

Mobile Governance in complex value-creation networks: A user centric approach

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Keywords

Information Technology, Corporate Strategy, Mobile Governance, Information Governance, Value Networks, Value Creation, Information Management, Datability, Data Ownership, Mobile Applications, Mobile Ecosystems, Internet of Things

Abstract

The management of digital platforms like mobile services and data or information flows are an essential part of modern information governance. In this theoretical article the relationship between mobile governance, value networks and data portability is discussed, focusing on the effects, management of information has on the overall value capture. The current approaches within the information governance literature are, in the majority of cases solely information technology (IT), corporate or legal centric based. Therefore a user centric approach is proposed to address strategic issues arising from new digital services and leveraging the overall value capture by corporations and customers.

1. Introduction

The emergence of countless new digital and mobile services for consumers and corporations offer not only a broad variety of strategic business opportunities but as well arise new issues within the research field of information governance. Especially mobile devices and the applications involved show a glimpse of the forthcoming internet of things (IoT) and extend of the present App-Economy. According to the networking equipment manufacturer Cisco these services generated already in 2014 mobile data traffic of 2.5 Exabytes per month and is estimated to grow at a compound annual growth rate (CAGR) of 57 percent to 24.3 Exabytes per month by 2019 (Cisco, 2015, p. 5).

The enormous amounts of new raw data generated by these digital services, challenges corporations to manage and harvest the retrieved information appropriately. Especially the capability to generate business relevant insights in real time and the opportunity of an advanced speed of reaction to market or customer incidences is crucial (Smallwood, 2014, pp. 3-5). Technological implications and solutions like big data information retrieval have already been discussed in depth, due to the information and communication technology (ICT) nature of the field and are progressively developing (Kaisler, Armour, Espinosa, & Money, 2013). Furthermore, the ongoing discourse is accompanied by legal admissibility issues regarding the extent of compliance and legal requirements (Kaeding, 2002), which have to be met by corporations on a minimum level. Therefore the current approaches within the information governance literature are, in the majority of cases, solely corporate governance, information technology (IT) or legal centric.

The relevance of this discourse is determined by the fact, that these obtained information are valuable intangible assets (Kaplan & Norton, 2004), which for example offer in a business analytics environment the opportunity, to learn customer behaviour or predict future trends. In the context of the Internet of Things and smart products, which consist not only of a pure physical product, but gain an essential part of their overall generated and by the customer perceived value through digital services like mobile applications or digital assistants. For

corporate strategies and their competitive advantage, providing these value enhanced digital solutions powered by retrieved data has become mission critical (Porter & Heppelmann, 2014).

2. Literature Review

2.1. Mobile Governance

Enabling business by information technologies and generating competitive and collaborative advantage through the innovation of digital products and services with a very short time to market cycle, requires a highly functional Business-Unit-IT and strategy (Ratzer & Probst, 2013, p. 31). The governance of these ICT based strategies and assets within the corporation is an essential part of state of the art corporate management and practices, hence supported by a large variety of IT-management frameworks. Especially the Control Objectives for Information and Related Technology (CobiT 5)-Framework (ISACA, 2012) along with the ISO/IEC 38500 framework on corporate governance of information technology are nowadays essential tools for CIOs, CTOs and top management decision makers..

Due to the relevance and impact information technology has on the overall corporation, it is part of modern corporate governance and supports business targets by linking business and technology strategies. The demarcation between corporate governance and IT governance can be made clearly by its focus on the overall corporation as a system, in the context of regulatory and compliance requirements and on the other hand IT governance as the specific structure to manage relationships and control of processes by IT (Rüter, Schröder, Göldner, & Niebuhr, 2010, p. 20).

In the latest research literature on the issue, the term information governance is established as a super discipline on ICT related topics in corporations, including data governance, IT governance and mobile governance within the different governance terminologies (Smallwood, 2014, pp. 5-7). Therefore mobile governance is a subset of information governance addressing mobile device, application and data specific issues within the corporation and its value network. Due to the link of digital services, powered by data, gained through mobile solutions there is a strong interdependency between the subset of mobile and data governance in this research paper. Delivering outstanding market insights or assistant services which are able to really fit user needs, requires an advanced data management which addresses data quality, amount and business value. In this context it is mission critical for corporations within the definition of strategic mobile and data governance guidelines to address the question of data ownership and seamless data flows in and outside of the corporation. Unfortunately due to the prevailing mind set in corporations to secure compliance obligations or legal issues, the majority of approaches is today solely IT security or legal based and does not meet the user requirements of data portability in complex interconnected digital service environments.

2.2. Value-creation networks

The emergence of these new digital services like the sports mobile application *Runtastic* or the IoT mashup platform *ifttt*, which are interconnected and built complex ecosystems with other digital services, change the value creation (Amit & Zott, 2001) of its participants deeply. Whilst the example of *Runtastic* shows very well, how a digital service in the sports domain provided by a single corporation interacts with a broad and specific mobile application portfolio, from running over mountain biking to skiing, within the company boundaries (Runstastic, 2015) it still enhances by including other complementary services in the value network like the *MyFitnessPal*.

On the other hand, the example of *ifttt* shows a business model, which generates its value capture for its participants solely, by interconnecting physical products and a vast variety of digital services in a centralized hub, where interactions between these services can be defined by the user through simple algorithms. This enhances the added value of the products and services for the user tremendously, by allowing them to setup a set of interaction rules between these services which empowers them to build really smart digital assistants for daily problems (IFTTT, 2015).

The value capture of corporations and customers as described by Kaplan and Norton (2004), can be enhanced from a standalone digital service through the perceived additional benefits created by the interconnection with other complementary services via open data flows, as shown in Figure 1:

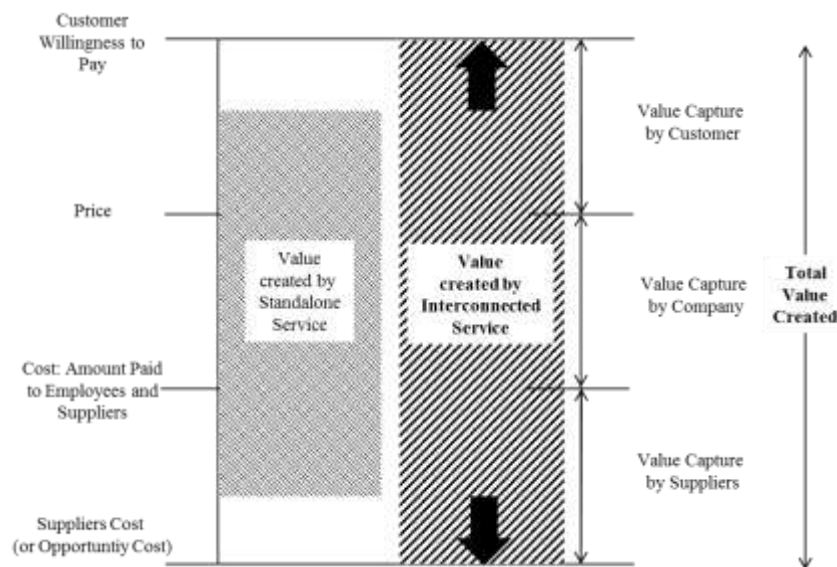


Figure 1: Digital service value capture (Based on: (Kaplan & Norton, 2004, p. 321)

For the consumer the value capture results in the “[...] Differenz zwischen ihrer Zahlungsbereitschaft und dem wahrgenommenen Nutzen [difference between their willingness to pay and the perceived benefits (Translation by author)]” (Wirtz, 2010, p. 138).

Whilst the impact of network effects have been described originally by Metcalf in the early nineties (Gilder, 1993) and discussed further by (Shapiro & Varian, 1999) and (Briscoe, Odlyzko, & Tilly, 2006). However, little is known about how the management of data by information governance guidelines in corporations affects the value capture of consumers in complex value networks and networked mobile solution environments as described in the approach for organizations in a value network by (Van de Kar, 2004) and the consumer centric m-Commerce model by (Coursaris & Hassanein, 2002).

The connection between different mobile services and the seamless flow of data streams in and outside the corporate environment enriches the digital customer experience (DCX) on one hand, but on the other hand arises questions in terms of information management and data security. For corporations the management of these data streams, ownerships and alliances has become a crucial task to sustain competitive advantage and form digital ecosystems.

2.3. Information management

Despite these huge opportunities the correct and trustworthy management of personal customer information is essential to avoid external and internal data breaches and to meet legal

obligations as well as regulatory standards in terms of data ownership (Silic & Back, 2013). The adoption of information and mobile governance frameworks within corporations is therefore nowadays a core business requirement (Kooper, Maes, & Lindgreen, 2011).

In the context of designing data streams between interconnected services, corporations have to handle several issues with strong interdependencies. Foremost the relationship between personal data privacy and the transfer to different digital services. During this process, the data leaves the boundaries of the corporation, which makes it nearly impossible for the corporation to ensure the data privacy and information security when the data is beyond their sovereignty. The implementation of standard measures like secure authentication, encryption and information rights management are not only essential part of modern information governance guidelines (Smallwood, 2014, pp. 207-238; 280-281) but crucial for the reputation and success of the corporation in digital ecosystems. Opposite to these strict security requirements is the digital customer experience (DCX) on seamless data flows and easy service access. Identifying the right sweet spot in the balance is essential for new business models and user acceptance in the network economy, as shown in figure 2:

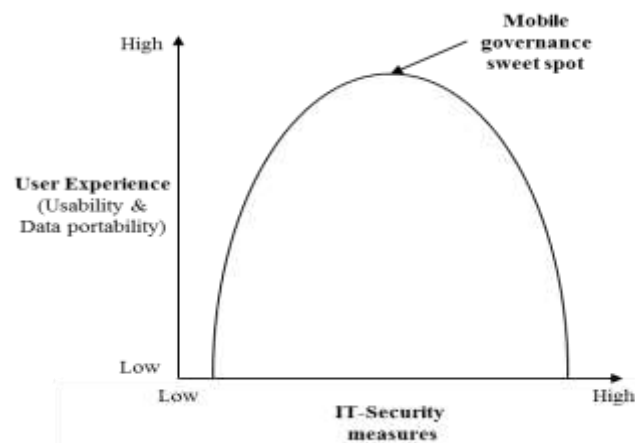


Figure 2: Mobile governance sweet spot

Furthermore the balance between data portability respectively datability based on technical standards like XML has become a basic customer requirement. Whilst the automatic connection of different digital services in value networks requires web services and APIs to be provided and written by corporations itself, user still want to integrate services out of corporate initial scope to handle with their personal data. A simple example might be a GPS path recorded by a sports application to be transferred to a geo information system (GIS) like *Google Earth* for further analysis. On the contrary providing this datability is the attempt of corporations to minimize customer retention and creating a certain customer LockIn-effect (Ewerhart & Schmitz, 1997). Selecting the right approach in information and stakeholder management within this trust-based context is a key challenge for corporations to come.

3. Proposed User centric approach

Taken the in this research paper described challenges into consideration, a user centric approach is proposed to address further developments within the digital transformation process. Crucial parts of the overall created value by corporations are in digital services, are outside of corporate control and boundaries. Therefore beyond sovereignty of information, data and mobile governance guidelines. Taken this into consideration classic IT or legal based approaches are not able to deliver the necessary point of view on the value creation provided by these services and should be developed further to leverage competitive advantage. Therefore a

user centric approach is proposed to enable corporations to step further, by leveraging the perceived benefit for the customer with digital customer experience management as lead paradigm within the mobile governance guidelines as shown in Figure 3:

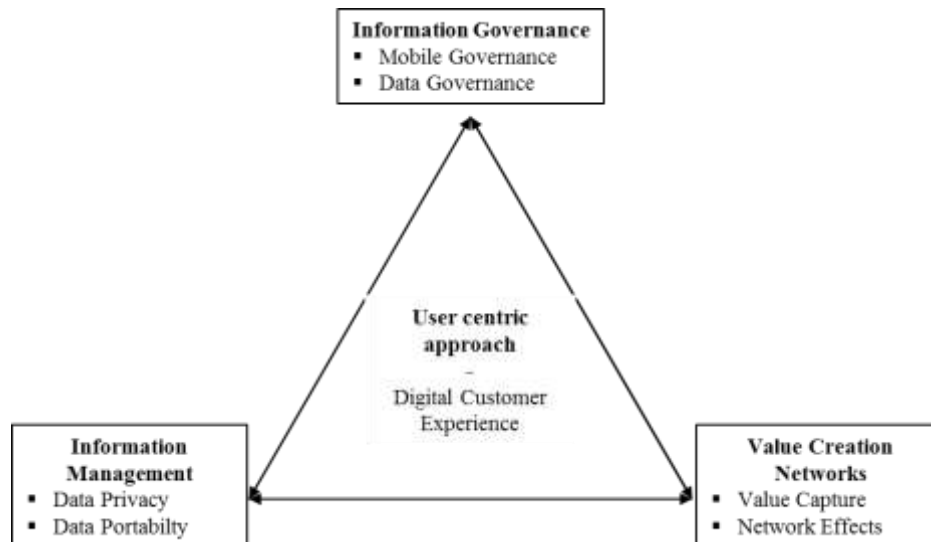


Figure 3: Mobile Governance a user centric approach

Focusing on the user requirements and an outstanding overall digital customer experience within the approach, allows to define governance guidelines, which enhance the existing value capture for both users and corporations as well, by extending the perceived benefits and enabling digital ecosystems as well as alliances supported by the corporation. Conclusively the user centric approach on mobile governance addresses the value sweet spot of the overall generated value capture by enabling secure data flows and empowering user to manage their information beyond corporate restrictions.

4. Discussion and Summary

The goal of this paper was to propose on the basis of the latest information governance and mobile business literature a customer centric point of view, to complement existing legal and IT focused approaches. As part of modern strategic information management in corporations, focusing on increasing the value capture for all anticipating stakeholders in a value network enables to create competitive advantage. The limitations of this approach on the other side are obvious in the extent of following a pure and non-mixed approach to the issue. In terms of data and IT infrastructure management new flexible organizational structures and security concept have to be implemented, to address the mutual dependency between costs and information governance measures.

5. Direction for Future research

Based on the theoretical discussion within this research paper, future research may address the interdependency of strategic decision making by favouring certain business models in relationship to existing information governance guidelines. Future research may also consider the sector-specific implications of highly regulated industries like the finance and banking sector and the relationship of FinTech companies to information governance.

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