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Improving the agility of IT service networks

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Chapter 8

Summary

193



Traditionally working processes are to a large extent hierarchically organized. Such hierarchical setup is aimed on efficiency and stability. That aim on efficiency and stability fits a world that develops itself with limited speed. Nowadays the world develops itself in a much faster pace. That fast pace makes companies producing via hierarchical structures, less effective in the response to market changes. In the last decennia a development unfolds in which companies organize their work via network structures. These business networks are to a large extent enabled by modern information technology. Examples of such technology are internet and mobile telephony. With that technology collaboration structures can be setup in a very short time. Technology is therefore an essential part of our modern network oriented society.

Such technology is delivered by many IT providers, as IT services. Each IT service provider delivers one or more of these IT services. Multiple IT service providers then combine the IT services to composed interdependent IT services, which are delivered to a business network. Different IT service providers consequently form networks of IT services. Such network of IT services results in the term 'IT service network'.

Given the fast developing markets the IT services in that network are subject to many changes. To realize these IT service changes faster, initiatives emerged in the beginning of this century. These initiatives aimed to let organizations operate with increased flexibility. The initiatives are known under the 'Agile' umbrella, meaning 'responsive', 'flexible'. Remarkable successes have been achieved with 'Agile execution'. Yet, these successes are based on small scaled applications. The Agile execution of organizations at a large scale brings serious challenges due to the many dependencies in networks of IT services.

This dissertation is the result of multiple studies aiming to answer the question how the Agility of networks of interdependent IT services can be improved. The first study (see chapter 2) aimed to identify the codependencies between the parties that deliver these IT services. These parties are the IT service providers and the teams in each of the IT service providers. This study revealed three types of networks with codependencies: (1) the human network, (2) the contractual network and (3) the technical network. The study shows that the dependencies in these networks are to a large extent based on the information that staff shares. Staff needs that information to deliver their IT services. The follow up research (see chapter 2) aimed to identify the information that needs to be 'visible' for the staff. This research resulted in an overview of information for each of the three types of codependencies. The case study revealed a lack of almost all information that is needed by the staff.

CHAPTER 8

A logical related question was whether increasing the ‘visibility’ of information within and between the teams that deliver the IT services improves Agility. The resulting research (see chapter 3) was executed in a large financial institute. The study shows improved Agility as a result of the increased information visibility. Agility in the study was defined as the duration of (IT incident handling) tasks that teams complete.

The follow up research question that emerged was which other factors influence the Agility of IT service networks. To answer that question a case study was performed about the issues that staff in IT service networks experience (see chapter 4) to deliver Agile IT services. From these issues six factors were identified, including the visibility of information.

The subsequent case study tested whether influencing these factors improves the Agility in an IT service network. The case study was performed at a financial institute (see chapter 5), in which we deployed intervention actions for that context. The study confirmed the relationship between the factors and the IT service network Agility; the Agility increased by a significant reduction of the delivery time of new software.

With the results of the studies (chapter 2-5) the Agile 5+1 framework was developed. The Agile 5+1 framework consists of 20 generic intervention actions to improve the Agility of IT service networks.

Still, a lot is to be studied in the field of IT service networks. A limited number of cases have been studied which limits the generalizability of the results. This opens the possibilities for future research in the field. A natural avenue for future research is the empirical confirmatory study of the Agile 5+1 framework. Naturally these studies will take place in the IT industry. However, also outside the IT industry I see possibilities to improve the flexibility between and within collaborating parties, based on the results of this dissertation.