical products, digital products have distinct characteristics requiring different strategic and managerial approaches (Menz et al., 2021). Digital products often rely on network effects such that the value experienced by one is positively related to the number of others using this product (Birkinshaw, 2018). Additionally, these products often alter the firm’s cost structure by replacing transaction costs, decreasing human tasks, and increasing automation (Verhoef et al., 2021). For instance, digital technologies are capable of leveraging artificial intelligence and big data analytics that fuel advancements in additive manufacturing and industrial 3D printing (Baskerville et al., 2020). Hence, digitalization does not comply to certain limitations in scale and scope of the previous industrial era (Menz et al., 2021), but rather allows firms to find new ways of value creation via platform strategy, horizontal integration, and cross-collaboration among industry players.

In summary: due to the comprehensive effect of the digital transformation on firms, it fundamentally alters previously established success formulas across various industries. Consequently, the traditional perspectives of industry value chains, firm value creating activities, and consumer behaviors require a comprehensive update. In order to successfully navigate digital transformation, firms need to alter their entire process of strategizing based on broader strategic frames, flexible practices, and managerial agility (Volberda et al., 2021).

1.3. Implications for corporate turnarounds

For many established companies, the digitalization effort, which comes with multiple and comprehensive technological novelties, represents an existential threat. Unlike born-digital organizations, such as Facebook (Meta), Amazon, Apple, Netflix, Google (Alphabet), or Microsoft (a group of firms often collectively referred to as FAANGM), incumbent firms’ efforts to adapt to a new digital reality requires a transformation process that affects the entire organization. Thereby, the business reality provides us with multiple examples that show that these transformation efforts often fail. In fact, there are multiple examples documenting the struggles of incumbent firms with comprehensive technological change. In the past 25 years, more than 50% of the Fortune 500 companies have either gone bankrupt, been acquired, or ceased to exist. Industry observers attribute much of this phenomenon to the digital disruption. This compares to the FAANGM, which have managed to capture close to 25% of the S&P’s 500 total market capitalization by the end of August 2021. The incumbents’ difficulties with digital transformation leaves them vulnerable to disruption, performance shortfalls, and decline (Atluri et al., 2017).

Our current theoretical understanding of turnarounds insufficiently incorporates these recent business realities. While prior research studied turnarounds in technology and knowledge-intensive environments (Ndofor et al., 2013; Barker and Schmitt, 2017), the recent environmental changes suggest that extant turnaround models fail to acknowledge the comprehensiveness and turbulence caused by digitalization in several ways. First, as mentioned before, digitalization, as a general-purpose technology, does not only affect any given production technology but simultaneously brings changing customer preferences, value co-creating, and increasingly

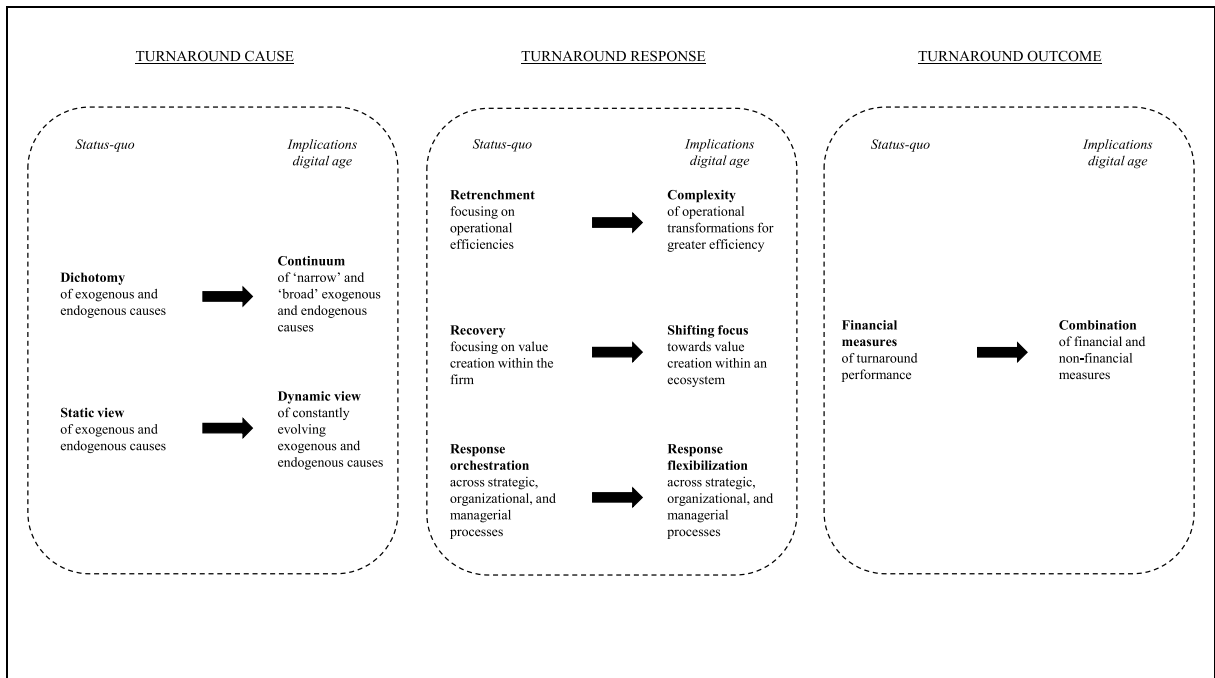


Fig. 1. Implications of digitalization for corporate turnarounds.

blurred industry boundaries. This is substantially different from previous technological changes (Bharadwaj et al., 2013). Hence, earlier assumptions about turnaround strategies and their outcomes may no longer be accurate. Second, the impact of digitalization in transforming industry boundaries into a wider digital ecosystem requires research into corporate turnaround to shift the turnaround efforts' focus from the firm perspective towards a broader view of the firm as an integral part of a wider ecosystem or network. Consequently, it is likely that the complexity in managing turnaround has increased substantially. Third, the speed, scale, and scope with which digital technologies evolve (Bharadwaj et al., 2013) are likely to positively impact the rate of decline. Turnaround attempts thus must be carried out in situations of heightened resource scarcity as a firm's economic returns and/or financial resources from existing business models risk becoming obsolete in shorter timeframes.

Owing to these uncertainties, it is currently unclear which of the current turnaround research's insights and knowledge uphold to explain corporate turnarounds in the digital area. Motivated by these ambiguities, we reviewed the existing turnaround literature considering the ongoing digital transformation of our industries. Generally, traditional (e.g., Arogyaswamy et al., 1995; Pearce and Robbins, 1993) and more recent frameworks (e.g., Trahms et al., 2013; Schweizer and Nienhaus, 2017) summarize and describe corporate turnarounds as an interaction of three main components: the cause, the response, and the outcome dimension of turnarounds. Keeping with this tradition, we depict the implications of corporate turnarounds in times of digitalization among these three components, namely the turnaround situation, the turnaround response, and the turnaround outcome (see Fig. 1).

The turnaround cause. A firm's turnaround is the result of both exogenous (Harrigan and Porter, 1983; Ndofo et al., 2013; McKinley, 2011) and endogenous forces (Trahms et al., 2013; Hofer, 1980; Robbins and Pearce, 1992). However, this dichotomy of external versus internal reasons for corporate turnarounds is rather problematic, as the previously mentioned "value co-creation" between firms implies mutual causality between environmental and organizational elements (Bogner and Barr, 2000). Furthermore, the digitalization is representative for nonlinear changes in which small triggers can result in large outcomes (El Sawy et al., 2010). This combination of nonlinearity and environmental discontinuities calls for a different research mindset (Meyer et al., 2005) that is much more context sensitive and identifies critical initial configurations. Consequently, separating environmental and organizational factors when analyzing decline might lead to false assumptions, incorrect cause-effect relationships, and over-simplistic perceptions of the turnaround situation.

Future turnaround studies should follow prior claims (Greenwood et al., 2011; Gubbi et al., 2015; Hanelt et al., 2021) to examine variations of the contextual scope, instead of keeping the dichotomy of internal and external decline contexts. Hanelt et al.'s (2021) distinction of a 'narrow' versus a 'broad' contextual scope can be particularly useful to assess the complexity linked to steering digital turnarounds. Whereas a 'narrow' contextual scope allows for identifying specific elements of the digital ecosystem in relation to the organization's functioning, the 'broader' contextual scope enables turnaround firms to understand and evaluate the firm's value creation system in relationship to the multiple technological, organizational, and environmental elements in the digital ecosystem. Shifting exogenous and endogenous factors of decline into a continuum enables future turnaround scholars to grasp the complexity of the ecosystems and allows them to fundamentally assess how they create and capture value (Priem et al., 2018).

Moreover, due to the concurrence of many changes (i.e., competitive dynamics/value co-creation, customer preferences, and economies of production), future turnaround studies should assess the decline's nature from a holistic and dynamic instead of an atomistic or static approach. Digital ecosystems are built on the continuous realignment of synergistic relationships between multiple stakeholders and technological evolutions (Ramaswamy and Gouillart, 2010). By their very nature, these systems are adaptive and in constant flux. Hence, the sources of a firm's decline are therefore not only driven by a novel technology (Warner and Wäger, 2019) or new competitors (Garud et al., 2020), but also by ongoing interactions between firms and customers that are adapting and reacting to these contextual conditions (Hanelt et al., 2021). This perception diverges fundamentally from prior ideas of environmental changes, such as environmental jolts (Meyer et al., 1990), technological changes (Hinings et al., 2004), and punctuated equilibriums (Romanelli and Tushman, 1994), which model environmental changes as large episodic events followed by new levels of stability. Contrastingly, digital ecosystems do not subscribe to the idea of an "equilibrium," as their structure and functioning implies "that cause-and-effect may cascade in unpredictable ways to alter the structure or health of the ecosystem, or end it entirely" (El Sawy and Pereira, 2013: 2). Considering this environmental dynamism, the sources of a firm's decline can but do not necessarily have to relate to an organizational unit or the organization in its unity. Depending on the particular context, firms thus have to live with constantly changing or ongoing turnaround situations.

In sum, future turnaround situations may rather require a holistic and ongoing assessment regarding the decline's nature and impact. The evolution and potential multiplication of changes within the ecosystem implies that the turnaround firm's analysis of the turnaround situation needs to constantly co-evolve with the dynamically changing environment.

The turnaround response. Turnaround scholars have explored a range of turnaround activities that fall into two distinct categories: retrenchment and recovery (Barker and Mone, 1994; Robbins and Pearce, 1992). While retrenchment activities focus on increasing a firm's efficiency through cost and asset reductions, recovery activities concentrate on improving a firm's market position through strategic change. The current turnaround literature shows a certain bias towards discussing the role, effectiveness, and timing of retrenchment strategies that aim at improving the firm's cost and asset structure (Lim et al., 2013; Barbero et al., 2017; Tangpong et al., 2015). Some others have offered a more interdependent and dynamic view of retrenchment strategies and argued for simultaneous, interdependent strategic recovery activities (Arogyaswamy et al., 1995; Schmitt and Raisch, 2013; Barker and Schmitt, 2017). Turnaround strategies that combine efficiency and innovation activities ensure the long-term survival and prosperity of the firm (McKinley et al., 2014; Trahms et al., 2013; Morrow et al., 2007). However, these dynamics between retrenchment and recovery may shift in times of digitalization. As mentioned, digitalization does not occur during economically tough times, but it still implies very challenging conditions for most firms. This is likely to put increased emphasis on recovery (relative to retrenchment), yet, so far, the literature fails to provide us with answers regarding ways in which to turnaround firms in times of digital disruption and business

model transformation.

During turnarounds, firms need to actively ensure the availability and use of resources to reverse the decline situation and capture opportunities for long-term growth. In other words, turnaround firms need to gain control of the survival-threatening scarcity situation, while simultaneously circumventing the inherent limitations to invest in recovery strategies. The purpose of retrenchment activities is to alleviate situations of resource scarcity by reducing a turnaround firm's input resources and improving operational efficiency to restore profitability (Hambrick and Schecter, 1983; Pearce and Robbins, 1994). The impact of digitalization on the economies of production can function to obtain efficiency gains in a turnaround firm's operations and processes. For instance, Björkdahl (2020) has found that manufacturing firms use digitalization to improve operational efficiency by reducing labor costs, decreasing variance and the number of breakdowns while simultaneously increasing throughput and quality. Moreover, firms can leverage digitalization to create integrated value chains that yield cost advantages by reducing lead times, enable better operational control, and allow for timely planning of important processes (Björkdahl, 2020; Holmström et al., 2019). However, these retrenchment gains via digitalization need to be considered via two aspects. First, the replacement of tasks via digitalization might trigger new skill requirements during turnarounds, which can become hidden costs. Fully automated manufacturing systems, for example, will certainly reduce the need for a low to medium skilled labor force, but creates the necessity for fewer but higher skilled individuals that oversee and manage these systems (Balsmeier and Woerter, 2019). Additionally, these new digital systems and processes require new governance structures and coordination mechanisms that allow for the reaping of the full benefits of a digitized firm. Second, digitalization carries a high risk of destroying the value of previously obtained assets. Prior studies (e.g., Tripsas, 1997; Henderson and Clark, 1990) have emphasized that technological shifts can lead to the destruction of competences and assets held by incumbent firms. Given that assets serve as collateral to secure stakeholders' financial support, or to obtain new financial support during turnarounds, such asset devaluation might counterbalance or even aggravate efforts to alleviate resource scarcity.

Recovery activities are essential for turnarounds, since efficiency-oriented retrenchment activities will not solve the deficiencies in a declining firm's strategic orientation (Barker and Duhaime, 1997) and align the firm's resources with the demands of an evolving environment. The mentioned switch from physical to online products (or the general tendency to obtain and collect more data) can help turnaround firms to obtain valuable customer or product performance data for product improvement and/or development (Porter and Heppelmann, 2014). Such data, or the information-gain that goes with it, increase customer proximity and enable firms to obtain new business revenue streams by offering additional operational and complementary services (Björkdahl, 2020; Wise and Baumgartner, 1999; Baines et al., 2017; Nauhaus et al., 2021). The latter is explicitly possible, as industries increasingly merge with others and value is co-created with them. In this sense, digitalization can be complementary to a firm's existing assets or business model, allowing for business improvement via data collection and connectivity, and can create new market opportunities by enriching a firm's product and service portfolio. However, a turnaround firm's recovery response in times of digitalization must shift away from traditional perceptions of value creation, as mentioned when discussing the principals of digitalization.

According to both the firm's resource-based view and/or the market-based view, firms capture value by building entry barriers or access to unique resources and competences. This logic falls short if the firm's future value system is based on a digital ecosystem (Adner, 2017) in which value creation is based on an open paradigm of technological, product, and service interactions (Holgersson et al., 2018). Consequently, future recovery strategies need to consider value creation mechanisms that are not only focused on the firm itself, but go beyond the firm's boundaries that avoid narrow domains of strategy thinking (Volberda et al., 2021). In this way, recovery strategies help the firm to define system-wide competence gaps and identify which strategic assets are required from other firms to co-create value within the ecosystem. Yet this is difficult to implement, given that firms need to seek network openness to build inter-firm relationships while simultaneously maintaining a degree of control over their value creation to remain relevant in the future (Boudreau, 2010).

Whereas digitalization provides new possibilities for both retrenchment and recovery, their overall effectiveness seems to hinge on how well they integrate with the firm's long-term digital transformation efforts in a constantly evolving ecosystem. These uncertain dynamics require turnaround firms to become agile regarding their strategic, organizational, and managerial processes to respond to, sense, and seize new opportunities. Recent studies (e.g., Björkdahl, 2020; Menz et al., 2021; Volberda et al., 2021) emphasize new structural designs, increased decentralization, an emphasis on dynamic capabilities, and changes to managerial cognition and strategic thinking to successfully implement digital transformations. These suggestions have substantial implications for how turnaround firms approach the turnaround response's execution. Instead of rigidly implementing the turnaround's response strategies, future turnaround firms need to be able to build in a certain flexibility and adaptability throughout the turnaround's execution. However, the need for operational efficiency (Chowdhury and Lang, 1996) to 'stop the bleeding' in the face of organizational decline (Bibeault, 1982) creates a general tendency towards a so-called 'mechanistic shift' that overemphasizes control, restricts information processes, and focuses more on retrenchment than recovery (Barker and Mone, 1998; Cameron et al., 1987). Such an organizational context is in sharp contrast to the organizational needs for digital transformations. In short, the turnaround response's effectiveness will not only depend on balancing retrenchment and recovery (Schmitt and Raisch, 2013), but also on how firms manage to effectively integrate both in an open and flexible network of organizational processes and systems.

The turnaround outcome. Extant turnaround research provides us with accounting-based and market-based measurements regarding a firm's turnaround outcome (Trahms et al., 2013). In a digital era, due to value co-creation, the turnaround's future success will depend on how struggling firms can recover by sustainably creating value in a digital ecosystem with ambiguous or blurred boundaries. Yet, uncertainty and ambiguity are difficult to measure (Diebold et al., 2010) and digitalization, as mentioned, creates substantial changes to customer preferences and behavior in combination with limited market insight and nascent competition for demand-satisfying solutions (Day and Schoemaker, 2000). In this sense, digitalization may provide turnaround firms with short-term performance benefits within the existing business model that might become obsolete once there is a fundamental need to

renew the business model. Adding complementary non-financial measures to the existing financial measures of turnaround success would allow the firm to capture future capacity to adapt and change towards the ecosystem's dynamism. Similar to dynamic capabilities that help organizations to create, extend, or modify their resource bases (e.g., Helfat et al., 2007; Winter, 2003), a turnaround firm's success could therefore be assessed by measuring its future change and learning potential. Whereas scholars have consistently emphasized the uniqueness of dynamic capabilities to a particular firm (for a recent review please see: Laaksonen and Peltoniemi, 2018), turnaround outcomes should be enriched by identifying the 'existence' instead of the importance of whether firms possess certain 'types' of dynamic capabilities. Integrating these measures would allow for a more fine-grained examination of how well the turnaround firm achieved the capacity to constantly monitor and adapt to the digital ecosystem.

The Articles in the Special Section.

We developed the call for this special section based on the idea that digitalization had fundamentally affected not only the reasons why many firms decline but also their options for trying to turn around. Each paper has ideas to offer in this regard, and we have summarized each paper's main arguments and findings in Table 1.

Abebe, Tangpong and Ndofo's (2022) conceptual paper argues that digital technology is a major force that will continually disrupt industries and firms by reducing the value of a firm's existing capabilities. Furthermore, it argues that digitalization is fundamentally changing relationships throughout firms' value chains. Exemplified by the newspaper industry – representative for many industries that digitalization fundamentally altered - the authors emphasize incumbent firms' struggles to adjusting to their changed environment, especially once performance declines have started. These recovery difficulties are covered the second and third major assertions of Abebe, Tangpong and Ndofo, as noted in Table 1. In fact, becoming more efficient and making changes to products and services may not be enough to recover from decline caused by digital technology. Instead, they argue that firms not only need to revamp their strategies, structures, controls and mission through a strategic reorientation (e.g., Tushman and Romanelli, 1985), but also need to restructure their upstream and downstream value chains to fundamentally offer customers greater choice and value. Such *digital*

Table 1
Overview of articles in this Special Issue.

Study	Type	Research focus	Main insights
Abebe et al. (2022)	Conceptual	Turnaround situation, response, and performance	<ul style="list-style-type: none"> • Digitalization is a permanent source of firm capability obsolescence leading to decline. • Traditional retrenchment and strategic change turnaround strategies may not adequately encompass what changes firms need to enact to recover when digitalization has restructured their environment. • Recovering from decline may take a digital reorientation strategy that not only changes the organizational architecture but uses digital technology to restructure the firm's value chain and relationships with customers.
Tangpong, Lehmborg and Li (2022)	Qualitative study of management changes at 12 firms (6 turnaround firms, 6 non-turnaround firms) that declined in innovation-heavy or digitizing industries <u>and</u> changed Chief Executive Officers as part of their turnaround efforts	Turnaround response	<ul style="list-style-type: none"> • Timing of top management team (TMT) changes matter to turnaround attempt success. • Turnaround firms had TMT vacancies in core business functions before a new CEO arrived. • Turnaround firms had TMT stability in support functions after a new CEO enters. • Open or vacant key TMT positions (e.g., core function TMT members) enable the new CEO to avoid the downside of firing TMT members on the organization's climate but can still install the CEO's own TMT members.
Wang and Bai (2022)	Quantitative study of 292 publicly traded SMEs in China attempting to turnaround from decline	Turnaround response	<ul style="list-style-type: none"> • Investments in different digitalization technologies are key contingencies that can increase the effectiveness of various firm turnaround responses. • Retrenchment actions more likely lead to turnarounds when the firm invests in <u>internal</u> digitalization (i.e., production planning, supply chain, warehouse management, etc.) that allows better understanding of the firm's value chain. • New Product introductions more likely lead to turnarounds when the firm invests in external digitalization (i.e., social media, e-commerce platforms, customer apps, etc.) which allows better understanding of customers and stakeholders.

reorientation turnaround strategy links to the comprehensiveness of change required by digitalization. Given the difficulty of organizations overcoming inertia, even for lesser types of changes (Rumelt, 1995), these digital reorientations require fundamental effort and belief by the declining firm's managers and employees. As such, the firm declining due to digitalization will likely need slack resources, as changing beliefs take time and often require failures to set the stage for adopting new ones (Nystrom and Starbuck, 1984). Thus, the moderating influence of slack on a digital reorientation, as firms deal with digital restructuring of their environments, may be a direction for future study.

The second paper is a qualitative study by Tangpong et al. (2022), focusing on the effects of CEO replacement in declining high-technology firms. Such firms are generally dealing with digitalization at a high level of intensity, which subjects them to the competence-devaluing aspects of digitalization on a continuous basis. As CEO replacement is added to (or caused by) such a challenging context, bankruptcy, dissolution, or acquisitions (at a large discount) become more likely. Comparing the histories and top management changes of six turnarounds (once-declining high-tech firms matched with six non-turnaround high-tech firms) leads the authors to observe that the timing of top management team (TMT) members matters to the success of the new CEOs. New CEOs at successful high-tech turnarounds inherited far fewer TMT members in *core or primary functions* (i.e., marketing, operations, sales, etc.) from the former management team, as these positions had turned over without being refilled. This enables the new CEOs at turnaround firms to insert their preferred manager into these primary function TMT positions without having to go through the disruption of dismissing their predecessors. Turnaround high-tech firms also had TMT stability in the support *functions* like product development, HRM and accounting. Thus, some continuity was achieved in the make-up of the TMT in the decline and turnaround attempt phases of the evolution of the successful firms. These findings add nuance to the existing literature, which primarily tends to view top management changes as being helpful to strategic change (Hofer, 1980; Barker and Duhaime, 1997) and often explicitly assumes that higher levels of TMT dismissal or turnover is the most expeditious route to strategic change, rather than lower levels of TMT change (e.g., Barker et al., 2001). These positions may need to be tempered or adjusted by understanding that dismissing or forcing out TMT members can lead to political behavior. This could imply turnover of many more employees than just the dismissed top executives and, ultimately, the loss of some of the internal social capital that resides in connections between TMT members and between the TMT and

Table 2

Future research directions with connections to special forum articles.

Aspect of digitalization affecting the declines and recovery attempts of firms	Possible research questions related to this aspect of digitalization	Example studies from this issue's special forum
Digitalization creates increased chances of firm decline due to industry restructuring or substitution but also increases managerial discretion in recovery options.	<ul style="list-style-type: none"> • What happens to firms unsuccessful at creating digital ecosystems or platforms? Do they more likely fail than firms following non-creation strategies? • Does moving ecosystems or joining a new platform increase the chances of recovery? • Does the size (# of firms) and structure of a digital ecosystem create a greater chance of declining and/or a greater chance of recovery? 	Abebe, Tangpong and Ndofor
Digitalization allows more seamless integration and communication with a declining firm's supply chain and customers	<ul style="list-style-type: none"> • How can digital technology in the supply chain be used to stabilize declining firm performance? • Can declining firms rally stakeholder support effectively through digital supplier connections and social media? • How can recovery strategies emerge from outside the firm through digital connections to innovative partners or crowdsourcing? What are the mechanisms? 	Abebe, Tangpong and Ndofor Wang and Bai
Digitalization creates complex and difficult sensemaking issues for top managers trying to understand both the causes of decline and the efficacy of potential turnaround strategies.	<ul style="list-style-type: none"> • Can incumbent or long-tenured firm managers successfully lead turnaround attempts from declines caused by digitalization? • Is industry experience an asset or a liability for top managers trying to implement turnarounds in firms negatively affected by digitalization? • Will top managers who are younger and have technological backgrounds be more effective turnaround leaders? • Does the data generated by digitalization help or overload managers searching for turnaround strategies? 	Abebe, Tangpong and Ndofor Tangpong, Lehmborg and Li
The increased value of human and social capital as knowledge is required to manage organizations and keep them from failing.	<ul style="list-style-type: none"> • Is decline a reflection of deteriorating human and social capital at a firm? • Is preservation of human and social capital key to the first phase of the turnaround process? • Does recovery require a change in the profile of the declining firm's human capital? • Are across-firm social connections valuable to recovery from decline? 	None

other employees within the firm. The high-tech context may be enough of a challenge to recover from decline, so that too much TMT dismissal (in compressed time) decreases the chances of turning around. Tangpong, Lehmborg and Li's findings certainly suggest that turnaround researchers need to take the disruption of TMT dismissals seriously and explore the various contingencies that may favor different patterns of management change or stability.

Wang and Bai (2022) study a quantitative sample of Chinese SMEs. They examine how investment in digitalization can provide opportunity for a firm's turnaround from decline. Investigating publicly traded Chinese SMEs with declining performance, they tested contingency hypotheses that (1) retrenchment would more likely lead to turnarounds when declining firms simultaneously invested in internal digitalization (production planning systems, supply chain automation, digital warehouse management, etc.) and (2) recovery strategies would more likely lead to turnarounds when declining firms invested in external digitalization that connected them more closely to buyers (e-commerce platforms, social media, cell phone apps, etc.). They found some support for both of these contingency hypotheses. Overall, Wang and Bai's study reminds one of the opportunities that are presented by digitalization. While we have spent much of this introduction outlining how digitalization challenges firms and industries, for example by destroying incumbent capabilities and accelerating the obsolescence of competitive advantage, top managers at declining firms can also grasp the tools of digitalization to regain profitability and become more successful. The top managers of the successful firms in Wang and Bai's study used investment in digitalization to make their turnaround efforts successful. Wang and Bai's study also provides a strong cross-over connection to Abebe, Tangpong and Ndofo's conceptual paper on digital reorientations. The successful firms in Wang and Bai's study used digital technology to make their retrenchment and recovery strategies more effective in response to decline. There is a very strong parallel in this finding to Abebe et al.'s argument that declining firms in the digital era may need strategic reorientations infused with digital technology backwards and forwards throughout the value chain. To us, this parallel suggests a strong opportunity for turnaround researchers to use the constructs and ideas of these studies to enrich our understanding of recovering from decline in a global business environment that is increasingly digital.

1.4. Future research questions

Digitalization describes a challenging context to firms rarely seen before. Unlike prior global industry shocks (such as economic jolts and/or financial crises), digitalization disrupts existing value creation mechanisms not via economic hardship but rather during times of expansion and growth. By being a general-purpose technology, it also comes with broad-scale social (e.g., customer behavior), competitive (e.g., boundaries of industries), and economic (e.g., business models) consequences. All this poses both great opportunities and threats for most incumbents, and hence it is an interesting field of study to further our theoretical understanding of turnarounds.

While digitalization creates a large number of future directions for turnaround research, we have highlighted four broad areas in which we believe future investigation would be fruitful and lead to greater scholarly understanding of decline and recovery in a digitalized world. These research areas are highlighted in Table 2. While parsimonious use of journal space does not allow us to explore these four areas in depth, we hope to pique researcher interest by pointing out these possible directions.

First, as seen in our literature discussion and the special forum papers, digitalization creates increased chances of firm decline due to industry restructuring or substitution, but it also increases managerial discretion in recovery options. Hence, digitalization is a double-edged sword for managers: while industries may be restructured, and the value of core firm resources and capabilities may be eroded, creative destruction (e.g., Schumpeter, 1942) also creates opportunities for firms searching to create value. As pointed out by Abebe et al. (this issue), finding new ways to create and capture value may require a complete "digital reorientation strategy" which will be painful for the declining firm's managers and employees, as it goes beyond just changing products and/or services to altering core ways of doing business via digitalization. However, when industries spend large sums of capital on research and development, as would be the case with a quickly digitalizing industry, managerial discretion for making the firm unique from competitors also increases (Hambrick and Abrahamson, 1995).

Along these lines, we have posted some possible research questions about digital ecosystems and platforms in Table 2. As digital ecosystems and platforms become a large part of industry transformations and digitalization, they create opportunities for understanding both the decline caused by a firm's position in the ecosystem or platform and recovery odds by joining an existing ecosystem or platform. As the number of research sub-questions within these broader questions would run into the hundreds, we want to emphasize opportunities for recovery that may exist within the digitalizing environment. Much of the literature on digitalization has emphasized the destructive aspect of digitalization to existing firm's strategic positions (see this article's introduction for a summary). However, the reshuffling of a firm's competitive position can also create opportunities for the declining firm to move into a better strategic position (Krakowski et al., 2022).

Digitalization allows more seamless integration and communication with a declining firm's supply chain and customers, in addition to the strategic disruption it causes. As noted in Table 2, this seamless integration allows much stronger connection to customers, suppliers, and other stakeholders. Given the increased stakeholder management challenges of declining firms (Arogyaswamy et al., 1995; Pajunen, 2006), digitalization creates greater opportunities to leverage those relationships to help the firm recover. For example, Wang and Bai (this issue) found that new product introductions helped lead to a turnaround in performance when the firm also invested in digital technologies connecting it to buyers, suppliers, and other stakeholders. While the nature of their data did not allow exploration of the mechanisms beyond technology investment, their study provides initial evidence that a more seamless flow of ideas between a declining firm and its stakeholders may generate better ideas for recovery strategies around new products and services. We have listed some other research questions in Table 2 surrounding the digital connection to stakeholders as a key contingency in turnaround attempt success.

As we discussed previously, avoiding decline in an age of digitalization may be more difficult, as managers must live in a dynamic

world of constantly changing exogenous and endogenous causes of possible decline. This dynamic situation will place greater stress on the sense-making capabilities of top managers who are trying to reverse declining performance. While the decline and turnaround literature has previously examined the characteristics of successful top managers in turnaround situations (Chen and Hambrick, 2012; Hofer, 1980; Tangpong et al., 2022), digitalization may change the value of certain top manager backgrounds for recovery from decline. For example, as noted in Table 2, top managers with extensive industry experience may not be as effective in declines caused by digitalization because of how digitalization restructures industries. If the sources of competitive advantage in an industry have changed dramatically, experience may lead to turnaround strategies that reflect a prior state of the industry rather than its transforming reality. Along a similar line of reasoning, it is worth asking whether younger and more tech-savvy top managers will be more likely to lead a recovery from decline due to digitalization? Also, digitalization often leads to a tidal wave of data that may be used to help a firm's operations and strategy (Nauhaus et al., 2021). However, can that data overwhelm management's sensemaking in the face of poor performance? We believe that quantitative studies of top managers' backgrounds, combined with qualitative studies of firm decision processes, can lead to greater understanding of how sensemaking can be more effective in the face of decline caused by digitalization.

Lastly, the role of a firm's human and social capital in responding to decline caused by digitalization needs examination. As labor is replaced by technology and smart machines, firms will be increasingly reliant on the technical expertise (e.g., human capital) of their employees and the ways in which they work together (e.g., social capital) (Barker and Schmitt, 2017). This dependence creates a number of issues for decline and turnaround researchers. Does decline caused by digital shocks reduce the value of a firm's human capital? If not losing human and social capital are keys to recovering from decline, how can managers avoid the losses of key employees and their connections inside and outside of the firm? As noted in Table 2, many research questions can be asked in this realm. The key difference from past conceptualizations of employees is the increasing skills of knowledge workers due to digitalization and their need to work with each other to make the digitalized firm successful. As such, the retention of valuable skills and relationships in the digital workforce, along with the evolution of workforce knowledge, become elevated issues in declines caused by digitalization.

2. Conclusion

This special forum is a first step towards updating the field, and we are grateful for the contributions made by the three papers included in this section. A common theme that emerges is that digitalization requires turnaround firms to keep an open, agile, and transformational mindset. To be successful, firms need to become comfortable and embrace the complexity linked to their ecosystem. Instead of focusing on one specific turnaround strategy, future firm recoveries will largely depend on how well a turnaround firm understands and repositions itself in an interconnected network of value-creating activities. The digital ecosystem's complexity naturally associates turnaround firms' repositioning efforts into a future commitment to understand, assess, and capitalize on dynamic changes within increasingly blurred industry boundaries.

The continuous development of digital ecosystems embodies a wealth of new research opportunities to bypass previous limitations in turnaround research. In fact, the inter-dependency of digital value creation networks enables researchers to overcome, to a certain extent, the well-known difficulties in obtaining in-depth information about specific turnaround strategies (Whetten, 1980). As a result, the field can move away from assessing performance snapshots towards gaining deeper insights in turnaround micro-foundations and behaviors. In light of our suggestions concerning future research, we are excited and optimistic to see more work in this domain, eventually updating our understanding of corporate turnarounds in times of digitalization.

Author statement

Vince Barker, Johannes Luger, Achim Schmitt, and Katherine Xin: Conceptualization, writing, review, & editing. All authors contributed equally to this article and are thus listed in alphabetical order.

References

- Abebe, M.A., Tangpong, C., Ndofor, H., 2022. Hitting the 'reset button': the role of digital reorientation in successful turnarounds. *Long. Range Plan.*
- Adner, R., 2017. Ecosystem as structure: an actionable construct for strategy. *J. Manag.* 43, 39–58.
- Adner, R., Kapoor, R., 2010. Value creation in innovation ecosystems: how the structure of technological interdependence affects firm performance in new technology generations. *Strat. Manag. J.* 31, 306–333.
- Afuah, A., 2003. Redefining firm boundaries in the face of the internet: are firms really shrinking? *Acad. Manag. Rev.* 28, 34–53.
- Amit, R., Schoemaker, P.J.H., 1993. Strategic assets and organizational rent. *Strat. Manag. J.* 14, 33–46.
- Arogyaswamy, K., Barker, V.L., Yasai-Ardekani, M., 1995. Firm turnarounds: an integrative two-stage model. *J. Manag. Stud.* 32, 493–525.
- Atluri, V., Dietz, M., Henke, N., 2017. Competing in a world of sectors without borders. *McKinsey Q.* 54, 1–14.
- Autio, E., 2017. Strategic entrepreneurial internationalization: a normative framework. *Strateg. Entrep. J.* 11, 211–227.
- Autio, E., Mudambi, R., Yoo, Y., 2021. Digitalization and globalization in a turbulent world: centrifugal and centripetal forces. *Glob. Strat. J.* 11, 3–16.
- Baines, T., Ziaee Bigdeli, A., Bustinza, O.F., Gang Shi, V., Baldwin, J., Ridgway, K., 2017. Servitization: revisiting the state-of-the-art and research priorities. *Int. J. Oper. Prod. Manag.* 37, 256–278.
- Balsmeier, B., Woerter, M., 2019. Is this time different? How digitalization influences job creation and destruction. *Res. Pol.* 48, 1–10.
- Barbero, J.L., Di Pietro, F., Chiang, C., 2017. A rush of blood to the head: temporal dimensions of retrenchment, environment and turnaround performance. *Long. Range Plan.* 50, 862–879.
- Barker, V.L., Duhaime, I.M., 1997. Strategic change in the turnaround process: theory and empirical evidence. *Strat. Manag. J.* 18, 13–38.
- Barker, V.L., Mone, M.A., 1994. Retrenchment: cause of turnaround or consequence of decline? *Strat. Manag. J.* 15, 395–405.
- Barker, V.L., Mone, M.A., 1998. The mechanistic structure shift and strategic reorientation in declining firms attempting turnarounds. *Hum. Relat.* 51, 1227–1258.

- Barker, V.L., Patterson, P.W., Mueller, G.C., 2001. Organizational causes and strategic consequences of the extent of top management team replacement during turnaround attempts. *J. Manag. Stud.* 38, 235–269.
- Barker, V.L., Schmitt, A., 2017. Firm turnarounds in knowledge-intensive industries. In: Adriaanse, J., Van Der Rest, J.P. (Eds.), *Turnaround Management and Bankruptcy: A Research Companion*. Routledge, New York.
- Barret, M., Davidson, E., Prabhu, J., Vargo, S.L., 2015. Service innovation in the digital age: key contributions and future directions. *MIS Q.* 39, 135–154.
- Baskerville, R.L., Myers, M.D., Yoo, Y., 2020. Digital first: the ontological reversal and new challenges in IS research. *MIS Q.* 44, 509–523.
- Benner, M.J., Waldfoegel, J., 2020. Changing the channel: digitization and the rise of “middle tail” strategies. *Strat. Manag. J.* 1–2.
- Bharadwaj, A., El Sawy, O.A., Pavlou, P.A., Venkatraman, N., 2013. Digital business strategy: toward a next generation of insights. *MIS Q.* 37, 471–482.
- Bibeault, D.B., 1982. *Corporate Turnaround: How Managers Turn Losers into Winners*. McGraw-Hill, New York.
- Birkinshaw, J., 2018. What to expect from agile. *MIT Sloan Manag. Rev.* 59, 39–42.
- Björkdahl, J., 2020. Strategies for digitalization in manufacturing firms. *Calif. Manag. Rev.* 62, 17–36.
- Bogner, W., Barr, P., 2000. Making sense in hypercompetitive environments: a cognitive explanation for the persistence of high velocity competition. *Organ. Sci.* 11, 212–226.
- Boudreau, K., 2010. Open platform strategies and innovation granting access vs. developing control. *Manag. Sci.* 56, 1849–1872.
- Bouncken, R., Barwinski, R., 2020. Shared digital identity and rich knowledge ties in global 3D printing - a drizzle in the clouds? *Glob. Strat. J.* 55, 1–28.
- Brunton, G.D., Ahlstrom, D., Wan, J., 2003. Turnaround in East Asian firms: evidence from ethnic overseas Chinese communities. *Strat. Manag. J.* 24, 519–540.
- Brynjolfsson, E., Hu, Y., Smith, M.D., 2010. Long tails vs. superstars: the effect of information technology on product variety and sales concentration patterns. *Inf. Syst. Res.* 21, 736–747.
- Brynjolfsson, E., McAfee, A., 2017. **The business of artificial intelligence**. *Harv. Bus. Rev.* <https://hbr.org/cover-story/2017/07/the-business-of-artificial-intelligence>.
- Cameron, K.S., Whetten, D.A., Kim, M.U., 1987. Organizational dysfunctions of decline. *Acad. Manag. J.* 30, 126–138.
- Chen, G., Hambrick, D.C., 2012. CEO replacement in turnaround situations: executive (mis)fit and its performance implications. *Organ. Sci.* 23, 225–243.
- Chowdhury, S.D., Lang, J.R., 1993. Crisis, decline and turnaround: a test of competing hypothesis for short-term performance improvements in small firms. *J. Small Bus. Manag.* 8–17.
- Chowdhury, S.D., Lang, J.R., 1996. Turnaround in small firms: an assessment of efficiency strategies. *J. Bus. Res.* 36, 169–178.
- Christensen, C.M., Bartman, T., Van Bever, D., 2016. The hard truth about business model innovation. *Sloan Manag. Rev.* 58, 30–40.
- Day, G.S., Schoemaker, P.J.H., 2000. Avoiding the pitfalls of emerging technologies. *Calif. Manag. Rev.* 42, 8–33.
- Diebold, F.X., Doherty, N.A., Herring, R.J., 2010. *The Known, the Unknown, and the Unknowable*. Princeton University Press, Princeton, NJ.
- El Sawy, O.A., Malhotra, A., Park, Y.K., Pavlou, P.A., 2010. Seeking the configurations of digital ecodynamics: it takes three to tango. *Inf. Syst. Res.* 21, 835–848.
- El Sawy, O.A., Pereira, F., 2013. *Business Modelling in the Dynamic Digital Space*. Springer, Heidelberg.
- Filatotchev, I., Toms, S., 2003. Corporate governance, strategy and survival in a declining industry: a study of UK cotton textile companies. *J. Manag. Stud.* 40, 895–920.
- Garud, R., Kumaraswamy, A., Roberts, A., Xu, L., 2020. Liminal movement by digital platform-based sharing economy ventures: the case of Uber technologies. *Strat. Manag. J.* 1–29.
- Gawer, A., Phillips, N., 2013. Institutional work as logics shift: the case of Intel’s transformation to platform leader. *Organ. Sci.* 34, 1035–1071.
- Greenwood, R., Raynard, M., Kodeih, F., Micelotta, E.R., Lounsbury, M., 2011. Institutional complexity and organizational responses. *Acad. Manag. Ann.* 5, 317–371.
- Grinyer, P.H., Mayes, D., Mckiernan, P., 1988. *Sharpbenders: the Secrets of Unleashing Corporate Potential*. Basil Blackwell, Oxford.
- Grinyer, P.H., Mayes, D., Mckiernan, P., 1990. The sharpbenders: achieving a sustained improvement in performance. *Long. Range Plan.* 23, 116–125.
- Grinyer, P.H., Spender, J.-C., 1979. Recipes, crisis and adaptation in mature businesses. *Int. Stud. Manag. Organ.* 9, 113–133.
- Gubbi, S., Aulakh, P., Ray, S., 2015. International search behavior of business group affiliated firms: scope of institutional changes and intragroup heterogeneity. *Organ. Sci.* 26, 1485–1501.
- Hambrick, D.C., Abrahamson, E., 1995. Assessing managerial discretion across industries: a multimethod approach. *Acad. Manag. J.* 38, 1427–1441.
- Hambrick, D.C., Schechter, S.M., 1983. Turnaround strategies for mature industrial-product business units. *Acad. Manag. J.* 26, 231–248.
- Hanelt, A., Bohnsack, R., Marz, D., Marante, C.A., 2021. A systemic review of the literature on digital transformation: insights and implications for strategy and organizational change. *J. Manag. Stud.* 58, 1159–1197.
- Hannah, D.P., Eisenhardt, K.M., 2018. How firms navigate cooperation and competition in nascent ecosystems. *Strat. Manag. J.* 39, 3163–3192.
- Harrigan, K.R., Porter, M.E., 1983. End-game strategies for declining industries. *Harv. Bus. Rev.* 61, 111–120.
- Helfat, C.E., Finkelstein, S., Mitchell, W., Peteraf, M.A., Singh, H., Teece, D.J., Winter, S., 2007. *Dynamic Capabilities: Understanding Strategic Change in Organizations*. Blackwell, Malden, MA.
- Henderson, R.M., Clark, K.B., 1990. Architectural innovation: the reconfiguration of existing product technologies and the failure of established firms. *Adm. Sci. Q.* 35, 9–30.
- Hinings, C.R., Greenwood, R., Reay, T., Suddaby, R., 2004. Dynamics of change in organizational fields. In: Poole, M.S., Van De Ven, A. (Eds.), *Handbook of Organizational Change and Innovation*. Oxford University Press, New York.
- Hofer, C.W., 1980. Turnaround strategies. *J. Bus. Strat.* 1, 19–31.
- Holgersson, M., Granstrand, O., Bogers, M., 2018. The evolution of intellectual property strategies in innovation ecosystems: uncovering complementary and substitute appropriability regimes. *Long. Range Plan.* 51, 303–319.
- Holmström, J., Holweg, M., Lawson, B., Pil, F.K., Wagner, S.M., 2019. The digitalization of operations and supply chain management: theoretical and methodological implications. *J. Oper. Manag.* 65, 728–734.
- Jacobides, M.G., Cennamo, C., Gawer, A., 2018. Towards a theory of ecosystems. *Strat. Manag. J.* 39, 2255–2276.
- Krakowski, S., Luger, J., Raisch, S., 2022. Artificial intelligence and the changing sources of competitive advantage. *Strat. Manag. J.* 1–28. <https://doi.org/10.1002/smj.3387>.
- Kronblad, C., 2020. How digitalization changes our understanding of professional service firms. *Acad. Manag. Discov.* 6, 436–454.
- Laaksonen, O., Peltoniemi, M., 2018. The essence of dynamic capabilities and their measurement. *Int. J. Manag. Rev.* 20, 184–205.
- Lavalle, S., Lesser, E., Shockley, R., Hopkins, M.S., Kruschwitz, N., 2011. Big data, analytics and the path from insights to value. *MIT Sloan Manag. Rev.* 52, 21–32.
- Lim, D.S.K., Celly, N., Morse, E.A., Rowe, W.G., 2013. Rethinking the effectiveness of asset and cost retrenchment: the contingency effects of a firm’s rent creation mechanism. *Strat. Manag. J.* 34, 42–61.
- McKinley, W., 2011. Organizational contexts for environmental construction and objectification activity. *J. Manag. Stud.* 48, 804–828.
- McKinley, W., Latham, S., Braun, M., 2014. Organizational decline and innovation: turnarounds and downward spirals. *Acad. Manag. Rev.* 39, 88–110.
- Menz, M., Kunisch, S., Birkinshaw, J., Collis, D.J., Foss, N.J., Hoskisson, R.E., Prescott, J.E., 2021. Corporate strategy and the theory of the firm in the digital age. *J. Manag. Stud.* forthcoming.
- Meyer, A.D., Brooks, G.R., Goes, J.B., 1990. Environmental jolts and industry revolutions: organizational responses to discontinuous change. *Strat. Manag. J.* 11, 93–110.
- Meyer, A.D., Gaba, V., Colwell, K.A., 2005. Organizing far from equilibrium: nonlinear change in organizational fields. *Organ. Sci.* 16, 456–473.
- Mone, M.A., McKinley, W., Barker, V.L., 1998. Organizational decline and innovation: a contingency framework. *Acad. Manag. Rev.* 23, 115–132.
- Morrow, J.L., Johnson, R.A., Busenitz, L.W., 2004. The effects of cost and asset retrenchment on firm performance: the overlooked role of a firm’s competitive environment. *J. Manag.* 30, 189–208.
- Morrow, J.L., Sirmon, D.G., Hitt, M.A., Holcomb, T.R., 2007. Creating value in the face of declining performance: firm strategies and organizational recovery. *Strat. Manag. J.* 28, 271–283.
- Nauhaus, S., Luger, J., Raisch, S., 2021. Strategic decision making in the digital age: expert sentiment and corporate capital allocation. *J. Manag. Stud.* 58, 1933–1961.

- Ndofo, H.A., Vanevenhoven, J., Barker, V.L., 2013. Software firm turnarounds in the 1990s: an analysis of reversing decline in a growing, dynamic industry. *Strat. Manag. J.* 34, 1123–1133.
- Nystrom, P.C., Starbuck, W.H., 1984. To avoid organizational crisis, unlearn. *Organ. Dynam.* 12, 53–65.
- Pajunen, K., 2006. Stakeholder influences in organizational survival. *J. Manag. Stud.* 43, 1261–1288.
- Pearce, J.A., Robbins, K.D., 1993. Toward improved theory and research on business turnaround. *J. Manag.* 19, 613–636.
- Pearce, J.A., Robbins, K.D., 1994. Retrenchment remains the foundation of business turnaround. *Strat. Manag. J.* 15, 407–417.
- Porter, M.E., Heppelmann, J.E., 2014. How smart, connected products are transforming competition. *Harv. Bus. Rev.* 92, 64–88.
- Porter, M.E., Millar, V.E., 1985. How information gives you competitive advantage. *Harv. Bus. Rev.* 63, 149–160.
- Priem, R.L., Wenzel, M., Koch, J., 2018. Demand side strategy and business models: putting value creation for consumers center stage. *Long. Range Plan.* 51, 22–31.
- Ramaswamy, V., Gouillart, F., 2010. *The Power of Co-creation: Build it with Them to Boost Growth, Productivity, and Profits*. Free Press, New York, NY.
- Reis, J., Amorim, M., Melão, N., Cohen, Y., Rodrigues, M., 2019. Digitalization: a literature review and research agenda. *International Joint Conference on Ind. Eng. Oper. Manag.* 443–456.
- Robbins, D.K., Pearce, J.A., 1992. Turnaround: retrenchment and recovery. *Strat. Manag. J.* 13, 287–309.
- Romanelli, E., Tushman, M.L., 1994. Organizational transformation as punctuated equilibrium: an empirical test. *Acad. Manag. J.* 37, 1141–1166.
- Rossi, M., Nandhakumar, J., Mattila, M., 2020. Balancing fluid and cemented routines in a digital workplace. *J. Strat. Inf. Syst.* 29, 101616.
- Rumelt, R.P., 1995. Inertia and transformation. In: Montgomery, C.A. (Ed.), *Resource-based and Evolutionary Theories of the Firm: towards a Synthesis*. Springer, Boston, MA.
- Schendel, D., Patton, G.R., Riggs, J., 1976. Corporate turnaround strategies: a study of profit decline and recovery. *J. Gen. Manag.* 3, 3–12.
- Schmitt, A., Barker, V.L., Raisch, S., Whetten, D., 2016. Strategic renewal in times of environmental scarcity. *Long. Range Plan.* 49, 361–376.
- Schmitt, A., Raisch, S., 2013. Corporate turnarounds: the duality of retrenchment and recovery. *J. Manag. Stud.* 50, 1216–1244.
- Schumpeter, J.A., 1942. *Capitalism, Socialism, and Democracy*, 3rd. Harper & Row, New York.
- Schwab, K., 2017. *The Fourth Industrial Revolution*. Crown Business, New York.
- Schweizer, L., Nienhaus, A., 2017. Corporate distress and turnaround: integrating the literature and directing future research. *Bus. Res.* 10, 3–47.
- Sheppard, J.P., Chowdhury, S.D., 2005. Riding the wrong wave: organizational failure as a failed turnaround. *Long. Range Plan.* 38, 239–260.
- Srai, J.S., Lorentz, H., 2019. Developing design principles for the digitalisation of purchasing and supply management. *J. Purch. Supply Manag.* 25, 78–98.
- Tan, T.F., Netessine, S., Hitt, L., 2017. Is Tom Cruise threatened? An empirical study of the impact of product variety on demand concentration. *Inf. Syst. Res.* 28, 643–660.
- Tangpong, C., Abebe, M.A., Li, Z., 2015. A temporal approach to retrenchment and successful turnaround in declining firms. *J. Manag. Stud.* 52, 647–677.
- Tangpong, C., Lehmberg, D., Li, Z., 2022. CEO replacement, top management vacancy, and the sequence of top management team changes in high technology turnaround companies. *Long. Range Plan.*
- Teece, D.J., 2010. Business models, business strategy and innovation. *Long. Range Plan.* 43, 172–194.
- Trahms, C.A., Ndofo, H.A., Sirmon, D.G., 2013. Organizational decline and turnaround: a review and agenda for future research. *J. Manag.* 39, 1277–1307.
- Tripsas, M., 1997. Unraveling the process of creative destruction: complementary assets and incumbents survival in the typesetter industry. *Strat. Manag. J.* 18, 119–142.
- Tushman, M.L., Romanelli, E., 1985. Organizational evolution: a metamorphosis model of convergence and reorientation. *Res. Organ. Behav.* 7, 171–222.
- Verhoef, P.C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J.Q., Fabian, N., Haenlein, M., 2021. Digital transformation: a multidisciplinary reflection and research agenda. *J. Bus. Res.* 122, 889–901.
- Verhoef, P.C., Stephen, A.T., Kannan, P.K., Luo, X., Abhishek, V., Andrews, M., Bart, Y., Datta, H., Fong, N., Hoffman, D.L., Hu, M.M., Novak, T., Rand, W., Zhang, Y., 2017. Consumer connectivity in a complex technology-enabled and mobile-oriented world with smart products. *J. Interact. Market.* 40, 1–8.
- Volberda, H.W., Khanagha, S., Baden-Fuller, C., Mihalache, O.R., Birkinshaw, J., 2021. Strategizing in a digital world: overcoming cognitive barriers, reconfiguring routines and introducing new organizational forms. *Long. Range Plan.*
- Wang, J., Bai, T., 2022. How digitalization affects the effectiveness of turnaround actions for firms in decline. *Long. Range Plan.*
- Warner, K., Wäger, M., 2019. Building dynamic capabilities for digital transformation: an ongoing process of strategic renewal. *Long. Range Plan.* 52, 326–349.
- Weitzel, W., Jonsson, E., 1989. Decline in organizations: a literature integration and extension. *Adm. Sci. Q.* 34, 91–109.
- Whetten, D.A., 1980. Organizational decline: a neglected topic in organizational science. *Acad. Manag. Rev.* 5, 577–588.
- Winter, S.G., 2003. Understanding dynamic capabilities. *Strat. Manag. J.* 24, 991–995.
- Wise, R., Baumgartner, P., 1999. Go downstream: the new profit imperative in manufacturing. *Harv. Bus. Rev.* 77, 133–141.
- Yoo, Y., Boland, R.J., Lyytinen, K., Majchrzak, A., 2012. Organizing for innovation in the digitized world. *Organ. Sci.* 23, 1398–1408.
- Yoo, Y., Henfridsson, O., Lyytinen, K., 2010. The new organizing logic of digital innovation: an agenda for information systems research. *Inf. Syst. Res.* 21, 724–735.

Vince Barker is the Edmund P. Learned Professor of Business Administration at the University of Kansas. His research focuses on how top managers influence strategy, especially as shaped by their personalities, motivations, backgrounds and understandings of their competitive situations. He is especially interested in extreme cases such as declining organizations where understandings are influenced by pressure and resource constraints. In addition to his own research, Vince currently serves on the editorial boards of the *Strategic Management Journal*, *Journal of Management Studies* and *Journal of Business Research*.

Johannes Luger is an Assistant Professor of Strategy and Innovation at the Copenhagen Business School. He is further affiliated with the Hospitality Business School Lausanne and LMU Munich. Johannes studies strategic decision making in organizations, in recent years, focusing on the question of how the increasing progress of digitalization affects decision making in organizations. His work is published in the most prestigious journals of the field (e.g., *Academy of Management Journal*, *Organization Science*, *Strategic Management Journal*, etc.) and his work is continuously presented at the leading international conferences (e.g., AoM, SMS, etc.).

Achim Schmitt is a Full Professor at EHL and Dean of EHL's Graduate School. He holds a PhD from the University of Geneva, obtained his Habilitation at the University of Paris-Dauphine, and is a Visiting Professor at the University of Geneva. Achim's research focuses on strategic management, with particular interest in organizational decline, corporate turnarounds, and strategic renewal. His articles and papers have been published in diverse outlets including the *Harvard Business Review*, *International Journal of Management Research*, *Journal of Management Studies*, *Long Range Planning*, *Management Learning*, and *MIT Sloan Management Review*. He is a former turnaround and bankruptcy consultant and currently serves on two boards in the private sector, CEIBS Europe's academic advisory board, as well as on the Editorial Board at *Long Range Planning*.

Katherine Xin is Professor of Management, Bayer Chair in Leadership, Associate Dean (Europe) at China Europe International Business School (CEIBS). She holds her Ph.D. from the University of California and was previously on the faculty of the University of Southern California, Hong Kong University of Science and Technology and IMD, Lausanne, Switzerland. Professor Xin specializes in the areas of leadership, organizational transformation, and strategic human resource management. Her research work has appeared in the leading international management journals such as *AMJ*, *ASQ*, *SMJ*, *Leadership Quarterly*, and has won the honor of World's Most Cited Chinese Researcher in business in a consecutive of 7 years from 2014 to 2020, released by the authoritative data analysis platform Scopus, the world largest academic paper review database.