Towards a Theory on Collaborative Decision Making in Enterprise Architecture

Agnes Nakakawa[1], Patrick van Bommel[1], and Erik Proper[1,2]

[1] ICIS, Radboud University Nijmegen
P.O. BOX 9010 6500, GL Nijmegen, The Netherlands
[2] CITI, CRP Henri Tudor Luxembourg, Luxembourg
A.Nakakawa@science.ru.nl, pvb@cs.ru.nl, e.proper@acm.org

Abstract. Several challenges in enterprise architecture development indicate the need for collaborative decision making to be deployed during architecture creation. However, how this should be achieved remains ad hoc. This paper, therefore, presents an evolving theory that is currently being used to guide the development of a method for supporting collaborative decision making during enterprise architecture creation. The first iteration to evaluate the relevance of the concepts in this theory was done using an exploratory survey, and the findings are briefly presented.

Keywords: Enterprise Architecture, Collaborative Decision Making.

1 Introduction

Some challenges in enterprise architecture development can be addressed by complementing architecture approaches with collaborative decision making. Therefore, this research uses the Design Science research methodology to develop a method for supporting collaborative decision making during enterprise architecture creation. Since the method will specifically enable Collaborative Evaluation of Enterprise Architecture Design Alternatives (CEADA), it is herein referred to as CEADA. Design Science facilitates the creation and evaluation of practical innovative artifacts for solving significant organizational problems [2]. The resultant artifact in this research is the CEADA method. However, there is need to formulate a theory, based on existing theories, that will guide the development of CEADA. This theory can help researchers and practitioners to gain insight into the orchestration of key determinants for collaborative decision making to be successfully realized during enterprise architecture creation. Section 2 presents the evolving theory and section 3 presents the results from the first iteration of the theory as well as the conclusion.

2 Joint Decision Making in Enterprise Architecture

Theory refers to the body of knowledge that describes, explains, and increases understanding of a situation in order to predict future occurrences and to lay

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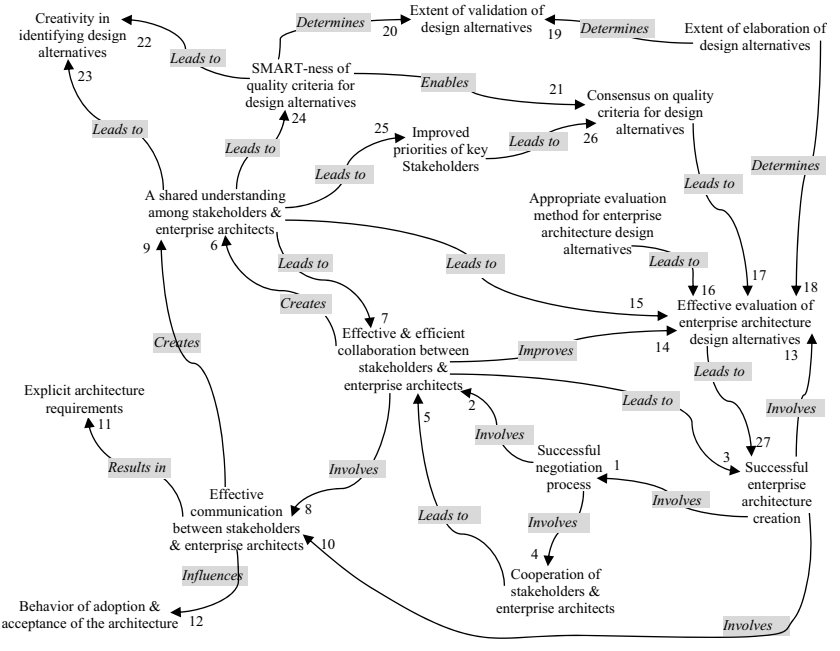

Fig. 1. Theory on Collaborative Decision Making in Enterprise Architecture

a foundation for improvement opportunities [3]. The situation of interest is the effective and efficient deployment of collaborative decision making into architecture creation in order to deliver an understandable, feasible, acceptable, and efficient enterprise architecture for an organization. This section shows how the existing knowledge on enterprise architecture creation and (collaborative) decision making is used to explain this situation and predict ways in which it can be addressed. The guidelines for theory formulation in [3,7] have been used to formulate the theory shown in figure 1 and briefly explained below.

Enterprise architecture creation involves activities such as: understanding the purpose of the architecture, creating a shared understanding of the 'as-is' and 'to-be' contexts of the organization, determining possible impacts of the desired transformation, and communicating with stakeholders [9]. Decision making, on the other hand, generally involves: intelligence (investigating an environment for any need for improvement), design (devising possible decision/design alternatives, and choice (selecting the appropriate decision alternative) [1]. Moreover, collaborative (or joint or cooperative) decision making involves several individuals cooperating to arrive at a joint decision, which will yield joint consequences for each individual [6]. From these definitions, collaborative decision making in enterprise architecture creation can be defined to involve enterprise architects and organizational stakeholders *cooperating* to: gain *mutual understanding* of the 'as-is' and 'to-be' contexts of the organization; *identify* and *devise* possible design alternatives for realizing the 'to-be' (or target) organization context; *evaluate* the