

Corporate User Representatives and the Dialectics of Enterprise Systems: A Quest for Social Actors with Political Skill

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Abstract

Enterprise System implementations may be viewed as dialectics of adaptation. To reach a synthesis, a corporate user representative role is important. This paper addresses the question of who would be suitable for the role as a corporate user representative, i.e. what is required to fill the role.

Drawing on an in-depth interpretive study from the oil industry, this paper contributes by augmenting our view of the corporate user representative as a multidimensional social actor. The case is from an innovative integration of ECM with collaboration technology. With a state-of-the-art combination of technologies, the task of representing 26.000 users proved to be a challenge.

Based on longitudinal data, important corporate user representative characteristics are described as social actor dimensions. In terms of IS participation theory, the role is involved in a rich participation experience as a change agent. To fill this role, a corporate user representative should be a management function with political skill.

user experience. According to the project managers the corporate user representative played a key role in the dialectics of adaptation. This raises the question, what kind of person should fill the role? Following a lead given by the project managers, this paper therefore reports on the case to address the question:

Faced with the dialectics of adaptation in Enterprise System implementations, who would fit the role as corporate user representatives?

This study focuses on an ES different from ERP. The case is a combination of technical solutions, involving an integration of Enterprise Content Management [7] (ECM) with collaboration solutions and personal productivity tools. A number of software systems are integrated, and user representation proved to be a challenging task.

The paper is organized as follows: section 2 presents previous research on user participation and theoretical frameworks. After a description of the research method in section 3, section 4 describes the case with findings on the role of the corporate user representative. Section 5 discusses the findings, concluding with implications for ES research and practice.

1. Introduction

In Enterprise System (ES) implementations value conflicts occur between stakeholders [1], and a dialectic perspective thus explains important aspects of the ES implementation process [2,3,4,5]. A dialectic perspective views change as the result of contradictory values competing for domination [6]. An important aspect is the dialectics of adaptation, where the customer requirements contradict an as-is implementation of the commercial software [3, 5].

This paper describes a case where the corporate user representative played a crucial role in reaching a synthesis in the dialectics of adaptation. Key issues were customer requirements concerning solution integration and

2. Background Literature

Theory is said to support the desirability of user participation in systems development [8]. User participation in the context of systems development is said to be one of the most researched topics in the IS literature [e.g. 9,10]. However, changing contexts such as ES require new research on user participation and in particular single-context studies [11].

This literature section is organized as follows. Relevant studies on user representation in systems development are presented first. Then relevant ES literature is reviewed. Finally three theoretical contributions are presented. All these contribute to the interpretation of the findings.

2.1. User participation in systems development projects

The term corporate user representative is used to describe a role that represents the interests of ES stakeholders. In the context of systems development, end user representatives are said to have a most challenging and demanding role [12]. Such user representatives need a high level of interpersonal and communication skills, the ability to acquire technical knowledge in diverse areas, the ability to persevere in difficult circumstances, the ability to sustain a strong sense of mission, and patience. In systems development the developers' role is active. This implies that in a user-developer communication process, developers receive and interpret messages from users, and developers set priorities and take action [9].

Traditionally, three different forms of user participation have been identified in the literature: cross-functional project teams, steering groups, and project champions [13]. Project champions are usually individuals who, by virtue of their personal attributes, take a leadership role in ensuring acceptance and diffusion of the IT project. An important issue in a user participation structure, is the interaction between the team and the steering committee and the project champions [13].

The issue of who should represent the user population in systems development is a crucial one [12]. This emphasizes the research question raised above, i.e. what are "appropriate" corporate user representatives, in the context of ES?

2.2. Enterprise Systems literature on participation

An ES entails many stakeholders. They typically have multiple and often conflicting objectives and priorities, and rarely agree on a set of common aims [14]. The ES affects many types of users, and yet a low proportion of affected users have opportunities to participate [11].

Previous research addressing users in an ES context includes ERP value conflicts between stakeholders [1], users' role in ERP parameter settings [2], and power issues with the procurement of a CRM package [15]. The engagement of the users is considered a key

variable with ES [16], but little research has focused on representing the users. In ERP projects, successful implementation is due in part to the management of user participation [2].

In an ERP context, a project champion performs the crucial functions of transformational leadership, facilitation, and marketing the project to the users [17]. Key activities include management of expectations, interdepartmental communication and cooperation, and minimal customization.

2.3. Users as social actors

In this context, a more sophisticated view of a corporate user representative is needed. The social actor [18] concept is therefore applied. The concept is based on roles and interest groups, and denotes a professional capable of mobilizing change. According to Lamb and Kling [18] users are better understood as organization members whose ICT-related actions can be characterized along four dimensions. Later Lamb [19] has added a fifth dimension called temporalities. These social actor dimensions are summarized in Table 1.

Table 1. Social actor dimensions [18,19]

Dimension	Description
Affiliations	Organizational and professional relationships that connect an organization member to industry, national and international networks
Environments	Stabilized, regulated and/or institutionalized practices, associations, and locations that circumscribe organizational action
Interactions	Information, resources, and media of exchange that organization members mobilize as they engage with members of affiliated organizations
Identities	Avowed presentations of the self and ascribed profiles of organization members as individual and collective entities
Temporalities	Socially constructed segmentations of time that shape the interactions of an organization member in response to the expectations of networked affiliates

The multidimensional view of a social actor [18] enables IS researchers to “address the social actor as an organization member who is representing the interests of the firm or department...”. This appears to fit well with the corporate user representative role, and the social actor dimensions are therefore used as a framework to discuss the findings.

2.4. Political skill

The corporate user representative role involves social skills. An interesting type of social skill is termed political skill [20]. This is an interpersonal style that combines social astuteness with the ability to relate well. People who practice this skill behave in a disarmingly charming and engaging manner that inspires confidence, trust, sincerity and genuineness. Political skill is not a single trait or skill. Rather, it reflects an integrated composite of internally consistent and mutually reinforcing and compatible skills and abilities that defies precise description. It is a style-type of component, a way of putting thoughts into words. Another feature of political skill relates to how people accumulate forms of personal, non-financial capital. Individuals with social skill invest in the development of their reputations [20].

2.5. Participation theory

To revitalize participation as an important area of IS theorizing and research, Markus and Mao [11] outline key elements of a theoretical framework for IS participation. This theory distinguishes between stakeholders, participants and change agents. Stakeholders are likely to be affected by a solution, participants are the subsets of stakeholders who are actually given the chance to participate in implementation activities. Change agents are people who play important roles in designing and executing participation opportunities for stakeholders. Participation activities may be divided into different types, e.g. solution design, solution implementation, and project management. Participation richness is another concept in this theory, i.e. the extent to which the participation activities are meaningful and enable participant influence [11].

3. Research Methodology

This paper is part of an ongoing research effort with Statoil, a large Norwegian oil company. In 2002, Statoil launched a corporate-wide collaboration and ECM program, and the author is one in a group of researchers that has studied the development from the start. This includes access to important project documents and interviews with key project staff, and is reported elsewhere. Table 2 summarizes the data sources used for this paper, which are referred to by date. There was a partial “snowball” [21] sampling of informants, to locate information-rich key informants. As seen from Table 2, the data reflect viewpoints from different levels and roles within the project. The study therefore represents an analysis of the experiences and interpretations of nine key actors in the project.

Table 2. Data sources

Date	Type of data
12.2005	Interviews with the two project managers, informants 1 and 2
10.2006	Initial interview with the QA/first corporate user representative, informant 3
02.2007	Follow-up interview with the QA/first corporate user representative, informant 3
03.2007	Interviews with the second and third corporate user representative, informant 4 and 5
04.2007a	Interviews with two reference group members, informants 6 and 7
04.2007b	Interviews with two steering committee members, informant 8 and 9

The principal data collection method was in-depth, semi-structured interviews, combined with background information from previous studies. To combine focus with openness, a general interview guide approach was combined with an informal conversational interview, to “go with the-flow” [21]. All interviews were audio-taped and transcribed. Translations into English have been checked by a linguist. To increase knowledge as the interviews progressed, an interim analysis [22] was performed and the interview guide evolved. The study has been guided by Pettigrew’s [23] advice on longitudinal research on change, exploring the larger context of 2002-2007 and in particular how changes emerged.

Interviews with the project’s two subsequent managers (12.2005) initiated this research, since they emphasized the importance of the corporate

user representative. As the dialectics of adaptation brought the role of the corporate user representative into focus, the theoretical construct of political skill [20] was found to be potentially relevant. Together with the dialectics of adaptation, this became a sensitizing concept [21] to guide further data collection and analysis. The definition of political skill [20] was presented to the informants to validate the concept's relevance for the corporate user representative role.

The data analysis started with coding schemes based on interview guides, data reduction and displays [22], and continued with an inductive analysis [21] of themes and categories occurring in the data.

An alteration between the different theoretical viewpoints presented above, emerged as a useful approach during the analysis of and reflection upon the case data. This is in line with qualitative data analysis as an iterative process [22] and fits an interpretive stance. Several iterations of analysis of the initial interviews (12.2005 and 10.2006) occurred in parallel with a search for appropriate theoretical lenses. The research methodology therefore followed a hermeneutical circle [24] until the parts of data from the initial interviews (12.2005, 10.2006) were considered consistent with the theoretical whole. This sharpened the focus for the remaining interviews (02.2007 through 04.2007b).

4. Statoil's ES project: Background and case description

Statoil is the third largest exporter of crude oil in the world, with approximately 25,600 employees in 33 countries in 2006. The company operates 60% of all Norwegian oil and gas production. The company consists of seven business units, each with an IS/IT manager.

Statoil was one of the world's largest users of Lotus Notes/Domino in the 1990s [25]. The IT architecture evolved into a portfolio of technologies with partly overlapping functionality and applications, resulting in an information infrastructure scattered over a number of different storage media and applications. This caused major challenges related to information retrieval, version control and information quality [26]. Statoil's volume of information objects grow at a rate of about 300,000 per month. In response, Statoil's corporate IS/IT service therefore launched a

major ECM and collaboration development program in 2002. The time frame of the project is presented in Table 3.

Table 3. Time frame for the ES implementation

Year	Main activities
2002	Strategy, Feasibility study of vendors
2003	Feasibility study of the organization, Procurement process
2004	Building and integration of the solution
2005	Pilot implementation, General release, Stabilizing the solution
2006	Organizational implementation in all business units
2007	New releases, Solution in production

Table 4. The set of software products chosen

Software category	Products
ECM software	Meridio ECM and records management system. (www.meridio.com)
Collaboration management software	Microsoft Office System, including Live Meeting, Windows SharePoint Services
Web publishing software	Microsoft Office System, Microsoft Content Management Server
Search and taxonomy software	Fast (www.fast.no) and Stratify (www.stratify.com)
Workflow	Microsoft BizTalk
Server software	Microsoft Office Live Meeting Server, Meridio Servers, Sharepoint Portal Server, Microsoft Content Management Server

4.1. Technologies

The technologies that constitute the ES are summarized in Table 4. Each employee in Statoil is attached to team sites to conduct their knowledge work and collaboration. The team site is a collaboration space that automatically captures the context (e.g. date, producer, team, and project) of every piece of content produced and stored within the ECM. The team site also provides the collaboration tools needed by an employee, such as an overview of co-workers on the same team, documents, events, discussion forum and an integrated Outlook e-mail. The

corporate-wide search tool provides advanced search features and refinement according to a pre-defined corporate taxonomy. Taken together, the team sites, corporate-wide integrated storage and search engines provide a powerful information environment, to be accessed through a corporate portal. The installation differs considerably from standard [3], and the case is therefore a complex ES solution, based on a combination of technologies. The task of representing 26.000 users therefore proved to be a considerable challenge.

4.2. Project organization

The project was organized with the CIO as sponsor, a steering committee, a project group, and a reference group with representatives from the business units (Figure 1). The reference group discussed user requirements and user acceptance. The steering committee consisted of process owners and IS/IT managers from different business units, having a customer role. The sponsor represented corporate management, was financially and commercially responsible, and chaired the steering committee. The project group was staffed by corporate services IS/IT. Vendors and other consultants were involved as needed.

Two project managers were involved, one from 2002 to the summer of 2005, the other since 2005. According to them, Statoil's business units were the most important stakeholders in influencing the contents of the solution (12.2005). According to Munkvold et al. [27], project members expressed that they had relatively good access to project information, but reference group members expressed a certain lack of information. The involvement of users and business representatives was strong, and the use of a reference group served to obtain input and requirements from the business units and users. The overall impression was that the business units were well involved, but that varied.

4.3. The Corporate User Representative role

The term corporate user representative may be inadequate to describe the role in Statoil. The role is literally translated "user-professionally responsible", but is officially titled "corporate user responsible". The corporate user representative is a professional within a domain

that is important for the business units. (S)he is responsible for representing the professional interests of the business units and their users. The corporate user representative works for the sponsor, and all changes in the project are approved by the corporate user representative or the sponsor. At the outset the quality assurance (QA) responsible had the role, but at the end of the project chartering phase the need for a corporate user representative role crystallized (04.2007b). The first corporate user representative was then appointed, and he mobilized reference groups consisting of representatives from relevant discipline networks and various business units representing end users. It is important to note that the role is not an "end user" representative as such, but rather a representative for the business units who are the ES customers (c.f. Figure 1).

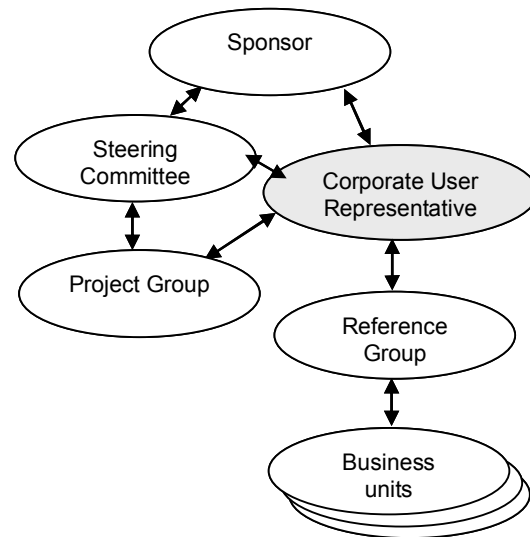


Figure 1. The context for the corporate user representative

Typical key words used by the informants to describe the role are the following:

- Listener (5)
- Facilitator (3)
- Broker (1) and catalyst (1)

These key words (with occurrences) describe the role when dealing with the business units' requirements. Other characteristics of the role were also used, and these are summarized in Table 5.

The corporate user representative is viewed as an exposed position, and therefore no "ordinary" user is assigned the role. It is also considered a management role. During the

project three different individuals have filled the role, for natural turnover reasons. These were appointed by the sponsor, each having different backgrounds, formal positions and personal characteristics. Their backgrounds were from IS/IT, as chief engineer, senior engineer and project and product management. The one with a chief engineer background was characterized as "...he certainly has more weight in the organization, he brings a history with him, into the role. Which maybe NN [the current person] is actually missing" (04.2007b). Lacking such a background, the current person is said to have "a good share of personal power, and he is very capable, so he certainly handles the challenge better than most people would... But it confirms that... I do not think this [political skill] is enough" (03.2007).

Table 5. Characteristics of the corporate user representative role

Character-istic	Description
A management role	Representing 26.000 users, with the task of securing clear instructions for the project, is clearly considered a management role (03.2007, 04.2007b)
A single point of contact	A single point of contact is considered crucial with such a heterogeneous enterprise solution, a connecting link between the business units and the project (03.2007)
Communicates requirements to the project	Based on discussion with the business units, requirements are structured, prioritized and verified by the corporate user representative (02.2007, 03.2007, 04.2007b)
Communicate results back to the customer	The scope of the solution's next version is important to communicate back to the business units. Explaining the reasons for constraints and limitations is vital (02.2007, 03.3007, 04.2007a)

The informants had different perspectives on how the role is to handle requirements, as seen in Table 6. Those who had filled the corporate user representative role themselves, emphasized their decision making role more than the other informants did.

Table 6. Different outlooks on how the corporate user representative should handle requirements

Informants	View of handling requirements
Steering Committee	Collect the requirements from the business units, have them structured and prioritized (04.2007b)
Corporate user representative	Take care of the requirements, evaluate and prioritize them, and adjust them according to the strategy. Make a decision and stand firm. Describe scope and decide on changes in functionality. (10.2006; 03.2007).
Reference Group	Represent the interests of the business units and users by taking care of all the requirements, without picking out some of them (04.2007a).

4.4. The Corporate User Representative and the dialectics of adaptation

In this project, customer requirements concerning solution integration and user experience contradicted an as-is implementation of the commercial software. Especially in the project phase when the dialectics of adaptation occurred, the project manager needed a strong corporate user representative who could give direction by expressing the requirements of the business units. "As soon as we started to 'turn on' functionality [i.e. beyond standard], we had a greater need for acquiring ... a strong and commanding user responsible, that really could put the business' requirements down on paper" (12.2005).

The dialectics of adaptation poses great challenges for the role. According to the corporate user representative involved in the most intense phase of dialectics, it involved different levels and tensions (c.f. Figure 1). These are summarized in Table 7, and express the viewpoints of the corporate user representative.

Priorities between experts from different knowledge domains constituted a major contradiction, and the corporate user representative had an important broker role. According to one informant "there has

presumably always been a tension between the steering committee and the project as to how far we should go concerning the local adaptation...” (12.2005). In particular the tension was between the steering committee and the corporate user representative, according to this informant. The steering committee expressed a lack of information that some of their decisions implied local adaptation (04.2007b). The tensions with the reference group resulted in massive protests from the user communities, referred to as “the violent storm broke out” (03.2007).

Table 7. Snapshots of the dialectics of adaptation at different levels

Level of the dialectic	The corporate user representative’s position in the dialectic
Tensions with the Project Group	“Is this really not possible to solve, with the products we bought?” (03.2007)
Tensions with the Steering Committee	“We have a problem here, what we bought turned out to be less flexible than we thought” (03.2007)
Tensions with the Reference Group	“We have to change the scope, [we need to] do things differently, and the solution will be different from what we decided” (03.2007)

4.5. The quest for a good Corporate User Representative

The informants stated several personal characteristics that are crucial for this role, and these are summarized in Table 8. The first point emphasized above all is to be a good listener, although this did not always occur in practice: “I feel that it easily becomes so that... [he] does things a little like he wants, doesn’t he?” (04.2007a).

An ability to understand the big picture is an important characteristic. This requires both domain knowledge and sufficient technical knowledge to see consequences of requirements. Domain knowledge across such a heterogeneous solution (Table 4) is a challenge, and some of this knowledge has to be acquired during the project. When presented with a definition of political skill, all informants verified that this certainly is important for the role. While it is necessary, it is not considered sufficient. A combination of personal characteristics and

competence are also necessary for a good corporate user representative.

Table 8. Important personal characteristics of a good corporate user representative

Personal characteristic	Description
Good communicator (02.2007, 03.2007, 04.2007a, 04.2007b)	A good listener who is open for ideas (s)he does not necessarily agree with. Sensitivity to engage in a positive dialogue with the customers. Engage the users to give input. Verify understanding, ”was this what you really meant?” Ability to speak plainly, including ability to say “no”.
Consensus builder (04.2007b, 04.2007a)	Being able to find unifying solutions. Reaching consensus by talking through a common priority with the business units, instead of decisions by voting. “One who navigates between the actors”.
Domain competence and technical competence (03.2007, 04.2007a, 04.2007b)	Ability to understand the big picture. Understand the totality of the solution and the long term technical consequences of the suggested requirements. Point out alternative solutions, ability to make propositions. The ideal: knowledge of all the application domains in the solution, a competence that matches the discussion partners’ competence.
Political skill (02.2007, 03.2007, 04.2007a, 04.2007b)	Expressed as: - A good share of personal power - Accumulated personal capital, “more weight in the organization” - “The power to shape and prepare for decisions”.

5. Discussion

This paper is an attempt to augment and refine our view of the corporate user

representative as a multidimensional social actor. The role in this case adds to the social actor dimensions [18,19] as summarized in Table 9. Although not the object of study, the dialectics of adaptation constitute an important background for understanding the corporate user representative's challenges. The implications of this study are a focus on the two dimensions of *interactions* and *identities*, although with a different emphasis.

Table 9. Social actor dimensions of the corporate user representative

Dimension	Description
Affiliations	Enterprise, project sponsor
Environments	ES context: Sarbanes-Oxley compliance, government regulations, mergers
Interactions	The main interactions are with sponsor, steering committee, project group and reference group (c.f. Fig 1). The role is a single point of contact that communicates requirements to the project, and communicates results back to the business units. The interactions require political skill, being a good listener and communicator, able to negotiate unifying decisions.
Identities	It is clearly considered a management role, it requires domain and technical competences. The role requires an understanding of the totality of the solution, i.e. knowledge of application domains, and technical competence to comprehend long term consequences of the requirements. The role is a change agent, who needs political skill.
Temporalities	The corporate user representative role exists only within the ES implementation project. A long project period (2002-2007) meant that different individuals filled the role.

5.1. Interactions

To deal with the dialectics of adaptation in this complex ES context [3], interactions constitute a key issue. What has been advocated as an effective user participation structure [13] is incorporated in this case. However, the corporate user representative's interaction has a different focus than a project champion. More than ensuring acceptance and diffusion of the ES project, the interactions' main emphasis is on communicating requirements to the project. The role therefore goes beyond the project champion of ERP projects [17].

The required skills for interactions are similar to those needed by user representatives in systems development projects [12]. The corporate user representative addresses the crucial issue of who should represent the user population, with a clear management support. The management support is twofold in this case, (i) it is based on the project sponsor, (ii) the role should have a management identity as discussed later. Interactions in this representative type of user participation imply a considerable depth of indirect user participation [c.f. 8]. The participation involves all stages of the development process, it involves frequent interactions, and the users had an indirect voice in the development process. Contrary to a user-developer communication where developers interpret messages from users, set priorities and take action [9]; it is the corporate user representative who receives and interprets messages from users, sets priorities and prepares for decisions.

The *political skill* concept [20] appears to be a pertinent summary of several of the corporate user representative's interaction aspects, and all the informants confirmed that this is important. Necessary personal characteristics of the role that fit with political skill include: personal power, accumulated personal capital, and the power to shape and prepare for decisions. The following keywords used to describe the role, also fit with the political skill concept: facilitator, broker and catalyst. I.e. being a good listener who is able to find unifying solutions. Political skill is further discussed in the section on identities.

Interactions also relate to activities of IS participation theory [11]. The interactions may be categorized as a change management participation activity type, as the participation activities are related to the solution's scope. The interactions may also be categorized as a rich

participation experience, which therefore may be expected to have a strong relationship with the solution's success [11].

5.2. Identities

Due to the dialectics of adaptation, the identities dimension is important. The corporate user representative is a social actor who represents business units. An important finding is that *a corporate user representative in an ES context has to be a management role*. Although not a manager, to represent 26.000 users in business units with different interests, requires a management role. The informants were emphatic on this point, and this harmonizes with the need for management of user participation in ES [2].

In the identities dimension of the corporate user representative, the ICT use component [18] is subordinate. However, ICT knowledge is important, together with application domain knowledge. Not only is the ability to acquire technical knowledge in diverse areas important [c.f. 12]; but in this ES context a comprehension of the whole and of the long term technical implications of chosen alternatives is vital. A focus on the whole and on the long term consequences also underlines the management identity of the corporate user representative.

Identities also relate to IS participation theory [11]. One aspect is the role as a full-time project participant on behalf of important stakeholders. The corporate user representative also plays an important role as *change agent*, i.e. designing participation opportunities for stakeholders. The corporate user representative was active in appointing the reference group and in obtaining input from the business units' users. Another change agent dimension is to shape and prepare for decisions. As both a participant and a change agent, the role spans two disjoint categories in Markus and Mao's [11] theory. The reason may be that there is a tension in the role, it is a combination of user representation and a management role.

Although the social actor model is fundamentally integrated with ICT use, it accommodates important characteristics of the corporate user representative role. Agency is indeed channelled through a complex, multilevel system of networks and organizational affiliations. IS participation theory adds to the social actor dimensions, although two categories overlapped.

ES is a context that requires new research on user participation [11]. As typical with ES

[1,14], the stakeholders had multiple and often conflicting objectives and priorities. Still the stakeholders were to a large extent able to agree on a set of common aims, by means of the corporate user representative role as a broker and facilitator. However, the reference group had a different perspective on decision making than the project group and the steering committee (Table 6). This illustrates the challenging role of corporate user representative due to the dialectics of adaptation, where the reference group was deeply involved (Table 7).

Political skill is also an identity dimension, as the best corporate user representatives were said to have personal power, good reputations and a history in the enterprise. Although important, political skill appears insufficient to handle the dialectics of adaptation. With the words of one deeply involved: "I do not think this [political skill] is enough" (03.2007).

In a dialectic perspective, contradictory forces are competing for domination [6]. To get one's way as a change agent in the face of resistance [29] requires power. The concept of power [28] is therefore another important perspective for insights on the corporate user representative role. However, a discussion of power is too comprehensive for the scope of this paper, and deserves a thorough treatment in future studies. Further research is also needed to focus on which aspects of political skill are the most important for the corporate user representative role.

6. Conclusion

This paper portrays a corporate user representative role that served as a single point of contact between the business units' users and the ES implementation project. This turned out to be an important role in view of the dialectics of adaptation.

A good corporate user representative in an ES implementation project may be hard to find. In a quest for a good candidate, two social actor dimensions were particularly important for the role:

- (i) Interactions - a good communicator with political skill, involved in a rich participation experience, being able to deal with contradictory interests;
- (ii) Identities - a management level change agent, with both technical and domain knowledge.

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