

Trittin-Ulbrich, Hannah; Böckel, Alexa

Article — Published Version

Institutional entrepreneurship for responsible digital innovation: The case of corporate digital responsibility

Creativity and Innovation Management

Provided in Cooperation with:

John Wiley & Sons

Suggested Citation: Trittin-Ulbrich, Hannah; Böckel, Alexa (2022) : Institutional entrepreneurship for responsible digital innovation: The case of corporate digital responsibility, Creativity and Innovation Management, ISSN 1467-8691, Wiley, Hoboken, NJ, Vol. 31, Iss. 3, pp. 447-459, <https://doi.org/10.1111/caim.12513>

This Version is available at:

<https://hdl.handle.net/10419/265045>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<http://creativecommons.org/licenses/by-nc/4.0/>

SPECIAL ISSUE ARTICLE

Institutional entrepreneurship for responsible digital innovation: The case of corporate digital responsibility

Hannah Trittin-Ulbrich  | Alexa Böckel 

Leuphana University Lüneburg, Lüneburg, Germany

Correspondence

Hannah Trittin-Ulbrich, Leuphana University Lüneburg, Lüneburg, Germany.
Email: hannah.trittin@leuphana.de

Funding information

Robert Bosch Stiftung; Schöller Stiftung

How does responsible digital innovation become an accepted and desired innovation practice for businesses? Drawing on the case of Corporate Digital Responsibility (CDR), we study how institutional entrepreneurs across different fields construct CDR as an issue to legitimize corporate commitment to responsible digital innovation. Our qualitative study from Germany suggests that institutional entrepreneurship for responsible digital innovation entails the discursive, relational and material legitimation of responsible digital innovation through the issue of CDR. The findings of this study enrich institutional research on digital innovation by shedding light on the field-level construction of responsible digital innovation through Corporate Digital Responsibility. We further extend existing CDR frameworks by detailing the multi-stakeholder efforts that may shape a firm's approach to CDR, as well as by revealing additional topics associated with the issue. We highlight the theoretical and practical implications of our research.

KEYWORDS

corporate digital responsibility (CDR), digital innovation, institutional entrepreneurship, legitimacy, responsible digital innovation

1 | INTRODUCTION

Digital innovation is proposed as a means to overcome barriers that hinder businesses to contribute to sustainable development (e.g., George et al., 2020). Businesses are important innovators and therefore play a key role in the proliferation of (digital) innovation for the greater good (Halme & Korpela, 2014). Arguably, whether a digital innovation developed and adopted by a firm does more good than harm is highly dependent on the innovation itself, as well as the context of the application (Bican & Brem, 2020). Digital innovation may create or fuel social problems, including lacking data protection, fake news, racism and sexism (Trittin-Ulbrich et al., 2021), as well as environmental problems such as increasing energy and resource consumption and electronic waste (WBGU, 2019). In the light of the manifold potential 'dark sides' of many digital innovations (Trittin-Ulbrich et al., 2021), scholars and policy makers call upon businesses to

engage in responsible digital innovation, that is, to develop and adopt innovative digital products and services that do no harm, do good and are governed in a responsible manner (see also Scherer & Voegtlin, 2020).

Digital innovation usually entails the creation and orchestration of disruptive and radical products, services or even entirely new business models. Digital innovation puts existing ways of doing things into question, creates new rules and can have considerable impact on existing institutional arrangements (e.g., Hinings et al., 2018). Consequently, digital innovations often do not comply with formal or informal institutions and are met with little to no governmental regulation (e.g., Pelzer et al., 2019). What is more, governments and regulators often refrain from the governance of responsible business conduct through legally binding policies (Kourula et al., 2019). This makes corporate responsibility, also with regard to digital innovation, largely a voluntary endeavor.

This is an open access article under the terms of the [Creative Commons Attribution-NonCommercial](https://creativecommons.org/licenses/by-nc/4.0/) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited and is not used for commercial purposes.

© 2022 The Authors. *Creativity and Innovation Management* published by John Wiley & Sons Ltd.

Consequently, in order for responsible digital innovation to be taken up by businesses, it must come to be perceived as appropriate and desirable. The creation of legitimacy, here defined as 'generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions' (Suchman, 1995, p. 574), is therefore essential for the institutionalization of responsible digital innovation. In the light of these considerations, we ask the following research question: How does responsible digital innovation become an accepted and desired innovation practice for businesses?

Applying an explorative, qualitative research design, we address this important research question. An institutional entrepreneurship lens (e.g., Hardy & Maguire, 2017; Pacheco et al., 2010; Tumbas et al., 2018) enables us to reveal the legitimization practices that institutional entrepreneurs from different fields, including politics, media and civil society, draw on to construct responsible digital innovation as an understandable and desirable issue that businesses should engage in. Grounded in the analysis of qualitative data from Germany, we illustrate institutional entrepreneurship efforts around the issue of 'Corporate Digital Responsibility' (CDR). We find that institutional entrepreneurs attempting to legitimize responsible digital innovation through the issue of CDR vary in their motivations to engage in the issue, but they collectively attempt to legitimize responsible digital innovation in the field of business. Drawing on a variety of discursive, material, but also relational practices when engaging with businesses, they create pragmatic, cognitive and moral legitimacy (Suchman, 1995) for responsible digital innovation. Relying on the institutionalized concept of CSR as a template, the issue of CDR emphasizes the voluntary, self-regulatory character of corporate commitment to responsible digital innovation. However, the issue also links notions of corporate responsibility and digital innovation in unique ways.

With these findings, this research makes the following two contributions: First, we contribute to institutional research on digital innovation (e.g., Gegenhuber et al., 2022; Hinings et al., 2018; Tumbas et al., 2018). We outline how the inception and governance of responsible digital innovation in Germany is driven by institutional entrepreneurs across different fields. These institutional entrepreneurs legitimize responsible digital innovation as understandable and appropriate in the business context through the construction of the issue of CDR. This research reveals who is involved in the construction of the issue of CDR in Germany, traces the construction of the issue of CDR and reveals associated practices that institutional entrepreneurs draw on to legitimize responsible digital innovation through CDR. We understand the documented efforts to contribute to the institutionalization of responsible digital innovation in business. Second, we enhance the nascent, yet emerging research field of Corporate Digital Responsibility (e.g., Herden et al., 2021; Lobschat et al., 2021). Notably, our empirical insights expand previous CDR frameworks (e.g., Herden et al., 2021; Lobschat et al., 2021), by outlining how business approaches to CDR are shaped by interorganizational, multi-stakeholder legitimization efforts in Germany. We discuss that this offers ample opportunity for businesses attempting to engage in responsible digital innovation and CDR.

2 | CONCEPTUAL BACKGROUND

2.1 | Responsible digital innovation

The Covid-19 pandemic has highlighted the potential of digital innovation for overcoming grand challenges for society such as inequalities within and between generations, the ageing of populations and the threats caused by climate change (George et al., 2016). Digital innovation encompasses new products and services, and their production processes bring along new values and novel combinations of actors (George et al., 2020; Hinings et al., 2018). There is a vast range of application contexts in which the responsible development and application of digital innovation enables sustainable development. To name only a few; digital hackathons provide the possibility to bring together citizens, for example, in order to develop solutions in the health sector (Mair & Gegenhuber, 2021). Video game consoles can support elderly people in care homes in improving their cognitive and motor skills (Shamsrizi et al., 2021). Drones can ensure the most efficient use of fertilizers and hence contribute to sustainable agriculture (Ayamga et al., 2021) and to support park managers in ecosystem monitoring of rain forests (Jiménez López & Mulero-Pázmány, 2019). These examples show that digital innovations, often developed and applied responsibly by businesses can directly tackle urgent societal problems.

Digital innovation also entails opportunities for the sustainable transformation of businesses (e.g., Narula et al., 2021). By enabling firms to decrease their negative and increase their positive sustainability impact, digital innovation may help businesses to reduce their potential societal harm. For example, blockchain technology can support transparency and trust-building processes between companies and consumers and therefore is discussed in the context of the circular economy (Böckel et al., 2020). Further, algorithms can be used to monitor sustainability indicators for sustainability management (Etzion & Aragon-Correa, 2016). These are only some of the numerous examples of how responsible digital innovation can contribute to corporate sustainability management and sustainable development overall.

Businesses are important innovators and ought to have a high level of responsibility for the positive and negative effects of digital innovation on society. Yet ensuring that businesses conduct and apply digital innovation responsibly, that is, in ways that digital technologies contribute to the greater good, do no harm and are governed responsibly (see also Voegtlin & Scherer, 2017), is difficult. This is because of two reasons. First, digital innovations often challenge existing institutional arrangements, and consequently, they are often met with little to no regulation. Also, they often cause issues of legitimacy due to their disruptive and fast-paced nature (see also Hinings et al., 2018). Second, governments frequently refrain from implementing hard laws in order to enforce responsible business conduct (Kourula et al., 2019). Hence, in order for businesses to engage in responsible digital innovation, they must come to view and accept such innovation practice as legitimate. Notably, the increasing interest in the role and responsibilities of businesses in digital innovation has led to the

emergence of the scholarly debate around the term Corporate Digital Responsibility. This debate addresses the 'new' or additional responsibilities that businesses have or should live up to in the context of digital innovation. In the following, we review this literature.

2.2 | Corporate digital responsibility

In the light of the unique opportunities and challenges that digital innovation bring about, scholars argue for the inception of Corporate Digital Responsibility as a new concept emphasizing the important role that businesses play in the creation of responsible digital innovation (e.g., Grigore et al., 2021; Herden et al., 2021; Lobschat et al., 2021). Attempting to define CDR, Lobschat et al. (2021) suggest in their seminal work that CDR is about 'the set of shared values and norms guiding an organization's operations' (Lobschat et al., 2021, p. 876) when dealing with digital innovation. The authors further argue that while different corporate approaches to CDR may exist, ideally, internal and external stakeholders should be involved in a firm's approach to self-govern its conduct in the context of digital innovation (Lobschat et al., 2021). In addition, Herden et al. (2021) provide an overview of topics that businesses should take responsibility for and should regulate their conduct along three categories of the Environmental, Social, Governance (ESG) framework, including digital waste, digital inclusion or data security.

Unsurprisingly, scholars also reflect on the relationship between the institutionalized concept of Corporate Social Responsibility (CSR) (Bondy et al., 2012) and the issue of Corporate Digital Responsibility. For example, Grigore et al. (2017) question whether and how CSR adequately covers business responsibilities in the digital economy in the light of the risks and potentials that digital innovations such as social media can have for society at large (e.g., Grigore et al., 2017; Grigore et al., 2021). Similarly, in hindsight of the disruptive nature of digital innovation, as well as the possible misuse and the permeation of digital technologies, Lobschat et al. (2021) argue for CDR as a distinct issue. In their view, the specificities of digital innovation cannot be covered with common CSR approaches and require a stand-alone concept. Herden et al. (2021) oppose this view. Instead, they argue that CDR can be viewed as an expansion to CSR, given that CDR is associated with a 'company's emerging responsibilities related to their digitalization-related impacts, risks, challenges, and opportunities' (p. 14).

Taken together, the emerging scholarly CDR debate revolves around the question of how to adequately capture the responsibilities businesses have with regards to the impact of digital innovation on society and the environment. Studies underline that businesses must ensure that digital innovation is conducted responsibly and provide first insights into the challenges associated with digital innovation. They also theorize how to operationalize CDR in the form of responsible digital innovation. Prior research has also begun to reflect on how to define and separate CDR from institutionalized concepts such as CSR. Yet, the literature provides us with little insight into how businesses become involved in the issue of CDR in the first place. Given the novelty of responsible digital innovation, as well as the lack of

appropriate governmental regulation that can ensure responsible business conduct in digital innovation, the question is, how responsible digital innovation in the form of CDR becomes a legitimate issue for businesses. This study addresses this important concern.

3 | THEORETICAL LENS: INSTITUTIONAL ENTREPRENEURSHIP

Assuming that the development and adoption of novel innovation such as responsible digital innovation is effortful, we aim to explore how the inception of responsible digital innovation is purposefully fostered in business. To that end, we draw on an institutional theory-based notion of the institutional entrepreneurship perspective (e.g., Pacheco et al., 2010; Tumbas et al., 2018). This perspective is well suited to study how actors from different fields (e.g., politics, civil society and business) collectively work towards the inception of a novel innovation practice such as responsible digital innovation.

Institutional entrepreneurship can be defined as 'activities of actors who have an interest in particular institutional arrangements and who leverage resources to create new institutions or to transform existing ones' (Maguire et al., 2004, p. 657). Research on institutional entrepreneurship understands that organizational practices are shaped by institutionalized pressures, yet, are malleable and changeable through the actions of individuals (e.g., Leca et al., 2008). To qualify as institutional entrepreneurs, actors have to pioneer changes as well as execute them in their context (Leca et al., 2008). Establishing new or changing existing institutionalized arrangements requires effort, and institutional entrepreneurs are often described as skillful actors that need to develop convincing arguments enabling them to motivate others to join their causes (e.g., Perkmann & Spicer, 2007; Tumbas et al., 2018). Prior research on digital innovation has relied on an institutional entrepreneurship perspective to study the inception of digital innovation in businesses. Tumbas et al. (2018), for example, demonstrate how chief digital officers facilitate the inception of digital innovation into business practice. The authors outline how these managers act as institutional entrepreneurs within their firms by purposefully articulating and developing a 'digital' logic of action in order to link emerging digital technologies and innovation and to legitimize their role in the firm, but also digital innovation as a business practice.

Importantly, institutional entrepreneurship can happen within organizations (Tumbas et al., 2018) or between organizations (e.g., Zilber, 2007) and is often conducted by individuals or groups of individuals (Battilana et al., 2009). Particularly between organizations and hence on the field level, institutional entrepreneurship often entails the creation of legitimacy for organizational practices (Garud et al., 2007). Yet institutional entrepreneurship is often difficult, given the rather fragmented nature of institutional arrangements on the field level (for an overview, see Hardy & Maguire, 2017). Legitimacy is a core concept of institutional theory (Deephouse & Suchman, 2008), and is generally defined as 'a generalized perception or assumption that the actions of an entity are desirable, proper, or actions of entity desirable, proper, or appropriate within some socially constructed system of

system of norms, values, beliefs, and definitions' (Suchman, 1995, p. 574). Legitimacy entails three dimensions: Pragmatic legitimacy emerges if the action of an entity is viewed as practical and useful. Cognitive legitimacy rests on the perception that a practice is understandable, and moral legitimacy emerges from a positive normative evaluation on an action as desirable and appropriate (Suchman, 1995).

Building on and extending initial efforts to study the legitimation of digital innovation through the lens of institutional entrepreneurship (e.g., Tumbas et al., 2018), in this study, we explore how institutional entrepreneurs from different fields legitimize responsible digital innovation by constructing CDR as an issue of importance and relevance to businesses. In the following, we explain our methodological approach.

4 | METHODOLOGY

4.1 | Data collection

Overall, our study is aligned with the interpretive research paradigm which recognizes that 'sociality is "produced" as "intersubjectivity" by subjects who mutually interpret one another' (Bohnsack, 2004, p. 218). In line with this paradigm, we investigate the legitimation of responsible digital innovation along the social construction of the issue Corporate Digital Responsibility. To reveal the practices that institutional entrepreneurs draw on to legitimize CDR, we draw on semi-structured interviews and a subsequent workshop with eight selected individuals who make use of the term 'Corporate Digital Responsibility' in their respective work. Additionally, we collected complimentary archival data.

4.1.1 | Interviews

Eight individuals were interviewed to garner their perspectives on CDR and insights into their respective involvement with CDR and responsible digital innovation bringing in different perspectives from their respective fields (see also Table 1). The selection of the participants for this study was guided by theoretical considerations. We aimed to identify individuals who acted as institutional entrepreneurs of CDR. One participant called himself and others the 'champions of CDR', that is, advocates of CDR and responsible digital innovation. The participants were identified by searching professional networking websites, social media or Internet search for the term 'Corporate Digital Responsibility'. Additionally, events and activities, as well as media reports on CDR, were scanned for the identification of potential candidates. The search resulted in a list of several potential participants, of which eight confirmed their participation in this study.

The participants of this study come from different fields in society. The individuals include, from the political field, two representatives of two separate governmental agencies. From the field of media, a self-described author and public speaker took part. From the field of business, a sustainability manager of a medium-sized company, a

TABLE 1 Overview of interviewees

Name (pseudonym)	Role	Field
John	Governmental agency representative A	Politics
Patrick	Governmental agency representative B	Politics
Ron	Author and public speaker	Media
Michael	Sustainability manager medium-sized company	Business
Laura	Former sustainability manager of a large-scale company working on digital business models	Business
Angelina	Business consultant	Business
Mary	Representative of a non-governmental organization focusing on digital innovations for the greater good	Civil society
Nick	Activist	Civil society

former sustainability manager of a large-scale corporation who today works on the firm's digital business model, and a representative of a large consultancy firm joined the workshop. From civil society, a self-identified activist of the 'technology for good' movement and a representative of a non-governmental organization focusing on digital innovation for the greater good took part in the workshop. Pseudonyms are used for all organizational entities and participants of this study to ensure confidentiality. Table 1 provides an overview of our interviewees.

We conducted semi-structured interviews that provided an understanding of their individual perceptions of CDR, their motivation to engage in CDR and how they attempt to legitimize that corporations engage in responsible digital innovation. The interviews also helped the researchers to contextualize the participants' input to the subsequent workshop. To familiarize the individuals with each other and their respective viewpoints, key statements from the interviews were cut together in a short video, which was shared with the group before the workshop. The interviews took place between July and September 2020 via video-conferencing tools and were transcribed verbatim and translated.

4.1.2 | Workshop

To unearth how the interviewed institutional entrepreneurs construct the issue of CDR by building on and rejecting each other's statements (Phillips et al., 2004), we relied on an interactive setting in the form of a workshop. The workshop can be considered as an 'interstitial space' (Furnari, 2014). Interstitial spaces bring together institutional entrepreneurs from various fields, allowing them to engage with each other across different norms and institutions guiding their respective fields. In our workshop, the institutional entrepreneurs were able to engage in a dialogue about CDR which was observed, documented and subsequently analysed. The workshop was announced as a 'roundtable

[that] aims at looking critically and constructively at the phenomenon of corporate digital responsibility and its broader and more narrow conceptualizations' (workshop invitation). Due to the COVID-19 pandemic, we conducted the workshop via a video conferencing tool over 3 h in September 2020.

The event began with input by one of the participants on digital ethics that served as stimulation for the subsequent discussion. Group settings ideally allow the creation of an 'own structural identity' amongst the participants (Bohnsack, 2004). To that end, they have to be set up in ways that allow the participants to develop their collective orientation framework by enabling them to determine their topics, suggesting, rather than prescribing topics for the debate and facilitating a natural flow of conversation (Bohnsack, 2004). The first author of this study acted as moderator in the event by posing questions to the group. They provided conversation-provoking questions, such as 'In your view, what is different about digital innovations with regard to corporate responsibilities (in comparison to other innovations)?', but refrained from overly moderating the natural course of the conversation. The second author protocolled the event.

Overall, the atmosphere in the workshop was constructive and the remarks of the institutional entrepreneurs often aligned notwithstanding their different backgrounds. However, we also observed some contestation during the workshop. For example, some participants argued that questions of responsibility (and sustainability) are somewhat hindering the development of (data-driven) digital innovation. They feared that this may lead to a competitive disadvantage for European and German businesses in comparison to businesses in other global contexts. Others rejected this negative interpretation of the association between responsibility and digital innovation. We regard this contestation also as a sign that the participants felt comfortable within the workshop to utter their honest viewpoints and engage in a meaningful dialogue with each other. The workshop was recorded and then transcribed and translated, resulting in 37 pages of text.

4.1.3 | Archival documents

Finally, we collected a series of archival data. These data helped us to contextualize the observations from the interviews and the workshop and to reconstruct a timeline of the emergence of CDR as an issue as well as to identify the role and engagement of different institutional entrepreneurs attempting to set the issue in Germany. To that end, we collected publicly available documents, including press reports, corporate statements or public policies referring to CDR. These data amount to 451 pages of text, covering a period of about 3 years (January 2018 to August 2021).

4.2 | Data analysis

All data were analysed with established forms of qualitative research methods. Initially, we explored the collected data in an open-ended manner, followed by more structural and targeted steps. Drawing on

multiple strategies for categorizing qualitative data (e.g., Grodal et al., 2021), we analysed the data to gain a better understanding of the who, the what and the why relating to the construction of the issue CDR and the legitimization of responsible digital innovation through CDR. Initially, we followed an inductive approach; later on, previous research helped us to structure our findings. In this sense, our analytical approach can be best characterized as abductive (Timmermans & Tavory, 2012).

In the first step, we aimed to make sense of who the institutional entrepreneurs are that were involved in the issue of CDR in Germany, besides those taking part in our study. We therefore aimed to identify key actors and initiatives involved in establishing responsible digital innovation as a legitimate business practice. This step of the analysis was based on all data sources, but particularly the archival data. We noted that in Germany, multiple individual and organizational actors from all fields (e.g., business, politics, media and civil society) rallied for responsible digital innovation by drawing on the issue of Corporate Digital Responsibility. Our codes included 'German government', 'governmental agency', 'non-profit organization', 'consultant', 'journalist' and 'activist', indicating a variety of actors across different fields being involved in CDR, including our interview and workshop participants. We concluded from this step that responsible digital innovation and the issue of CDR are driven by a variety of institutional entrepreneurs across different fields in Germany. Next, we investigated the data on how the institutional entrepreneurs constructed the issue. We carefully revised all data sources to identify what topics and concerns were associated with CDR. Drawing on existing CDR frameworks, we aimed to determine similarities and differences. We used the ESG dimensions to organize our findings.

Then, following suggestions by Potter (2004), we explored how the institutional entrepreneurs attempted to motivate and enable businesses to engage in responsible digital innovation through the issue of CDR. To that end, we primarily went through the interview and workshop data openly, sticking closely to the participants' own words. We noted that our interviewees and workshop participants spoke of 'dialoguing' and 'creating awareness' but also how their efforts aimed to 'develop applicable CDR standards', 'award corporate CDR commitment' or how they hoped to 'make CDR tangible' when engaging with businesses. We realized that the institutional entrepreneurs carefully framed CDR as a distinct issue in the light of the institutionalized issue of CSR. This observation prompted our analysis to focus on how the institutional entrepreneurs legitimized the 'novel' issue of CDR as an understandable and desirable issue for businesses (Suchman, 1995). Consequently, we investigated what practices they made use of to create legitimacy, that is, pragmatic, cognitive or moral legitimacy (Suchman, 1995) for the issue of CDR and for responsible digital innovation. By comparing the data iteratively, we were able to distil three types of legitimization practices that champions of CDR made use of to legitimate CDR as an issue in the field of business. Figure 1 provides an overview of our complete coding scheme of institutional entrepreneurship for responsible digital innovation. In the following, we present the results of our analysis along a comprehensive case narrative.

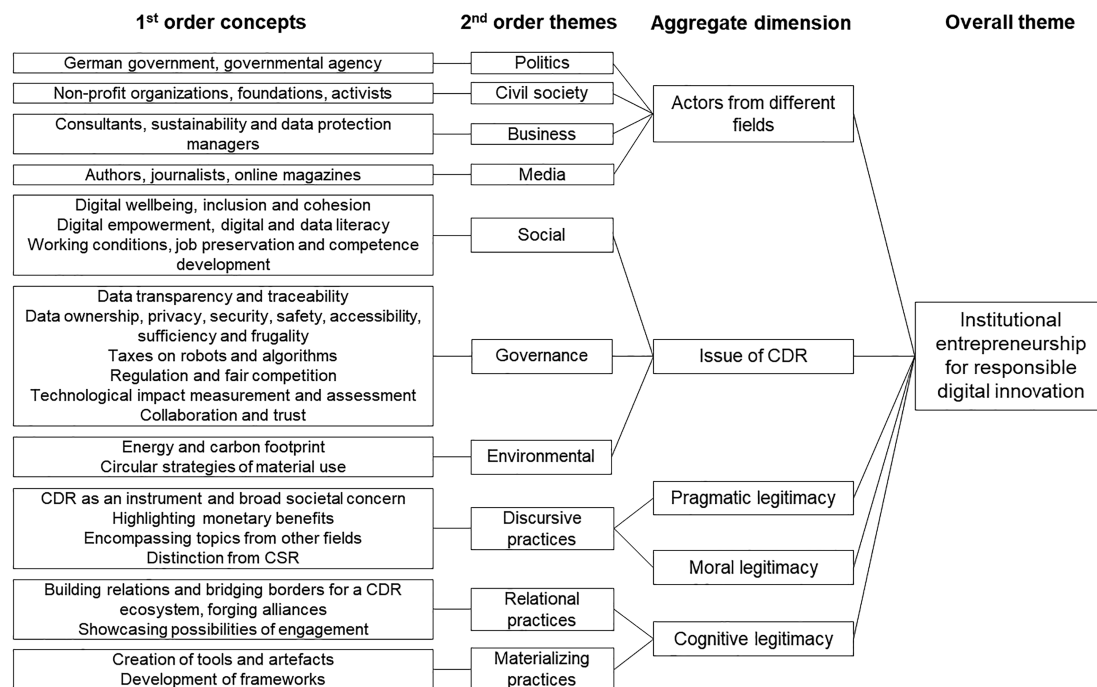


FIGURE 1 Coding scheme

5 | FINDINGS

5.1 | Institutional entrepreneurship for responsible digital innovation

Corporate Digital Responsibility is a fairly new issue in Germany. The inception of the issue into the public context in Germany can be dated back to the year 2018 when the German Federal Ministry for Justice and Consumer Protection (BMJV) together with a group of corporations from various industries launched a CDR initiative. The (ongoing) CDR initiative aims to facilitate the dialogue between the German government and businesses to explore voluntarily what it means for German corporations to act responsibly and sustainably in the digital transformation (BMJV, 2021). We consider the inception of this initiative as a potential issue field configuring event because it brought together disparate institutional actors in an official setting (Schüssler et al., 2014).

From 2018 to mid of 2021, a fragmented landscape of actors, activities and practices emerged, each referencing to the issue of CDR, or slight variations of it (e.g., Digital Responsibility and Digital Ethics) when promoting or addressing business accountability, responsibility and sustainability-related issues connected to digital innovations. Actors involved in CDR encompass the BMJV and its CDR initiative, other political agencies but also corporations, civil society foundations (e.g., Bertelsmann Stiftung, 2021), advocate agencies of small and medium-sized corporations (e.g., nachhaltig.digital, 2019), industry associations (e.g., BVDW, 2021) or online media such as a digital CDR magazine (e.g., Corporate Digital Responsibility, 2021). Most recently, in summer 2021, an industry association and a political

agency launched in collaboration a ‘CDR Award’ to publicly reward businesses that engage in responsible digital innovation (CDR Award, 2021). Until 2021, these various actors and initiatives started the inception of a small number of CDR principles, codices and frameworks, aiming to foster a voluntary responsible business commitment to digital innovation (CDR Initiative, 2021).

Institutional entrepreneurship for responsible digital innovation and CDR in Germany is accompanied by existing institutional infrastructures of CSR (e.g., Waddock, 2008), including initiatives like the United Nations Global Compact. These have also begun to address digitalization as a topic that links to questions of responsible and sustainable business conduct. The development of CDR in Germany is further contextualized by public policy developments in the European Union, notably the outset of several new laws on topics such as data protection (i.e., the General Data Protection Regulation, GDPR) or the development of sustainability-related policies such as the European Green Deal; however, none of which regulates responsible digital innovation.

From the perspective of those involved actors, institutional entrepreneurs from the field of politics have an active role in constructing the issue of CDR. The BMJV and other political agencies conducted regular public events and workshops, as well as coordinated the prominent CDR initiative, in collaboration with a growing number of large and medium-sized corporations across various industries. Through these CDR related activities, rather than through hard-law regulation, institutional entrepreneurs from the field of politics aim to motivate corporations to engage in responsible digital innovation and ‘consumer-friendly products and services’ (Patrick, governmental agency representative, interview) in a voluntary manner, promising firms that

'now is the window of opportunity, where you can handle the CDR framework and design it, and you have to eliminate issues such as anti-social discrimination, exclusion, and unecological aspects that come from digitalization in the form of algorithms, and you have to eliminate these before they become solidified [in hard-law regulation]' (John, governmental agency representative, workshop). This quote illustrates that the institutional entrepreneurs from the political field try to highlight the opportunities for businesses instead of creating a presumed 'disabling' narrative of corporate responsibility. Further, the CDR initiative, for example, states that it aims to 'ensure that digital responsibility becomes a normal part of day-to-day business for companies in all sectors. Even more companies should be encouraged to go beyond what is required by the law and actively shape the process of digitalisation in a people- and value-oriented way' (CDR Initiative, 2021).

Some participants of our study welcomed these efforts, arguing that involvement of political institutional entrepreneurs is particularly useful to provide the necessary frameworks or standards along which businesses can orient themselves to act responsibly and sustainably in the process of digital innovation and transformation. Especially arguing from the perspective of entrepreneurs and small and medium-sized corporations, some individuals remarked the potentially essential role of the German government for facilitating responsible digital innovation: 'And this is for me the responsibility of politics to give companies a framework that they can deal with and handle it to alleviate this burden from small and medium-sized companies because they do not have the time to deal with this adequately' (John, governmental agency representative, workshop).

Others argued that the German government needed to act to make responsible digital innovation attractive to corporations: 'because when a firm wants to act responsibly, then it often faces market pressure that will force it to abstain from such activity because it has to remain in business and cannot change on short notice' (Ron, author and public speaker, workshop). In this sense, CDR and responsible digital innovation was seen as something that ultimately also required hard-law regulation, particularly regulation of the global digital economy and market competition. Michael, the sustainability manager, explained the incumbent German business view on this matter: 'traditionally, as a firm in the production industries, you say "We do not want regulation." But we have come to realize more and more that we are dependent on certain providers of crucial intersections, such as app stores. There, you see that even large corporations that usually decry regulation, suddenly call for regulation' (workshop statement).

The interviewed institutional entrepreneurs involved with CDR from the field of business acknowledged consumer opinions and their trust in European and German technologies as a key driver for their commitment to the issue of CDR and responsible digital innovations: 'particularly, when the tools come from European providers, people expect the highest level of security standards in place. [...] The trust in German corporations is great, particularly if it is about technologies, but also industries as a whole' (Angelina, consultant, interview). Some participants also point out that it is nothing new for European

corporations to voluntarily act and think about their responsibilities in society. Laura, the former sustainability manager, underlined that corporate approaches to digital innovation should not be 'just about innovations, radical innovations or the destruction of whole industries and the economy. [Instead] It's about the question, how we want to approach [digital innovation]'. In this sense, the interest of institutional entrepreneurs from the field of business in the topic of CDR was motivated by the prospects of facing trust issues amongst consumers, as well as facing a lack of regulation that was perceived as a threat to their existence.

Ultimately, many of the interviewed institutional entrepreneurs envisioned the issue of CDR to become the cornerstone of an ecosystem that could support European and German businesses in their voluntary commitment to responsible digital innovation, also through governmental incentives, for example, through initiatives such as GAIA X (Data Infrastructure, 2021), the European data infrastructure project: 'When we are able to build upon these trends and develop ecosystems around them, then we are on the right path' (Patrick, governmental agency representative, workshop). In this sense, their commitment to the issue of CDR can be interpreted as an important and conscious effort of working along collaborative ideals towards the inception of a new issue. As one participant put it pointedly, 'if we want to shape our future and not only regulate what others have invented, then we need our own digital business and digital economy in Europe' (Ron, author and public speaker, interview). Further, cooperation across different fields was seen as a way of achieving this goal and facilitating responsible digital innovation.

The interviewees recognized that adequate regulation was yet to come. Consequently, the institutional entrepreneurs envisioned CDR as an alternative to hard law regulation. According to them, the issue of CDR encompassed the governance logic of what one participant called 'collaborative responsibility' (Laura, former sustainability manager, workshop). Through collaboration with the government and civil society, businesses should be motivated to voluntarily engage in responsible digital innovation. Like Laura, the NGO representative pointed out during her interview, 'I am convinced that the more corporations, and I say, at this point, purposefully German corporations, are doing well in digital ethics, the better it is for everyone. [...] The more know-how we have, the more we share this knowledge, the more everyone profits from it in Germany, also in terms of reputation'.

Turning our attention to the construction of the issue of CDR itself, we noticed that the interviewed institutional entrepreneurs constructed the issue of CDR by relating it to a variety of social and ecological concerns and topics. In contrast to the topics already mentioned in previous studies (e.g., Herden et al., 2021), the institutional entrepreneurs brought up further environmental aspects, such as circular strategies of material use, destruction of nature through resource use, rebound effects and the ecological footprint of digital innovation. Along the social dimension, one of the governmental agency representatives highlighted the necessity of CDR to cover the risk of racism in basic technological contexts giving the example that 'people of color are discriminated against in all sorts of ways, even

starting with the soap dispenser, who just do not recognise a dark skin color' (John, workshop). Correspondingly, the digital divide between generations, dark patterns, digital and data literacy, data protection, discrimination in general, consumer privacy and working conditions in the digital economy were mentioned in relation to the social dimension of digital innovations. Further topics mentioned included technological impact measurement and assessment (environmental), the digital divide between generations and dark patterns (social) and fair competition in the market and tax regulations (governance).

Concerning fundamental governance principles of CDR, the former sustainability manager mentioned sufficiency as a guiding principle: 'So how can you reduce the data collection to a minimum, so to speak, and really only use and collect what is necessary at all, and not, I say, a stockpile data collection, the more the better' (Laura, former sustainability manager, workshop). In terms of governance, traceable creation of algorithms, regulations for fair competition in the market, compliance with human rights, labels and licenses and the role of taxes were also mentioned.

Importantly, the institutional entrepreneurs did not only link various topics to the issue of CDR, but also they seemed to consider the relation and tensions between those topics. For example, such tensions were addressed in relation to the need and desire for transparency and energy consumption: 'Transparency requires technology, requires energy, requires resources, for example, to measure certain conditions in order to bring in transparency. And that always has the trade-off of whether everything really has to be digitalised, or is it perhaps even more sustainable not to digitalise something' (John, workshop).

5.2 | Legitimizing responsible digital innovation through the issue of CDR

In the light of the potential ecological and social harm of digital innovation, the various 'champions of CDR' attempted to construct the issue of CDR in ways that could foster the acceptance and commitment to responsible digital innovation amongst German businesses. We distilled a variety of institutional work practices from their efforts. We discerned three core practices, that is, *discursive*, *relational* and *material* practices that were geared towards the creation of pragmatic, cognitive and moral legitimacy (Suchman, 1995) for responsible digital innovation through the issue of CDR.

5.2.1 | Discursive practices

In the absence of hard-law regulation that could enforce business commitment to responsible digital innovation, several of the interviewed institutional entrepreneurs recognized that they had to convince businesses to voluntarily commit to responsible digital innovation. They drew on *discursive* practices that aimed to construct responsible digital innovation as desirable and appropriate practice for the business sector in the innovation process. To that end, they

purposefully framed responsible digital innovation through the issue of Corporate Digital Responsibility. Yet the institutional entrepreneurs acknowledged that the issue CDR was essentially 'a moving target', meaning that it encompassed a broad variety of topics and concerns at the intersection of digital innovation and transformation, corporate responsibility, and sustainability.

Beyond concrete topics associated with the issue of CDR, based on our observations from the field-spanning discussions within the workshop, we were able to distil two general dimensions along which the institutional entrepreneurs framed the issue of CDR when explaining the need for responsible digital innovation to others. The first dimension, described as 'limited' or instrumental dimension by one of the participants, entails framing digital innovation as instrumental to the corporate sustainability management agenda. Here, CDR is positioned in a way that suggests that responsible digital innovation may contribute to corporate sustainability objectives. Michael, the sustainability manager, outlined this dimension in his interview and reiterated it in the workshop by drawing on the example of ecological concerns and the use of predictive maintenance of products and services: 'predictive maintenance in this regard means that the customer service agent does not have to use a car with probably carbon dioxide emissions to get to the consumer but he knows before that the machine will have a problem and then maybe it's possible to fix it remotely. So, we saved the emissions'. Digital innovation here is framed as responsible, as it could reduce the harm that businesses do to society (see also Voegtlin & Scherer, 2017).

Aligned, the 'champions of CDR' acknowledged that they carefully crafted their arguments around a business logic why businesses should engage in CDR, highlighting the monetary benefits that businesses could gain by committing to responsible digital innovation: 'For example, when we speak about accessibility, I have to tell people how much bigger their target group for their shop or for different products can become when we make it more accessible than the competitors. And this way I have to go mostly all the time when I speak to corporations' (Nick, activist, interview). We interpret this discursive framing of responsible digital innovation as an attempt to enhance the pragmatic legitimacy of responsible digital innovations, that is, the economic desirability of CDR (Suchman, 1995).

The institutional entrepreneurs further stated that they framed CDR as an issue that could help businesses to learn about the changing societal expectations that businesses would encounter, in the light of the digital transformation of society at large. This second, 'extended' dimension of CDR encompasses not just the idea that responsible digital innovations should do no harm but that they should contribute to the greater good (see also Voegtlin & Scherer, 2017). Digital innovations were not just construed as an 'instrument' for businesses but framed as a broad societal concern, as well as the rapidly evolving societal awareness for potentially negative impacts of digital innovations on society. The institutional entrepreneurs therefore suggested that they found CDR useful to articulate and address this more general societal shift of expectations with regards to how digital innovations of businesses affect society, arguing that 'digitalization has a lot of hidden impacts, and you have to bring these to the

fore and show these impacts' (John, governmental agency representative, interview).

In the eyes of the institutional entrepreneurs, not only does CDR suggest that responsible digital innovation is about singular, definable innovative products or services. Even further, it calls for reflection of organizations and how their creation or adoption of digital innovations change and for challenging established societal and business structures altogether. Framed this way, Michael, the sustainability manager of a German mid-size corporation, reflected that CDR helped him and his firm to think 'about what digital change means for us. Because all rights come with responsibilities, as some say, and more and more business opportunities might come with challenges, and we need to find solutions to these challenges'. We interpret the framing efforts of the institutional entrepreneurs of responsible digital innovation through the extended dimension of CDR as an attempt to strengthen the moral legitimacy of responsible digital innovation, that is, its normative desirability (Suchman, 1995).

The institutional entrepreneurs simultaneously reflected on the similarities and distinctions between the issue of CDR and already institutionalized constructs such as sustainability and CSR. For example, Michael, the sustainability manager, suggested that 'CDR is a rather new topic while sustainability as a whole is a very established concept'. Others acknowledged differences between sustainability-related innovations and digital innovations: 'Digital innovations are much closer to the people (also in their private lives), they are much faster, their negative impact is much more hidden', as John, the governmental agency representative, outlined. Subsequently, some participants rationalized that they find it useful to draw a clear distinction between CDR and CSR when approaching businesses, arguing that the CSR in the past had remained a 'niche' topic for many corporations, meaning a topic without strategic value (Laura, former sustainability manager, workshop), a 'trap' they hoped to avoid by constructing CDR as a distinct issue for businesses, which was distinct to CSR.

5.2.2 | Relational practices

Alongside framing responsible digital innovation through the issue of CDR, the 'champions of CDR' outlined how they attempted to build a 'CDR ecosystem' that would enable businesses to learn about and experiment with responsible digital innovation. Relational institutional work practices around CDR that could support this goal included the building of personal relations and engaging in cross-sectoral knowledge exchange in an open-minded, dialogic manner: their participation in our workshop being a testament to their openness of cross-field interactions. Several individuals indicated that they actively try to address various audiences and create awareness for CDR: 'I promote CDR mostly through talks, so I speak a lot at conferences, or also in internal workshops for corporations' (Nick, activist, interview). Likewise, to make CDR appear both desirable and accessible for businesses, the institutional entrepreneurs attempt to promote not just one particular way to engage in CDR

but by showcasing multiple ways of engaging in CDR positively. For example, Mary, the NGO representative shares that she and her organization aimed to inform and inspire firms, for example, by featuring different firms and their CDR initiatives on the NGO's webpage, but also a variety of initiatives or projects that all address different issues relating to CDR. In her view, it is important to provide firms 'room to grow' and to learn about responsible digital innovation. Aligned, offering incentives such as public appraisal through a CDR award, or by featuring best practice cases in social media was perceived as a useful measure to motivate businesses to engage in CDR and responsible digital innovation.

Some participants outlined that purposefully drawing on the term CDR (instead of CSR) allowed them to bridge functions within organizations and helped them to avoid becoming 'trapped' in one corporate function (i.e., the CSR or sustainability department). Instead, they used the issue of CDR relationally to forge new alliances within businesses beyond single functions like the data protection office or the sustainability office. Nick, the activist, for example, explained that he uses the term CDR because he attempts 'to find the gateway between the sales part and the responsibility part to give anyone in a corporation access to these topics to speak about and give foundational knowledge on these topics for internal discussions with colleagues or to empower them to speak with the chairman or board members'. Treating questions of responsibility (and sustainability) and digital innovation separately without departmental collaboration, simultaneously, was feared to lead to 'internally competing spaces' inside of firms, which the workshop participants do not see as productive for facilitating the development of responsible digital innovations, as outlined Patrick, the governmental agency representative outlined in the workshop. To address this challenge, the institutional entrepreneurs viewed the term CDR as favourable to relationship building amongst different functions within firms.

We interpret these relational practices as the attempt to create cognitive legitimacy for responsible digital innovation (Suchman, 1995), that is, to foster cognitive understanding of the interconnectedness between corporate responsibility and digital innovation in and around businesses through personal ties and contacts.

5.2.3 | Materializing practices

Finally, in addition to relational institutional work practices, the institutional entrepreneurs indicated that they also engaged in *materializing* practices, that is, activities that would get businesses substantially involved in the development of responsible digital innovation through concrete, material artefacts. While from their perspective, this was the most difficult task because this also often required financial commitment on part of businesses, they outlined that one of their core tasks was to make CDR as tangible as possible for businesses. To that end, they engaged corporations in joint research projects or offered them ready-made tools that may help them to act responsibly. For example, Patrick, the governmental agency representative, outlined how he, in close collaboration with some firms, developed a data

process software, through which the corporate handling of data streams could become more transparent to the firm but also to its stakeholders (interview). Similarly, the development of CDR-specific frameworks and guidelines of other actors can be interpreted as practices of materializing CDR for businesses. For example, through the 'CDR Building Bloxx' framework, the German Association for the Digital Economy (BVDW) hopes to provide businesses with a framework along which businesses can develop their own CDR model in a 'practice-oriented and company-specific' manner (BVDW, 2021). This and other projects and frameworks materialize the issue of CDR in the form of tangible products, artefacts and application-oriented documents and can be interpreted as a way of facilitating the cognitive legitimacy of responsible digital innovation (Suchman, 1995), that is, the understandability of what it means to act responsibly in digital innovation.

6 | DISCUSSION AND CONCLUSION

This study was motivated by the question of how businesses come to accept responsible digital innovation as acceptable and desirable business practice. In the light of the ambiguous and disruptive nature of digital innovation, as well as the general lack of regulation that could enforce businesses to engage in responsible digital innovation, we argue that such innovation practice must be perceived by businesses as understandable, desirable and therefore legitimate. Only then businesses may engage in responsible digital innovation that may enable businesses to secure their social 'license to operate' (Scherer & Palazzo, 2007) in times of a growing societal awareness of the potentially problematic and 'dark' implications of digital innovations (e.g., Trittin-Ulbrich et al., 2021; Zuboff, 2019) and to contribute to the greater societal good.

6.1 | Legitimizing responsible digital innovation through the issue of CDR

The first contribution of our study is the expansion of institutional research on digital innovation (e.g., Gegenhuber et al., 2022; Hinings et al., 2018). We explore how various actors across different fields collaboratively engage in institutional entrepreneurship for responsible digital innovation through the construction and legitimation of the issue of CDR. We identify the various actors involved with the issue of CDR, elaborate on their various motivations for constructing the issue, identify the various topics associated with the issue and outline the institutional entrepreneurship practices through which they legitimize responsible digital innovation. Notably, we demonstrate that 'champions of CDR' draw on various discursive, relational and material legitimation practices to create pragmatic, cognitive and moral legitimacy for the issue of CDR when dealing with businesses. Overall, the institutional entrepreneurs indicate that the issue of CDR is useful to their individual and collective attempts to ensure the inception of responsible digital innovation in German businesses.

Previous research drawing on an institutional entrepreneurship lens in the study of digital innovation has focused on legitimation efforts inside of businesses (e.g., Tumbas et al., 2018). Our study adds crucial field-level insights into how institutional entrepreneurs in and outside of businesses collectively and collaboratively attempt to change existing institutional arrangements to motivate businesses to act responsibly in digital innovation. On the field level, legitimizing responsible digital innovation entails discursive, relational and material efforts. The majority of the identified practices aim to create pragmatic and cognitive legitimacy, meaning understanding and acceptance amongst businesses based on instrumental considerations. This can be explained with the novel and complex (e.g., Dougherty & Dunn, 2011) nature of digital innovation.

Acting responsibly with and in digital innovation demands that businesses first develop an understanding of digital innovations, including the related opportunities and challenges for businesses. Aligned, an understanding of which business functions should be involved in the process of responsible digital innovation is needed. Only then responsible conduct that is aligned with existing norms and values can be ensured. In addition, because institutional entrepreneurs from the field of media or from civil society in general are involved in CDR, the issue is also equipped with moral legitimacy. This helps to construct CDR as a desirable issue. Through the issue of CDR, responsible digital innovation is constructed as desirable innovation practice.

Importantly, we detect similarities and differences between our findings and those of previous institutional theory-based studies concerned with digital innovations. For example, in a recent study, Gegenhuber et al. (2022) suggest that actors may purposefully draw on CSR as a template, combined it with other templates to build new collective institutional infrastructures such as Crowdwork Agreements to govern digital innovation, particularly in the platform industry context. Institutional templates inform interactions based on informal guides and patterns for behaviour in a given organizational context (Gegenhuber et al., 2022). The authors suggest that CSR is well suited as a template to regulate digital innovations, given that it emphasizes a private, voluntary self-regulation mechanism and it is well known in Germany.

The findings of our study add somewhat contrasting insights into the usefulness of CDR as a template for shaping organizational activities around digital innovations. Our study suggests that institutional entrepreneurs interested in facilitating responsible digital innovation particularly within 'traditional' corporations outside of the platform economy, may purposefully avoid using CSR as a template. Instead, they may prefer to draw on a 'spin-off' variation of CSR to create a stand-alone issue and thereby generate an 'entrepreneurial opportunity' for responsible digital innovation. Constructing CDR as a distinct issue allows them to promote new cross-functional collaboration between technical and socially oriented functions within businesses. CDR may help to forgo responsible digital innovation getting reduced to a 'niche' problem or becoming associated with more negative connotations of the established template of CSR, including 'greenwashing' (Laufer, 2003), which would crucially affect the legitimacy of CSR and inhibit the chances of responsible digital innovation becoming

adopted by businesses. In this sense, our study indicates that drawing on the established concept of CSR as a template for legitimizing and building new institutional arrangements around digital innovation in traditional businesses may be less fruitful.

6.2 | CDR: An issue driven by multi-stakeholder efforts

Our study further contributes to the emerging debate on Corporate Digital Responsibility (CDR) in two ways. First, our in-depth explorative approach enabled us to identify additional topics that are associated with the issue of CDR in Germany. Prior studies on CDR have identified a range of topics and technologies that can be associated with CDR, either based on theoretical considerations (Lobschat et al., 2021) or based on questionnaires amongst individuals based in the United States of America (Herden et al., 2021). Adding to the topics clustered into the environmental, social and governance framework by Herden et al. (2021), our study based on the study of CDR in Germany helps to uncover additional topics, such as circular strategies of material use, technological impact measurement and assessment (environmental), the digital divide between generations and dark patterns (social) and fair competition in the market and tax regulations (governance). Additional principles and norms, particularly the underlying logic of collaborative responsibility, but also data sufficiency and frugality were mentioned, relating to the extended dimension of CDR. In this sense, our study extends prior research on CDR by indicating a series of additional topics and principles associated with CSR and responsible innovation, particularly in Germany. This underlines that CDR is a contextually bound issue.

Second, our study underscores that CDR is not just a corporate issue, but it is essentially an issue constructed and driven by multiple actors, including businesses, but also political actors and civil society actors. Prior CDR frameworks, such as the one proposed by Lobschat et al. (2021), suggest that CDR is first and foremost a corporate concept: one, which arguably is shaped by various internal and external influences, including the social context and the organizational context. Our study adds to this framework by illustrating the central agentic role that external actors, notably civil society and political actors play in shaping corporate approaches to CDR. Our empirical exploration suggests that CDR is mainly driven by various actors in many fields, most importantly political institutional entrepreneurs.

The insights of this study also have practical implications. First of all, our study indicates who exactly is involved in the construction of the issue of CDR at the field level. In this study, the institutional entrepreneurs view the logic of 'collaborative responsibility' as central to the issue of CDR, which positions governments as key facilitators for the development of responsible and sustainable digital innovations alongside businesses. This is relevant for policy-making. Former research highlights the contested role of governments in innovation (Aghion & Griffith, 2008). Some scholars argue that liberalization of markets fosters innovativeness of the economy (Aghion & Griffith, 2008). Others question the positive effects of a lack of

regulation on corporate innovativeness (Amable et al., 2016). In the context of CDR, actors, even those from the field of business, acknowledge the vital role that governments play for the progression of CDR and responsible digital innovation. From the perspective of those involved with CDR, governments can facilitate responsible digital innovation through the regulation of the digital economy but also through the facilitation of voluntary collaboration between governments and businesses.

Our research further entails important managerial implications. Our research suggests that managers aiming to pursue responsible digital innovation in German businesses may rely on collaborative supporting networks with institutional entrepreneurs from across different fields. As previous research has shown, such external support for responsible business conduct can be crucial to facilitate internal commitment (see also Girschik, 2020). Individual managers seeking to involve their firms with CDR consequently should make use of institutional entrepreneurship for CDR. In addition, the findings of this research indicate that early engagement in the issue of CDR gives businesses the opportunity of being involved in the construction of the still-emerging issue of CDR. This may ultimately offer the opportunity for businesses to shape the issue to their benefit and engage in digital innovation while also catering to societal expectations regarding responsible business conduct.

7 | LIMITATIONS AND FUTURE RESEARCH

Our explorative research design is appropriate in the light of the nascent nature of the issue of CDR and responsible digital innovation in business practice, as well as in academic research. To our best knowledge, it is the first study addressing the field-level efforts that go into the legitimation of responsible business conduct in digital innovation. It also allows us to provide crucial initial insights into how the issue of CDR links to responsible digital innovation. Yet the study design brings along certain limitations, however, which offer manifold opportunities for future research.

First, our study focused on the German context. Future research should investigate and compare the findings of our study with insights from other national contexts, in order to advance generalizability in other national or international settings. National contexts exhibit different expectations with regards to business conduct in society (e.g., Matten & Moon, 2008). Similarly, the issue of CDR might be understood differently in different national contexts in terms of its dimensions (limited and extended) and the topics it encompasses.

Second, our study relies on an in-depth analysis of a limited data set, covering a limited period of time. Since the issue of CDR is a 'moving target' and emerges from a rather fragmented interstitial issue field, further longitudinal examination as well as the investigation of additional actors within the field may provide additional insights into the dynamics of the field.

Third and finally, we explore how institutional entrepreneurs attempt to legitimize CDR and responsible digital innovation. Yet our study provides little insights into whether these efforts lead to the

successful inception of responsible digital innovation in business practice. Future in-depth studies within German corporations may enhance our knowledge on whether the documented institutional entrepreneurship efforts of the 'champions of CDR' are successful.

ACKNOWLEDGEMENTS

We thank the Robert Bosch Stiftung for the generous funding of the workshop series "Digitalization and Sustainability: A European Perspective," which helped with the data collection process. Hannah Trittin-Ulbrich further acknowledges the financial support of the Dr. Theo and Friedl Schöller Research Center for Business and Society. We further thank Nicolas Markert for his support in preparing the data for analysis.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

ORCID

Hannah Trittin-Ulbrich  <https://orcid.org/0000-0002-9501-0003>

Alexa Böckel  <https://orcid.org/0000-0001-7978-3471>

REFERENCES

- Aghion, P., & Griffith, R. (2008). *Competition and growth: Reconciling theory and evidence*. MIT Press.
- Amable, B., Ledezma, I., & Robin, S. (2016). Product market regulation, innovation, and productivity. *Research Policy*, 45(10), 2087–2104. <https://doi.org/10.1016/j.respol.2016.08.003>
- Ayamga, M., Akaba, S., & Nyaaba, A. A. (2021). Multifaceted applicability of drones: A review. *Technological Forecasting and Social Change*, 167, 120677. <https://doi.org/10.1016/j.techfore.2021.120677>
- Battilana, J., Leca, B., & Boxenbaum, E. (2009). How actors change institutions: Towards a theory of institutional entrepreneurship. *Academy of Management Annals*, 3(1), 65–107. <https://doi.org/10.5465/19416520903053598>
- Bertelsmann Stiftung. (2021). Unternehmensverantwortung im digitalen Wandel – Ein Debattenbeitrag zu Corporate Digital Responsibility. <https://www.bertelsmann-stiftung.de/de/publikationen/publikation/did/unternehmensverantwortung-im-digitalen-wandel-all-1>
- Bican, P. M., & Brem, A. (2020). Digital business model, digital transformation, digital entrepreneurship: Is there a sustainable "digital"? *Sustainability*, 12(13), 5239. <https://doi.org/10.3390/su12135239>
- Böckel, A., Nuzum, A. K., & Weissbrod, I. (2020). Blockchain for the circular economy: Analysis of the research-practice gap. *Sustainable Production and Consumption*, 25, 525–539. <https://doi.org/10.1016/j.spc.2020.12.006>
- Bohnsack, R. (2004). Group discussion and focus groups. In U. Flick, E. von Kardorff, & I. Steinke (Eds.), *A companion to qualitative research* (pp. 214–221). SAGE Publications.
- Bondy, K., Moon, J., & Matten, D. (2012). An institution of corporate social responsibility (CSR) in multi-national corporations (MNCs): Form and implications. *Journal of Business Ethics*, 111(2), 281–299. <https://doi.org/10.1007/s10551-012-1208-7>
- BVDW. (2021). Corporate digital responsibility. <https://www.bvdw.org/der-bvdw/gremien/corporate-digital-responsibility/cdr-building-bloxx/>
- CDR Award. (2021). Corporate digital responsibility award. <https://www.cdr-award.digital/>
- CDR Initiative. (2021). Unsere Ziele – der CDR-Kodex. <https://cdr-initiative.de/kodex>
- Corporate Digital Responsibility. (2021). Online magazine. <https://corporate-digital-responsibility.de/>
- Data Infrastructure. (2021). GAIA-X: A federated data infrastructure for Europe. <https://www.data-infrastructure.eu/GAIA/Navigation/EN/Home/home.html>
- Deephouse, D. L., & Suchman, M. (2008). Legitimacy in organizational institutionalism. *The Sage Handbook of Organizational Institutionalism*, 49, 77. <https://doi.org/10.4135/9781849200387.n2>
- Dougherty, D., & Dunn, D. (2011). Organizing ecologies of complex innovation. *Organization Science*, 22(5), 1214–1223. <https://doi.org/10.1287/orsc.1100.0605>
- Etzion, D., & Aragon-Correa, J. A. (2016). Big data, management, and sustainability: Strategic opportunities ahead. *Organization & Environment*, 29(2), 147–155. <https://doi.org/10.1177/1086026616650437>
- Furnari, S. (2014). Interstitial spaces: Microinteraction settings and the genesis of new practices between institutional fields. *Academy of Management Review*, 39(4), 439–462. <https://doi.org/10.5465/amr.2012.0045>
- Garud, R., Hardy, C., & Maguire, S. (2007). Institutional entrepreneurship as embedded agency: An introduction to the special issue. *Organization Studies*, 28(7), 957–969. <https://doi.org/10.1177/0170840607078958>
- Gegenhuber, T., Schüssler, E., Reischauer, G., & Thäter, L. (2022). *Building collective institutional infrastructures for decent platform work: The development of a crowdwork agreement in Germany*. Research in the Sociology of Organization, 79, 43–68.
- George, G., Howard-Grenville, J., Joshi, A., & Tihanyi, L. (2016). Understanding and tackling societal grand challenges through management research. *Academy of Management Journal*, 59(6), 1880–1895. <https://doi.org/10.5465/amj.2016.4007>
- George, G., Merrill, R. K., & Schillebeeckx, S. J. D. (2020). Digital sustainability and entrepreneurship: How digital innovations are helping tackle climate change and sustainable development. *Entrepreneurship Theory and Practice*, 45(5), 999–1027. <https://doi.org/10.1177/1042258719899425>
- Girschik, V. (2020). Shared responsibility for societal problems: The role of internal activists in reframing corporate responsibility. *Business & Society*, 59(1), 34–66. <https://doi.org/10.1177/0007650318789867>
- Grigore, G., Molesworth, M., Miles, C., & Glozer, S. (2021). (un) resolving digital technology paradoxes through the rhetoric of balance. *Organization*, 28(1), 186–207. <https://doi.org/10.1177/1350508420968196>
- Grigore, G., Molesworth, M., & Watkins, R. (2017). *New corporate responsibilities in the digital economy*. In *corporate social responsibility in the post-financial crisis era* (pp. 41–62). Palgrave Macmillan. https://doi.org/10.1007/978-3-319-40096-9_3
- Grodal, S., Anteby, M., & Holm, A. L. (2021). Achieving rigor in qualitative analysis: The role of active categorization in theory building. *Academy of Management Review*, 46(3), 591–612. <https://doi.org/10.5465/amr.2018.0482>
- Halme, M., & Korpela, M. (2014). Responsible innovation toward sustainable development in small and medium-sized enterprises: A resource perspective. *Business Strategy and the Environment*, 23(8), 547–566. <https://doi.org/10.1002/bse.1801>
- Hardy, C., & Maguire, S. (2017). Institutional entrepreneurship and change in fields. *The Sage Handbook of Organizational Institutionalism*, 2, 261–280. <https://doi.org/10.4135/9781446280669.n11>
- Herden, C. J., Alliu, E., Cakici, A., Cormier, T., Deguelle, C., Gambhir, S., Griffiths, C., Gupta, S., Kamani, S. R., Kiratli, Y.-S., Kispataki, M., Lange, G., Moles de Matos, L., Moreno, L. T., Betancourt Nunez, H. A., Pilla, V., Raj, B., Roe, J., Skoda, M., ... Edinger-Schons, L. M. (2021). Corporate digital responsibility. *NachhaltigkeitsManagementForum*. Advance online publication, 29, 13–29. <https://doi.org/10.1007/s00550-020-00509-x>
- Hinings, B., Gegenhuber, T., & Greenwood, R. (2018). Digital innovation and transformation: An institutional perspective. *Information and*

- Organization, 28(1), 52–61. <https://doi.org/10.1016/j.infoandorg.2018.02.004>
- BMJV (2021). CDR-Initiative. https://www.bmjv.de/DE/Themen/FokusThemen/CDR_Initiative/CDR_Initiative_node.html
- Jiménez López, J., & Mulero-Pázmány, M. (2019). Drones for conservation in protected areas: Present and future. *Drones*, 3(1), 10. <https://doi.org/10.3390/drones3010010>
- Kourula, A., Moon, J., Salles-Djelic, M. L., & Wickert, C. (2019). New roles of government in the governance of business conduct: Implications for management and organizational research. *Organization Studies*, 40(8), 1101–1123. <https://doi.org/10.1177/0170840619852142>
- Laufer, W. S. (2003). Social accountability and corporate greenwashing. *Journal of Business Ethics*, 43(3), 253–261. <https://doi.org/10.1023/A:1022962719299>
- Leca, B., Battilana, J., & Boxenbaum, E. (2008). *Agency and institutions: A review of institutional entrepreneurship* (pp. 8–96). Harvard Business School.
- Lobschat, L., Mueller, B., Eggers, F., Brandimarte, L., Diefenbach, S., Kroschke, M., & Wirtz, J. (2021). Corporate digital responsibility. *Journal of Business Research*, 122, 875–888. <https://doi.org/10.1016/j.jbusres.2019.10.006>
- Maguire, S., Hardy, C., & Lawrence, T. B. (2004). Institutional entrepreneurship in emerging fields: HIV/AIDS treatment advocacy in Canada. *Academy of Management Journal*, 47(5), 657–679.
- Mair, J., & Gegenhuber, T. (2021). Open social innovation. *Stanford Social Innovation Review*, 26–33.
- Matten, D., & Moon, J. (2008). “Implicit” and “explicit” CSR: A conceptual framework for a comparative understanding of corporate social responsibility. *Academy of Management Review*, 33(2), 404–424. <https://doi.org/10.5465/amr.2008.31193458>
- Nachhaltig.digital. (2019). CDR denkt Digitalisierung und Nachhaltigkeit zusammen. <https://nachhaltig.digital/blog/1171>
- Narula, S., Puppala, H., Kumar, A., Frederico, G. F., Dwivedy, M., Prakash, S., & Talwar, V. (2021). Applicability of industry 4.0 technologies in the adoption of global reporting initiative standards for achieving sustainability. *Journal of Cleaner Production*, 305, 127141. <https://doi.org/10.1016/j.jclepro.2021.127141>
- Pacheco, D. F., York, J. G., Dean, T. J., & Sarasvathy, S. D. (2010). The coevolution of institutional entrepreneurship: A tale of two theories. *Journal of Management*, 36(4), 974–1010. <https://doi.org/10.1177/0149206309360280>
- Pelzer, P., Frenken, K., & Boon, W. (2019). Institutional entrepreneurship in the platform economy: How Uber tried (and failed) to change the Dutch taxi law. *Environmental Innovation and Societal Transitions*, 33, 1–12. <https://doi.org/10.1016/j.eist.2019.02.003>
- >Perkmann, M., & Spicer, A. (2007). ‘Healing the scars of history’: Projects, skills and field strategies in institutional entrepreneurship. *Organization Studies*, 28(7), 1101–1122. <https://doi.org/10.1177/0170840607078116>
- Phillips, N., Lawrence, T. B., & Hardy, C. (2004). Discourse and institutions. *Academy of Management Review*, 29(4), 635–652. <https://doi.org/10.2307/20159075>
- Potter, J. (2004). Discourse analysis. In M. Hardy & A. Bryman (Eds.), *Handbook of data analysis* (pp. 607–624). Sage. <https://doi.org/10.4135/9781848608184.n27>
- Scherer, A. G., & Palazzo, G. (2007). Toward a political conception of corporate responsibility: Business and society seen from a Habermasian perspective. *Academy of Management Review*, 32(4), 1096–1120. <https://doi.org/10.5465/amr.2007.26585837>
- Scherer, A. G., & Voegtlin, C. (2020). Corporate governance for responsible innovation: Approaches to corporate governance and their implications for sustainable development. *Academy of Management Perspectives*, 34(2), 182–208. <https://doi.org/10.5465/amp.2017.0175>
- Schüssler, E., Rüling, C. C., & Wittneben, B. B. (2014). On melting summits: The limitations of field-configuring events as catalysts of change in transnational climate policy. *Academy of Management Journal*, 57(1), 140–171. <https://doi.org/10.5465/amj.2011.0812>
- Shamsrizi, M., Pakura, A., Wiechers, J., Pakura, S., & Dauster, D. V. (2021). Digital entrepreneurship for the “decade of action”. *Digital Entrepreneurship*, 303. https://doi.org/10.1007/978-3-030-53914-6_15
- Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*, 20(3), 571–610. <https://doi.org/10.2307/258788>
- Timmermans, S., & Tavory, I. (2012). Theory construction in qualitative research: From grounded theory to abductive analysis. *Sociological Theory*, 30(3), 167–186. <https://doi.org/10.1177/0735275112457914>
- Trittin-Ulrich, H., Scherer, A. G., Munro, I., & Whelan, G. (2021). Exploring the dark and unexpected sides of digitalization: Toward a critical agenda. *Organization*, 28(1), 8–25. <https://doi.org/10.1177/1350508420968184>
- Tumbas, S., Berente, N., & Brocke, J. V. (2018). Digital innovation and institutional entrepreneurship: Chief digital officer perspectives of their emerging role. *Journal of Information Technology*, 33(3), 188–202. <https://doi.org/10.1057/s41265-018-0055-0>
- Voegtlin, C., & Scherer, A. G. (2017). Responsible innovation and the innovation of responsibility: Governing sustainable development in a globalized world. *Journal of Business Ethics*, 143(2), 227–243. <https://doi.org/10.1007/s10551-015-2769-z>
- Waddock, S. (2008). Building a new institutional infrastructure for corporate responsibility. *Academy of Management Perspectives*, 22(3), 87–108. <https://doi.org/10.5465/amp.2008.34587997>
- WBGU. (2019). Towards our Common Digital Future. <https://www.wbgu.de/en/publications/publication/towards-our-common-digital-future>
- Zilber, T. B. (2007). Stories and the discursive dynamics of institutional entrepreneurship: The case of Israeli high-tech after the bubble. *Organization Studies*, 28(7), 1035–1054. <https://doi.org/10.1177/0170840607078113>
- Zuboff, S. (2019). *The age of surveillance capitalism: The fight for a human future at the new frontier of power: Barack Obama's books of 2019*. Profile books.

AUTHOR BIOGRAPHIES

Hannah Trittin-Ulrich is an assistant professor for business administration, particularly business ethics at Leuphana University Lüneburg, Germany. Her research interests include topics such as corporate social responsibility (CSR), corporate digital responsibility (CDR), new forms of work and organizing, and change agents for sustainability.

Alexa Böckel is a researcher and lecturer at the Social Change Hub (SCHub) of the Centre for Sustainability Management at Leuphana University Lüneburg, Germany. She leads the SCHub in collaboration with others and is currently pursuing her PhD on the topic of circular economy.

How to cite this article: Trittin-Ulrich, H., & Böckel, A. (2022). Institutional entrepreneurship for responsible digital innovation: The case of corporate digital responsibility. *Creativity and Innovation Management*, 31(3), 447–459. <https://doi.org/10.1111/caim.12513>