

□ Abstract

On the basis of the concept of compromise, this research in progress deals with the development of an Information System of competencies management. Based on the Actor Network Theory approach (Law, 1992; Callon, 2001; Akrich, Callon and Latour, 2002a,b; Latour, 2005), the concept of compromise helps us to understand how various actors shape an Information System. From the Banque de Luxembourg case study, we analyze two compromises during the first period of the development of the Information System: the definition of model and the choice of Information Technologies. At last, we discuss the theoretical framework, and open the line of argument on the roles and effects of compromises in Information System projects.

Key-words:

Compromise, Actor-Network theory, Information System development, collaborative research.

□ Résumé

A partir du concept de compromis, cette recherche en cours traite de la conception d'un système d'information (SI) pour le management des compétences. Développé à partir de la théorie de l'acteur-réseau (Law, 1992; Callon, 2001; Akrich, Callon and Latour, 2002a,b; Latour, 2005), le concept de compromis permet de comprendre comment des acteurs hétérogènes parviennent à définir les contours d'un SI. A partir du cas Banque de Luxembourg, nous analysons deux compromis : la définition du modèle de SI et le choix des outils TIC. Enfin, nous discutons le cadre théorique en nous interrogeant sur les rôles et les effets des compromis dans les projets SI.

Mots clefs :

Compromis, acteur-réseau, conception de Systèmes d'Information, recherche collaborative.

Building an Information System of competencies management: a story of compromises

(Research in progress)¹

Développement d'un système d'information de gestion des compétences: une affaire de compromis

(Recherche en cours)

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Introduction

In September 2008, a bank (Banque de Luxembourg) and the Public Research Centre Henri Tudor (PRC) start a project on the development of an Information System of competencies management. This specific Information System should be integrated into the existing Information System of the bank, and into the existing Information Technologies: the software to manage the human resources, the bank's website, the bank's intranet, and the balanced scorecard software. Obviously, each actor and organization involved in the conception process has his or her own logic, approach, and objectives about the Information System of competencies management. How can these different actors and organizations, from different sectors, get results? How have they sealed satisfactory compromises?

From this case study, the paper focuses on the concept of compromise in Information System development. The study of compromise helps us to improve our understanding about the success or failure of partnership in collaborative research of Information System projects including both private companies and public research centers. Based on the socio-technical approach (Williams and Edge, 1996, Mumford, 2000, Laudon and Laudon, 2006), which highlight the importance of the relationship between stakeholders and technology, the theoretical framework is anchored on the Actor Network Theory approach (Callon 1986; Law 1992; Akrich, Callon, and Latour 2002a,b; Munir and Jones 2004; Latour 1988, 2005; Akrich, Callon and Latour 2006). The aim is to develop a framework to understand the compromise, then the conditions of satisfactory compromises.

From this perspective, the contributions of this research in progress are in 1/ the conceptualization of a theoretical framework to understand and describe the compromises, and 2/ a better understanding of the development of Information Systems.

The paper is structured as follows: the first section presents a literature review, then a theoretical framework about the concept of compromise. The second section outlines the case study, the method and the factual description. Then, the preliminary results analyze two compromises in the case study. The fourth section discusses the theoretical framework.

1. The concept of compromise

1.1. Brief review of literature

The concept of compromise has been studied from the beginning of social sciences, as shown by Kutty and Nachi (2004) and Papilloud and Rol (2004), who detect the concept of compromise in the Simmel, Durkheim, and Weber works. Then, many authors deal with the concept of compromise in various fields: Smith (1942), Hallowell (1944), Mc Carthy (1957), Golding (1979), Kuflik (1979), Pennock and Chapman (1979), Ricoeur (1991),

Nachi (2004a), Boltanski and Thévenot (2006). In organization science, Parker Follet (1924) appears as a pioneer in dealing with the concept of compromise.

Approaches about compromise are heterogeneous in both definition and method. Some authors try to define the efficiency in the degree of compromise (Sanver and Sanver, 2004), other ones try to differentiate compromise by adding other notions: integration (Parker Follet, 1924; Graham, 1998), alliance (Habermas, 1992); harmony (Li, 1997); modus vivendi and consensus (Arnsperger and Picavet, 2003). Moreover, the literature proposes many concepts close to the concept of compromise: agreement; trade off; negotiation and decision (Simon, 1955; Crozier, 1964); regulation (Reynaud, 1978; Sainsaulieu, 1995); win-win (Mc Nary, 2003); closure of controversy (Latour, 2005).

However, the review of literature highlights two limits in the study of the concept of compromise in Information System: first, the concept of compromise is rarely analyzed (Nachi, 2004b). The approaches are often mixed up with various notions (negotiation, conflict, consensus, etc). Second, the concept has not been fully developed in Information System. Nevertheless, we consider this concept as relevant for understanding the development of Information System in a coordinate approach (Reix, 2005). Thus, in order to extend the literature, we propose a theoretical framework based on the Actor Network Theory in order to define and characterize the concept of compromise.

1.2. Toward a theoretical framework

For the Actor Network Theory (Law, 1992; Callon, 2001; Akrich, Callon and Latour, 2002; Latour, 2005), a compromise is understood as the closure of a controversy. Compromise allows associations between actors and objects in a socio-technical network (Latour, 2005), and coordination within the socio-technical network. Associations define the linkage between actors and objects, and the modalities of their interactions. Nevertheless, these associations are invisible for the researchers. They only appear when a controversy is deployed (Callon, 2001). Controversy can be defined as anything affecting interaction. In order to describe associations, the researcher has to follow controversies. At the closure of controversy, socio-technical network has defined new associations, which allow renewing the coordination. Compromise can also be defined as the condition for a stable association.

Compromise as a mediator in associations

At the closure of controversy, compromise constitutes a mediator between stakeholders which allow the association. Mediators always convey interactions: "mediators transform, translate, distort, and modify the meaning or the elements they are supposed to carry (Latour 2005, p.39). Compromise emerges from the negotiation during the controversy. Also, a compromise is an abstract and/or a physical entity building by actors. In sealing compro-

mise, stakeholders develop a mediator which contains the modalities of association. For example, boundary object (Star et Griesemer, 1989), catchall object (Flichy, 2007), or mediation object (Hussenot and Missionier, 2007) can be considered as mediators which anchor compromises in time.

Compromise as equilibrium between concession and gift

For actors, compromise is less and more than they wanted. This is a mutual gift and concession, and a synergy between stakeholders. Concession can be defined as “something which is allowed or given up, often in order to end a disagreement or the act of allowing or giving this” (Cambridge Dictionary). Conversely, a gift is something stakeholders give for building the compromise. The notion of gift is near the works of Mauss (1954). Also, compromise requires mutual effort in time. Stakeholders must repeat their gifts and concessions in order to maintain the modalities of interactions.

Compromise as a synergy

From the mutual gifts and concessions, a synergy between stakeholders can appear. From this synergy, new unexpected modalities of compromise emerge. This result of this synergy can be a mutual gain for everybody. Also, the compromise encompasses all of these modalities (concessions, gifts, and synergy), which are negotiated and developed by stakeholders. This compromise is a mediator in the boundary object approach (Star and Griesemer, 1989): it allows coordination and different meaning about the interest for each stakeholder. The compromise is the same for every stakeholder, but each one finds his own interest in the compromise. More precisely, compromise embeds mutual and individual interests.

Typology of compromises: complete compromise / incomplete compromise

An ideal typical compromise is, first, equilibrium between gift and concession for each stakeholder, and, second, the synergy going past the concessions and gifts of actors. We call this first ideal type of compromise complete compromise. A complete compromise is a satisfactory situation for all stakeholders. The value of partnership is fair sharing. Nevertheless, collaborations and projects can exist without complete compromises. We call this second ideal type of compromise incomplete compromise. In this case, stakeholders are in an unbalanced collaboration: the exchange between gift and concession are unsatisfactory for some.

2. Empirical illustration

For many years, the Banque de Luxembourg wanted to improve its competencies management. As a consequence, the Banque de Luxembourg (BDL) has negotiated a partnership with the Public Research Centre Henri Tudor (PRC) in order to develop an Information System of competencies management. In September 2008,

the financial crisis called into question the policy of recruitment in banks. For many years, banks have employed many new collaborators. The collapse of financial markets stops the new recruitments. In this context, the project becomes exigent to the Banque de Luxembourg. To complete this project, the BDL delegates the leading of project to a former employee of the BDL, who is now a consultant. We focus on the period of the definition of Information System (September 2008 – February 2009).

2.1. Method: a case study

The findings reported in this paper are based on a case study (Eisenhardt, 1989; Stake, 1998; Yin, 2003). Three data-collection instruments were used: first, the transcriptions of project team meetings (30 participatory observations from September 2008 - March 2009). Second, we have collected much information about organizations, contexts, Information Technologies implemented in the bank, and actors in a research log. Third, we have used mails and documents exchanged during the project. The data are compiled with Nvivo software.

To analyse these qualitative data, we have used the methodology of coding (Miles and Huberman, 2003). Three main steps structure the coding process and the analysis of these data (working in progress).

1/ From the theoretical framework, a tree node is defined. This tree node is defined before the beginning of the coding.

2/ Moreover, a second coding will be realised according to the context of the case study. This second coding is named free nodes.

3/ At last, we have built sets (tree nodes and free nodes) in order to bring the compromises together.

From this coding, we are able to describe and analyze the compromise.

2.2. Monograph : the beginning of the Banque de Luxembourg case study

This collaborative research has to develop an information system of competencies management. For the BDL, the operational objective came first: BDL had to develop an Information System for competencies management, while the PRC wanted to develop an Information System and scientific outputs. For the project members, the first step was to define the objective and the finality of the project. From these different objectives, a partnership contract was signed in September 2008. In this partnership contract, actors determine their mutual vision and their reciprocal responsibilities about the project.

The first step was the organization of the project. During the meetings, stakeholders formulated different logics to conceptualize the Information System. For the consultant, the objective was the satisfaction of the BDL managers with as little mobilization of employees as possible. The PRC hoped to use its previous works and a precise scientific methodology in order to publish about the case study. At last, the BDL hoped that the project would not

mobilize their employees too much. Moreover, the project must not scare the employees. The financial crisis produced tensions. The team project must demonstrate empathy and listen to the employees.

Moreover, stakeholders have got different approaches about the management of competencies. The PRC has a theoretical approach, while BDL has a pragmatic approach. BDL has to conceptualize their competencies management practices. Thus, two main approaches confronted each other: the competencies of management from the task and the competencies of management from the resources. These approaches are quite different. Moreover, actors have to define many concepts together, like competencies, tasks, or activity, and they had to negotiate the articulation of these concepts in the model of Information System. In spite of these different logics, actors conceptualized a first draft of model in December 2008.

In the same time, actors deal with the Information Technologies issues. There are indeed many Information Technologies in the bank to manage human resources. Hence, a competencies management approach requires, first, the integration of the new Information (sub) System to the existing Information System of the bank, and, second, the using of many Information Technologies (website, intranet, balanced scorecard software, *etc.*). Also, the partners have to answer to many questions: how integrate the Information (sub) System of competencies management to the existing Information System? Which are the relevant Information Technologies to support this Information (sub) System? Needs the bank use existing Information Technologies or develop new Information Technologies?

3. Preliminary results

From the theoretical framework and the empirical illustration, the results analyze two main sealed compromises from the conceptualization of the model of Information System to the definition of the Information Technologies which support the Information System. Each compromise will be analyzed according to (1) the concessions and the gifts of stakeholders, (2) the result of the synergy, (3) the typology of compromises (complete or incomplete). There are below the first elements of two compromises.

3.1. First compromise: conceptualization of an Information System of competencies management

The first compromise is about the conceptualization of the Information System model. In November 2008, the PRC asked one of their engineers to present a previous model of Information System of competencies management to the consultant representing the BDL in the project. Also, the PRC brought its approach resources based on the articulation between the individual competencies and the collective competencies. The consultant

representing the BDL brings experimental materials to test the preliminary models. More precisely, he works on a specific profession in the bank. This experience is an important resource to combine all the BDL's features in the model. Also, the team uses these previous works to elaborate the model. From the theoretical knowledge of the PRC and the experience of the consultant, an original model emerged. In February 2009, actors have defined some information flows, some uses, and the main users.

3.2. Second compromise: definition of Information Technologies which will support the Information System

Since January 2009, actors have worked on the choice of Information Technologies which will support the Information System of competencies management. According to the BDL, the data may integrate in PeopleSoft, a software of human resources management. In this case, BDL should invest in new applications. Conversely, the PRC considers all the solutions. At last, each user needs specific functionalities and interface, according their uses. For example, some managers want this information about competencies in their balanced scorecard software, while some collaborators want this information in the intranet solution. In spite of many debates, actors do not define the tools of competencies management at the end of February.

4. Toward a discussion about roles and effects of compromises within an Information System project

From the first elements of the empirical illustration, we are able to discuss the roles and the effects of the compromises in Information System projects. Three points can already be highlighted: the importance of the first compromise, the materialization of compromises, and the effects of compromises in the project: profit sharing and irreversibility (Callon, 1986).

Importance of the first compromise and the creation of meanings

The case study shows that the first compromise is the most important. The first compromise allows the sharing of a mutual approach on the project. Because the stakeholders have different logics, the first compromise must specify the features of the IS as well as everyone's responsibilities. Through the first compromise, stakeholders determine their mutual vision (Flichy, 2007) of the IS.

Materialization of compromises to objectivize the modalities

In the theoretical framework, we define the compromise as an abstract or physical mediator (Latour, 2005), which anchors the gifts, concessions, and the synergy of everybody. About this mediator, the case study underlines a

tendency: stakeholders materialize their main compromises. For example, through the choice of Information Technologies, stakeholders determine the modalities of compromises and “objectivize” these ones. The materialization of compromises allows a mutual confirmation of the modalities.

Effects of compromises: profit sharing and irreversibility

The satisfactory compromises carry on growing profit sharing for the stakeholders to the IS project, and irreversibility. The profit sharing is the dynamic in which stakeholders find more and more interest to collaborate together. A growing profit sharing means that the gain of the synergy is more important than the concession. The irreversibility is due to the constraint impulse by the compromise. Each compromise takes the IS further on a path. The future compromise must be sealed in regard with the previous one. Nevertheless, to Callon (1986) and Latour (2005), the irreversibility is temporary. Actors can always break with the path of IS project.

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