DECOUPLING, RE-ENGAGING: MANAGING TRUST RELATIONSHIPS IN IMPLEMENTATION PROJECTS

Abstract
An important aspect of the successful implementation of large information systems (such as ERP systems) is trust. These implementations impact the legitimate interests of many groups of stakeholders, and trust is a critical factor for success. Trust in the project is contingent upon many factors, is likely to vary over time, and should not be taken for granted. Previous studies have identified the relationship between trust and project outcomes, and suggested trust-building strategies, but have largely ignored the dynamic quality of trust relations through the life of a major project, and the complex demands of managing those fluctuations. We investigate evolving trust relationships in a longitudinal case analysis of a large Integrated Hospital System implementation for the Faroe Islands. Trust relationships suffered various breakdowns, but the project was able to recover and eventually meet its goals. Based on concepts from Giddens’ later work on modernity, we develop two approaches for managing dynamic trust relationships in implementation projects: decoupling and re-engaging.

Keywords: Trust, Implementation, Project Management, Giddens, Abstract Systems

1 INTRODUCTION
The implementation of large information systems such as ERP systems and Integrated Hospital Information Systems (IHIS) is notoriously problematic (Berg, 2001, Heeks, 2006, Chowdhury et al., 2007). Large system implementation in the public sector is particularly volatile, leading to alarming failure rates (Gauld and Goldfinch, 2006). One factor previously identified as important for the success of such projects is trust (Gefen, 2004a, Nah and Delgado, 2006). The importance of trust in large system implementations reflects mutual dependence: organisations may not have resources to write software on this scale and thus need vendors; vendors cannot configure and install standardized systems without the active co-operation of organisational personnel. In a large-scale implementation of an IHIS in the Faroe Islands, trust was identified as a major contributor to the successes and failures of the project. The levels of trust between stakeholders, and between various participating organisations could be seen to vary considerably over the five year period of study (Schlichter, 2010). The causes of trust fluctuations were complex, but it became clear that lack of trust in the project had serious adverse consequences: relationships became strained, cooperative work suffered, project members became distressed, employees resigned and expertise was lost. Work was observed to develop correspondingly better in situations where trust was present. Trust in the project could therefore be understood as a dynamic process – a series of causally related conditions, events and consequences evolving over time. However, successive project managers struggled to manage those relationships and the observing researchers lacked satisfactory explanatory models. The information systems literature contains many examples of point-in-time trust studies, which are helpful in understanding the nature of trust and its relation...
to other factors such as ecommerce success, but few longitudinal process studies of trust in implementation projects. The subject of trust-building has been addressed, but there are few studies of the evolution of trust relations and little guidance for project managers in addressing trust issues. The research question that drives the study is consequently ‘how can stakeholder trust in a large system implementation project be managed?’ In particular we will investigate strategies for managing effectively in situations of trust, and for recovering from situations of distrust.

Trust studies play a significant role in at least three IS reference disciplines: psychology, economics and social theory. In psychology, trust studies concern the development of the individual’s personality, interpersonal relationships and the individual’s relation to the social world. Trust is, according to Erikson (1968), the first stage of psychosocial development in the child, leading to feelings of security and optimism. For the individual, trust makes social life predictable, creating a sense of community and the basis for working together (Misztal, 1996). Social psychologists also study the role of trust in organizations, where trust can be an alternative or complement to managerial control. Trust is often seen as a rational choice where organisational actors seek to maximise their utility in the face of risk; the benefits of trust for organisational performance are clearly documented (Kramer and Cook, 2004). In economics, trust is understood as a lubricant which reduces transaction costs and leads to efficient markets; however a rational economic actor need display only as much trust in a transaction as the other party (Braynov and Sandholm, 2002). Too little trust can lead to the loss of economic opportunities, whereas too much trust opens the truster to exploitation. Granovetter (1985) points out that economic actors are also embedded in social networks; trust resulting from personal contact and social experience can reduce contracting costs. In social theory trust is studied at the micro level in the behaviour of social actors, where it overlaps with social psychology; at the macro level it has emerged as a major element in the theory of late modern and post-modern society. Trust helps to reduce complexity in collective action (Luhman, 1991). It is a form of social capital (Putnam, 2000) and plays a determinant role in societal prosperity (Fukuyama, 1996).

Trust can therefore be studied from a psychological, an economic or a social standpoint. We choose the social over the psychological in order to focus on groups of stakeholders rather than individuals, and over the economic because we believe that the maintenance of social relationships is more important to the outcomes of a project than quantifiable economic factors. The theoretical foundation for this article is accordingly derived from Giddens’ account of modernity. Giddens’ theories have played an important role in the academic development of the IS field (Rose et al., 2005, Jones and Karsten, 2008), particularly through the duality of technology model (Orlikowski, 1992) and adaptive structuration theory (DeSanctis and Poole, 1994), though they have yet to make a substantial contribution to practice. Giddens’ theories reconcile micro and macro styles of social theory, making them suitable for organisational analysis. They can be understood as emergent process theories (Markus and Robey, 1988) suitable for the analysis of evolving social relationships. Trust, especially trust in abstract social systems, is an important component of Giddens’ work on late modernity (Giddens, 1990).
We follow the breakdown and recovery of trust relationships in a longitudinal interpretative case study from the Faroe Islands – studying the evolution of trust relationships through analysis of the principal actors’ perceptions of the project, using a theoretical framework based on Giddens. The Faroe Islands’ IHIS is now largely operational; however the project went through various crises which extended its lifetime by several years, and its budget had to be revised in the Faroese parliament. The data analysis strategy is content analysis (Krippendorf, 2004).

The paper is organized as follows. We present the study’s conceptual foundations followed by the research approach. The next section relates the breakdown and recovery of trust in the IHIS implementation. Analysis of trust relations leads to the development of strategies for managing trust, and the final section concludes with implications for future research and practice.

2 TOWARDS A DYNAMIC VIEW OF TRUST IN LARGE-SCALE IMPLEMENTATION PROJECTS

According to Gefen (2004), trust is ‘the belief that others upon whom one depends, yet has little control over, will not take advantage of the situation by behaving in an opportunistic manner but, rather, will fulfil their expected commitments by behaving ethically, dependably and fairly, especially under conditions involving risk and potential loss’. Previous attempts at change-making provide the starting context. Trust is shown to have positive consequences for implementation projects. It influences co-operation and commitment between actors (Salam et al., 2001), reduces complexity (Lander et al 2004) and is crucial to establishing positive results during implementation (Lander et al., 2004, Scott and Kaindl, 2000, Somers and Nelson, 2001, Wang and Chen, 2006). Trust is ‘important for ERP customization clients in determining their assessment of the relationship with the vendor, because the customization of such complex software typically entails vulnerability and dependence on the vendor’ (Gefen, 2004a, p266). Partners are typically locked into relatively long-term associations, with heavy penalties for failure (Gefen, 2004b). The perceived qualities of the software are also thought to play a role in trust relationships in implementation projects (Gefen, 2004b). Successful implementation of ERP systems ‘requires a corporate culture that emphasizes the value of sharing common goals ….. and ….. trust between partners, employees, managers and corporations’ (Somers and Nelson, 2001). The consequences of lack of trust can be severe; as problems and delays mount, trust relations become strained leading to a circle of suspicion and disbelief which is both destructive and hard to break out of (Gefen, 2004a, Nah and Delgado, 2006). Various mechanisms for establishing trust are considered, including initial interactions, integrity, predictability, communication, sharing control, concern for others, joint identification, commitment, potential for success, and managerial decisions (Lander et al., 2004). Trust can be built up with intensive communication, coaching, delegation of responsibility, personal care and attention (Jarrar et al., 2000). Building trust quickly in temporary project situations is considered important (Lander et al., 2004), and customization companies need to behave responsively and to act in accordance with their clients’ expectations (Gefen, 2002) in order to maintain trust. Sabherwal (1999a) develops the idea of vicious and virtuous trust cycles in development projects.
These considerations raise a number of conceptual and methodological issues which are considered next.

2.1.1 Conceptualising trust: state or process, switch or continuum, input or output, static or dynamic

Trust can be understood both as a state, and a process. In the IS literature, trust is most commonly understood as a psychological state or condition in the individual (Brown et al., 2004), which has both antecedents (reasons) and consequences for the individual’s choice of actions and relationships with other individuals and groups. Trust beliefs, attitudes, intentions and disposition are studied in relation to the individual’s consequent choice of action (McKnight et al., 2002). Thus an individual’s trust of an eCommerce vendor could be a factor in their decision to buy (Lim et al., 2006). Trust is a universal positive; by this we mean that is generally associated with positive consequences, for instance in the decision to buy at an ecommerce site or the effectiveness of the collaboration of a virtual team (Brown et al., 2004), or knowledge transfer through inter-organisation systems (Ibrahim and Ribbers, 2009). Trust fosters social capital and economic growth, and facilitates innovative actions (Dinev et al., 2006). However an uncritical association of positive outcomes with trust may not be wise; blind (unconsidered) trust may lead to unfortunate consequences. Trust can be manipulated by powerful communicators (advertisers, business, politicians, charities) with vested interests. Gallivan (2001), finds that ‘effective performance may occur in the absence of trust’ and theorises a dialectic of trust and control, advocating striking a balance (Gallivan and Depledge, 2003). Control strategies in implementation projects can take a variety of forms including rigorous contracting procedures, performance evaluation and classical project management (Nah et al., 2003). Trust (as a state) often becomes a taxonomic scheme based on the reason for the individual’s trust; thus trust can be openness-based (based on the trustee’s willingness to share their own knowledge and interests) or competence-based (based on the trustee’s ability to perform their tasks) (Ibrahim and Ribbers, 2009). The assessment of competence, the cooperation process (Lander et al., 2004), or of an institutional system (such as a certifying professional body) can be a rational-cognitive assessment; openness and interpersonal relationships are more social-affect based (Scott, 2000). Trust can thus both be based on rational and emotive grounds. IS researchers adopt various taxonomic schemes with some overlap, but little consistency.

Methodologically, trust (as a state) is commonly a dependent or independent variable in a variance study; an input (for example as a critical success factor in implementation (Jarrar et al., 2000)), or an output. It is sometimes treated as a binary switch (trust is present or absent) - as in the critical success factor example - but can also be treated as a continuum: more trust, less trust. Where it is understood as a continuum then it is also necessary to decide whether mistrust (distrust) is treated as part of the continuum (negative trust) or as a separate investigation (Komiak and Benbasat, 2008).

Trust is less commonly understood as a process, for example the building of trust over time (Gefen, 2002, Lander et al., 2004, Komiak and Benbasat, 2008). A common observation is that trust is easily destroyed but hard to build up. Whereas variance studies based on survey techniques capture a point in time (static) view of trust, trust as a process is necessarily dynamic and must be studied longitudinally. An interesting facet of the relationship between
trust and performance is that it may be amplifying or self-reinforcing - a cycle where positive interactions lead to trust which in turn leads to further positive interactions. This may be why trust is ‘crucial in enabling and shaping many business relationships, especially if the parties lack control over, but depend upon, each other’ (Gefen et al., 2008).

2.1.2 The truster, the trustee, the trusted: person, group, organisation, system

Psychological theories of trust, as used in the IS literature, focus on the trust state in the individual. The simplest psychological expression of trust is between two people, the truster and the trustee. However this is already a social relationship where the behaviour of both parties may influence the relationship (if I lend my friend money which he does not repay, then I am not likely to do it again). Building trust can thus be an investment in social capital which can facilitate later co-operations. Trust between teams (Brown et al., 2004, Paul and McDaniel Jr, 2004, Gefen et al., 2008, Jarvenpaa et al., 2004) and between organisations (Gallivan and Depledge, 2003, Ibbott and O’Keefe, 2004, Scott, 2000) is also considered. These situations involve many interactions over time where a trust theory which is both socially-oriented and processual may be preferred. The object of trust can also be a technology artefact (Vance et al., 2008, Komiak and Benbasat, 2006, Komiak and Benbasat, 2008) or some form of abstract system, such as a market (Datta and Chatterjee, 2008).

2.1.3 Towards a dynamic view of trust in large-scale implementation projects

In the context of the implementation of large-scale implementations of information systems we should assume a project lasting for some time, for which a processual theory will be appropriate. We should expect that trust in the project varies over time (dynamic not static), and that managers may need to concern themselves with developing trust or reacting to distrust. They will also be concerned with trust as a state, because they will need to recognise the trust conditions of their stakeholders in order take necessary managerial actions. Trust is envisaged as a continuum rather than a switch, and we will assume that the continuum includes distrust. Trust will be both input and output; we will assume that trust relations may affect the progress of an implementation project, and vice versa. It makes sense to adopt a social rather than a psychological stance because of the many stakeholder groups. Trust in an implementation project is multi-directional: stakeholders may trust the project team and cooperate with them (or not), but the reverse is also true - project members may distrust their stakeholders. Internal trust relationships (between software vendors and local implementers, for instance) can also be challenged. Nor is a project necessarily a stable construction: team members, project leaders and partners may come and go. A further major object of trust is the information system that is being implemented. For these reasons we prefer to speak of trust in the project, rather than the project team or the information system. Trust in the project, which might best be understood as an abstract system (like a market) will be an umbrella term for all these relationships. Included by implication are the assumptions that trust may decline into mistrust, that trust has a relationship with the outcomes of the project, and that managerial actions may affect those relationships.
In these conceptual and methodological considerations we differ from the main thrust of the IS literature, where the many studies are point-in-time variance studies conducted with quantitative data, using a static, state and taxonomy-oriented conception of trust. There is a shortage of longitudinal qualitative studies (which are particularly relevant for the implementation of large information systems). Trust in the project, (which is neither a person, nor an organisation, nor a virtual team) is not considered, and though there is some research on trust building, there is little work on the dynamics of trust in implementation projects. A further subject that is little addressed is recovering from trust breakdowns - these can put project managers in extremely difficult and stressful situations.

3 TRUST IN ABSTRACT SYSTEMS – GIDDENS’ ACCOUNT OF MODERNITY

Dynamic theories of trust can contribute to the understanding of evolving trust relations and their outcomes during large systems implementation projects, where multiple actors are involved in networks of trust relations. Such theories also reflect our empirical perceptions: project staff engaged in a web of decision-making, with uncertain outcomes affected by circumstances beyond their control, where the consequences of one decision impact the conditions for the next. Giddens’ account of the role of trust in sustaining abstract systems is suitable for theorizing emergent processes (Schlichter and Rose, 2009). Trust is not decomposed taxonomically, but rather placed in a relationship with other concepts, producing outcomes which are not predictive or determinant, but emergent.

Giddens’ theories of modernity represent an extension of his earlier work on structuration, and many of the underlying concepts and the central idea of how social practices reproduce themselves are carried forward. Giddens regards trust as a central element in modernity, defining it as ‘confidence in the reliability of a person or [social] system, regarding a given set of outcomes or events, where that confidence expresses a faith in the probity or love of another, or in the correctness of abstract principles or technical knowledge’ (Giddens, 1990, p33). Social action has uncertain outcomes and thus involves risk and danger, to which trust is a response mechanism. Giddens distinguishes between trust in persons and trust in abstract systems. Abstract systems, such as legal and banking systems, are combinations of technical means, procedures, professional expertise and other structures. Trust in abstract systems enables dynamism in modern societies by allowing social actors to act with confidence in the absence of personal knowledge of, or contact with the structures, actors and actions embodied in the (abstract) system. Customers in a net-bank trust the bank without detailed knowledge of the internet protocols, databases, banking procedures, or professional expertise of its staff, and the money they deposit is invested in other ventures (leading, in this example, to dynamism in capital markets). They may trust the bank without ever having personal contact with the bank’s human representatives. Trust is related to absence in time and space - the ability to have confidence even though the trusted person or social system is out of direct contact - Giddens refers to this throughout his work as time-space distanciation. The net-bank customer trusts that their deposit can be retrieved at a later date, from a different location. In fact trust is a central precondition for the bank’s operation; if its customers stop trusting it and seek to withdraw their money it will fail. Abstract systems are thus dis-embedding mechanisms – they lift social relations out of the immediate context of personal relationships and stabilize them across time and in
According to Giddens, the social relations of pre-modern societies are mainly confined to face-to-face interactions in a given place. Modern societies, in contrast, foster social relations between actors in different locations with reduced potential for face-to-face interaction; they dis-embed or lift out social relations from local contexts of interaction and rearrange them across indefinite spans of time and space. Internet technologies notably facilitate dis-embedding as in the case of social network technologies - dis-embedded social relationships functioning across time and geography despite minimal face-to-face interactions. During the dis-embedding process, social interactions and relations ‘become impersonal, at a distance’ (Walsham, 1998). Dis-embedding is dependent upon trust - the actors involved must have confidence that the social relation will continue and can be re-captured at a later time and different place. A dis-embedded social relation can be re-embedded – that is, it can again become localised, personal and immediate, however temporarily. In the case of a problem with the net bank, an account holder may ring and speak directly with a bank representative. Re-embedding is ‘a means of anchoring trust in the trustworthiness and integrity of colleagues………to reaffirm and, more centrally, update the basis of trust’ (Giddens, 1990, p87), thus ‘the re-appropriation or recasting of dis-embedded social relations so as to pin them down (however partially or transitorily) to local conditions of time and place’ (Giddens 1990, pp. 79-80). Re-embedding is important for the maintenance and re-establishment of the trust relationship between the abstract system and those who use it.

Thus dis-embedding is based on trust and supports the establishment of procedures with minimal personal contact, whereas re-embedding is a process in which trust is re-established during personal interaction. Places where people meet and interact with an abstract system are termed access points by Giddens. Access points are described in terms of two forms of interaction: those which are personal between representatives of the abstract system and its users (facework commitment), and those which are impersonal, such as an interaction with the bank represented in an internet browser (faceless commitment). Re-embedding is made necessary by our modern habit of chronic reflection - sustained reflective evaluation of our situation, our actions and their consequences. Trust in persons or abstract systems is therefore not absolute, but must be periodically re-confirmed; and an abstract system must be trustworthy at its access points. Thus the browser-based contact with a net bank must be secure and reliable, and the telephone meeting must display appropriate professionalism – here the dis-embedded social relation is re-embedded and trust reconfirmed. Trust involves the attribution of probity to a person or social system – the assumption that they will act in a reliable way in situations with incomplete knowledge and uncertain outcomes; therefore the breakdown of trust is also a personal failure of attribution. Trust is therefore implicated in social actors’ ontological security – confidence in their social identity, and in their situation and how to deal with them. Trust in abstract systems characterizes modern societies (according to Giddens); producing dynamism in society by allowing actors to proceed in situations of uncertainty - freeing resources and enabling social interactions across time and space. The absence of trust forces social actors to take many actions to reduce risk and uncertainty, to control situations through face-to-face interactions and confidence-building measures, and to set in place procedures and regulations to govern social interactions.
3.1 Research model

In this section we adapt Giddens’ theoretical concepts to serve as a research model which will be used to guide the analysis of the implementation project case study. We conceptualise an implementation project as an abstract system. A project brings together experts with their own knowledge structures, tools and technologies (project management, development and implementation methodology, change management, hardware and programming competencies); thus a combination of technical means, procedures, professional expertise and other structures. These are shared (at least to some extent) in the project team but generally poorly understood by other stakeholders, who are, however, experts in their own work disciplines. Project members may come and go but the project retains a shared commitment to the configuration and implementation of an information system and a distinct organisational identity. The project must co-ordinate events with stakeholders in different locations over a substantial period of time and is thus a mechanism for time-space distanciation. Stakeholders encounter the project during the course of the project through documentation, web-sites, configuration workshops, in management and configuration meetings, training, small scale implementations, help and advice; these constitute the project’s access points. Particularly important for the project are encounters with the software itself, the implemented computer system. Trust in the project is dependent upon reflection about encounters and is constantly re-evaluated (chronic reflection). Trust can be expected to vary both over time and between different actors and stakeholder groups. Moreover trust in the project reinforces the psychological comfort (ontological security) of stakeholders (both project members and external stakeholders), which in turn affects their evaluation of encounters with the project. Trust in the project is understood to have a recursive or reinforcing effect upon the project’s outcomes (the most important of which is the software configuration itself and its embedding in the organisation’s work practice); positive encounters build trust which underpins effective co-operation, further positive encounters and better outcomes. The reverse is also assumed – poor encounters foster distrust and can hinder progress. The project is at times decoupled (dis-embedded) from particular stakeholder groups; this implies that much work is conducted behind the scenes without their direct involvement (for example re-programming of a software module). Many eventual system users may have little or no personal contact with project members, but are expected to cooperate when required, for example in training sessions. The project may periodically re-engage (become re-embedded) with more intense and personal contacts between project members and stakeholders in an active attempt to listen, respond and persuade, and through active interaction with project artefacts such as system prototypes. Here confidence in the social relationship is re-established through positive interaction.

The research model is given in Figure 1.
4 RESEARCH METHODOLOGY

Trust perceptions are subjective phenomena for which interpretive studies are well suited (Walsham, 1993). The case study is conducted according to principles for interpretive research documented by Klein and Myers (1999). Longitudinal data collection in the field at multiple interview points facilitates the study of process and change: evolving patterns of action and consequence (Pettigrew, 1990). One of the authors was a non-participant observer, attending project meetings; the other remained detached in the insider-outsider pattern (Evered and Louis, 1981). The analysis is retrospective and Giddens’ theories were not directly introduced to participants. We adopted a multiple source data collection strategy consisting of participant observation, individual semi-structured interviews and document study. Interviews with 18 actors were planned twice a year among between late 2005 and early 2009. Staff changes and unforeseen circumstances resulted in a total of 50 interviews (net appendix 1). Several hundred staff were involved to some extent in the project; interviewees were selected to represent stakeholders at different hierarchical levels, from a broad range of professions representing the various organisations involved. Two broad groups of interviewees can be distinguished: those with a managerial responsibility for the project (Deputy Minister, CIO, project manager, and those primarily affected by it in the wards (doctors, nurses and secretaries). Inte-
views followed a protocol (net appendix 2) for consistency. Content analysis (primarily of interviews) was used to develop an understanding of the empirical materials through the research model (Figure 1). Analysis design is given in net appendix 3.

The transcribed interview texts were coded independently by the authors (using HyperResearch software) to a coding table (net appendix 4) based on the theoretical constructs described in section two. Open coding was also allowed to capture important elements of trust situations not covered by the coding table. Positive and negative statements about expectations for the project were coded as indicators for trust levels. The coding was piloted, discussed with an external reviewer, and a cross-section of the interviews was coded by both authors to ensure consistency. Coding frequencies are also given in net appendix 4. This process led to more than 800 empirical observations of trust-related events, with the perceptions and causal attributions of the actors concerned. Generalisation to theory is on the basis of observation of repeated patterns in the data within and across the coding categories. Table 2, for example categorizes repeated patterns in 284 passages of text coded as dis-embedding and re-embedding.

Content analysis is supplemented with critical incident analysis (Flanagan, 1954). This method consists of a set of procedures for collecting observations of events and behaviour which have critical impact, positive as well as negative, on a given set of situations. The procedures used are:

- a purposeful description of the context in which the critical incident takes place
- the cause, description and outcome of a critical incident
- the individuals’ understanding of the situation
- means taken to overcome or solve any observed problems.

Critical incident analysis generates detailed process descriptions and is well suited for the analysis of cause and effect as perceived by interviewees. It therefore supports the analysis of trust dynamics.

5 EVOLUTION AND MANAGEMENT OF TRUST IN THE IMPLEMENTATION OF IHIS IN THE FAROE ISLANDS

The Faroe Islands are a self-governing part of the Danish National Community. Three hospitals and twenty-seven general practitioners (GPs) report to the ministry of health. The IHIS implementation project is one of the largest IT projects ever in the Faroese public sector, involving the complete health care system throughout the community. Feasibility studies and planning took place in 2004, and the implementation commenced in January 2005, with completion planned for the end of 2006. A project charter and group were established and the core system was eventually configured with two pilot wards. However in late 2007 the project organization began to collapse, culminating in the resignation of the project manager. 2008 began with massive rescheduling of the project and additional funding from parliament. The major roll-out was suspended and the project organization redesigned. The
IHIS was fully implemented in two wards in 2009 and the majority of GP’s also adopted the system. An events synopsis of the case is given in net appendix 5 and a full account in Schlichter (2010).

We coded interviewee statements expressing negative and positive expectations for the future of the project and used these as a rough overall indicator of trust in the project at the six interview points (Figure 2). Initial confidence in the project was replaced by a series of trust crises, which gradually improved over several years.

![Figure 2. Interviewee’s expectations for positive outcomes for the implementation project at the six interview points, expressed as a percentage of the total coded expectations](image)

We used critical incident analysis to qualitatively correlate the expectations of the two major groups of stakeholders (those with managerial responsibility and those primarily affected by the project) with major incidents (Figure 3). The major incidents are named, and their influences on stakeholder trust indicated by the arrows (upwards pointing arrow shows a positive influence on trust).
In late 2007 a serious crisis of trust in the project in the management group (caused by continuing delays and budget overspend) nearly led to the termination of the project, despite improved confidence in the wards.

In the following analysis we investigate the evolution of trust relations during the project. The first analysis focuses on the declining spiral of trust in the project and the second on gradual recovery.

5.1 Trust in the project: decline, multiple breakdowns

5.1.1 The project and its outcomes

The project objectives were ambitious and strongly integrative – to standardise the whole Faroese health service around the IHIS. This implied a wide-ranging project covering all aspects of health services and many institutions and profession groups. The run-up to the project included detailed project planning and the supplier delivered a project charter describing procedures and organisational issues, which was well-received. The plan called for a pilot implementation in two wards, followed by hospital-wide rollout. The introduction of the IHIS implied re-organisation and re-distribution of tasks ("You get a work practice upgrade – you leave poor existing practices behind" [#47, Hospital Director]). However the IHIS is a standard system designed in Sweden and it did not match Faroese work practices particularly well. General practitioners, for example, have a billing system particular to the Faroe Islands which was not supported by the IHIS; this was discovered late and it was necessary to programme a new module. Workshops were organised to introduce the system to super users in the project group, but configuration work progressed slowly. There were many technical issues with the system: usability problems, poor response
times and much downtime. Staff working with configuration found bugs in the systems and questioned compliance with the contract, for example in the protection of patients’ data. The project was subject to delays and rescheduling almost from the start. There was more configuration work to do than expected, progress was slow and there were delivery delays from the supplier. Resources, including dedicated personnel for configuration, money for hardware, upgrades, operational support, project staff and time, were in short supply. Nevertheless some parts of the system were implemented in the pilot wards and staff learned to accept and use the system. Patient confidentiality and privacy became a serious issue as a Faroese data protection act was debated in the parliament. The supplier claimed that these concerns and the performance issues necessitated an upgrade to a new version of the IHIS, but there was a contractual dispute over who should pay for it, and the upgrade involved further work which considerably disrupted progress. In September 2007, the core system was finally configured and taken over by the Faroese authorities, but the project had taken a heavy toll on the project staff. Money to buy out staff from their clinical duties ran out, end users began to quit and the surgical ward resigned from the project, claiming that the IHIS could not be used. With the resignation of the project manager, the project’s internal organisation more or less collapsed.

5.1.2 Stakeholder encounters with the project

The main supplier was new to the Faroese health service; the configuration supplier was local but had no previous relationship with the main supplier, or experience with IHIS, so many relationships needed to be built up from scratch. The broad goals of the implementation dictated co-operation with extremely diverse groups of stakeholders: radiographers, consultants, medical secretaries, administrators and ministry statisticians, each with their own history, professional expertise and expectations. Initial encounters took the form of information meetings and a series of configuration workshops. Communication difficulties were apparent here; the supplier’s consultant seemed to have little healthcare experience, whereas many of the users had little background in computer use. Subsequently the project staff and user representatives were left to get on with the configuration tasks with minimal support – they made little progress. The supplier eventually took over some configuration tasks, entering basic data, and creating users. The next encounters were at the pilot wards; here relevant parts of the system were configured and installed. Clinical staff began to use the system with minimal training and support and expressed satisfaction with it, despite a number of performance issues. From this point, encounters were marked by a series of conflicts; general practitioners were unable to see how they could manage their invoicing in the IHIS, nurses and doctors could not agree on the form and content of the patient record, the ministry and the supplier could not agree on payments for system upgrades, and patient data protection became a contentious issue with the Faroese data protection agency. Project staff planned the system rollout, but progress with configuration and implementation became painfully slow.
5.1.3 Stakeholder reflections, comfort and trust

The Faroese health system was still largely paper-based at the start of the implementation, and project and supplier staff were unprepared for the lack of IT experience amongst Faroese health professionals (“some of the nurses were really scared to have anything to do with computers………….they’d been on a very short course and that was that” [#21, coordinator]). In addition, a lack of experienced local IT personnel meant the import of foreign experts from Denmark, and the language of the system interface was also Danish (“It’s not our language, it’s not Faroese, you lose the sense of ownership there” [#11, nurse]). Workshop participants criticised the supplier’s representatives for lack of understanding of the local situation, and of healthcare practice in general. Digital reporting was experienced as time-consuming by clinical personnel, and senior medical consultants worried that this would impact patient care. Formalisation and standardisation of work practices was often interpreted as leading to more control by management and less individual autonomy (“We’ll be forced to work in the way the system dictates – in the way the management wants. It’s about registration, monitoring………” [#14, GP]). The digital patient record raised many transparency issues (who could see confidential patient records; who could inspect treatment choices; should doctors see nursing notes and vice-versa) which were threatening for staff. In addition the formalisation of the medical journal into a digitalised patient record, at the heart of the implementation, also implied many work practice changes (for instance the introduction of standard diagnostic codes) with work re-distribution and possible redundancies. There were difficulties with external agencies, particularly the data protection unit, reinforcing internal privacy concerns. The many delays destroyed confidence (“I’m saying the more the deadlines get pushed, the more it looks like a fiasco” [#22, Doctor]). In the management group, the threat of a major upgrade and the consequent bill from the supplier, on top of many delays and cost overruns provoked many concerns, especially since re-financing had to go through the Faroese parliament – a major loss of face.

5.1.4 Project management approach

The project started with a high level of trust based on the charter: “we had an introductory steering committee meeting where the supplier showed us a project plan which looked very convincing” [#31, Deputy Minister]. This was reflected in management strategies - cooperation was assured through shared long term expectations and a confidence in future rewards. The steering group initially left the hands-on management of the project in the hands of project staff, expecting them to follow the detailed procedures set out in the charter. Project management was physically located on several different sites, away from the hospitals where the IHIS would be implemented, making personal contact between project staff and the wards difficult. As a response to developing problems, the management intensified controls and requested that formal regulations from the project charter should be applied. Difficulties mounted and project staff suffered from overwork, lack of internal communication (partly caused by sitting in different buildings) and role-confusion – with the project manager feeling that she had at least three different roles. Even the project staff eventually gave up believing in the project plan – there were too many tasks and few of them were successfully carried out. Project members complained of lack of senior management commitment
and insufficient back up, for instance in disputes with powerful medical consultants. Dissatisfaction (and some open resistance) expressed in much gossip amongst users began to mount, and was felt keenly by project staff ("we get a lot of we don’t know what we’re doing from the users – we haven’t understood what it’s about – we’re stupid – it’s a tough project for the project staff" [#31, PM]). In autumn 2007 the project was close to collapse. "The biggest problem we have is that there is an overall organisation that has to manage things for quite a lot of other units...there’s one organisation that runs the project and another that implements it........there’s a lack of ownership and commitment" (#33, CIO). Shortly before resigning the project manager commented “my rollout role is difficult to carry out when I’m located in a different place than the team.....it means there’s practically no progress in the project team ... I can’t really function as the overall project manager without contact with the CIO, or the steering committee. If I’m in the hospital, that’s fine, I can at least manage the rollout, but I can’t be the overall project manager in the health department.........but if I’m not here at the health department then I think the overall project management will suffer” (#26, PM).

5.2 Recovery of trust relations and improved project outcomes

5.2.1 Project management approach

Recognising the difficulties, the hospital management confirmed its commitment to the project and demonstrated ownership. The project steering committee was reorganised and begun to meet regularly. The project was re-organised to give greater role clarity and its members found offices at the ministry where they could sit together, leading to clearer project identity and better internal communication. The management group, strongly supported by the deputy minister, changed their approach: they decided to focus on stakeholder cooperation, explaining the rewards of the project to stakeholders and assuring (and communicating) a series of quick wins. Both the project and the principal supplier found ways to staff the project with people with more relevant backgrounds, who were better able to relate to clinical work practice and communicate with ward staff. Management appointed a full-time consultant with extensive knowledge of health practice from the supplier in the Faroe Islands, which was well-received by both stakeholder groups. Part of the project strategy became an increase in personal contact with users. An important component in building trust was contact and experience with the IHIS itself. A sandbox (an image of parts of the IHIS) was set up for super-users, where they could learn their way around and experiment with different configuration options. Project staff spent much time responding to users’ difficulties and concerns through the help desk service. Time was taken to celebrate and communicate successes – the core-system handover was the occasion for a party at the ministry.

5.2.2 The project and its outcomes

Major re-financing was approved in the Faroese parliament, enabling more resources, mainly in the form of experienced personnel time. This enabled further involvement of core personnel from the wards. Training sessions with the new system and experiments in the sandbox allowed users to overcome worries about their own competence and learn the system’s possibilities. Much work with configuration and tailoring began to pay dividends as the
IHIS began to match work practice well enough to allow staff to benefit. The core system was eventually accepted by the Faroese authorities: an important symbolic action for the project. A solution for the GP’s billing was custom made, and GP’s began to adopt the system. The privacy and patient confidentiality issues were resolved. Support services and a help desk were set up. More wards and health service units adopted the system, and further systems (X-ray, blood bank, laboratory) were bought and integrated. After the breakdown in late 2007, the CIO decided to re-configure parts of the already implemented system. He enforced the pilot implementation and focused on technical quality, system performance, bug removal and training. This approach improved stakeholder trust.

5.2.3 Stakeholder encounters

The strategy of intensive personal communication ("communication, information and dialogue all the way along, that’s the way forward" [#43, Project Manager]) included repeated meetings with clinical decision-makers and GPs to demonstrate the IHIS and discuss configuration needs. Many concerns were voiced and resolved in this way. Relationships with the supplier were clarified and commitment reaffirmed in an important meeting in Denmark ("we’ve had a lot of problems.............. we brought in our lawyer..............do we stick to the contract or don’t we?......they also had some demands..........is it reasonable or isn’t it ?.........we cleared the air and got things moving again" [#26, Deputy Minister]). Much time was devoted to interactions with end users: training, configuration workshops, demonstrations and glitch resolution. A help desk was established which became the focal point of a responsive attitude. Help was available when needed and users’ complaints were taken seriously and rapidly fixed. The safe environment of the sand-box was important in developing user understanding of the system, breaking down resistance, and furthering the implementation work in the pilot wards. The pilot wards and clinics became ice-breakers, and also the scene for many small success experiences (quick wins) - substantially improving the morale of the project team members.

5.2.4 Stakeholder reflections, comfort, trust

Though management experienced a major trust crisis late in 2007, clinical morale was improving: “...it is a success, we have something we did not have before....soon the [IT]-system will be complete...” [#22, Consulting Doctor]. Nurses and secretaries from the wards developed increased confidence in project outcomes. The strategy of increased personal communication, combined with more knowledgeable and experienced staff facilitated a better dialogue with the different clinical groups. As the system gradually became operational in the pilot wards and its reliability and usability improved, more users came into direct contact with it ("they got a chance to try the system out themselves..........it was a real breakthrough" [#29, CIO]). Users developed confidence in their ability to understand and negotiate the system, and incorporate it into their work routines. Computer literacy improved significantly, both as a result of workshop training and super-user involvement, and because of daily involvement with the IHIS. A significant factor in winning over the GPs was the implementation of the IHIS in the accident and emergency room, where GPs rotated shifts. Benefits became apparent in stakeholders’ accounts: for instance instant availability of test and X-ray results, access to patient records from multiple points, and significant time sav-
ings in tracking down missing journals ("we’re really happy with it (the IHIS) because it gives us a better work day with better and more solid foundation" [#39, Doctor]). Some standardization effects were appreciated, for example avoidance of double registration in nurse and doctor notes. Patient benefits were also noted: for example through automated medicinal dosing and side-effect alerts. Drug abusers became easy to spot. Confidence in the system’s ability to contribute work benefits which outweighed start-up difficulties grew. Responsiveness with help and support increased trust in the project group’s ability to hear users and act on their behalf, and to understand local medical work routines and adapt the system accordingly. These factors led to increased confidence in the ability of the project to meet significant goals, despite setbacks.

6 STRATEGIES FOR MANAGING TRUST RELATIONSHIPS IN IMPLEMENTATION PROJECTS: DECOUPLING, RE-ENGAGING

In this section we consider the research question: ‘how can stakeholder trust in a large system implementation project be managed?’ We outline two approaches for managing interactions with stakeholders which are based upon Giddens’ characterisation of dis-embedding and re-embedding and on empirical patterns established in the case analysis. They are *decoupling*, which is suitable for situations with perceived high levels of stakeholder trust, and *re-engaging*, a response to low stakeholder trust. We understand project staff’s interaction behaviour during a project as an evolving continuum between these two idealised strategies, in response to local trust conditions with different groups of stakeholders.

*Decoupling*, (a response to perceived high levels of stakeholder trust), describes a project management approach that leverages trust (a form of social capital invested in the project). Project staff focus on internal goals, which are assumed to be shared with stakeholders and to need explanation rather than justification and negotiation. They focus on the work at hand and benefit from the co-operation and engagement of their stakeholders. Stakeholder tasks in the project need to be clearly explained so that they can be accomplished. There are few demands for feedback, formal review or transparency of project information and their work can rely on their own competences and professional expertise. They may seek legitimisation in the project charter. Configuration practice can rely on standardised models built in to the software, and a reasonable degree of compliance can be expected from end users – they can be trusted to improvise their own solutions and workarounds where the system does not exactly meet their needs. A technical focus on system operation can be maintained and late rollout after a long configuration period can produce a relatively well-functioning system.

*Re-engaging* is a response to perceived low levels of trust. Two kinds of encounters between stakeholders need to be particularly encouraged, personal encounters between project staff and stakeholders (corresponding to Giddens account of facework commitment), and opportunities for stakeholders to work with the system itself. Stakeholder co-operation needs to be earned through discussion and negotiation, and short term rewards established. A series of small quick wins with appropriate recognition is more appropriate than a focus on rollout months in the future. Project information needs to be transparent and open, and the project must be seen to operate by the appropriate
norms, conventions and regulations. Project staff can no longer rely on their own professional expertise but must show that they understand and can work competently with the expertise domains of their stakeholders. Institutional support (charter, funding, hierarchy) will not be sufficient and the project staff must obtain visible commitment from senior management. Continuous implementation of the software system with heavy tailoring to situation is appropriate. Stakeholders, particularly end users, need to interact with the software to allay their fears and adapt their work patterns. The inevitable problems of piecemeal implementation need rapid and careful response. Help desk and support systems need to be in place, and problems rapidly solved to the satisfaction of stakeholders.

The two management approaches are contrasted in Table 1.
<table>
<thead>
<tr>
<th></th>
<th>Decoupling</th>
<th>Re-engaging</th>
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</thead>
<tbody>
<tr>
<td><strong>Response to</strong></td>
<td>Perceived high level of stakeholder trust</td>
<td>Perceived low level of stakeholder trust</td>
</tr>
<tr>
<td><strong>Theoretical grounding (Giddens)</strong></td>
<td>Dis-embedded abstract system, dis-embedding, faceless commitment, dynamism</td>
<td>Re-embedding, faceless and facework commitment</td>
</tr>
<tr>
<td><strong>Focus on</strong></td>
<td>Efficient execution of project tasks</td>
<td>Promoting project, trust-building, engagement with stakeholders</td>
</tr>
<tr>
<td><strong>Cooperation</strong></td>
<td>Stakeholders confident of future rewards, stakeholder cooperation assumed, shared long term expectations assumed</td>
<td>Stakeholder cooperation earned and encouraged, rewards explained, focus on series of quick wins</td>
</tr>
<tr>
<td><strong>Project visibility</strong></td>
<td>Necessary stakeholder contact, focus on backstage activity</td>
<td>Much face-to-face contact between project workers and stakeholders, focus on front stage activity</td>
</tr>
<tr>
<td><strong>Project administration</strong></td>
<td>Trust-based: small bureaucracy, little control, little formal evaluation</td>
<td>Trust-building: many explanations, checks and controls, formal regulations applied, transparency, inspections</td>
</tr>
<tr>
<td><strong>Knowledge strategy</strong></td>
<td>Reliance on internal expertise in project</td>
<td>Explanation of project’s professional expertise, and investigation of stakeholders’ professional knowledge</td>
</tr>
<tr>
<td><strong>Communication style</strong></td>
<td>Informing and information collecting – necessary communication only</td>
<td>Extensive translation between professional languages, emphasis on two-way communication</td>
</tr>
<tr>
<td><strong>Task structure</strong></td>
<td>Focus on internally-defined project tasks</td>
<td>Rapid response to stakeholder issues</td>
</tr>
<tr>
<td><strong>Legitimation</strong></td>
<td>Rely on institutional arrangements such as charter</td>
<td>Seek visible support from top-leadership</td>
</tr>
<tr>
<td><strong>Configuration strategy</strong></td>
<td>Rely on industry standard models, expect compliance and user-workarounds, fast and cheap</td>
<td>Tailor closely to user-needs, slow and costly,</td>
</tr>
<tr>
<td><strong>Stakeholder/system contact</strong></td>
<td>Pilot implementation and roll out, focus on technical quality, system performance, bug removal and correct configuration, training</td>
<td>Early and continuous implementation, safe sandbox experimentation environment, rapid response to user problems, help desk and support organisation, iterative adjustment of system</td>
</tr>
</tbody>
</table>

Table 1. Trust management approaches: decoupling and re-engaging
Decoupling can be understood to be based primarily on process-based trust (Lander et al., 2004), rational cognition-based trust (Scott, 2000), system trust (Leimeister et al., 2005), or competence-based trust (Ibrahim and Ribbers, 2009). Re-engaging as an approach focuses more on building social-affect based trust (Scott, 2000), relational trust (Paul and McDaniel Jr, 2004), interpersonal trust (Leimeister et al., 2005), and openness-based trust (Ibrahim and Ribbers, 2009). Trust in the information artefact (Vance et al., 2008) is an important aspect of the re-engaging strategy - engaging with the system overcomes resistance and builds user comfort. Here the perceived quality of the information system (Gefen, 2004a) is less important than the perceived responsiveness of the implementation team: that there is help on hand and problems are quickly rectified. This builds both social affect and process trust. The re-engaging approach is broadly in line with previous recommendations for trust building (Jarrar et al., 2000, Lander et al., 2004). Giddens’ theorization focuses on the positive instrumental value of trust, also confirmed by our study and suggests a causal mechanism for the efficacy of trust missing in statistical studies focusing on the correlation of trust with success indicators. However it is difficult to substitute control for trust (as Gallivan (2001) suggests - project managers have little effective authority over many of their stakeholders. The dynamic account of trust also provides theoretical and empirical support for the circles of suspicion and disbelief observed by Nah and Delgado (2006), and Sabherwal’s (1999b) vicious and virtuous trust cycles.

The short discussion above shows that trust explanations derived from social theories can, at least partially, be reconciled with more common explanations in the IS literature derived from psychology. Multiple point-in-time studies can also be used to capture the dynamic evolution of trust with variance studies (Zahedi and Song, 2008), though these have not yet been used in the implementation context. Another promising area of investigation is though economic theories: trust is an important component of agency theory and game theory (games based on the Prisoner’s Dilemma are commonly used to link trust with economic utility) and such studies would help to explain the mechanisms behind a positive association of trust with project outcomes.

7 CONCLUSIONS

The IS literature contains a number of trust studies, but the longitudinal process-based study of trust in implementation projects for large implementation is neglected, and there is little help for project managers exposed to complex evolving trust relationships. Whereas a point-in-time statistical variance study based on a taxonomic understanding of trust as a psychological phenomenon can be useful in addressing (for example) an overall causal relationship between trust and project outcomes, we chose to investigate trust as a component in a dynamic social system, using the theories of Giddens. Recent theories both in economics and sociology highlight advantages of trust in social systems; for example Fukuyama (1996) addresses economic advantages of high-trust societies in developing large enterprises through social capital, and Zak and Knack (2001) demonstrate a formal correlation between trust in societies and economic growth. Trust is here not psychological condition of the individual (though this is, of course also relevant to problems in large-system implementations), or a moral imperative, but a pragmatic component of the organisation of modern society. Giddens’ theoretical constructs incorporate these understandings; we
used them to interrogate a longitudinal implementation case study. The constructs and the empirical analysis depict an evolving trust landscape over the life of the project. The project suffered severe trust crises, but recovered and was able to demonstrate successful outcomes. We summarised different approaches for managing stakeholder interactions in periods of good trust relations, and in poor trust relations, as decoupling and re-engaging. The first is a strategy for effectively using the social capital inherent in trust, whereas the second is primarily a trust-building strategy. The two approaches represent a continuum that the experienced manager can adapt to fluctuating trust conditions. The article contributes to a dynamic process-oriented theory of trust in implementation projects, to the understanding of causes and effects of trust and project outcomes and to amplifying effects in these relationships. The article further contributes a descriptive theory of trust management approaches, which can be used as a sensitizing mechanism for project managers. The longitudinal case study allows an in-depth situational understanding of evolving cause and effect, but does not securely permit wide generalisation across situations. It may be the case that the patterns observed in the case are to some extent culturally determined, and further studies are necessary to investigate these effects. Giddens’ theory does not easily lend itself to factor analysis or statistical modelling, which may indicate difficulties integrating the research into other trust studies; however it does provide a complementary perspective. The research suggests a more important role for the management of trust in implementation projects than has previously been assumed, and the decoupling /re-engaging strategies can be developed as practice-oriented guidance for managers. The research also points to a role for longitudinal studies of trust in implementation projects, and for process oriented theories which are suitable for conceptualising dynamic trust relationships.

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References


