

# MANAGING FASHIONABLE ORGANIZING VISIONS: EVIDENCE FROM THE EUROPEAN BLOCKCHAIN SERVICES INFRASTRUCTURE

*Research Paper*

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## **Abstract**

*Grand visions for organizational transformation increasingly build on fashionable information technologies. Organizational leaders may be tempted to adopt these visions due the high degree of legitimacy and mobilization they afford. However, their fashionable nature makes adoption risky. In this paper, we explore how organizations can manage this risk and successfully navigate the adoption of fashionable organizing visions. Specifically, we track how over the last five years the European Blockchain Partnership adopted a self-sovereign identity organizing vision based on blockchain. We find that successful adoption requires dynamic coupling and decoupling between vision and IT – both on a discursive and the material levels. Moreover, it requires effective management of ‘sensegiving’ and ‘sensebreaking’ by the innovation community.*

*Keywords: Blockchain, Fashionable IT, Organizing vision, Self-sovereign identity, Sensemaking.*

## **1 Introduction**

Many IT innovations are accompanied by grand organizing visions (Miranda et al., 2015; Ramiller and Swanson, 2003; Swanson and Ramiller, 1997). These visions are the rhetorical product of an ongoing and cross-organizational discourse (Currie, 2004; Miranda et al., 2015) and manifest “a focal community idea for the application of information technology in organizations” (Swanson and Ramiller, 1997, p. 460). The discourse around organizing visions is often diverse and full of flexibility and ambiguity, which makes it impossible to adopt organizing visions ‘off-the-shelf’ (Swanson and Ramiller, 1997). Instead, they demand adopting organizations to engage in a discursive sensemaking process and craft their own interpretations of the vision – so-called visions-in-use (Miranda et al., 2015) – that fit the organization’s technical, cultural, and political structure (Ansari, 2010; Canato et al., 2013). This sensemaking typically happens through a recursive process of interpretation and implementation (Berente et al., 2011; Roth et al., 2022). Many of these emerging visions-in-use are then looped back into the larger discourse, reciprocally shaping the larger organizing vision and their specific visions-in-use (Miranda et al., 2015; Ramiller and Swanson, 2003). As a result, organizing vision discourses may

become cluttered over time with multiple competing views and visions-in-use (Currie, 2004; Swanson and Ramiller, 1997). This ultimately complicates the adoption and use of organizing visions.

Organizing visions tend to be especially complex when they are constructed around fashionable ITs (Swanson and Ramiller, 2004). A fashionable core technology can impose a bell-shape on the discourse with a single sharp up- and downswing. Moreover, fashionable ITs are often loaded with cultural and political values that may influence the organizing vision (Lichti and Tumasjan, 2022; Roth et al., 2022). Many organizations nevertheless readily adopt organizing visions that involve fashionable IT to benefit from high degrees of legitimacy and mobilization during their up-swing phase as well as purportedly beneficial cultural and political loadings (Swanson and Ramiller, 2004; Wang, 2010). However, it is not clear how organizations can successfully navigate the adoption of such ‘fashionable’ organizing visions. This research thus aims to investigate the process of their organizational sensemaking and materialization. It asks the following research question:

*How can adopting organizations successfully make sense of and materialize fashionable organizing visions?*

To answer this research question, we conduct an inductive longitudinal case study (Yin, 2009). Our case of analysis is the development of the European Blockchain Services Infrastructure (EBSI) by the European Blockchain Partnership (EBP) and the European Commission. In their development of EBSI, the EBP and the European Commission adopted a self-sovereign identity (SSI) organizing vision that was centered around blockchain technology. Three members of our research team were closely involved with the EBP in different functions for close to five years, which offers rich insights into how the EBP made sense of and materialized blockchain-based SSI.

Our analysis provides a more nuanced understanding of the organizational sensemaking of fashionable organizing visions and the complexities that may arise along these processes. Specifically, we find that adopting organizations may experience pronounced discursive and material dissonance between their organizing vision-in-use and the vision’s fashionable core technology. To mitigate this dissonance, they can employ discursive and material processes of ‘coupling’ and ‘decoupling’. Furthermore, we find that the evolution of the larger organizing vision discourse plays a pivotal role in the development of organizing visions-in-use. It can support both sensegiving and sensebreaking, especially when it questions the role of the fashionable technology for the organizing vision. We translate these findings into a tentative recursive process theory for the sensemaking of fashionable organizing visions.

Our paper is structured as follows: The subsequent sections outline the theoretical background of our work and present our case study design. We then present how the EBP made sense of and materialized its organizing vision-in use of blockchain-based SSI. Thereafter, we translate our findings into a tentative recursive process theory and discuss our contributions. Our paper concludes with a summary of our findings, an outline of limitations, and avenues for future work.

## **2 Theoretical Background**

### **2.1 Fashionable Organizing Visions**

Organizing vision theory emerged as a complementary lens to study the diffusion of IT innovation (Currie, 2004; Miranda et al., 2015; Swanson and Ramiller, 1997). In contrast to more traditional theories of economic rationality, it focuses on the role of inter-organizational discourses (Miranda et al., 2015). Organizing visions describe the opportunities for embedding one or multiple core technologies in an organization. That is, they provide a “vision for organizing” around a focal IT (Swanson and Ramiller, 1997). Organizing visions give rise to a shared “social account” that provides a common ground for *interpreting* and *legitimizing* IT innovations and *mobilizing* actions for their realization and application (Currie, 2004; Gorgeon and Swanson, 2011). Some organizing visions target existing business problems, others are “solution[s] in search of a problem” (Miranda et al., 2015).

Organizing visions are often replete with ambiguity and buzzwords. These buzzwords act as a center of gravity for the discourse and allow organizing visions to attract and coordinate a variety of

heterogeneous parties, such as prospective adopters, consulting firms, technology vendors, journalists, or academics (Swanson and Ramiller, 1997; Wang and Swanson, 2007). These parties reciprocally interact, shape, and enrich the organizing vision (Miranda et al., 2015; Wang and Swanson, 2007). In some cases, these interactions make an organizing vision more coherent, in others, they drive diversity and even contradiction (Ramiller and Swanson, 2003; Wang and Swanson, 2007). Organizing visions are thus fluid by nature. Moreover, they have ‘careers’ that are marked by alternating up- and downswings of visibility, prominence, influence, and tenor until they finally fade away – either as a result of institutionalization or abandonment (Currie, 2004; Ramiller and Swanson, 2003).

Coherence and diversity within the organizing vision discourse as well as the tenor of discourse are valuable indicators for how an organizing vision’s career will play out (Miranda et al., 2015; Wang and Swanson, 2007). While diversity allows an organizing vision to attract a larger innovation community, “a lack of coherence will not be tolerated indefinitely” (Swanson and Ramiller, 1997, p. 463). Adopting organizations are a pivotal driver for an organizing vision’s diversity and coherence. They materially engage with the core technology, which often sets boundaries for the organizing vision (Miranda et al., 2022), especially if core technologies are unavailable or poorly defined (Currie, 2004; Swanson and Ramiller, 1997). Moreover, they develop tailored organizing visions-in-use that fit their organizational contexts (Miranda et al., 2015). These visions-in-use support other organizations in their sensemaking efforts and can be decisive for an organizing vision’s ultimate success. While successful visions-in-use additionally legitimize an organizing vision, stories of failure can drive abandonment (Wang and Swanson, 2007). In some cases, however, an organizing vision’s fate is determined not by those who embrace it but by those who do not. If powerful actors refrain from engaging with an organizing vision, an organizing vision’s legitimacy and mobilizing effects can be undermined (Currie, 2004).

Building an organizing vision around a fashionable technology can increase the legitimacy and mobilizing effects of organizing visions (Swanson and Ramiller, 2004). An IT is said to be fashionable when it is surrounded by a “transitory collective belief that an information technology is new, efficient, and at the forefront of practice” (Wang, 2010, p. 66). Like organizing visions, this collective belief is the rhetoric product of a community discourse. Unlike organizing visions, however, it typically follows a well-defined, bell-shaped trajectory, with a sharp up- and downswing (Baskerville and Myers, 2009; Swanson and Ramiller, 2004). Organizing visions with fashionable core technologies tend to inherit this trajectory. They have a very rich and enthusiastic upswing discourse full of unbalanced and at-times unsubstantiated claims and down-swing discourses marked by negative and critical statements (Swanson and Ramiller, 2004; Wang, 2010). Furthermore, the discourse around fashionable IT is often loaded with cultural and political values. These values typically entail specific views of organizing that introduce an additional degree of complexity into fashionable organizing visions (Lichti and Tumasjan, 2022; Roth et al., 2022; Swanson and Ramiller, 2004).

The higher the degree of complexity of an organizing vision, the more important it is for adopting organizations to engage in a process of organizational sensemaking that iterates between interpretation of the organizing vision and implementation of the underlying fashionable IT (Berente et al., 2011; Roth et al., 2022). The exact process, however, remains poorly understood.

## **2.2 Self-Sovereign Identity and the Role of Blockchain**

00/00/0000 00:00:00 Since the invention of the internet, organizations have been trying to develop effective identity management on the web (Sedlmeir et al., 2022). Over time, two dominant models emerged: fragmented and federated identity management (Schlatt et al., 2021). However, limited interoperability and convenience of fragmented and high risks of security and privacy breaches of federated identity management have sparked and legitimized a rethinking of current ways of organizing (Sedlmeir et al., 2022). Thus, a new vision of decentralized or self-sovereign identity (SSI) management emerged (Allen, 2016). The SSI vision is increasingly gaining support by various stakeholders, such as technology vendors, consultancies, prospective adopters from the public and private sector, and even policy makers (Lacity et al., 2023). SSI seeks to enable users to conveniently manage and share their identity data without being dependent on an identity provider (Lacity and Carmel, 2022; Weigl et al.,

2022). In this sense, SSI is commonly interpreted as a digital way of organizing that is comparable to today's physical identity management (Hoess et al., 2022).

The SSI organizing vision builds on three core technologies: digital credentials, digital wallets, and trust infrastructures (Sedlmeir et al., 2021). Digital credentials are cryptographically signed, machine-verifiable, and tamper-resistant digital certificates that attest certain identity claims (Feulner et al., 2022). One of the most popular standards for these certificates is the W3C's verifiable credentials standard (W3C, 2022). The exchange of digital credentials is organized in a bilateral fashion (Lacity et al., 2023). Issuers attest specific identity claims in the form of digital credentials and transfer these credentials to their subjects, who can manage them in a digital wallet (Rieger et al., 2022). When requested, subjects can use their digital wallet to selectively present their credentials or certain attributes in these credentials to a verifier, such as an online service provider (Mühle et al., 2018; Sedlmeir et al., 2022). To verify the presented credentials, verifiers typically make use of (cryptographic) trust infrastructures that provide them with the required information to establish the authenticity and validity of the presented identity information (Lacity et al., 2023; Sedlmeir et al., 2021). While the general SSI idea has been very coherent, it provides a certain degree of rhetorical flexibility concerning the interpretation of self-sovereignty. Furthermore, there is diverse discourse regarding the use of blockchain as trust infrastructures (Hoess et al., 2022; Sedlmeir et al., 2022).

Characterized by stark upswing and downswing phases, blockchain is a fashionable IT that has kept organizations across different sectors on their toes (Beck et al., 2018; Miranda et al., 2022). From a technological point of view, blockchains are distributed transactional databases that are jointly operated by the nodes of a peer-to-peer network (Beck et al., 2018; Rossi et al., 2019). Data entries, so-called transactions, are grouped into blocks, which are cryptographically linked in chronological order. These features provide a high degree of resilience to unauthorized changes and enable a "trusted" state of information without requiring a central trusted third-party (Chanson et al., 2019; Rieger et al., 2019).

Blockchain began its career modestly as a technical backbone for the processing of cryptocurrency transactions (Nakamoto, 2008). However, things changed quickly when it was extended with advanced features, such as flexible programming logic, that enabled various applications beyond the processing of financial transactions (Casino et al., 2019; Lacity, 2022). This broader applicability enabled a veritable blockchain hype from 2016 onwards, with vivid discourses around blockchain's promises to establish a new era of decentralization (Beck et al., 2018; Miranda et al., 2022). The blockchain hype also influenced the discourse around SSI and led to an SSI variant that positioned blockchain as the only sensible core technology for SSI's trust infrastructures (Lacity, 2022; Sedlmeir et al., 2021). However, criticism soon emerged around this positioning of blockchain, which was amplified by the European Commission's development of a competing vision and framework that was independent of blockchain (European Commission, 2023). These developments and the competing variants in the SSI discourse make SSI a particularly interesting candidate for studying the adoption of fashionable organizing visions.

### **3 Research Method**

To explore how adopting organizations can successfully make sense of fashionable organizing visions, we opted for an inductive research design that would allow us to generate new process insights (Eisenhardt, 1989; Sarker et al., 2018). Specifically, we chose to conduct a longitudinal single case study. Case study research is a very fruitful approach for investigating sensemaking processes given their socially embeddedness and contingency on contextual factors, such as the organizational domain and the larger organizing vision discourse (Benbasat et al., 1987; Yin, 2009). A longitudinal design, in turn, allows to examine these processes in-depth and facilitates rich theorizing on how they unfold over time (Yin, 2009).

### 3.1 Case description

In our case study, we investigate the adoption of blockchain-based SSI by the European Blockchain Partnership (EBP). The EBP was founded in April 2018 as a joint initiative of the European Commission and the EU’s member states (plus Liechtenstein and Norway) with the goal of developing a blockchain-based infrastructure – the European Blockchain Services Infrastructure (EBSI) – for delivering cross-border public services.

The EBP is structured and managed through a loose organizational framework. The European Commission assumes responsibility for the coordination of the partnership and the technical development of EBSI. The operation of EBSI, in turn, is distributed across node operators in the participating countries. The ‘EBP technical group’ – a group of technical experts from all participating countries – supports the development of EBSI by providing technical advice. Decisions, in turn, are made by the ‘EBP policy group’, which consists of one delegate from each participating country. These decisions include, among others, the definition of formal governance structures or the endorsement of public services that should inform the development of EBSI. Each of these services has a dedicated working group that develops specifications and defines required interfaces and business applications.

Soon after its inception, the EBP created a working group that developed a blockchain-based SSI vision-in-use and materialized it as the so-called European Self-Sovereign Identity Framework (ESSIF). ESSIF became the dominant vision for EBSI when the EBP decided to focus its piloting efforts on public services related to digital identity management. These services include digital (university) diplomas and a digital European Social Security Pass. EBSI’s digital diploma service received particular traction when the EBP and the European Commission launched a multi-university pilot for digital diplomas in early 2021. This pilot provided funding for prospective adopters, such as universities and public authorities, and technology vendors, such as digital wallet providers, to engage in national piloting.

### 3.2 Data collection

To enable data triangulation and increase the validity of our theorizing, we collected data from three different sources: interviews, participant observations, and documentation. Interviews were our primary source of evidence (Yin, 2009). We conducted a first set of 7 interviews in the fall of 2020 to study the adoption of SSI. These interviews suggested mounting (discursive) tensions from the coupling of blockchain and SSI. Over time and with increasing material dissonances, these tensions dominated EBSI’s adoption of blockchain-based SSI. A later set of interviews revealed how the EBP navigated the sensemaking and materialization of blockchain-based SSI. Specifically, we interviewed 21 partners in the summer and autumn of 2022 to reflect on the EBPS’ management of interdependencies and dissonances between SSI and blockchain.

Our informants included representatives from the European Commission and other organizations involved in EBSI like national and local governments, technology providers, and universities (Table 1). We selected informants from those organizations that were either actively involved in EBSI on a strategic and discursive level; engaged in the implementation of EBSI, ESSIF, and the digital diploma service; or both. We also considered the backgrounds and areas of expertise of interviewees to better understand the evolving vision-in-use as well as its materialization. The selected informants helped us gain a comprehensive view and rich insights into how the EBP made sense of and materialized blockchain-based SSI.

	Number of interviewed experts from organizations involved in the EBP			
	European Commission	National and local government	EBP technology partner	Universities
Wave 1	1	3	3	-
Wave 2	5	8	5	3

Table 1. Overview of interviewees.

For our interviews, we employed a semi-structured design (Schultze and Avital, 2011). Each of our interviews followed a logical sequence. We first asked our informants about their reasons to engage with the EBP and its blockchain-based SSI organizing vision. This also included a short discussion about their initial expectations of blockchain-based SSI. Interviewees then gave their opinion on the EBP’s emerging vision-in-use. Moreover, we asked interviewees how they perceived the effects of implementation. Our last (set of) questions encouraged interviewees to reflect on how their understanding of the relationship between blockchain and SSI evolved over time. We audio-recorded each of the interviews and additionally transcribed them to support our data analysis. The interviews had an average duration of 56 minutes.

We complemented these interviews with participant observations. Three authors of this work were actively involved with EBSI in different roles and regularly attended the different working groups involved in EBP’s sensemaking of blockchain-based SSI. More specifically, the second and fourth author of this work started to engage with the EBP in October 2018. Both served as national representatives for EBP’s technical working group and occasionally attended meetings of the ESSIF and policy working groups. From March 2021 to March 2023, both the second and fourth author engaged in one of the national projects for piloting digital diplomas based on EBSI and ESSIF. The first author of this work joined this national project in November 2021. When joining this project, the first author also started to regularly participate in the technical, policy, and ESSIF working group and the negotiation of the national strategy regarding EBSI and SSI. To make these observations available for later analysis, the observing authors took notes and collected presentations and protocols. In addition, we gathered internal and publicly available documents (Table 2) (Eisenhardt et al., 2016; Yin, 2009). Overall, our active involvement gave us rich first-hand insights into how the EBP, and its members made sense of and implemented blockchain-based SSI. To ensure a balanced analysis and objectivity, we added two co-authors to the team who have not been involved with the EBP (Gioia and Chittipeddi, 1991).

	<b>Types of documents</b>	<b>Total number of pages</b>
<b>Internal documents</b>	Internal presentations, Legal assessments, Internal project reports, Technical documentation	210+ pages
<b>Public documents</b>	Blog posts & other marketing material, Press releases, Public presentations, Public reports	160+ pages

*Table 2. Overview of Secondary Evidence.*

### **3.3 Data analysis**

Following our data collection, we retraced the evolution of the EBP’s engagement with blockchain-based SSI and its materialization. Specifically, we performed a two-stage coding process to analyse the collected data. For open coding, we assigned initial codes to all statements we considered relevant for our research (Corbin and Strauss, 1990; Saldaña, 2013). Our early theme discovery focused on topics such as the evolution of ESSIF, the emergence of initially supportive and later discouraging discourses around blockchain-based SSI, discussions on the meaning of SSI for EBSI, and approaches to the technical integration of SSI with EBSI. Based on the identified themes, we performed a second, iterative process of axial coding. This helped us to refine our codes and aggregate synonymous codes into overarching categories. Moreover, we specified the dimensions and properties of each category, and analysed our codes and categories regarding interdependencies (Corbin and Strauss, 1990; Saldaña, 2013). The emerging constructs focused on the derivation of a specific vision-in-use, the interplay between discursive and material engagement, how material coupling and decoupling led to the de- and reframing of the vision-in-use, and how the larger innovation community affected these sensemaking processes through sensegiving and sensebreaking. The process yielded first theoretical explanations which we refined by iterating between data and theory (Eisenhardt et al., 2016; Gibbert et al., 2008; Yin, 2009). Overall, our coding process produced more than 1900 codes, which we managed using the MAXQDA software.

The coding was performed by the first author of this work, who iterated the identified codes and theoretical insights in close collaboration with the second author. These two authors regularly discussed emerging themes with the third author to enhance objectivity (Dubé and Paré, 2003; Gibbert et al., 2008). Throughout the axial coding process, we triangulated our different sources of evidence to enhance the construct validity and generalizability of our research (Dubé and Paré, 2003; Eisenhardt et al., 2016).

## 4 Emerging Theoretical Framework

The EBP's sensemaking and materialization of blockchain-based SSI can be bracketed into three phases, each with a different emphasis. While sensegiving by the innovation community served as a catalyst for *adopting and materializing blockchain-based SSI* in a first phase, challenges with further materialization resulted in a recursive process of material coupling and decoupling of SSI and blockchain in a second phase. These efforts helped the EBP to better understand and frame the interplay between SSI and blockchain. In a third phase, the revision of the European Union's regulation on electronic identification, authentication and trust services (eIDAS) led to sensebreaking and inevitably demanded *navigating a competing organizing vision*.

### 4.1 Adopting and materializing a fashionable organizing vision

In April 2018, the EU's member states, Liechtenstein, and Norway formed the EBP to facilitate the delivery of cross-border public services with a shared blockchain infrastructure. The EBP's first activities centered around the joint identification of relevant public services that should inform the development of a European Blockchain Services Infrastructure.

For the selection of these services, political fit, a sound legal basis, and the prospect that blockchain can improve current practice were important guiding criteria. While investigating potential services, the EBP became aware of the organizing vision of blockchain-based SSI, which had become fashionable in the internet identity community. This organizing vision resonated well with some of the EBP members, who still struggled with the largely unsuccessful implementation of the first version of the eIDAS regulation. To them, the organizing vision of SSI was a promising way forward "*to overcome limitations*" and "*initiate a change in the eIDAS system*." It provided a common interpretation for rethinking current approaches of digital identity management. They also saw the potential of blockchain-based SSI for a privacy-preserving, self-determined identity management for European citizens. Moreover, the fashionable character of blockchain-based SSI granted the EBP a legitimate organizing vision for EBSI and acted as a "*catalyst*" for mobilizing required stakeholders. In the words of one of the EBP's technology providers and one EBP member state representative:

*"I think this really goes also back to this [internet identity] community that wants to solve identity in the most user-centric way. And now, with blockchain [...], they found a way of giving people actual ownership, whatever that means, over their identities."*

*"We really believe[d] that the ledgers and the network supported by a blockchain can play a very important role to protect the privacy of citizens and to enable the self-sovereign identity of the user."*

Eventually, the EBP decided to adopt the fashionable organizing vision of blockchain-based SSI and established a working group for the development and materialization of a more specific vision-in-use – the European Self-Sovereign Identity Framework in April 2019. This ESSIF working group should inform EBSI services focused on the exchange of identity-related information and the use of digital credentials. Soon, the ESSIF working group began to explore the interplay of blockchain and SSI. The group collected requirements and developed guidelines for implementing SSI features. Moreover, it investigated opportunities to align ESSIF with the requirements outlined by the eIDAS regulation. The ESSIF working group was "*enthusiastic about blockchain as a technology*". It perceived blockchain and SSI to be highly resonant and foresaw a brilliant future for blockchain-based SSI. One year later, the working group materialized a first version of ESSIF in the form of a conceptual architecture. This materialization specified EBSI as a trusted infrastructure for the exchange of digital credentials. From a more technical perspective, it defined EBSI as a storage layer for digital credentials and related

information. One representative from the European Commission and one national government representative explain this initial materialization:

*“We thought that aside of using blockchain for storing information about accreditation organizations, which accredits the issuers to issue specific credentials, we can also store some additional information such as decentralized digital identifiers of natural persons.*

*In the ESSIF solution, there are decentralized digital identifiers [...] and verifiable credentials anchored [on the blockchain]. That's currently the ESSIF model.*

## 4.2 Addressing materialization challenges through coupling and decoupling

In early 2021, the EBP started to pilot ESSIF and engage more materially with blockchain-based SSI by piloting the digital diploma service. The pilot aimed to assess EBSI's technical viability and the added value of the digital diploma service. The EBP also used the pilot to determine ESSIF's effects on citizens' privacy and its compliance with the EU's General Data Protection Regulation (GDPR). As piloting proceeded, ESSIF increasingly became a bone of contention as it dawned on the EBP that the idea of a privacy-preserving SSI framework and the intended use of blockchain as a core technology were difficult to reconcile. This dissonance occurred in two stages, to which the EBP responded with material decoupling.

The first dissonance emerged when the ESSIF working group developed specifications for the information that should be stored on EBSI. They informed their specifications by examining other initiatives and their visions-in-use. The ensuing sensemaking of the various visions-in-use led the ESSIF working group to realize that blockchain is not relevant for all information. They understood that credentials do not need to be stored on a blockchain to ensure their integrity and make them verifiable. On the contrary, the planned storage of credentials – albeit in encrypted form or as a hash of the credential – may contradict with one of SSI's key principles, namely the protection of users' privacy. One EBP member state representative reflects:

*“We did consider saving a hash of the [credential] on the blockchain. But we soon discarded this idea for many reasons. One of them is that well [...] who knows if in 20 years someone could obtain the original information from a hash. [...] So, we decided to remove that information from the blockchain”*

To mitigate this dissonance, the EBP revised its conceptual architecture so that digital credentials would only be stored in the holder's digital wallet, but not on EBSI. In other words, the EBP approached dissonance reduction by materially decoupling the storage of digital credentials, a pivotal SSI component, from EBSI. At the same time, the ESSIF working group promoted material coupling of SSI and blockchain where they perceived high resonance between both. This led to the implementation of services that help store decentralized digital identifiers of credential issuers and holders on EBSI. However, the storage of holder identifiers was highly controversial due to the resulting privacy implications. Although some members of the EBP, including representatives from our research team, emphasized these concerns, the ESSIF working group, nonetheless, decided to implement both services. They thought storing identifiers of issuers and holders on EBSI is essential to facilitate the cryptographic verifiability of credentials and assure a binding between digital credentials and their holders. In the words of one of the EBP's technology providers:

*So, the idea of [the EBP] is to store DIDs that identify natural persons on a blockchain. But there's still the question, if that is even a good idea or if that is already too much. There's a really large group of people who believe that even that is already too much to be stored on a public ledger.”*

As piloting progressed, the EBP could successfully demonstrate EBSI's technical feasibility and the added value of its digital diploma service. However, a few months later, in February 2022, the results of an assessment related to EBSI's compliance with the EU's GDPR introduced a more critical perspective and further dissonances concerning blockchain-based SSI. The GDPR assessment concluded that a natural person's decentralized identifiers constitute personally identifiable information and must not be stored on a blockchain. To comply with GDPR requirements, the EBP had to remodel ESSIF and removed the storage of natural persons' decentralized identifiers from EBSI. In effect, the



EBP had to decouple SSI and blockchain even further to mitigate dissonance between blockchain and SSI, so that *“the blockchain layer was becoming thinner and thinner. Much more things are [now] happening outside the blockchain network because of privacy issues.”* The new ESSIF featured EBSI only as a registry for trusted issuer information. One representative from the European Commission and one technology provider recount:

*“We went through a long, long, long battle with the data protection officers and lawyers and policymakers. And we’ve understood if we would allow to store the decentralized identifiers of natural persons on the ledger, on EBSI, the EBSI service wouldn’t be GDPR-compliant. So, our brave architects and masterminds found out that, we don’t really need to store it on the ledger. We can keep it on the wallet side, and that’s the new version of conformance.”*

*“Over time, the vision that you can use blockchain for digital identity has certainly diminished. It still has its legitimacy, but it is significantly smaller than at the beginning.”*

These material changes inevitably raised discursive dissonances with the vision-in-use originally propagated by the EBP. The European Commission thus launched a marketing campaign to disseminate a reframed vision-in-use that would support the EBP members’ sensemaking. This marketing campaign focused on giving sense of the use and benefits of EBSI – as a trusted issuer registry – for the exchange verification of digital (diploma) credentials.

### 4.3 Navigating a competing vision

In parallel to the EBP’s efforts to make sense of and materialize blockchain-based SSI, the European Commission announced the revision of its eIDAS regulation in October 2020. Eight months later, in June 2021, the European Commission disclosed more details on their vision for eIDAS v2. Although not officially coined “SSI”, this vision for eIDAS v2 employed various ideas and concepts of SSI. Most notably, the European Commission emphasized a citizen-centric digital identity management based on digital identity wallets, which enables citizens to store and control their digital credentials.

Yet, the released details lacked information regarding a core technology for eIDAS v2’s trust infrastructure. This raised hopes but also caused uncertainties regarding EBSI’s and ESSIF’s future role in digital identity management in Europe. Some members of the EBP clearly viewed EBSI and ESSIF as core elements of eIDAS v2, as one EBP representative from the European Commission points out:

*“If anybody that is interested in blockchain would read this, one would see blockchain written everywhere. It’s not said blockchain. It’s not. They don’t say decentralized ID the way we do, but the way it’s phrased seems to be hinting at that. This is a possible answer to what they want to do.”*

Other EBP members, however, sensed resentment around blockchain-based SSI among members of the eIDAS expert groups. Specifically, these groups considered blockchain as less mature, secure, and privacy-preserving than the centralized trust infrastructures already in place for eIDAS v1. These concerns were fueled by the failed launch of a blockchain-based SSI application for Germany’s mobile driving license in September 2021. A national EBP representative and an EBSI adopter highlight:

*“I would say that especially the people that created eIDAS are not all positive about blockchain [...] The IT people who really developed it, they can show that there is a system that is working. They are not necessarily convinced why we would need something new.”*

*“The recognition has pretty much backfired with the failed launch of Germany’s mobile driving licence, which was massively criticized.”*

As the eIDAS revision moved through the EU’s legislative process, uncertainties regarding EBSI and ESSIF further increased. In February 2022, the European Commission published the first outline of the eIDAS v2 reference architecture framework to materialize its vision. However, details regarding the core technology for the underlying trust infrastructure were still missing. Instead, the European Commission emphasized that the regulation will be technology neutral, leaving the EBP with hopes but also uncertainties. These uncertainties and divided opinions about EBSI’s and ESSIF’s fit with the new regulation provoked a sensebreaking and destruction of the EBP’s understanding of blockchain-based SSI. The EBP also perceived that its vision of blockchain-based SSI had lost its legitimacy with the

emergence of a competing vision that will be legally mandated. One national EBP representative and one representative from the European Commission explain:

*“Do I need a blockchain for a digital identity? [...] The eIDAS revision has given a lot of space to this discussion. Because there is a clear will to break away from [blockchain] and the revision is also supposed to be technology-neutral, [...], there is no further talk about blockchain.”*

*“The situation was much more comfortable for EBSI to develop ESSIF before the proposal for the new eIDAS regulation. [...] Because we were investigating the solution of the future, whereas now we are in a situation where it seems that we are competing with a solution which is much more legitimate.”*

The EBP’s broken sense is currently triggering feverish attempts to find new sense. At this stage, the EBP is questioning blockchain-based SSI altogether and SSI. Some even perceive SSI as a “*child that has outgrown its parent [blockchain]’s home.*” To account for these concerns, the EBP has begun to actively reframe ESSIF and drop all mentioning of SSI in favor of a less fashionable framework centered around digital credentials. This reframing better reflects EBSI’s role as a registry for meta-information that is required for verifying digital credentials. Furthermore, the EBP attempts to reduce uncertainties by strengthening EBSI’s portfolio of services that require verifiability of non-personal identity-related data. This not only includes the further development of a Social Security Pass service, but also experimentation with a new, much broader organizing vision. In particular, the EBP now positions EBSI as a trusted registry for metadata required to verify information, such as verifiable credentials. Two representatives from the European Commission explain:

*“It’s no more appropriate to claim that we are developing a new framework for self-sovereign identity. So, for me at least, the message is that we continue to work on our concept of the exchange of verifiable credentials.”*

*“At the end, EBSI is ultimately used as a source of trust. That’s the main purpose of blockchain: to build resilient lists that allow everyone from everywhere to get the required data to verify some other information.”*

## 5 Discussion

Organizations interested in IT innovation are often tempted to adopt organizing visions built on a fashionable IT to profit from the IT fashion’s legitimation and mobilization benefits (Currie, 2004; Swanson and Ramiller, 2004). Yet, these decisions are not without risk. Fashionable organizing visions can be full of unbalanced claims and poorly align with the underlying fashionable IT, which complicates the adoption of both the organizing vision and the IT (Roth et al., 2022; Swanson and Ramiller, 1997). Our inductive single case study sheds light on the resulting complexities and how adopting organizations can nevertheless successfully navigate the sensemaking and materialization of the fashionable organizing vision.

### 5.1 Tentative Process Model

Our core contribution is a tentative recursive process model (Cloutier and Langley, 2020) of the sensemaking of fashionable organizing visions (Figure 1). The model builds on theories about the adoption of organizing visions (Miranda et al., 2015; Swanson and Ramiller, 1997) and fashionable ITs (Baskerville and Myers, 2009; Roth et al., 2022; Wang, 2010).

The coupling of organizing visions with fashionable ITs serves as a starting point for our theoretical model. Adopting organizations often buy into coupling narratives that emphasize the fit of organizing visions and IT fashions and establish their own fashionable visions-in use. Through recursive attempts to make sense of these organizing visions-in-use, adopting organizations may discover resonant and dissonant elements between the organizing vision and the underlying fashionable ITs (Currie, 2004; Roth et al., 2022; Swanson and Ramiller, 1997). Further materialization efforts help adopting organizations to substantiate these resonances and dissonances and better understand the fit between the organizing vision and fashionable IT as well as the vision-in-use’s fit with the organizational context.

To reinforce resonance and to mitigate dissonance, adopting organizations can undergo cyclical processes of *material coupling* and *material decoupling*. More specifically, adopting organizations can enhance resonance by selectively implementing resonant elements with the fashionable IT. We refer to this practice as *material coupling*. They can also reduce dissonance by not implementing certain elements emphasized in the vision-in-use or by implementing those elements with non-fashionable ITs. We term this practice *material decoupling*. These implementation efforts can guide the de- and reframing of fashionable visions-in-use. Specifically, adopting organizations can apply *discursive coupling* and *decoupling* to emphasize fit between the vision-in-use (discourse) and the material implementation (Roth et al., 2022). These revised visions-in-use may serve as a basis for subsequent sensemaking cycles.

Along this cyclical and re-recursive sensemaking and materialization process, the larger organizing vision discourse also evolves (Wang and Ramiller, 2009). This can happen when the discourse community's knowledge on the role of the underlying fashionable ITs increases (Miranda et al., 2022), or when powerful actors step into the discourse and promote specific views. The evolution of the larger organizing vision discourse continuously influences organizational sensemaking and materialization. Once the underlying IT goes out of fashion, the discourse may become laden with decoupling narratives and ultimately dominated by a variant of the organizing vision that does no longer include the fashionable IT. This evolution can destruct the adopting organization's understanding of the interplay between the organizing vision and its fashionable core technology. The risk of such a turn of events is especially high when decoupling narratives are promoted by powerful actors (Nielsen et al., 2014). Their sensebreaking can eventually create a sense void that is hard to fill (Maitlis and Christianson, 2014; Pratt, 2000).

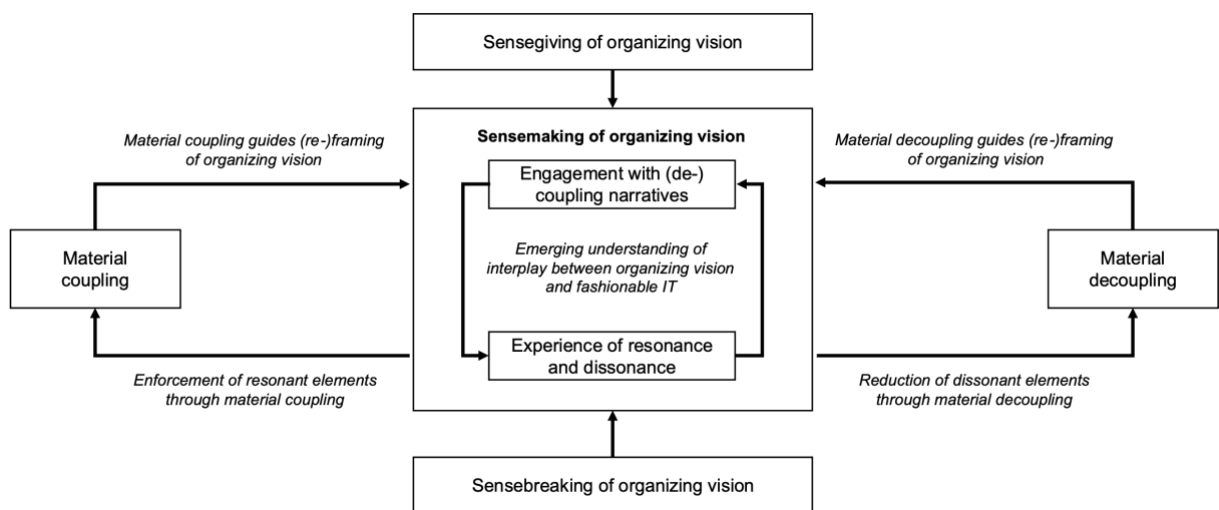


Figure 1. Process model for the sensemaking and materialization of fashionable organizing visions.

## 5.2 Contribution to Theory

Our theoretical process model contributes to the literature on organizing visions by providing a more nuanced understanding of how adopting organizations make sense of and materialize fashionable organizing visions. We find that the adoption of fashionable organizing visions engenders complex sensemaking and materialization processes – especially when adopting organizations experience dissonance between the organizing vision and the fashionable IT. Adopting organizations can mitigate this dissonance through discursive and material decoupling. In turn, they can amplify resonant elements through discursive and material coupling.

Moreover, our research offers empirical support that material engagement plays a pivotal role in how adopting organizations frame (fashionable) visions-in-use. In line with Miranda et

al. (2022) and Swanson and Ramiller (1997), our findings suggest that materialization forces a critical reflection on the organizing visions and the capabilities of fashionable ITs. More specifically, our research provides corroborative evidence that materialization efforts may uncover material constraints of the fashionable core technology. They may even require adopting organizations to de- or reframe their visions-in-use and, thereby, set boundaries that constrain the larger organizing vision discourses (Currie, 2004; Miranda et al., 2022; Swanson and Ramiller, 1997).

What is more, our research provides an improved understanding on the interplay between organizing visions and derived visions-in-use. In line with Miranda et al. (2015), our findings illustrate that adopting organizations establish more specific visions-in-use through recursive efforts of interpretation and materialization. What we unpack in this work is that these recursive processes may not only support sensemaking but can also have a sensebreaking effect. Specifically, we find that when the larger discourse shifts and drops a particular core technology, adopting organizations that built their visions-in-use around the dropped core technology will be unmoored.

Lastly, our research contributes to the literature on blockchain and SSI by providing a more nuanced understanding of how the discourse of blockchain-based SSI evolved over time. Our research offers empirical support that the fashion around blockchain served as an enabler for the diffusion of the SSI organizing vision (Mühle et al., 2018; Sedlmeir et al., 2022). Moreover and in line with the more technical research on SSI, our findings illustrate that a strong material coupling of both technologies is not necessarily required (Feulner et al., 2022; Hoess et al., 2022). On the contrary, we find that a strong association with blockchain may even have become undesirable now that the blockchain hype has died down and risks encumbering the adoption of SSI.

### **5.3 Practical Implications**

Our findings are also relevant beyond research. They provide practitioners with a more nuanced understanding of the interplay between organizing visions and fashionable ITs and the management of such fashionable organizing visions. Our findings suggest that fashionable organizing visions can be a tough nut to crack. Even when they appear to fit an adopting organization's legitimization and business needs perfectly in the beginning, they may turn out to be dangerous affairs. Sticking with fashionable organizing visions can lead to serious technical debt down the road.

In particular, practitioners should be aware that the understanding of fashionable organizing visions is typically limited at the beginning, and dissonances are very likely to emerge only at a later stage through materialization efforts. Undeterred practitioners should thus undertake first, small-scale materialization efforts early. These efforts may reveal resonance and dissonances between the organizing vision and the fashionable IT and provide essential guidance for the way forward, be it a modified organizing vision-in use or abandonment.

Furthermore, practitioners should keep in mind that fashionable organizing visions will enter a downswing at a later point. During this downswing, competing visions that are independent of the fashionable IT may start to dominate the discourse. If powerful actors promote one of these competing visions, fashionable visions-in-use might lose their legitimization and mobilization properties.

Consulting not only with experts within the innovation community but also with those from outside may help practitioners to gain a more balanced perspective and to avoid costly failures. This is where IS researchers may play a pivotal role since they can provide more neutral reflections and informed knowledge on the interplay of organizing visions and fashionable ITs (Baskerville and Myers, 2009).

### **5.4 Boundary Conditions**

Boundary conditions help to understand a theoretical model's descriptive power. Our process model is subject to three such conditions. The first boundary condition for our theoretical model is the effect of an adopting organization's vision-in-use on the overall (fashionable) organizing vision. While our model describes that materialization efforts trigger de- and reframing of visions-in-use, it cannot predict how these adaptations will impact the overarching (fashionable) organizing vision discourse.

A second boundary condition relates to the entry and ending conditions of our recursive process model. Our theorizing builds on a project that adopted the fashionable IT first and later complemented it with a fashionable organizing vision. Thus, our model cannot predict whether adopting organizations that buy into a fashionable organizing vision will necessarily move beyond informational engagement and really implement the underlying fashionable IT. Moreover, as we investigated the sensemaking and materialization of a fashionable organizing vision during its inception, our research cannot predict the ending conditions for the sensemaking of fashionable organizing visions. In that sense, it cannot predict whether organizations would favor the institutionalization of visions-in-use over the institutionalization of fashionable ITs when changes in the larger discourse force a decoupling.

The third boundary condition concerns the transferability of our results to different combinations of organizing visions and fashionable ITs. We develop our process theory from a case study on the adoption of blockchain-based SSI. Our model may thus not be able to predict how the adoption of other fashionable organizing visions will unfold. However, looking at recent fashionable organizing visions, such as generative artificial intelligence (AI) and the underlying large language models (core technologies), we see many parallels with our case. As with blockchain-based SSI and prior AI organizing visions, engagement with generative AI and implementation of large language models soon uncovered their technical constraints (Dwivedi et al., 2023). Organizations will have to navigate the resulting dissonance between the grand and unbalanced vision of a generative AI and the technical capabilities of large language models. Moreover, the generative AI hype will likely fade away at some point in the future and be supplanted by a new one. As with prior AI hypes, organizations may then need to refine their organizing visions-in-use of generative AI by specifying what type of work generative AI may take over (Berente et al., 2021). This refinement, in turn, may also open a window for incorporating new core technologies. In effect, we see substantial ground to surmise that our findings are also generalizable to other fashionable organizing visions.

## **6 Conclusion and Limitations**

Fashionable ITs can give organizing visions for IT innovations more legitimacy, which is why adopting organizations increasingly adopt organizing visions with a fashionable core technology. However, the bell-curved shape of IT fashions and their cultural and political loadings may result in significant complexities and costs for adopting organizations. This paper sheds light on how these complexities can play out and how organizations can successfully navigate the adoption of such fashionable organizing visions. Using an inductive single case study on the development of EBSI, we develop a recursive process model that unpacks how organizational sensemaking and materialization can support the adoption process. Moreover, our process model explains how organizations can amplify fit between their visions-in-use and the underlying fashionable ITs. We find that adopting organizations may do so through opposing cycles of material and discursive coupling and decoupling.

As the research design of a single case study naturally comes with questions of generalizability, we see room for further exploration in future research. Further studies on blockchain-based SSI in may help to account for potential effects of our case context. Besides, studying other fashionable organizing visions could provide further insights into the transferability of our findings to different combinations of organizing visions and fashionable ITs.

## **Acknowledgments**

This research was funded in part by: Luxembourg's Ministry for Digitalisation; the Luxembourg National Research Fund (FNR) grant reference 14783405; FNR and PayPal, PEARL grant reference 13342933/Gilbert Fridgen; and the European Union (EU) within its Horizon 2020 programme, project MDOT (Medical Device Obligations Taskforce) grant agreement 814654. For the purpose of open access, the author has applied a Creative Commons Attribution 4.0 International (CC BY 4.0) license to any Author Accepted Manuscript version arising from this submission.

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