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Please cite the final published version:

Obwegeser, N., & Bauer, S. (2016). Digital innovation and the becoming of an organizational identity. In *HCI in Business, Government, and Organizations: eCommerce and Innovation*. (Vol. 9751, s. 556-564). Springer. (Lecture Notes in Computer Science, Vol. 9751). DOI: 10.1007/978-3-319-39396-4\_51

## Publication metadata

<b>Title:</b>	Digital innovation and the becoming of an organizational identity
<b>Author(s):</b>	Obwegeser, N., & Bauer, S.
<b>Journal:</b>	Lecture Notes in Computer Science, Vol. 9751, 2016, s. 556-564
<b>DOI/Link:</b>	10.1007/978-3-319-39396-4_51
<b>Document version:</b>	Accepted manuscript (post-print)

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# Digital innovation and the becoming of an organizational identity

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**Abstract.** Today, companies often face rapid and substantial change of their business environment. To stay competitive, firms are forced to engage in continuous innovation of their products and services. Moreover, the digitization of society and organizations has led to an increase in radical and disruptive innovations across all industries and trades. As a result, companies often find it difficult to develop an organizational identity – a shared understanding of “who are we” and “what makes us different from others”. In this article, we combine extant theory on both digital innovation and identity formation processes to develop a conceptual model of identity formation, highlighting the dynamics between innovation and identity formation. We use our model to discuss symptoms that organizations might experience when engaging in digital innovation, shaping the process of identity development. Finally, we suggest future research topics to investigate the relationship between innovation and identity formation processes.

**Keywords:** Digital innovation, organizational identity, growth;

## 1 Introduction

In this article, we look at the effect of digital innovations on the process of organizational identity formation in growing companies. Today, companies often face rapid and substantial change of their business environment and are therefore forced to engage in continuous innovation of their products and services [9]. Moreover, the digitization of society and organizations has led to an increase in radical and disruptive innovations across all industries and trades [31]. As a result, these companies often find it difficult to develop an organizational identity – a shared understanding of “who are we” and “what makes us different from others” within members of the same organization [1]. We argue that this situation is especially challenging for growing small and medium enterprises (SMEs), as they (i) have not yet developed a strong identity and (ii) experience additional stress, both external and internal, due to their growth processes.

To investigate the dynamic interplay of incremental versus radical innovation with relation to the process of organizational identity formation, we combine extant theory on both digital innovation and identity formation processes to develop a conceptual

model of identity formation. While theory on identity formation has produced a number of valuable findings, deep insights into the sources, antecedents and mechanics of identity (re-)configuration, especially with regard to inception of identities in newly formed entities, remain scarce [18]. Our research focuses particularly on the role of changing innovation patterns due to the ongoing digitization of our society. Change due to digitization or new technologies often has implications beyond the technology itself. As [28] points out, digital innovation can impact firms in a way that they “may ultimately need to develop an entirely new organizational identity whereby both organizational members and external constituents must alter deeply held assumptions and beliefs about what the firm represents”.

To explore this complex phenomenon, which is difficult to observe directly, we construct a conceptual model to illustrate the interaction between the processes and support discussion. We use our model to elaborate on symptoms that organizations might experience when engaging in digital innovation, shaping the process of identity development. Moreover, we discuss the practical implications of our model and suggest future research topics to investigate the relationship between innovation and identity formation processes.

The remainder of this article is structured as follows. First, we introduce the state-of-the-art in research on organizational identity as a process as well as on digital innovation. Second, we present and discuss our proposed conceptual model. We conclude our paper with a discussion of implications, limitations and pointers for promising future research.

## **2 Theoretical background**

### **2.1 Organizational identity as a process**

Organizational identity has traditionally often been seen as a rather static attribute, an entity or characteristic of an organization, focusing on the “who are we?” question [1]. [17] refer to the aspects of endurance, distinctiveness and centrality that are widely used to describe an organizational identity. Only recently, building on social psychology, researchers have started to argue for a view of organizational identity as a process of development and change over time. [24] points to three process dimensions of organizational identity: relational, behavioral and symbolic. As an analogy, [15] remark that the process view on organizational identity can be compared to viewing a full motion picture about an organization, while the characteristic based view provides only a single snapshot or picture of the organization. Following that line of argument, we argue that the process-oriented perspective on organizational identity is particularly useful when investigating young and growing companies in competitive environments. Thereby, the influence of digital innovation activities on the development of an organizational identity can be observed in detail and the specific effects can be analyzed. The process view purposefully challenges the original notion of endurance of an identity, building on the fact that this aspect has remained understudied. According to [4] “identity endurance is rarely seen as a puzzle to be explained; it is assumed as relatively unproblematic and remains empirically neglected”.

In a review of literature on identity processes, [24] finds that identity processes are often associated with other processes, such as sense-making, learning, changing, among others. [5] suggests that there does not exist such a thing as an “identity process”, but that identity itself is rhetorical and thus the result or “content” of other “basic” processes. To investigate identity from a process perspective, [24] proposes three potential avenues for researchers: processes about identity, process unique to identity, and the interplay of processes in identity dynamics. Pertaining to the first, he argues that researchers could address the role of identity as “an outcome, antecedent, or content” of another process. Pertaining to the second, researchers could investigate processes that are unique to identity creation and maintenance. Thirdly, he posits that investigating the role and interplay of multiple processes in identity dynamics will likely yield interesting results. [18] identify three common themes that can be found in research on organizational identity formation: informal organization, human agency and environmental adaptation.

We find that the process view provides a highly useful perspective for the purpose of our study, as it allows us to understand how the interplay of different forces influence and shape the becoming of an organizational identity.

## **2.2 Digital innovation**

As an emerging area of research in information systems, the concept of digital innovation refers to “a product, process, or business model that is perceived as new, requires some significant changes on the part of adopters, and is embodied in or enabled by IT” [12]. Traditional industries and their practices are becoming more and more entangled in today’s digital infrastructures and are therefore required to rethink and adopt their innovation strategies [16, 31]. Digital innovation spans across the disciplines of technology management on the one side, and IT innovation on the other side [26]. In contrast to purely technical innovation, digital innovations always include a business perspective, which can be categorized in process, product or business model innovation [12]. Digital process innovations, or new ways of doing old work, were among the first drivers of new technologies in the workplace [27]. Digital product innovation refers to the integration of technological novelty as part of the product offerings of a firm [32]. Business model innovation by means of digital technologies is becoming more and more crucial in various markets, e.g. newspapers and publishing houses [3].

Technological change does not take place in a vacuum, but rather influences all other elements of information systems, such as people, tasks and processes, and knowledge. A change in the IS strategy of an organization needs to be reflected in both business strategy and organizational strategy, to ensure goal congruence and alignment throughout the organization [23]. Some IS scholars go as far as to conceptualize the social and the material as inseparable, or sociomaterial [20, 26]. Thus, digital innovation is found to be more disruptive to an organizations working culture or identity as traditional, incremental innovations.

### **3 Model development**

This chapter is used to develop and present our conceptual model on innovation and the identity process. In the following, we will first present the dimensions of our model (identities over time & growth) and then introduce and discuss the two figures that together constitute our model (see **Fig. 1** and **Fig. 2**).

#### **3.1 Identity inception, uncertainty and formation over time and growth**

While research on identity processes, formation and (re-)construction related to mature organizations has provided a great amount of insights [7, 25], research on the inception of identity in newly formed organizations (such as startups) has only recently gained the attention of academics [6]. [14] were among the first to follow the creation of a new entity (a college within a university) to reveal and understand the dynamics in the inception process of a new identity. [18] investigate Dutch microbreweries to introduce a new theoretical model of how different sources can act as antecedents to organizational identity and then become imprinted into the identity of nascent organizations. They state that research on identity inception is still in an early stage, and no uniform theory has yet been established to guide future investigations [18].

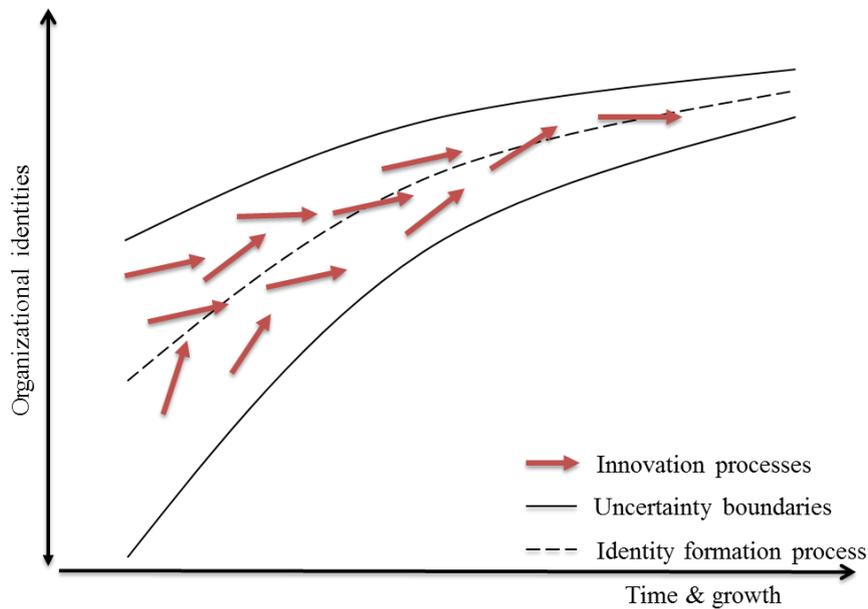
However, what unites most models and theories focusing on the early identity creation process is the notion that identity becomes more stable over time, theorized for example as a form of continuous and repeated imprinting of external and internal expectations [24]. Nascent organizations, such as startups or newly founded divisions of an existing organization are not certain about their organizational identity. [14] identified four sequential phases of the organizational identity inception process, namely (i) articulating a vision, (ii) experiencing a meanings void, (iii) engaging in experiential contrasts, and (iv) converging on a consensual identity. In addition, the authors theorize that those sequential phases are influenced by recurring themes such as the attainment of distinctiveness or the negotiation of identity claims that shape the process of identity formation [14].

Our model does not focus on the micro-level mechanisms that constitute identity creation but conceptualizes the identity process as a background process to an organization's lifecycle. Thus, while being aware of the complex and non-linear internal formation processes of organization, we simplify the external view on the identity process from an abstract perspective as a linear process. Within our model (see Fig. 1) we include so called "uncertainty boundaries" to demonstrate the convergence of a shared organizational identity over time, thus reducing the uncertainty of the identity.

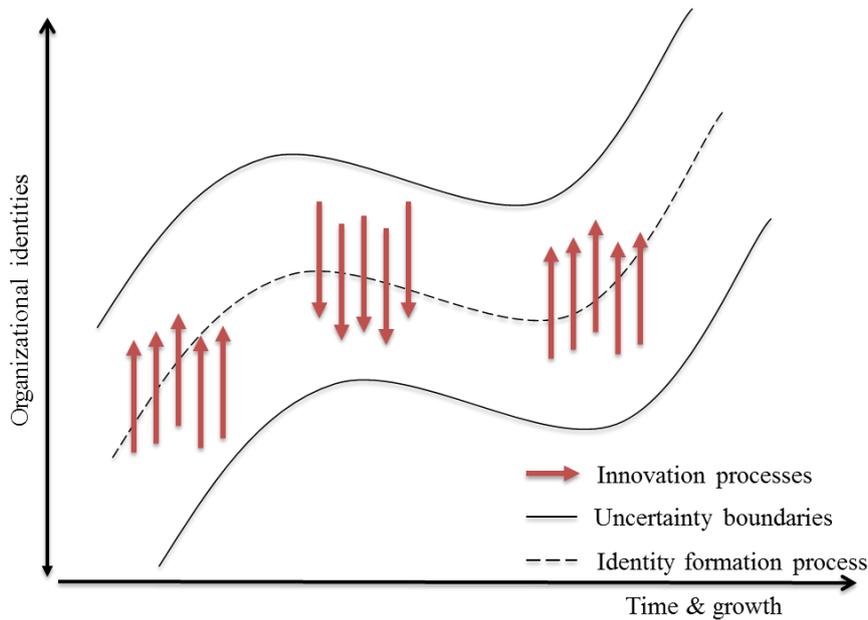
#### **3.2 Traditional innovation and identity**

From the perspective of the resource-based view (RBV) of the firm and its extensions, it has been shown that organizational identity can serve as a pivotal organizational resource [10, 29]. Product and process innovation contributes to renewal processes in firms, as it demands firms to acquire new or reconfigure existing competences and capabilities [9]. [9] builds upon [13]'s definition and describes organizational renewal as

“the building and expansion of organizational competences over time, often involving a change in the organization’s product domain”. Similarly to [9], who states that product innovation is not only influenced by an organizations resources and competences but that this relationship also exists vice-versa, we argue that the relationship between firm identity and firm innovative behavior is reciprocal and interdependent. Thus, a change in a firm’s innovative behavior is likely to have a direct or indirect effect on its organizational identity. In our model (Fig. 1), the traditional (incremental) innovation processes are shown as arrows. Our model shows that these innovation patterns are indifferent or supportive to the formation of an organizational identity, as they can act as one of many potential sources to the iterative process of identity creation, yet they do not challenge or disrupt already imprinted identity beliefs.



**Fig. 1.** Traditional (incremental) innovation and the formation of identity



**Fig. 2.** Digital (disruptive) innovation and the formation of identity

### 3.3 Digital innovation and identity

The quest for sustainable competitive advantage has long been the driving force of both academics and practitioners when investigating firms in the market. The ubiquitous availability of information technology and the widespread digitalization of our society has led to an increase in market balancing speed and created a hyper reactive, highly competitive business environment. Some scholars argue, though not undisputed [21], that sustained competitive advantage may no longer achievable in more and more markets and should therefore not be driving organizational strategies, but organizations should rather strive to be agile to compete better in such times of hypercompetition [8, 22, 30]. The technological advancement of society has thus not only led to an increase in innovation opportunities but at the same requires firms to continuously engage in such radical, disruptive changes in order to survive on the market.

Organizational strategists have long known and underlined the importance of continuous innovation for the success and competitiveness of firms [11, 19]. However, the way organizations innovate has to be adopted to fit these turbulent environments, requiring a shift from traditional, incremental innovation patterns to more radical approaches [9]. Research on digital innovations has demonstrated the possibilities of disruptive innovations, building on newly developed technologies or new business cases for existing technologies [32]. Thus, companies engage in recurring patterns of radical, technology-driven innovation [31].

The role of technological innovation, and how it affects the process of identity formation internal and external to the organization has been investigated in multiple contexts [2, 28]. [2] focuses on the role of enterprise systems implementation on identities and shows that the change in power and roles triggered by the implementation of an ERP system challenges professional identities. [28] proposes the label of identity-challenging technologies to describe technologies that “deviate from the expectations associated with an organization’s identity”. He finds that such technologies are hard to capitalize on, since organizations cannot fully recognize and realize the benefits of technology when blurred by the filter of a challenged identity and because of the difficulty of changing organizational routines that are embedded in or defining for the challenged identity [28].

To account for these dynamics between radical innovation patterns and their influence to organizational identity formation, our model depicts the change in the identity process as triggered by recurring disruptive innovation patterns over time (see Fig. 2). Unlike in situations of traditional (incremental) innovation processes, digital (radical) innovation processes are not indifferent or supportive but disruptive and challenging to the process of identity convergence. Researchers argue that “even seemingly minor shifts from a technological standpoint may challenge the existing organizational identity if, by pursuing the new technology, the organization violates the core features associated with its existing identity” [28]. Moreover, we posit that such recurring disruptions to identity formation hinder the (i) the convergence towards a shared identity and thus (ii) keep the organization from reducing the uncertainty about its identity, as depicted in Fig. 2.

#### **4 Implications, limitations and further research**

In this article we synthesize two research streams within the IS and organization science literature that have recently gained much attention and are likely to be of great interest for scholars in the future, namely organizational identity from a process perspective and the effects of shifting innovation patterns in organizations due to the digitization of society. We propose a conceptual model that demonstrates the disruptive tensions of digital innovations to the process of identity formation in an organization. Our model shows that digital innovation increases the difficulty of companies to convergence towards an organizational identity.

From a process management perspective, unclear organizational identities can lead to issues related to the identification of core and supporting processes. Moreover, digital innovation could force firms to shift IS/IT-processes from the periphery towards the core of a company’s value chain.

Research has found that agile organizations are better prepared to react to changing market demands, especially in hypercompetitive markets, and are therefore more likely to survive and succeed in such markets. Management of digital innovations on process-, product- and business model level is supportive to the agility of an organizations [26]. It has yet to be investigated what role a strong versus weak, broad versus narrow organizational identity plays, in relation to agility. While a broad identity might support

the need for flexibility required by some innovations, it can be hypothesized that a lack of a clear identity may lead to a rather unguided trial and error pattern in product and service offerings.

The paper is limited in several ways. First, we build on the rapidly growing literature base of two adjacent fields that have not yet converged towards mature theories. Thus, future research might invalidate the current knowledge base and our model. Second, and related to the first point, we lack empirical evidence to test and validate our model and the underlying principles.

We conclude therefore with a call for more empirical research into the relationships between identity and digital innovation, particularly from a process research perspective, to allow for insights into the interplay of the different forces that shape growing organizations.

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