

RESEARCH

Legitimizing the Smart City Idea: The Case of the #Smarthalle

Ruth Frischknecht, Kuno Schedler and Ali A. Guenduez

University of St. Gallen, CH

Corresponding author: Ruth Frischknecht (ruth.frischknecht@unisg.ch)

Many cities are pursuing the goal of becoming a smart city which has far-reaching consequences for the city and its stakeholders. A successful implementation of these smart city initiatives requires a broad legitimacy base. This poses a challenge for cities as creating legitimacy for new ideas is by no means easy. In this article, we explore how a city administration tries to influence the legitimacy of an idea like that of a smart city. Based on a case study about the #Smarthalle, a project of the city of St. Gallen different legitimization strategies are presented. The results show that legitimization efforts are primarily directed at citizens and administrative staff. The analysis reveals that creating a vision, making the idea tangible and mobilizing allies are key strategies for legitimizing smart city initiatives and related projects. Consequently, the #Smarthalle was designed as a place to exchange ideas, experience smart technologies and directly connect the administration and the citizens.

Keywords: Smart City; Legitimacy; Legitimation Strategies; Public Administration; Citizens

Immer mehr Städte verfolgen das Ziel zu einer Smart City zu werden, was weitreichende Folgen für die Stadt und ihre Anspruchsgruppen hat. Damit diese Smart City Projekte erfolgreich umgesetzt werden können, bedürfen sie der Legitimation möglichst vieler und unterschiedlicher Anspruchsgruppen. Dies stellt insbesondere eine Herausforderung für die Stadtverwaltung dar, weil es keineswegs einfach ist, neue Ideen zu legitimieren. Der vorliegende Artikel geht der Frage nach, wie eine Stadtverwaltung Einfluss auf die Legitimität einer Idee wie jene der Smart City nehmen kann. Anhand einer Fallstudie über die #Smarthalle, einem Projekt der Stadt St. Gallen, werden verschiedene Legitimierungsstrategien vorgestellt. Die Ergebnisse zeigen, dass sich die Legitimationsbemühungen primär an Bürgerinnen und Bürger sowie Verwaltungsmitarbeiterinnen und Verwaltungsmitarbeiter richten. Aus der Analyse geht zudem hervor, dass die Schaffung der Vision, die Erlebarmachung der Idee und die Mobilisierung von Verbündeten Schlüsselstrategien sind, um die Idee der Smart City zu legitimieren. Die #Smarthalle war demnach als ein Ort konzipiert, um Ideen auszutauschen, smarte Technologien zu erleben und die Verwaltung und die Stadtbevölkerung direkt miteinander zu verbinden.

Schlagworte: Smart City; Legitimität; Legitimationsstrategien; Öffentliche Verwaltung; Bürger

De nombreuses villes ont pour objectif de devenir une Smart City, ce qui a des conséquences importantes pour la ville et ses acteurs. Une certaine légitimité est requise afin d'assurer une mise en œuvre réussie des initiatives en lien avec la Smart City. Cela représente un défi considérable pour les villes, car il est difficile de légitimer de nouvelles idées. Dans cet article, nous examinons comment une administration municipale tente d'influencer la légitimité du concept de Smart City. Différentes stratégies de légitimation sont présentées dans le cadre d'une étude de cas concernant la #Smarthalle, un projet de la ville de Saint-Gall. Les résultats de cette étude montrent que les efforts de légitimation sont principalement dirigés vers les citoyens et le personnel administratif. Cette analyse révèle que la création d'une vision, la

clarification du concept de Smart City, ainsi que la mobilisation d'alliés sont des stratégies clés afin légitimer ces initiatives et ces projets. Par conséquent, la #Smarthalle a été conçue comme un lieu d'échange d'idées, d'expérimentation de technologies intelligentes et de mise en relation directe entre l'administration de la ville et ses citoyens.

Mots-clés: Ville intelligente; Légitimité; Stratégies de légitimation; Administration publique; Citoyens

1. Introduction

The smart city idea has found its way into public administration, following the wave of digitalization, data and sustainability technologies (Mahizhnan 1999). The term "smart city" describes the idea of more sustainable and socially connected cities that foster innovation (Kitchin 2014). This goal is achieved by not only applying technologies (Albino, Berardi & Dangelico 2015) but by also relying on smart people and smart governance (Nam & Pardo 2011). Cities and communities all over the world have put smart city initiatives on their agendas (Caragliu, Del Bo & Nijkamp 2011; Gasco-Hernandez 2018; Lee, Hancock & Hu 2014). For cities to harness the potential of these initiatives, they must secure the support of their stakeholders as many projects are funded based on political decisions. In other words, these initiatives require legitimacy. Legitimacy is commonly understood as "... a 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: 574). Accordingly, gaining legitimacy for the idea of the smart city means that the related initiatives and projects are seen as desirable, right and appropriate.

The sources of legitimacy, however, may differ significantly depending on a number of factors. Legitimacy can be rooted in power relations (Gordon, Kornberger & Clegg 2009), formalized norms such as laws (Polzer, Meyer, Höllerer & Seiwald 2016), or socio-political support from key stakeholders (Suchman 1995). Therefore, convincing citizens, politicians, and public administration officials of their relevance and usefulness is a challenge many cities face, not least to secure funding and cooperation. Gasco-Hernandez (2018) emphasized that in smart city projects, convincing key stakeholders is as important as thoroughly managing implementation. However, little is known about how cities can convince their stakeholders of their smart city initiatives or, put differently, how they can influence legitimacy judgements in this specific context. This paper thus addresses this question and asks: *How do cities create legitimacy for their smart city ideas?*

We address this research question through a descriptive case study describing the "#Smarthalle" project in the city of St. Gallen, Switzerland. We explore how the city of St. Gallen sought to create legitimacy for its efforts. We use a variety of data to gain deeper insights: multiple expert interviews, participant observations, field notes, personal communications, official and internal documents, and media coverage. In the following, we first discuss the empirical context of the #Smarthalle project and then explore its role in creating legitimacy. Our analysis shows that the city of St. Gallen mainly relied on three strategies for creating legitimacy: first, to create a vision that described a desirable city of the future; second, to increase understanding of the idea by making it tangible; and third, to create support by mobilizing allies to adopt the idea. The results of this case study contribute to a deeper understanding of how administrative actors create legitimacy in a smart city context. Specifically, this research suggests strategies for legitimizing smart city projects and sheds light on challenges cities face when implementing smart city projects.

2. Theoretical background

2.1. Creating legitimacy

Creating and sustaining legitimacy is a key issue for organizations in their organizational field (Meyer & Rowan 1977). Without legitimacy, organizations lose access to resources and credibility (Deephouse & Suchman 2008). Starting at a societal macro-level, early institutionalists defined legitimacy as the "basic acceptance of the more generalized values of the superordinate system" (Parsons 1956: 67) or the degree of cultural support for an organization (Meyer & Scott 1983). As the focus shifted to the meso-level, researchers looked at actions taken by organizational actors in relation to their organizational fields consisting of various and diverse actors (DiMaggio & Powell 1983). Lately, researchers have included micro-level legitimization processes as the focus now lies on individuals as promoters and sources of legitimacy (Deephouse et al. 2017). From any of these perspectives, legitimacy is not possessed by individuals or organizations, but is instead a judgment formed by individuals or other entities (Bitektine & Haack 2015).

This suggests that in the legitimacy process, at least two entities are involved: one striving for legitimacy and the other either granting or denying it.

Legitimacy is usually granted with a normative aspect, as when an idea already fits in with existing values and norms. In Suchman's (1995) terms, this aspect of legitimacy recognizes an idea as *desirable*, while Meyer and Scott (1983) highlight a cognitive aspect in which legitimate action needs to be *understandable*. This is, observers of this action have to be able to connect it to a repertoire of existing actions, which allows for meaningful interpretation. Hargadon and Douglas (2001), for example, argued that new and innovative ideas should be connected to already existing ones: Only if an idea is connectable will its target audience understand and adopt it. An idea gains legitimacy if it either meets the expectations from the field or if the actors in the field can be convinced to support the idea (i.e., if they change their expectations so that they are compatible with the idea) (Cloutier et al. 2016). The neo-institutionalist theory of organization typically analyzes the relationship of the organization to its organizational field (Thornton, Ocasio & Lounsbury 2012). However, for an idea to be successfully implemented within an organization, internal actors must also be mobilized (Meyer & Höllerer 2010; Schedler & Grand 2016). Thus, the addressees of actions designed to grant legitimacy can be outside and inside an organization.

Given the importance of legitimacy, organizations often seek to influence these judgments on the micro and macro level (Bitektine & Haack 2015). In order to gain legitimacy, actors construct narratives and stories to convince others to support their ideas (Aldrich & Fiol 1994; David, Sine & Haveman 2012; Lounsbury & Glynn 2001). They do so by providing collective action frames that contain both a problem's definition (often also identifying who or what is responsible) and solution (Duygan, Stauffacher & Meylan 2019; Hardy & Maguire 2008), together creating a vision (Battilana, Leca & Boxenbaum 2009). To gain legitimacy, actors sometimes choose two opposite ways: They either translate their idea in such a way that it fits the expectations of others (Sahlin & Wedlin 2008), or they try to influence the addressees' perception such that they accept the idea (Smets & Jarzabkowski 2013). As ideas rarely travel due to a single individual's action within an organization (Czarniawska & Joerges 1996), those striving for legitimacy often seek to form alliances when pursuing success (Duygan et al., 2019; Hardy & Maguire 2008). For example, van Oers, Boon and Moors (2018) explained that non-profit organizations gain legitimacy by gathering groups of supporters around themselves, thereby creating social capital.

As shown, organizations are not able to directly create legitimacy on their own. However, with applying strategies such as mobilizing allies or creating a vision, organizations can influence legitimacy processes. Following this, the present research describes an intervention in the smart city context designed to initiate such legitimization processes.

2.2. Legitimacy in Smart Cities

Legitimacy has been a major issue in a government context for decades. Weber categorized legitimacy as a reason for authority within a state, with legal authority as the foundation for a bureaucratic organization (Weber 1978). In Scharpf's (1999) words, this is "input legitimacy" that contrasts to "output legitimacy". While input legitimacy is primarily produced by political guidelines and legal foundations, output legitimacy is a measure based on results, interaction and acceptance, also known as legitimacy at the individual level (Schedler & Felix 2000).

Due to the political nature of the smart city idea, it is important that stakeholders actively legitimate initiatives and projects (e.g., through participation) (Nesti & Graziano 2020). Smart cities draw upon citizen involvement and participation, as this is considered a core element of their "smartness" (Kitchin 2014; Nam & Pardo 2011). Citizen participation is seen as a signal for legitimacy of an idea among citizens (Guenduez, Mettler & Schedler 2020a). Ideally, smart cities enhance government legitimacy by fostering citizen participation, thereby achieving outcomes such as sustainability and wealth (Meijer & Bolivar 2016). However, research on past public sector innovation projects has found a lack of stakeholder support and insufficient legitimacy, hindering the adoption of reforms in the public sector (Gil-Garcia & Pardo 2005; Savoldelli, Codagnone & Misuraca 2014; Schedler, Guenduez & Frischknecht 2019) while Schafer (2019) points out that in order to increase citizen participation, it has to be made convenient and accessible.

Smart cities are a new subject in research on legitimacy. Recent studies have highlighted that although smart cities in a continental European context promote principles of democratic representation, they lack mechanisms for truly fostering citizen participation (Nesti & Graziano, 2020). Meijer and Bolivar (2016) argued that smart city governance and legitimacy are not technical issues, but rather challenges of a political nature and participation. The idea of the smart city has been linked to a narrative that reinforces existing city branding, mobilizing a growing network of actors to develop a smart region (Valdez, Cook & Potter

2018), which again highlights the importance of creating a vision (Battilana et al. 2009) and mobilizing allies (Hardy & Maguire, 2008). Zuzul and Edmondson (2017) found that external and internal legitimacy may collide when an organization invests too much energy in creating external legitimacy. This “advocacy trap” is created by internal cognitive and emotional dynamics that prevent organizational learning.

To sum up, there is a sizeable body of literature on the nature of legitimacy that explores how it is created, granted, or denied. However, there is a need for further analysis of the operational implementation of legitimacy creation strategies. With the case of the #Smarthalle we explore how promoters of the smart city idea intended to create legitimacy for their projects. Since we are focusing on the rather short episode of the #Smarthalle project, we cannot include any analysis whether the project had an actual effect on legitimacy among the major stakeholders.

3. Empirical context

As in many other countries, a number of Swiss cities have established smart city projects (Musiolik et al. 2019). Most of these projects focus on improving processes and infrastructure (Wiederkehr, Kronawitter & Geissbühler 2019). The city of St. Gallen has been pursuing smart city projects as well, and is considered a pioneer in this area in Switzerland (Gassmann, Böhm & Palmié 2018). The city has already successfully implemented projects such as a smart parking information system and sensors that automatically measure the contents of landfills (Gassmann, et al. 2018; Lenkungsausschuss 2020). By hiring a Chief Digital Officer (CDO), St. Gallen created an organizational unit responsible for digitization projects. The city has also become a member in several associations (e.g., Smart Government Academy Bodensee, Smart City Hub Switzerland), thus forming national and international partnerships. The city's goals are rooted in a smart city strategy (Lenkungsausschuss 2020) and its vision for 2030 (St. Gallen 2020). The #Smarthalle, the subject of this case study, is one of the city's digitization efforts. In a press release (St. Gallen 2019), the project was described as follows.

“The aim was to give the population an insight into digitization and to make it tangible by examples from the city, to trigger an in-depth examination of the topic and to point out opportunities and challenges.”

The #Smarthalle was launched as part of the Swiss Digital Day 2019, a national action day initiated as a means of raising public awareness for digitization topics (Digitalswitzerland 2020). The #Smarthalle was open from September 3 to November 23, 2019. It was located in a former shoe shop in the middle of the city's pedestrian zone. In this highly visible place, different residential businesses and administrative departments presented their digitization efforts and smart city projects (see **Table 1** for an overview). In three months, over 90 events were held, including courses on e-taxes, talks on three-dimensional printing, and interactive workshops on a sharing economy. On the first floor of the venue was a co-working space for about 20 people. The team implementing the #Smarthalle project was composed of different actors from a variety of organizational units. The location promotion team was responsible for leading the project. The CDO, communications department, and public utilities (Stadtwerke) were also on the team. The project won the national Smart City Innovation Award in 2019 in the category “Idea” (EnergieSchweiz 2019), which both provided additional funding and signaled that the #Smarthalle was an idea worth supporting.

After the project ended, the project team, together with many stakeholders (e.g., tourism organizations, co-working associations), discussed continuing the #Smarthalle. However, the city council decided against it; they saw the project as a one-time innovation initiative. Nevertheless, the city remains open to supporting other (private) initiatives to further inform and educate the inhabitants of St. Gallen about digitization.

Table 1: Examples of events organized in the #Smarthalle according to the smart city areas captured by the smart city wheel (Smart City Hub, n. d.).

Title	Host	Smart City Area
Smart metering – risks and opportunities	Municipal infrastructure	Smart environment
Share Gallen	Public administration	Smart economy
E-Health and active assisted living	Local business	Smart living
A digital tourism ambassador	Tourism organization	Smart mobility
E-banking support	Local bank	Smart people
Improving city life through open data	CDO in collaboration with a local business	Smart governance

4. Research methodology

We chose a descriptive single case study design because it allows a thorough understanding of how the #Smarthalle helped to create legitimacy. We used a hybrid inductive and deductive approach, deriving criteria from the current research on legitimating new practices and then applying those to the case of the #Smarthalle. However, since smart city projects are a relatively new phenomenon, new categories were added where necessary.

The data used for the case study came from different sources and interview participants. The data were triangulated in two ways: by relying on multiple perspectives and including a variety of documents produced by the various actors and thus mirroring a selection of views. We conducted 10 in-depth topical interviews, seven with members of the #Smarthalle project team, as well as three with other stakeholders (politicians and citizens). The interviews addressed two main topics: project process and reflection. Both were addressed in each interview. Sub-topics were also defined, such as the reception the project received from the main stakeholders and any clear benefits the project conveyed. The interviewer deviated from the interview guidelines when new topics emerged, or a clarification was deemed appropriate.

Besides the interview data, participatory observations (e.g., from workshops), field notes, official documents (e.g., the smart city strategy), and the final report on projects and presentations were analyzed. Another source was comprised of four media reports and 11 press releases. All data were gathered between August 2019 and June 2020, and thus represented more than the three-month open phase of the #Smarthalle. This was in part due to the media's preparation for the project, which had already begun in August 2019. The project was completed in April 2020 with an official report submitted to the city council. A number of interviews took place subsequent to this report's release in order to incorporate these relevant data and to reflect on its findings.

First, we used the data to reconstruct the chronology of events. This overview served as the empirical context. Then, the interview transcripts, various document types, and field notes were coded and analyzed by going back and forth with theoretical insights and emerging categories. Following the recommendations in Saldaña (2016), the coding process was conducted in several cycles, adding more abstraction in each successive round. First, the data was coded descriptively, with the goal of distilling the extensive coding list into a more analytical set of codes. Then, similar codes (e.g., "improvising" with "being flexible") were combined under overarching categories (e.g., "working agilely"), eventually arriving at an even deeper analytical level. This procedure led to nine first-order categories, which then were further reduced into three second-order themes by grouping similar aspects together (see **Table 2** for an overview).

5. Findings

5.1. Create a vision of a smart city

The smart city is an idea so far removed from the current reality of city administration that it is difficult to imagine. Therefore, the vision of a smart city first had to be newly developed and communicated. The data show that this vision was created and refined through three different channels.

First, the #Smarthalle was intended to inform citizens and other key stakeholders about smart city initiatives already in operation, making these projects more salient and increasing visibility. By spreading information about smart city projects, citizens were enabled to understand the idea of the smart city as a whole. Through the exhibition and events, the city explained the relevance and likely benefits of this transformation and shared its smart city vision with different stakeholders. One of the main objectives of the project was to raise awareness of smart city efforts already implemented or in progress in order to disseminate knowledge among citizens, associations, and companies. However, this also meant that the administration had to develop and present very clear ideas about what it understood a smart city to be. The abstract concept was clarified by examples and fleshed out with content, so that the target audience could better picture St. Gallen as a future smart city.

Second, the #Smarthalle was not only designed to disseminate the city's vision but also to collect and understand the variety of smart city visions available from different stakeholders. For example, workshops were held in the #Smarthalle with the explicit aim of incorporating the ideas and wishes of the population into St. Gallen's smart city strategy.

"It is important for us to feel or experience what people think about smart cities and digitization, things to which we might have to pay special attention."

There was also an idea wall (called "Smartecho") listing suggestions from the population. In general, the goal was to better understand the needs and positive and negative associations with the city's (smart) future.

Table 2: Overview of the coding scheme, with the superordinate strategies and associated practices, the targeted stakeholder, and sample quotations.

Legitimation Strategy (second-order theme)	Practice (first-order category)	Stakeholder (internal/external)	Sample Quotation
Create a vision of a smart city	Collecting ideas	External	"I get a lot of immediate feedback about what the citizens like and what they don't like. That is important because I believe that this feedback can then be incorporated into our regular work."
	Promoting the smart city	External	"It has been noticed that the city of St. Gallen has a dynamic and innovative administration. It was a sign that we wanted to try something new."
	Informing about the smart city	External	"We communicate to the citizens what the city is already doing and what it is planning in terms of becoming a smart city."
Mobilize allies for the smart city idea	Networking	Both	"The fact that we were able to build up a network of contacts with various providers and stakeholders helped us [the city administration]."
	Collaborating	Both	"There are various companies or associations working in the smart city area. We described the project to them. That's how it is. The Smarthalle would not have been possible without these institutions."
Make the smart city idea tangible	Working agilely	Internal	"We did not have time to formulate a concept first. There was time pressure; there was financial pressure. The organization was not set. The only thing that was fixed was the opening date on September 3 rd . I think that accelerated things."
	Focusing on citizens	Internal	"They certainly brought openness with them. They became more open with that. They had the courage to sit in the same room with the citizens and do something. This is certainly an issue that I believe was important in the context of this experiment."
	Testing the smart city concept	External	"There is a reason why we are not doing this digitally, but in an analogue way. In the Smarthalle, we wanted to make digitization a vivid and tangible experience."

Third, there is evidence that the #Smarthalle served to actively promote the city's pioneering role in smart city topics. This information was not only disseminated in St. Gallen itself, but also communicated to other cities (e.g., by winning a Smart City Innovation Award and through presentations given at conferences and panel discussions). Therefore, St. Gallen used the #Smarthalle to position the city as modern and innovative and thus further refine its vision. Furthermore, the #Smarthalle enabled the public administration to present itself and its employees as modern, innovative, and transparent, in contrast to the common stereotype of public administrations being old-fashioned and cumbersome.

"I think the Smarthalle has sparked a perception that the city of St. Gallen has a dynamic and innovative administration. It was a sign that we wanted to try something out."

It was therefore not only the city as a whole, but also its administration who were able to present themselves in a favorable light through this project.

5.2. Make the smart city idea tangible

The second strategy emerging from the data was an attempt to translate the abstract smart city vision into a comprehensible and tangible representation of the idea. The main goal was to illustrate what was meant by a smart city, to make it an experience. This category is about action and less about the development of ideas. We argue that the #Smarthalle made the smart city idea tangible through the concept of working agilely, by focusing on citizens and their testing of the smart city conception.

First, in the #Smarthalle, citizens were encouraged to experiment with the smart city idea and thus bring it to life. By allowing citizens to interact directly with smart city technology, the idea could be made tangible. By testing smart city devices, applications, and services, citizens were able to engage and become familiar with smart city ideas.

"I can use services without calling, without going to the counter. I think that's a big deal. How can I bring the digital envoys the city administration has adopted and implemented to the general public?"

Second, the administration gained experience with approaching citizens, seeking direct dialogue, listening, and becoming more open. The set-up of the #Smarthalle encouraged interaction. The public administration left the town hall and went directly to the citizens, bringing their plans to the pedestrian zone where city life actually happens. Hence, the #Smarthalle not only embodied the smart city idea, but also made the city administration tangible. This meant that public officials had to focus on the interests of the citizens (i.e., actively think about how it had to sell itself and its content so that the citizens would be interested enough to come to the #Smarthalle). In that sense, the #Smarthalle was an opportunity to practice citizen orientation and it makes it a place to experience what it means for a public administration to become more open and reachable.

Third, the implementation window for the project was narrow, the project framework not clearly defined, and similar projects had never been realized. Therefore, the project team and others involved had to use agile and flexible methods to achieve their goals. In the #Smarthalle, the administration had the opportunity to improvise and test new methodologies.

"We didn't know how it would come out. We had to figure out how it could work. Trial and error, that's what happened."

Consequently, the city's administration had to become smart. The project structure was agile; the administration had to respond directly to the citizens and their needs in unusual ways and could no longer adhere to established processes. However, it also became clear that this unconventional form of cooperation brought with it a new internal administrative culture. This was also a completely new experience, in which the internal stakeholders associated with the idea of the smart city created internal legitimacy for the idea.

5.3. Mobilize allies for the smart city idea

The data suggest that the #Smarthalle helped to mobilize allies (i.e., possible supporters of the smart city idea and individual projects). These potential allies included the public administration itself, but also citizens, associations, and private enterprises. It was observed that these allies were mobilized in two ways: through networking and collaboration.

In order to realize the #Smarthalle project, various supporters of the smart city idea had to be mobilized. After all, the #Smarthalle was conceived of as a showroom for the city's plans. However, the content was not provided entirely by the project team, but rather by a variety of actors, including representatives from local companies, associations, and departments of the city administration.

"We as a city decided to deliver a platform, actually providing the building with the necessary facilities. But the program, the information came from the partner who brought in the content that was of interest to them."

Thus, to realize the #Smarthalle project, different actors had to collaborate and cooperate. The #Smarthalle made it possible to determine which population groups and companies were most interested in these topics (and, of course, which were not), as it made visible the various actors working on digitization or other smart city topics.

Thus, internal and external actors were able to find and connect with one another to further refine and disseminate their project ideas and smart city solutions. In this sense, the #Smarthalle enhanced the visibility of potential supporters and facilitated networking among these actors. Moreover, the #Smarthalle was not only useful for forming relationships with external stakeholders, it also helped facilitate the formation of networks of internal administrative stakeholders.

"The Smarthalle ensured that people talked to each other, especially inside public administration, that workshops were held together and that you learned about the topics your colleagues were working on. It showed how diverse our topics were."

Over the course of the project, administrative staff working on digitization projects or smart city initiatives in different organizational units were able to get to know one another while increasing the visibility of their own projects or ideas. In addition, they worked together across departments to implement the #Smarthalle project itself, and then later to provide its content.

6. Discussion and Conclusion

In this study, we explored how cities create legitimacy for their smart city initiatives. Based on the case study of the #Smarthalle, a project that served to create legitimacy for the smart city idea, we uncovered three different strategies. First, the #Smarthalle helped to communicate and refine the vision (*create a vision of a smart city*). Second, it enabled experimentation with and testing of the smart city concept (*make the smart city idea tangible*). Third, it helped garner support and connected supporters with one another (*mobilize allies for the smart city idea*). Creating a vision and mobilizing allies have already been recognized in the literature on the general creation of legitimacy (e.g. Bitektine & Haack, 2015), as well as in a smart city context (Valdez et al. 2018). In the #Smarthalle, the citizens and administrative staff were not only passively informed about what a smart city might be, they were actively encouraged to engage with it. In this way, the #Smarthalle not only raised awareness, but also created space for experience and participation. This aligns with the argument put forth by Schafer (2019), according to which citizens' participation in a project increases if that project is made conveniently accessible. The strategies identified were designed to make this rather abstract and infrequently-used concept into something tangible, enabling the development of a shared understanding. This suggests that the #Smarthalle was designed to create cognitive legitimacy, as understanding and cognitive legitimacy are closely related (Meyer & Scott 1983). Projects like the #Smarthalle may help to establish a more mature form of legitimacy (see i.e. Greenwood, Suddaby & Hinings 2002). We argue that making ideas tangible might be particularly useful for digitization projects, as their content and consequences are difficult to imagine.

Although the project was initially primarily designed for citizens and local businesses, the #Smarthalle also had an impact on the administration itself (see **Table 2**). Internal stakeholders were targeted with several strategies; they had to work closely together, and the project required agile methods and a citizen-orientated perspective. Addressing internal stakeholders is crucial in smart city initiatives, as past research has shown that public sector employees are skeptical about digitization projects and raise concerns such as surveillance or job loss (Guenduez, Mettler & Schedler, 2020b). Projects like the #Smarthalle might help in addressing such reservations and hence serve to create legitimacy for the smart city idea in public administration. Taken together, this suggests that the #Smarthalle helped to transport and anchor the smart city idea in the internal and external target audiences.

However, one potentially important target audience may not have received sufficient attention: political decisionmakers. Political support has been found to be crucial in digitization projects (Schedler et al. 2019). However, politics was barely mentioned in the data, and there were no (sub)strategies directly targeting politicians. Rather, the #Smarthalle prioritized the citizens and their needs, and reached out to them directly (without a clear, politically legitimate legal basis). This citizen orientation form of participation is a key characteristic of smart cities (Kitchin 2014). Even if the major focus was on the citizens and even if this channel was successfully managed, in situations of institutional complexity such as smart city projects, neglecting an existentially relevant stakeholder may jeopardize the entire endeavor. This notion is also supported by the fact that political decisionmakers did decide against continuing the #Smarthalle.

From a scientific point of view, this article contributes to a better understanding of legitimation strategies in the context of the smart city. We identified the importance of mobilizing allies and creating a vision and added a third new component of tangibility. Furthermore, we argued that smart city projects, due to their citizen-oriented character, run the risk of lacking political legitimacy. Future research should explore this problem more directly and investigate how politics can be more involved in these types of projects, and document success stories on a scientific basis. From the practitioner's point of view, a quite straightforward approach to creating legitimacy for smart city projects in multiple target audiences was presented. Additionally, the present research illustrated that politicians are a significant target audience for smart city projects. Practitioners should not neglect them, even if their efforts are based on direct citizen participation.

Like every single-case, this study has its limitations. It is embedded in the particular context of a Swiss municipality with its specific political system. Moreover, the data was collected across a very limited timespan. From that limited dataset, it is not possible to draw conclusions about the actual medium and long-term effects of the #Smarthalle project on legitimizing the smart city idea. Although it was well received by the citizens, other external stakeholders, and the public administration, we cannot prove whether the project contributed to establishing a new administrative culture, show that the smart city idea became more widespread across the target audience, or demonstrate that these projects are now given more legitimacy. Besides, most of the interviews and thus a considerable amount of the data stems directly from the team implementing the #Smarthalle, which is a potential source of bias. However, through triangulation with other data sources and perspectives, we believe that we were able to reduce any related bias as much as possible.

Competing Interests

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References

- Albino, V., Berardi, U., & Dangelico, R. M.** (2015). Smart cities: Definitions, dimensions, performance, and initiatives. *Journal of Urban Technology*, 22(1), 3–21. DOI: <https://doi.org/10.1080/10630732.2014.942092>
- Aldrich, H. E., & Fiol, C. M.** (1994). Fools rush in? The institutional context of industry creation. *The Academy of Management Review*, 19(4), 645–670. DOI: <https://doi.org/10.2307/258740>
- 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. DOI: <https://doi.org/10.5465/19416520903053598>
- Bitektine, A., & Haack, P.** (2015). The "macro" and the "micro" of legitimacy: Toward a multilevel theory of the legitimacy process. *Academy of Management Review*, 40(1), 49–75. DOI: <https://doi.org/10.5465/amr.2013.0318>
- Caragliu, A., Del Bo, C., & Nijkamp, P.** (2011). Smart cities in Europe. *Journal of Urban Technology*, 18(2), 65–82. DOI: <https://doi.org/10.1080/10630732.2011.601117>
- Cloutier, C., Denis, J.-L., Langley, A., & Lamothe, L.** (2016). Agency at the managerial interface: Public sector reform as institutional work. *Journal of Public Administration Research and Theory*, 26(2), 259–276. DOI: <https://doi.org/10.1093/jopart/muv009>
- Czarniawska, B., & Joerges, B.** (1996). The travel of ideas. In B. Czarniawska & G. Sevón (Eds.), *Translating organizational change* (pp. 13–48). Berlin: de Gruyter. DOI: <https://doi.org/10.1515/9783110879735>
- David, R. J., Sine, W. D., & Haveman, H. A.** (2012). Seizing opportunity in emerging fields: How institutional entrepreneurs legitimated the professional form of management consulting. *Organization Science*, 24(2), 356–377. DOI: <https://doi.org/10.1287/orsc.1120.0745>
- Deephouse, D., & Suchman, M.** (2008). Legitimacy in organizational institutionalism. In R. Greenwood, C. Oliver, R. Suddaby & K. Sahlin (Eds.), *The SAGE Handbook of Organizational Institutionalism* (pp. 49–77). London: SAGE. DOI: <https://doi.org/10.4135/9781849200387>

- Deephouse, D. L., Bundy, J., Tost, L. P., & Suchman, M. C.** (2017). Organizational legitimacy: six key questions. In R. Greenwood, C. Oliver & T. B. Lawrence (Eds.), *The SAGE Handbook of organizational institutionalism* (pp. 27–52). London: SAGE. DOI: <https://doi.org/10.4135/9781526415066>
- DigitalSwitzerland.** (2020). *Digitaltag Schweiz*. Retrieved from <https://www.digitaltag.swiss/about/>
- DiMaggio, P. J., & Powell, W. W.** (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48(2), 147–160. DOI: <https://doi.org/10.2307/2095101>
- Duygan, M., Stauffacher, M., & Meylan, G.** (2019). A heuristic for conceptualizing and uncovering the determinants of agency in socio-technical transitions. *Environmental Innovation and Societal Transitions*, 33, 13–29. DOI: <https://doi.org/10.1016/j.eist.2019.02.002>
- EnergieSchweiz.** (2019). *EnergieSchweiz vergibt ersten Smart City Innovation Award*. Retrieved from <https://www.energieschweiz.ch/page/de-ch/EnergieSchweiz-vergibt-ersten-Smart-City-Innovation-Award-in-Basel>
- Gasco-Hernandez, M.** (2018). Building a smart city: Lessons from Barcelona. *Communications of the Acm*, 61(4), 50–57. DOI: <https://doi.org/10.1145/3117800>
- Gassmann, O., Böhm, J., & Palmié, M.** (2018). *Smart City: Innovationen für die vernetzte Stadt – Geschäftsmodelle und Management*. München: Hanser Verlag. DOI: <https://doi.org/10.3139/9783446457584>
- Gil-Garcia, J. R., & Pardo, T. A.** (2005). E-government success factors: Mapping practical tools to theoretical foundations. *Government Information Quarterly*, 22(2), 187–216. DOI: <https://doi.org/10.1016/j.giq.2005.02.001>
- Gordon, R., Kornberger, M., & Clegg, S. R.** (2009). Power, rationality and legitimacy in public organizations. *Public Administration*, 87(1), 15–34. DOI: <https://doi.org/10.1111/j.1467-9299.2008.01743.x>
- Greenwood, R., Suddaby, R., & Hinings, C. R.** (2002). Theorizing change: The role of professional associations in the transformation of institutionalized fields. *Academy of Management Journal*, 45(1), 58–80. DOI: <https://doi.org/10.2307/3069285>
- Guenduez, A. A., Mettler, T., & Schedler, K.** (2020a). Citizen participation in smart government: A conceptual model and two IoT case studies. In J. R. Gil-Garcia, T. A. Pardo & M. Gasco-Hernandez (Eds.), *Beyond Smart and Connected Governments: Sensors and the Internet of Things in the Public Sector* (pp. 189–209). Cham: Springer International Publishing. DOI: https://doi.org/10.1007/978-3-030-37464-8_9
- Guenduez, A. A., Mettler, T., & Schedler, K.** (2020b). Technological frames in public administration: What do public managers think of big data? *Government Information Quarterly*, 37(1), 101406. DOI: <https://doi.org/10.1016/j.giq.2019.101406>
- Hardy, C., & Maguire, S.** (2008). Institutional entrepreneurship. In R. Greenwood, C. Oliver & R. Suddaby (Eds.), *The SAGE Handbook of Organizational Institutionalism* (pp. 198–217). London: SAGE. DOI: <https://doi.org/10.4135/9781849200387>
- Hargadon, A. B., & Douglas, Y.** (2001). When innovations meet institutions: Edison and the design of the electric light. *Administrative Science Quarterly*, 46(3), 476–501. DOI: <https://doi.org/10.2307/3094872>
- Kitchin, R.** (2014). The real-time city? Big data and smart urbanism. *GeoJournal*, 79(1), 1–14. DOI: <https://doi.org/10.1007/s10708-013-9516-8>
- Lee, J. H., Hancock, M. G., & Hu, M. C.** (2014). Towards an effective framework for building smart cities: Lessons from Seoul and San Francisco. *Technological Forecasting and Social Change*, 89, 80–99. DOI: <https://doi.org/10.1016/j.techfore.2013.08.033>
- Lenkungsausschuss.** (2020). *Smart St. Gallen – Der Mensch als Mittelpunkt der “Smarten Stadt” – Strategie*. Retrieved from <https://www.stadt.sg.ch/home/verwaltung-politik/direktionen/inneres-finanzen/stab-inneres-finanzen/chief-digital-officer/smart-city.html>
- Lounsbury, M., & Glynn, M. A.** (2001). Cultural entrepreneurship: Stories, legitimacy, and the acquisition of resources. *Strategic Management Journal*, 22(6/7), 545–564. DOI: <https://doi.org/10.1002/smj.188>
- Mahizhnan, A.** (1999). Smart cities – The Singapore case. *Cities*, 16(1), 13–18. DOI: [https://doi.org/10.1016/S0264-2751\(98\)00050-X](https://doi.org/10.1016/S0264-2751(98)00050-X)
- Meijer, A., & Bolivar, M. P.** (2016). Governing the smart city: a review of the literature on smart urban governance. *International Review of Administrative Sciences*, 82(2), 392–408. DOI: <https://doi.org/10.1177/0020852314564308>

- Meyer, J. W., & Rowan, B.** (1977). Institutionalized organization: Formal structures as myth and ceremony. *The American Journal of Sociology*, 83(2), 340–363. DOI: <https://doi.org/10.1086/226550>
- Meyer, J. W., & Scott, R. W.** (1983). *Organizational environments: Ritual and rationality*. London: Sage.
- Meyer, R., & Höllerer, M. A.** (2010). Meaning structures in a contested issue field: A topographic map of shareholder value in Austria. *Academy of Management Journal*, 53(6), 1241–1262. DOI: <https://doi.org/10.5465/amj.2010.57317829>
- Musiolik, J., Kohler, A., Vögeli, P., Lobsiger-Kägi, E., & Carabias-Hütter, V.** (2019). *Smart City: Leitfaden zur Umsetzung von Smart-City-Initiativen in der Schweiz*. Bern: Bundesamt für Energie.
- Nam, T., & Pardo, T. A.** (2011). Conceptualizing smart city with dimensions of technology, people, and institutions. *Paper presented at the Proceedings of the 12th Annual International Digital Government Research Conference: Digital Government Innovation in Challenging Times*, Maryland, USA. DOI: <https://doi.org/10.1145/2037556.2037602>
- Nesti, G., & Graziano, P. R.** (2020). The democratic anchorage of governance networks in smart cities: an empirical assessment. *Public Management Review*, 22(5), 648–667. DOI: <https://doi.org/10.1080/14719037.2019.1588355>
- Parsons, T.** (1956). Suggestions for a sociological approach to theory of organizations. *Administrative Science Quarterly*, 1(1), 63–85. DOI: <https://doi.org/10.2307/2390840>
- Polzer, T., Meyer, R. E., Höllerer, M. A., & Seiwald, J.** (2016). Institutional hybridity in public sector reform: Replacement, blending, or layering of administrative paradigms. In M. Lounsbury, J. Gehman & R. Greenwood (Eds.), *How Institutions Matter! (Research in the sociology of Organizations, Vol 48B)*, (pp. 69–99). Emerald Publishing Limited. DOI: <https://doi.org/10.1108/S0733-558X201600048B003>
- Sahlin, K., & Wedlin, L.** (2008). Circulating ideas: Imitation, translation and editing. In C. Oliver, K. Sahlin, R. Suddaby & R. Greenwood (Eds.), *Handbook of organizational institutionalism* (pp. 218–242). London: Sage. DOI: <https://doi.org/10.4135/9781849200387>
- Saldaña, J.** (2016). *The coding manual for qualitative researchers*. London: SAGE Publications.
- Savoldelli, A., Codagnone, C., & Misuraca, G.** (2014). Understanding the e-government paradox: Learning from literature and practice on barriers to adoption. *Government Information Quarterly*, 31, 63–71. DOI: <https://doi.org/10.1016/j.giq.2014.01.008>
- Schafer, J. G.** (2019). A systematic review of the public administration literature to identify how to increase public engagement and participation with local governance. *Journal of Public Affairs*, 19(2), 1–11. DOI: <https://doi.org/10.1002/pa.1873>
- Scharpf, F. W.** (1999). *Governing in Europe: effective and democratic?* New York: Oxford University Press. DOI: <https://doi.org/10.1093/acprof:oso/9780198295457.001.0001>
- Schedler, K., & Felix, J.** 2000. Quality in public management: the customer perspective. *International Public Management Journal*, 3(1), 125–143. DOI: [https://doi.org/10.1016/S1096-7494\(00\)00031-3](https://doi.org/10.1016/S1096-7494(00)00031-3)
- Schedler, K., & Grand, S.** (2016). Mobilizing Institutional Logics for Organizational Agency: Towards a Managerial Perspective. *Paper presented at the 12th Workshop on New Institutionalism in Organization Theory*, Lucerne.
- Schedler, K., Guenduez, A. A., & Frischknecht, R.** (2019). How smart can government be? Exploring barriers to the adoption of smart government. *Information Polity*, 24(1), 3–20. DOI: <https://doi.org/10.3233/IP-180095>
- Smart City Hub.** (n.d.). Smart City Wheel. Retrieved from https://www.smartcityhub.ch/smart_city_wheel.120de.html
- Smets, M., & Jarzabkowski, P.** (2013). Reconstructing institutional complexity in practice: A relational model of institutional work and complexity. *Human Relations*, 66(10), 1279–1309. DOI: <https://doi.org/10.1177/0018726712471407>
- St. Gallen.** (2019). Medienmitteilung Endspurt in der #smarthalle. Retrieved from <https://www.stadt.sg.ch/news/14/2019/11/endspurt-in-der-smarthalle.html>
- St. Gallen.** (2020). *Smart City St. Gallen*. Retrieved from <https://www.stadt.sg.ch/home/verwaltung-politik/direktionen/inneres-finanzen/stab-inneres-finanzen/chief-digital-officer/smart-city.html>
- Suchman, M. C.** (1995). Managing legitimacy: strategic and institutional approaches. *Academy of Management Review*, 20(3), 571–610. DOI: <https://doi.org/10.5465/amr.1995.9508080331>
- Thornton, P. H., Ocasio, W., & Lounsbury, M.** (2012). *The institutional logics perspective. A new approach to culture, structure, and process*. Oxford: Oxford University Press. DOI: <https://doi.org/10.1093/acprof:oso/9780199601936.001.0001>

- Valdez, A.-M., Cook, M., & Potter, S.** (2018). Roadmaps to utopia: Tales of the smart city. *Urban Studies*, 55(15), 3385–3403. DOI: <https://doi.org/10.1177/0042098017747857>
- Van Oers, L. M., Boon, W. P. C., & Moors, E. H. M.** (2018). The creation of legitimacy in grassroots organisations: A study of Dutch community-supported agriculture. *Environmental Innovation and Societal Transitions*, 29, 55–67. DOI: <https://doi.org/10.1016/j.eist.2018.04.002>
- Weber, M.** (1978). *Economy and society: An outline of interpretive sociology*. Berkeley: University of California Press.
- Wiederkehr, S., Kronawitter, A., & Geissbühler, P.** (2019). Stakeholderanalyse Smart City Switzerland – die wichtigsten Erkenntnisse. Retrieved from https://staedteverband.ch/cmsfiles/20190627_Bericht_Stakeholderanalyse_Smart_City_Switzerland_1.pdf?v=20200326132453
- Zuzul, T., & Edmondson, A. C.** (2017). The advocacy trap: When legitimacy building inhibits organizational learning. *Academy of Management Discoveries*, 3(3), 302–321. DOI: <https://doi.org/10.5465/amd.2015.0086>

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