

# Chapter 12

## Processes in R&D Collaboration

**Sanne Bor**

*Hanken School of Economics, Finland*

**Kees Boersma**

*VU University Amsterdam, The Netherlands*

### ABSTRACT

*This paper examines the process leading to a formalised co-operation. A comparative case study of Research and Development (R&D) collaborations illustrates how, during the process of formalising, the creation of shared understanding of the co-operation is supported or hindered. When participants are involved in setting goals, writing work plans, and creating the rules for the co-operation, each participant will have a better understanding of their relationship with others, their own role and responsibility and those of the others. In this study, the authors identify five possible factors that encourage or discourage the partners to use the process of formalising for the purpose of sensemaking.*

### INTRODUCTION

In this paper, we investigate the process and management of formalising collaboration between research partners in Research and Development (R&D) networks. We especially look at how this process can be used to create a shared understanding of collaboration and to create an understanding for each participant concerning their relationships, roles and responsibilities.

In recent years, inter-organisational R&D collaboration has grown rapidly as is evident from the longitudinal study by Hagedoorn and

his colleagues (Hagedoorn, 2002; Hagedoorn & Kranenburg, 2003; Roijackers & Hagedoorn, 2006). These collaborative networks have become increasingly important for both the innovation process and for the competitive advantage of companies and the economy in general (Chiesa & Manzini, 1998; Leydesdorff & Etzkovitz, 1996). Although inter-organisational R&D networks offer considerable potential, they also introduce new questions concerning management and organising (e.g., Provan, Fish, & Sydow, 2007). The partners in the collaboration need to create a shared understanding of what their collaboration is about,

what expectations each partner has, and how to work and make decisions together. This is needed in project teams in general (Demirkan & Nichols, 2008), but when partners come from different organisations it becomes even more important.

So far, the literature on inter-organisational R&D networks has focused mainly on collaboration between companies (see Grandori and Soda (1995) for an extensive overview of this literature). Far less attention has been given to collaboration between research institutes or between research institutes and companies. Some exceptions of this are Chompalov, Genuth, and Shrum (2002), Mothe and Quélin (2000), and Tijssen and Kor-evaar (1997).

This paper presents an in-depth empirical study of two Information Technology (IT) enabled R&D networks which have been funded as Networks of Excellence by the European Commission. This study seeks to respond to the need voiced for example by Provan et al. (2007) for empirical and reflexive investigation into collaborative networks.

This paper is structured as follows: first we introduce and explain the two core concepts used in the paper: *formalisation* and *sensemaking*. After this, we explain how the study on which the paper is built has been conducted. Following this we present the results of our empirical study. We start with a description of how the formalisation process unfolds in the two cases. As part of the formalisation process we discuss initiation and goal setting, member selection/recruitment, content development, rules for co-operation and management/decision making structure. After this we discuss the differences between the cases and how this impacts sensemaking and we identify potential factors that encourage/discourage participants to use/from using the formalisation process for the purpose of sensemaking. We then present our final conclusions and discuss possible directions for future research.

## **NETWORK FORMALISATION AS A SENSEMAKING PROCESS**

If the partners in a collaborative network are to be effective in their collaboration, they need to create a shared understanding of the collaboration. In an inter-organisational setting in which the participants have commitments to both their own organisation and the network, a shared understanding is even more important. A shared understanding of the expectations of each partner concerning the desired outcomes, how to work together and how decisions are made is essential in preventing frustration, demotivation or even conflict. In more positive terms, it encourages participants in a collaborative network to be effective, supportive and motivated to work together. In this paper, the concept of *sensemaking* (Weick, 1995) is used to refer to the process of creating this shared understanding. According to Weick (1995), sensemaking is at its simplest “the making of sense” (p.4) and it has the following seven properties: (1) it is grounded in identity construction; (2) it is retrospective; (3) it enacts sensible environments; (4) it is social; (5) it is ongoing; (6) it is based on extracted cues; and (7) it is based on plausibility rather than accuracy.

As discussed in this paper, the formalisation process of R&D collaboration is understood as the process through which collaboration becomes or is made formal. The process results, for example, in a contract, rules, procedures, or work plans. The concept of formalisation is closely related to the concept of institutionalisation (e.g., DiMaggio & Powel, 1983; Scott, 2001). Institutionalisation, however, refers to the setting of both formal and informal rules, procedures, and acceptable ways of acting. As we look at the formal side, we have chosen to focus on formalisation instead of institutionalisation.

Vlaar, Van den Bosch, and Volberda (2007) argue that inter-organisational management researchers have become increasingly interested in

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