A Shared Vision for Digital Transformation: Codification of The Operating Model Canvas Approach

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Abstract

Digital transformations are essential for organisations to stay competitive in modern economy. A digital transformation demands the business and IT departments of an organisation to be aligned and have a shared vision on the organisation’s future. To aid the generation of a shared vision as a basis for digital transformation, we propose the Operating Model Canvas (OMC) Approach. Its result is the OMC, a model that visualises the organisation’s value propositions, primary and supporting business activities, channels, and actors. We have performed a retrospective case study to codify the process and deliverables of the OMC Approach, to define its scientific fundamentals, and demonstrate its results. We found that the OMC provides a shared language for business and IT departments and subsequently generates them a shared vision. The key elements for generating a shared vision during the approach are the usage of existing client documentation and the active client participation throughout the entire process. We think the OMC can therefore be a solid starting point for a digital transformation project. The scientific contribution of this paper is to add to the theory of digital transformation design by codifying the OMC Approach.

Keywords: Business Model Canvas, Digital Transformation, Operating Model Canvas, Shared Vision, Value Chain.

1 Introduction

In today’s economy, IS and IT can deliver or support an organisation’s core value when utilised correctly. Thus, employing digital transformation to move an organisation’s business- and operating model from a traditional- to a digital business-focused perspective could be essential to stay competitive (Berman, 2013; Jentsch and Beimborn, 2014; Parmar et al., 2014; Lipitakis and Phillips, 2016).

Such digital transformations are best initiated top-down with an organisation-wide vision to generate sufficient executive and managerial support (Westerman, Bonnet and McAfee, 2016). It is essential for digital transformations that executives, business managers and IT managers share a vision of how IT can be used to benefit the organisation’s value proposition (Preston and Karahanna, 2009; Weill and Ross, 2009). A shared vision requires business and IT strategies to be aligned (Leonard, 2007) and for
both to recognise the value that IT delivers to the organisation. A lack of shared vision could result in misunderstanding among executives managers and subsequently a failing digital transformation (Jentsch, Schlosser and Beimborn, 2014); the need for a shared vision is supported by many (Leonard, 2007; Preston and Karahanna, 2009; Jentsch and Beimborn, 2014; Horlacher, 2016; Cash, Dekoninck and Ahmed-Kristensen, 2017).

However, most research merely focuses on strategic collaboration and the importance of a shared vision, rather than its practical implementation (Jentsch and Beimborn, 2014). To that end, this research-in-progress paper proposes a method for creating a shared vision among business and IT managers as a basis for digital transformation: the Operating Model Canvas Approach (OMC Approach). Its result is a model called the Operating Model Canvas (OMC) showing the organisation’s value propositions, primary and supporting business activities, channels, and actors (Sprokholt, Haijenga and Boersen, 2015). The OMC can be used as a starting point for top-down development and implementation of the digital transformation and generates a shared vision among business and IT managers by visualizing all transformation aspects. The OMC Approach should not be confused with the Operating Model Canvas that was described by Campbell, Gutierrez, and Lancelott (2017). Although at its core both approaches have the objective to create an overview of the organisation, different visualisation techniques are applied in the respective models.

The OMC Approach aims to generate a shared vision within an organisation by providing a shared language among all stakeholders of the organisation. The Operating Model Canvas (OMC) provides an integral image of the organisation covering both business and IT aspects. The OMC is inspired by two business reference models: the Business Model Canvas by Osterwalder and Pigneur (2010) and the Value Chain developed by Porter (1985). The Business Model Canvas visualises an organisation’s value propositions and contextual aspects in one image, while the Value Chain focuses on the primary business activities that generate the organisation’s core value. The OMC is a derivative of both that visualises the value propositions and environment of the organisation in relation to the organisation’s value chain and supporting business activities. Digital business aspects are included in components of the OMC. Thus, the OMC is a representation of the operating model, showing the intertwined nature of business and IT activities. An additional layer of information, called an aspect layer, can be placed on the OMC to visualise specific IT aspects such as deployed applications or data ownership. Modelling the appropriate level of abstraction is essential for shared vision development; the level depends on the stakeholders of the OMC, its future applications, and the needs of the envisioned digital transformation.

This paper aims to codify the approach to developing the OMC and discover its role in digital transformation design. Therefore, the research question is “How can the Operating Model Canvas Approach support digital transformation design?”. The scientific contribution of this paper is to add to the theory of digital transformation design by codifying the Operating Model Canvas Approach (OMC Approach). The theoretical premise will be validated by demonstrating the method’s principles and added value with a case study. The remainder of this paper is structured as follows: a theoretical background will be provided in section two; the research method and study design are described in section three; the main process steps and results of the OMC approach followed by a case study are discussed in section four; and lastly, the conclusions and future perspectives are provided in section five.

2 Theoretical Background

2.1 Digital transformation in organisations

Over the past decades, information systems and communication technologies have worked their way into organisations and have changed and optimised business processes, communication, and information sharing (Ferreira and Moreira, 2012). Although many scholars (Aho and Uden, 2013; Berman, 2013; Bounfour, 2015; Matt, Hess and Benlian, 2015; Piccinini, Gregory and Kolbe, 2015; Gimpel, Huber and Sarikaya, 2016; Westerman, Bonnet and McAfee, 2016; Kahre, Hoffmann and Ahlemann, 2017; Riasanow, Galic and Böhm, 2017) have mentioned digital transformation, no consensus on its definition exists to the best of our knowledge. Berman (2013) notes that digital transformation means rethinking
how an organisation delivers value to their customers, while Westerman, Bonnet and McAfee (2016) focus on the external impact digitality can have on the organisation. Digital transformation can be viewed from multiple perspectives, such as internal value creation, external threats, technological opportunities, and social implications. We adopt the definition by Bounfour (2015), who states that digital transformation is “the use of technology to radically improve performance or reach of enterprises”, for it addresses the need for technology as well as internal and external performance.

Since digitality influences the competitive environment and ecosystem of an organisation, transformation of an organisation’s business model is to be expected. Subsequently, the organisation’s operating model needs to be adapted to support the new value proposition. After all, business models and operating models are inherently intertwined (Bounfour, 2015). Digitality reshapes business activities and requires the inclusion of information systems, digital assets, and the usage of data throughout the organisation’s operating model (Berman, 2013). Achieving such inclusion means that business and IT ambitions need to be aligned (Jentsch, Schlosser and Beimborn, 2014).

2.2 Shared vision by business and IT

For digital transformation and aligning business and IT, two aspects are crucial: (1) a top-down vision for the digital transformation and (2) a shared vision of business and IT on what they can achieve together and what the future holds (Weill and Ross, 2009; Westerman, Bonnet and McAfee, 2016). Regarding the top-down vision, Weill and Ross (2009) state that defining an organisation-wide digital vision entails defining how an organisation will grow and stay profitable over the years, while imagining how IT can support those business goals. Westerman, et al. (2016) support the top-down approach, stating only top-management has the ability to oversee where the organisation should head towards. Implementing the digital vision in practice should then be realised on tactical and operational levels. Regarding the shared vision, Jentsch and Beimborn (2014) state that ample research has shown its importance in terms of creating business value using IT. To develop the shared vision, business and IT strategies should be aligned by jointly defining the IT value proposition of (Preston and Karahanna, 2009) and the role of IS in the organisation (Leonard, 2007; Jentsch, Schlosser and Beimborn, 2014). The key challenge in creating a shared vision and aligning business and IT is to have sufficient information sharing among business and IT managers, and to find a shared language for business and IT (Preston and Karahanna, 2009; Jentsch and Beimborn, 2014).

2.3 Using modelling as a shared language for a shared vision

A shared language mediates a shared vision between business and IT as it provides a means to communicate and understand each other (Jentsch, Schlosser and Beimborn, 2014). However, finding a common language between business and IT is a challenge (Cash, Dekoninck and Ahmed-Kristensen, 2017), since both have their own perspectives on the organisation and a disconnect might exist between the two (Jentsch, Schlosser and Beimborn, 2014). Due to the primary focus on business value and -model generation rather than IT during a digital transformation, the aim should be to let IT managers move towards understanding business language while generating a shared language (Preston and Karahanna, 2009).

Digital transformation and business IT alignment can encompass multiple organisational elements: business strategy, IT strategy, customers, suppliers, and technological developments (Bounfour, 2015). Visualisations can be a tool to create an overview of all those elements and to make it understandable for the entire organisation by simplifying complex organisational issues (Osterwalder and Pigneur, 2010). To that end, Osterwalder and Pigneur (2010) have developed the Business Model Canvas, which supports the generation of a shared language both in theory and in practice (Osterwalder et al., 2011). As such, visualisations can subsequently generate a shared vision among stakeholders.

3 Research Method

The purpose of this research is to contribute to the theory of digital transformation design by codifying the Operating Model Canvas Approach (OMC Approach). It categorises as design science as described...
by Wieringa (2010) and Hevner (2007). Peffers et al. (2007) developed an IS-specific design science research method consisting of six iterative steps: (1) problem identification, (2) objectives definition, (3) design and development, (4) demonstration, (5) evaluation, and (6) communication (Peffers et al., 2007). Since this research codifies a method to support digital transformation, the research entry point is an objective centred solution, thus our research initiates in step 2 of the process. Our research design aims to develop the meta-model of the OMC Approach by investigating the process and deliverables of the approach and analysing several versions of the OMC. The method will be demonstrated using a case study and evaluated by testing its appliance in practice. Lastly, communication of the method takes place via this research paper. In addition to codifying the OMC Approach, our research contributes to theory building in digital transformation research by using case study data (Eisenhardt and Graebner, 2007).

Although the OMC Approach has been applied in several digital transformation advisory projects, this research paper focuses on an individual project to enable in-depth description of its process and deliverables. As such, this research is a retrospective holistic single-case study (Yin, 2013). The chosen case focuses solely on the development of the OMC as the basis for digital transformation design, rather than the actual transformation. It was selected due to its comprehensive and focused image of shared vision development using the OMC. To analyse the historic case, we first gathered all material that was generated during its execution, consisting of: presentations and workshops to the client; subsequent versions of the OMC; the project’s planning; correspondence among stakeholders and advisors; and the commercial proposal. From those documents we deducted the activities that were carried out during the project and corresponding deliverables. Both the process and the deliverables were then visualised using process-deliverable diagramming, as formulated by Van de Weerd and Brinkkemper (2009). This meta-modelling technique was selected for it provides a concise overview of all activities and deliverables in one model. The model constitutes the artefact of our research. Validation of the artefact occurred two-phased. First, we validated the model with case experts via two interactive discussions, focusing on the activities, deliverables, and their order and placement in the model. Second, we conducted retrospective interviews with client participants to assess the role of the OMC in their organisation, focusing on its merit for digital transformation and its success in creating a shared vision between business and IT.

4 Findings: The Operating Model Canvas Approach

Our research showed that the OMC Approach consists of multiple activities and deliverables that can be divided into three phases: (1) project planning & OMC initiation, (2) OMC development & vision generation, and (3) finalisation. The main goal of the first phase is to establish a firm understanding of the client’s organisation and ambitions. To that end, the client’s documentation on corporate strategy, business information plans, functional strategies, and enterprise architecture are assessed. This is done by collecting meaningful phrases regarding the client’s vision and strategy, so called key statements. These key statements are the main input for the creation of the first version of the OMC. The second phase focuses on iteratively developing and refining the OMC in collaboration with the client. This is achieved by conducting three interactive workshops, during each of which the latest version of the OMC is shown. Participants can then deliver feedback on the model and discuss its contents and possible modifications. In the process of critically assessing the organisation and its future, workshop participants create a common understanding and shared vision for their organisation while developing the organisation’s OMC. The third phase concerns the finalisation of the OMC.

4.1 Retrospective case study: demonstration of the OMC Approach

The OMC Approach has been applied at the Dutch insurance cooperation Univé (from here on: InsCoop) by a digital and IT strategy consultancy organisation (from here on: ConsOrg). InsCoop operates for a total of 1.5 million customers, consisting of both consumers and businesses. It is a cooperation with a central organisation and regional organisations, employing over 2,650 people. In 2014, InsCoop aimed to compose an integral Business Information Plan (BIP), which would include a transformation of the IT landscape. This demanded the BIP to be tuned to all business units in an understandable manner. ConsOrg was asked to support the development of a shared vision for the entire organisation. To that
end, an OMC has been created for InsCoop (Figure 1). It consists of OMC areas, which are building blocks containing the value propositions, primary and supporting business activities, channels, and actors (Figure 2).

Figure 1. The final version of the OMC developed during the retrospective case study

Figure 2. An overview of the OMC areas
Generally, primary business activities are depicted in the centre of the OMC, in this case visualised in green. However, the activities Marketing and Member Loyalty are placed on the outside to meaningfully link activities and their environment, in this case the OMC areas. Members. The value propositions have been included in the primary business activity Proposition Management. Channels are positioned between the Members and the primary business activities, showing its communication function. Supporting Business Activities are symbolically depicted underneath the primary activities, while OMC areas Strategy & Planning and Control are shown at the top of the OMC to visualise their top-down nature. The OMC areas Channels and Members have been depicted on both sides to visualise the value chain of InsCoop. Marketing and Member Loyalty are shown twice to visualise the different nature of the activities within the OMC area. Each OMC area has its own content. The OMC areas Customer Relationship Management, Risk Management, Invest, Partner Network, Proposition Management, Supporting Business Activities, Strategy & Planning, Control, Marketing, and Channels are self-explanatory. However, those specific to InsCoop demand additional explanation. The OMC area Insurances contains the main value chain of InsCoop and shows the order of business activities such as sales, administration, and claims processing. In addition, it visualises the products and services InsCoop delivers. Members contains the (prospective) customers of InsCoop, sorted by segment and ordered to generated revenue. Member Loyalty depicts initiatives that generate organisational and local customer loyalty.

To create the OMC for InsCoop, several activities were conducted by the consultants of ConsOrg and the participants of InsCoop. The complete OMC development process of the retrospective case has been depicted in Figure 3, visualising all activities and deliverables of the OMC Approach with the OMC itself stressed in blue. The most important activities and deliverables have been described here. The first version of the OMC was constructed based on existing documentation of InsCoop. Documents containing information regarding integral strategies with a multiyear perspective, IT ambitions, enterprise architecture, and organisational structures were found to be particularly useful. Key statements were extracted from the documentation to develop OMC areas, which combined formed the first version of the OMC. The visualisation of the OMC was iteratively revised several times during the construction, aiming to improve the model. To increase the recognisability for InsCoop staff, the corporate design style, i.e. logos, colours, and terminology, was acquired and used in the OMC design.

Conducting the workshops was an important step in the development of the OMC and the generation of a shared vision. Employees from several disciplines, i.e. marketing, strategy, internal business consultancy, and IT, were invited to increase organisation-wide support of the OMC and ensure the development of a shared vision. Ultimately, approximately ten participants attended the workshops. During the first, the key statements were interactively discussed with the participants to ensure a common understanding of the contents and objectives of the case. Next, the OMC was presented and discussed with the participants, providing them the opportunity to give feedback. This led to the creation of new OMC areas and the discarding or merging of existing OMC areas. The process of retrieving feedback and adapting the OMC accordingly was repeated over the three workshops. InsCoop was therefore closely involved in OMC development, increasing its acceptance within the organisation. Also, it had the opportunity to discuss the content of its own strategy at length, generating a shared vision in the process.

Finalising the OMC with executives was a means to generate executive support to complement the existing managerial support. To do so, a Management Workshop was organised with executives. In preparation, several aspect layers were created to show the application of the OMC for developing the BIP. By using the same approach for the Management Workshop as for the others, executives were given opportunity to form and share their opinion on the OMC. This feedback was used to finalise the OMC to the satisfaction of the entire organisation.

4.2 Incorporated practices for shared vision generation

Our research showed that two practices of the OMC Approach in specific contributed to the development of a shared vision, both of which are highlighted and explained underneath Figure 3.
Figure 3. The Operating Model Canvas Approach in the InsCoop case
Analysing key statements on corporate and IT visions was vital to ensure support for the OMC within the organisation. By analysing business and IT documents, both future business and IT aspects of the organisation were included in the OMC. Analysing for key statements was done by highlighting phrases stating anything meaningful regarding InsCoop’s business- and/or IT-strategy, or any other future plans. This led to a total of 25 key statements, which were discussed during the first workshop. Key statements were presented accompanied by a reference to their source document to increase recognisability. During the discussion of the key statements, some were rephrased, discarded, or merged, leading to a final set of 16 key statements. By combining business and IT ambitions and visualising those in the OMC, it represented what the organisation would look like in several years. The OMC therefore provided a shared language and subsequently a shared vision for the organisation.

Participative building of a shared vision was done by actively involving business, IT, and management representatives during OMC development. In the first three workshops, staff from operational and tactical levels with different organisational roles attended. The OMC was presented to them by first discussing the overview of OMC areas, followed by a detailed discussion of each. The OMC was shown on A0-format paper (33.11” x 46.81”), allowing the participants to provide their feedback both verbally and on paper. In addition, intermediate contact took place between the client and ConsOrg outside workshops, during which the client delivered additional feedback. This enabled the client to have internal discussions on the OMC beyond the workshops and gave indisposed staff the opportunity to provide feedback regardless of absence. Both aspects contributed to InsCoop’s staff building a shared vision.

4.3 Evaluation and discussion of the OMC Approach at InsCoop

The case study showed a positive attitude towards the OMC Approach from InsCoop. An InsCoop executive manager found the OMC to be “strongly applicable (...) a beautiful document” and an InsCoop internal business and IT consultant mentioned “(...) the canvas will be used as a foundation for creating several additional (IT) aspect layers, with high recognition and understandability”. The case experts said the iterative development of the OMC and regular moments of collaboration between business and IT generated a shared vision for InsCoop, as was expected based on the findings by Preston and Karahanna (2009) and Jentsch, Schlosser and Beimborn (2014). During this case, executives were included in the process at the final stages of the OMC development. In retrospect, they should have been included from the start for developing a shared vision and securing their full support, in accordance with findings from Westerman, Bonnet and McAfee (2016). The OMC has been the foundation for the transformation of InsCoop’s IT landscape and the development of the Business Information Plan.

5 Conclusions and Future Research

We have codified the OMC Approach for digital transformation design, to answer our research question “How can the Operating Model Canvas support digital transformation design?”. The core principle of the approach is making business and IT plan jointly, rather than letting them operate in parallel. The OMC is a model that visualises the value propositions, primary and supporting business activities, channels, and actors. It shows the interplay among additional aspects of the organisation, such as data and FTE’s, by using aspect layers. We described a retrospective case study at an insurance cooperation for whom the OMC was developed. Evaluation of the development and application of the OMC showed a positive attitude towards the participative nature of the OMC Approach for generating a shared vision between business and IT, as the foundation for digital transformation design.

Future research will concern further development and optimisation of the OMC Approach. Additional cases will be analysed for both their process and deliverables, to create extra models. Results of these analyses will be combined to create one reference model for the OMC. In addition, practical experience with the OMC has shown that the OMC areas and their content tend to differ slightly among different clients and a link between the client’s industry and OMC areas has been identified. The nature of this connection and the impact that the client’s industry has on the final visualisation of the OMC will be further investigated. Specifically, the visualisation of the different value chains that different industries allow further exploration.
References


