

Business Transformation Through Service Science: A Path for Business Continuity

George Bithas, Damianos P. Sakas and Konstadinos Kutsikos

Abstract Globalization, technological change, economic crisis, and an increasing demand for specialization have led to new economic activities, new business models, and new value propositions. As enterprises try to react to these challenges, they realize that they need to transform through collaboration with other enterprises in business networks, in order to: (a) develop new value propositions, (b) reduce operating costs, and (c) engage in value innovation activities. In order to enable this transformation, we propose a Service Science approach to assist enterprises in developing collaborative value propositions.

Keywords Service science · Business transformation · Service Systems · Business continuity

Introduction

The rise of globe-spanning, service-based business models has transformed the way the world works. This transformation has been enabled by new information and communications technologies, specialization of businesses, global regulations, and increased use of external services by entities at multiple scales (Wirtz and Ehret 2012).

Enterprise networking is becoming a reality for any kind of organizations, because none can operate in isolation anymore. Due to globalization, it is necessary for an enterprise to be a member of a large supply chain and to have strong partnerships with other nodes of a collaborative network. Digital revolution has created new strategic models based on the closer relationship with customers and

G. Bithas (✉) · K. Kutsikos
Business School, University of the Aegean, Chios, Greece
e-mail: g.bithas@ba.aegean.gr

D.P. Sakas
Department of Informatics and Telecommunications, University of Peloponnese,
Tripoli, Greece

other partners in order to offer total solutions. Such a collaborative reality creates a new business environment, whereby its complexity and scale pose significant challenges. Today an increasing number of enterprises are looking into the question of “What” to do in order to transform. There is a need for modern enterprises to seamlessly interoperate poses significant challenges on their capabilities for engaging in multiple business networks. Today’s enterprises can transform through their participation in business networks, in order to: (a) develop new value propositions; (b) reduce operating costs; (c) engage in value innovation to satisfy more demanding customers; (d) participate in alliances that can help them become more sustainable.

This paper considers a particular type of business networks, namely, “service systems,” and proposes this architecture for enabling business transformation. Our approach is based on Service Science, which is the study of service systems and value cocreation. We believe that our approach can give a great impetus to enterprises that want to thrive in today’s highly competitive and complex business environment.

Literature Review

Business Transformation

The past few years have been characterized by significant developments that came along with fundamental changes in the way modern enterprises operate and are structured. Many organizations faced the challenge to question their operations, products, and business models and are forced to adapt to new conditions in a short period of time. Today’s enterprises need to be transformed by a combination of predicting better, learning and acting faster, as long as the market expect that a transformation will improve the value an enterprise can provide to the market (Rouse 2005). Irrespective of their size, organizations are required to adapt to a progressively dynamic environment. Mastering change is of the greatest importance for contemporary enterprises (Malhotra and Hinings 2013).

According to (Rouse 2005; Rouse and Baba 2006), business transformation is driven by value deficiencies that require significantly redesigned and/or new work processes. Transformation has proven to be a vital strategic element in business strategy. It does not involve merely fine tuning a few areas but requires radical changes in critical business factors. As reinvention of the entire business philosophy is the central idea, profound consideration is given to reinvention that will lead organizations to succeed and not die away due to stagnation. This process can give to organizations complex challenges but at the same time can offer new opportunities (Cowan-Sahadath 2010).

It is obvious that business transformation is highly complex process and that the results are influencing enterprise’s future. Currently the ability to manage a

transformation is crucial for enterprises to create advantage against competitors. Organizations need to create transformation capabilities in order to be capable to offer innovative value propositions, which are developed by innovative internal business processes (Stiles and Uhl 2012).

Business transformation management needs to be business-driven, value-oriented in order to be effective (Stiles and Uhl 2012). Business Transformation Management Methodology (BTM2) is a holistic methodology for managing business transformation. BTM2 is developed by Business Transformation Academy and is an approach that helps manage transformation initiatives.

BTM2 incorporates eight disciplines and are of two types: (a) the direction layer that refers to management of strategy, value, and risk of a business transformation and (b) the enablement layer that refers to business process management, program management, IT transformation management, organizational change management, and competence and training management.

Based on (Rouse 2005), research in enterprise transformation is progressing along six key areas: (a) Transformation Methods & Tools, (b) Emerging Enterprise Technologies, (c) Organizational Simulation, (d) Investment Valuation (e) Organizational Culture & Change and (f) Best Practices Research.

Collaborative Networks

A key concern for business transformation activities is how to control risks and ensure the firm's sustainability, post-transformation. Today's competitive markets are becoming even more complex and dynamic, with unable enterprises to prospering solely through their own individual resources (Friedman 2005). Each enterprise's success depends on the activities and performance of others to whom they do business with (Wilkinson and Young 2002).

It is very important for enterprises to understand the new possibilities and shifts that are able to affect global economy and use these shifts as asset for the future. Based on (Santucci et al. 2012), our digital society is redefining the individual enterprise in a context where the collaborative network is the business. These networks are the foundation of future enterprise systems (Chen et al. 2008).

The survival of traditional enterprises within the global economy relies on their ability to adapt to several changes, create new ideas, and new approaches to collaborating in dynamic networked environments. Collaborative networks are environments where resources are exchanged within and across organizational boundaries (Standing and Sims 2009). In order to succeed in a collaborative environment, enterprises need to be interoperable, thus being able to share information with other organizations, and must be adaptable to different network environments (Goncalves et al. 2007). Nevertheless, due to different models and information structures, the exchange of important information is not an easy task.

A very popular form of business cooperation that has attracted attention is virtual enterprises. A virtual enterprise is a coalition of business entities, selected from a

larger community of available business entities that collaborate on a joint project. The collaboration is often ad hoc, for a specific outcome only, after which the virtual enterprise may dismantle. The members of a virtual enterprise often possess complementary skills and technologies whose combination is deemed necessary (D'Atri and Motro 2007). It is also supported by extensive use of information technology. The main objective of a Virtual Enterprise is to allow a number of organizations to rapidly develop a common working environment, in which are capable to manage a pool of resources provided by all the nodes in order to achieve a common goal.

In this approach, a client is an entity outside the virtual enterprise, which approaches the virtual enterprise to acquire a product or a service. This means that a virtual enterprise does not cocreate value with a customer. The cocreation of value among customer and provider is very important for high-level service design.

Service Value Cocreation

Business transformation can be defined as the orchestrated redesign of the genetic architecture of the entire enterprise (Morgan and Page 2008). Transformations are complex undertakings. Many business transformations are highly susceptible to failure. Today an increasing number of enterprises are looking into the question of “What” to do in order to transform. Our approach is based on Service Science, which is the study of service systems and value cocreation. Service Science combines organization and human with business and technological understanding in order to categorize and explain service systems, including how service systems are able to interact and evolve to co-create value (Maglio and Spohrer 2013).

Value and value creation are critical to understand the dynamics of service systems (Vargo et al. 2008). Service Science adopts the service-dominant logic foundational premises. As a result, for service science, service is the application of competences (knowledge and skills) by one entity for the benefit of another (Vargo and Lusch 2004, 2006). This definition helps us to understand better what service means, by implying that value is created collaboratively in interactive configurations of mutual exchange, which are the service systems. The value that is generated may fall in one of two categories. The first is good-dominant (G-D) logic, which is based on the value-in-exchange meaning of value, created by the firm and distributed in the market, usually through exchange of goods and money. The alternative view, service-dominant (S-D) logic, is tied to the value-in-use meaning of value (Vargo and Lusch 2008). In S-D logic, the roles of producers and consumers are not distinct, meaning that value is always cocreated, in interactions among providers and beneficiaries through the integration of resources and application of competences (Vargo et al. 2008).

From the S-D logic viewpoint, value is not created until the recipient of a service offering has actually integrated the newly acquired resources with its own, for a positive, beneficial outcome. In other words, the recipient service system's overall

circumstances must somehow improve, implying that service value has been cocreated. To that extent, each service system engages in three main activities that make up a service interaction: (a) proposing a value cocreation interaction to another service system, (b) agreeing to a proposal, and (c) realizing the proposal (Maglio et al. 2009).

Service science emphasizes collaboration and adaptation in value cocreation, and creates an interdependent framework for systems of reciprocal service provision. Service systems survive, adapt, and evolve through exchange and application of operant resources, (those that act upon other resources), such as knowledge and skills, with other systems. In other words, service systems engage in exchange with other service systems in order to enhance adaptability and survivability for themselves and other service systems (Vargo et al. 2008).

Conclusions

In this paper, we argued that the service systems as a business transformation path is an important area of interest, both for academics and professionals. By adopting a Service Science viewpoint, we assume that service ecosystems are comprised of service systems collaborating for value cocreation. We believe that such an environment can provide new business opportunities to its participants in order to achieve sustainability and business continuity.

References

- Chen, D., Doumeingts, G., & Vernadat, F. (2008). Architectures for enterprise integration and interoperability: Past, present and future. *Computers in Industry*, 59(5), 647–659.
- Cowan-Sahadath, K. (2010). Business transformation: leadership, integration and innovation—a case study, changes & projects, 28(4), 395–404.
- D’Atri, A., & Motro, A. (2007). In IFIP international federation for information processing (vol. 243). In L. Camarinha-Matos, H. Afsarmanesh, P. Novais, C. Analide (Eds.), *Establishing the foundation of collaborative networks* (pp. 317–325). Boston: Springer.
- Friedman, T. (2005). *The world is flat*. New York: Farrar, Straus & Giroux. ISBN 978-0-374-29278-2.
- Goncalves, R., Agostinho, C., Malo, P., & Steiger-Garciao, A. (2007). Harmonizing technologies in conceptual models representation. *International Journal of Product Lifecycle Management*, 2(2), 187–205.
- Maglio, P. P., & Spohrer, J. (2013). A service science perspective on business model innovation. *Industrial Marketing Management*, 42(2013), 665–670.
- Maglio, P. P., Vargo, S. L., Caswell, N., & Spohrer, J. (2009). The service system is the basic abstraction of service science. *Information System E-Bus Management*, 7, 395–406.
- Malhotra, N., & Hinings, C.R. (2013). Unpacking continuity and change as a process of organizational transformation, long range planning, pp. 1–22.
- Morgan, R. E., & Page, K. (2008). Managing business transformation to deliver strategic agility. *Strategic Change*, 17(5–6), 155–168.

- Rouse, W. B. (2005) A theory of enterprise transformation. *Systems Engineering*, 8(4), 279–295.
- Rouse W., & Baba M. (2006). Enterprise transformation. *Communications of the ACM*, July 2006, 49(7).
- Santucci, G., Martinez, C., & Vlad-câlcic, D. (2012). The sensing enterprise. In: FInES Workshop at FIA 2012.
- Standing, C., & Sims, I. (2009). The use and perception of eMarketplaces: An institutional perspective. In C. Standing (Ed.), *Electronic markets: Benefits, costs and risks* (pp. 160–173). Hampshire: Palgrave, Basingstoke.
- Stiles, P., & Uhl, A. (2012). Meta management: Connecting the parts of business transformation. 360—the *Business Transformation Journal*, February 2012 3, 24–29.
- Vargo, S. L., & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing*, 68(January), 1–17.
- Vargo, S. L., & Lusch, R. F. (2006). Service-dominant logic: What it is, what it is not, what it might be. In R. F. Lusch & S. L. Vargo (Eds.), *The service-dominant logic of marketing: Dialog, debate and directions* (pp. 43–56). Armonk: M.E. Sharpe Inc.
- Vargo, S. L., & Lusch, R. F. (2008). Service-dominant logic: Continuing the evolution. *Journal of the Academy of Marketing Science*, 36, 1–10.
- Vargo, S. L., Maglio, P. P., & Akaka, M. A. (2008). On value and value co-creation: A service systems and service logic perspective. *European Management Journal*, 26, 145–152.
- Wilkinson, I., & Young, L. (2002). On cooperating: Firms, relations and networks. *Journal of Business Research*, 55(2), 123–132.
- Wirtz, J., & Ehret, M. (2012). Service-based business models: Transforming businesses industries, and economies. In R. Fisk, R. Russell-Bennett, & L. C. Harris (Eds.), *Serving customers: A global perspective*. Tilde University Press.