

A CONCEPTUALISATION OF MANAGEMENT SITUATIONS RELEVANT FOR COLLABORATIVE IS RESEARCH PROJECTS

Research-in-Progress

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Abstract

Collaborative research projects as a means to organise Information Systems research and prototyping activities become increasingly widespread. Their management is challenged by a multiplicity of different partners, activities and results. Required is a project management approach that allows for flexibility within the project life-cycle to address changing needs. We present research in progress aimed at conceptualising the notion of project management relevant situations in this context. This discriminates the conditions and circumstances under which management involvement becomes necessary and thus enables the definition of a suitable management approach. We identify a set of constituent factors to describe different situations based on a literature review and interviews with project managers involved in collaborative research projects. Future research is presented with respect to completing the full analysis cycle of our thematic analysis and the development of a situation-specific project management approach.

Keywords: IS project management, IS research, Collaboration, Qualitative research

Introduction

Research activities are often conducted collaboratively by industry and academic partners to draw from various economical and scientific benefits and to solve challenges that neither can tackle alone (Gassmann et al. 2003; Salter et al. 2001). Collaborative research projects as a means to organise these activities have become increasingly relevant (Davenport et al. 1998; Hessels et al. 2008). This development has been fostered by the strong commitment of public-funding agencies to mode-2 knowledge production and multi-stakeholder models for research management (Gibbons et al. 1994). Within this paper we focus on a specific type of such projects, namely collaborative research projects funded by the European Commission (EC) in the area of Information Systems (IS). Such projects can be defined as “focused research projects with clearly defined scientific and technological objectives and specific expected results” (EuropeanCommission 2007b, p.20). They are executed and co-financed by a consortium of public, academic and private partners (Adler et al. 2009; König et al. 2012). These partners share a common research interest and work across disciplinary, organisational and national boundaries to fulfil project goals (Dewulf et al. 2007; Inganäs et al. 2009). The amount, size and volume of EC-funded collaborative research projects have been growing over the last decade since the EC has subsequently increased the funding for each Framework Programme. The currently running 7th Framework Programme offers a budget of 50.5 billion euros for investments in Information and Communication Technology which is used to support 1952 projects in different stages of the project life-cycle (EuropeanCommission 2007a, Query for ICT projects run on http://cordis.europa.eu/fp7/projects_en.html). Impact assessments of former EC funding frameworks generally show a positive image of these projects concerning the overall socio-economic impact (EuropeanCommission 2009). Individual partners however often rate the results as less successful, in particular with respect to the direct use of developed technologies and related positive monetary returns (Adler et al. 2009; Fraunhofer-Institut für Systemtechnik und Innovationsforschung 1995).

Like any other type of project, collaborative research projects benefit from a professional and targeted project management (PM) to meet short-term project goals (budget, time, scope) as well as to improve the individual long-term use of results and return-on-investments for all involved stakeholders. Yet the projects show certain characteristics which complicate the application of many existing PM approaches and require innovation in this field (Erno-Kjohede 2001). The heterogeneous nature of the participants and the different activities within collaborative research projects cause a major practical challenge. It has been observed that the application of a uniform PM approach is inappropriate (Calamel et al. 2012; König et al. 2012). Successful PM needs the flexibility to manage tensions by applying different ‘aggregates of action’ at different points in the project life-cycle. Required is a flexible management approach based on situation-specific circumstances and conditions of collaborative IS research. Given this background it is important to understand the characteristics of each situation as a first step towards this situational PM approach. Since ‘project situation’ is a complex concept, our goal is to conceptualise this phenomenon in the context of the project type under discussion. Consequently the research question guiding our descriptive study is: “*What are suitable concepts to describe and distinguish PM relevant situations in collaborative IS research projects?*”

We address this question by presenting a thematic analysis of 20 in-depth expert interviews with project managers. We derive an initial set of constituent factors to describe different situations under which managerial approaches become necessary and discuss themes commonly identified in the data. Our work is currently in progress. Data collection and early analysis have been completed. In this paper we present the results together with the methodological steps and decisions. Next, the findings require a second round of analysis and an evaluation by a larger amount of project managers. Also, referring back to the idea of situational PM, future research steps need to link the results of our study to existing PM approaches.

Conceptual Background

Collaborative research projects form a special type of projects within the IS project portfolio. They are characterised by (a) the distinct nature of research activities, (b) the special collaborative set-up, and (c) a focus on the design, development and use of IS.

(a) Nature of research activities: Research in the broadest sense refers to a “studious inquiry or examination” (Merrriam Webster) and the systematic documentation and publication of results. In a scientific sense research addresses an existing research question or hypothesis (Alexander 2002), has novel results (Creswell 2009), and pursues a systematic approach to investigation (research method). The aim of research is to solve a certain research problem, rather than to follow a pre-specified product or service description or existing customer requirements (Cox 1990). As a result, research work “is not only characterised by uncertainty in terms of project duration or budget, but also by the nature of the results” (Clarke 2002, p.59) and the outcome remains pre-competitive and exploratory (Lenfle 2008). In addition, research requires a large degree of freedom and flexibility to foster creativity while at the same time firm structures are needed which ensure that rigorous research processes are being followed (Tatikonda et al. 2000). Within our study we acknowledge the organisational and managerial differences of research versus development projects and clearly focus on research activities (see e.g. Chiesa 1996; Chiesa et al. 2007; Cox 1990; Kapsali 2011; Lenfle 2008; Wouters et al. 2011). Research explores the technology and the market, while development (and in particular new product development) matures the technologies and introduces them into the market (Cox 1990; Kapsali 2011). Research has to deal with higher levels of novelty and uncertainty in terms of the expected result and working methods, while the problems in development arise from market uncertainty and technological complexity of large-scale implementations (Kapsali 2011; Turner et al. 1993; Wouters et al. 2011). Furthermore, Chiesa et al. (1996; 2007) point out that the culture in research projects is characterised by a high amount of freedom and flexibility and mistakes are accepted, whereas development projects have clear-cut priorities and a more formal communication style.

(b) Collaborative set-up: Research collaboration addresses the need of combining different perspectives on the research problem (Bruce et al. 2004) and is defined as “a system of research activities by several actors related in a functional way and coordinated to attain a research goal corresponding with these actors’ research goals or interests” (Laudel 2002, p.4). A wide range of collaborative research formats can be distinguished, ranging from single academia-industry collaborations to strategic alliances and joint ventures (Hagedoorn et al. 2000; Inganäs et al. 2009) and covering inter- and intra-collaboration on the individual, departmental, and national levels (Huutoniemi et al. 2010; Katz et al. 1997). This paper focuses on a specific form of such research collaboration that is characterised by a heterogeneity of actors in terms of organisational, national and disciplinary background (Adler et al. 2009; Dewulf et al. 2007), collective responsibilities and accountabilities which grant equal decision rights to all parties (Calamel et al. 2012; Erno-Kjolhede 2001; Morron 2013), and the constraints and regulations of the public-funding agency. Partners collectively plan, finance, and execute the project work and working processes and intellectual property rights are governed by contracts that are commonly defined. This autonomy and equality of consortium members differentiates this kind of partnership from the traditional contractor-principal or buyer-supplier model since it creates special conditions in terms of project governance and the execution of power (Calamel et al. 2012; Ruuska et al. 2009).

(c) IS focus: The projects are performed within the discipline of IS and are expected to provide solutions for technology-related problems, namely new services, technologies or software components, investigate their application within a certain context, and/or foster their combination in unusual or novel ways. They are often based on the design science principle in IS as the underlying research paradigm to develop relevant artefacts (March et al. 1995; Peffers et al. 2008). They align both business needs and research objectives. This alignment is based on a strong end-user involvement in research and development activities to allow for results that are “of both scientific and industrial interest” (Inganäs et al. 2009, p.214). Industry partners are assigned different roles in the project and their involvement ranges from providing an end-user perspective, testing developed results, and a more direct involvement in the research process. Project activities include all typical phases of an IS development cycle, from design to implementation and testing. However, these activities are executed under a high amount of uncertainty and changes and the developed technologies remain prototypical due to the research nature of the projects. In addition, an evaluation of the applicability and exploitability of the research results is a central part of the project activities and need to be justified towards the funding body.

Each aspect may not be new to the discipline of PM and related management knowledge has been gained. However the uniqueness of collaborative IS research projects lays in the combination of these characteristics in a single project, which results in a complex project environment. The ability to understand this project type and to innovate PM becomes critical and has received increasing attention in

PM literature. Existing contributions aim at making the everyday settings and processes of collaborative research projects explicit and plausible and thus at providing a structured and theoretically grounded conceptualisation of the project type and its management challenges. Examples include the underlying collaboration process (Calamel et al. 2012), the tasks, roles and responsibilities in interdisciplinary research management (König et al. 2012), the inquiry process within public-funded inter-disciplinary research (Bruce et al. 2004; Winter et al. 2006), and major managerial challenges faced by project managers (Adler et al. 2009; Ruuska et al. 2009). The results show that collaborative research projects comprise highly heterogeneous management activities at different levels of granularity, technical and political complexity, and concerning various types of stakeholders. Consequently a situational PM has to be enabled which supports the diverse usage of existing PM knowledge, depending on different managerial conditions and circumstances and their PM needs. Hereby it is not the goal to re-invent PM approaches for this project type, but to allow for the flexible usage of existing knowledge in the every-day context of collaborative IS research projects.

The interplay between the project needs and the best suited management approach is researched in PM contingency theory (e.g. Howell et al. 2010; Shenhar 2001; van Donk et al. 2008). PM contingency theory is based on the understanding that a project forms a 'temporary organisation' and that thus the ideas of organisational contingency theory are applicable in this context (Shenhar 2001). Correspondingly, the PM approach is considered the structural variable which needs to be adapted according to certain internal and contextual contingencies to optimise PM effectiveness. Related PM contingency research aims at identifying influencing factors for various project types and circumstances (for a detailed literature review on the application of contingency theory to PM see Hanisch et al. 2012; Sauser et al. 2009). Specific studies have also been conducted concerning the development of IS and discuss a fit of the development context and approach (e.g. Andres et al. 2001/2002; Koopman et al. 1996). Within our study this type of related research is used to derive a first set of factors to describe project situations and to develop a coding scheme (see section on methodology and results). However, current literature on PM contingency theory shows certain shortcomings with respect to the development of a situational PM approach. First, only a minor percentage of the contingency frameworks derive usable management recommendations for the identified project categories. These remain on a high-level and only give broad directions on how to manage each project type. As such they miss the link to the concrete implementation and application of existing PM standards and knowledge (vom Brocke et al. 2011). Second, most frameworks do not consider changes during the life-cycle of a project and thus fail to support a dynamic fit of context and approach (Koopman et al. 1996). Third, many studies investigate varied approaches to certain contingencies, instead of conceptualising the conditions (situations) under which managerial approaches become necessary (e.g. Chiesa et al. 2007; Lenfle et al. 2010; Lewis et al. 2002). The results of our study on project situations combined with future research on situational PM are expected to work towards these limitations.

According to Miles and Hubermann (1994), it is helpful for any qualitative study to describe the theoretical framework and the assumptions that underpin the research at hand. Our overall aim is to develop a situational PM approach for collaborative IS research projects. This follows the idea of PM contingency theory by assuming a fit between a certain situation and a corresponding management approach. In this context we define the terms as follows: A project situation refers to the conditions and circumstances under which management involvement becomes necessary. The PM approach (also referred to as PM method) is either a formal mature set of processes, techniques and tools or an informal practice that aids the PM team (Kerzner, 2006). PM effectiveness, as the dependent variable is defined as the quality in meeting the objectives of the project for all involved stakeholders (Widemann 2002). We expect that the project situations can be described in terms of a set of constituent factors and their dimensions. Their identification will be the main result of this study, whereas the development of the overall situational PM approach is subject to future research. The following figure depicts the theoretical framework that guides our data collection and analysis process.

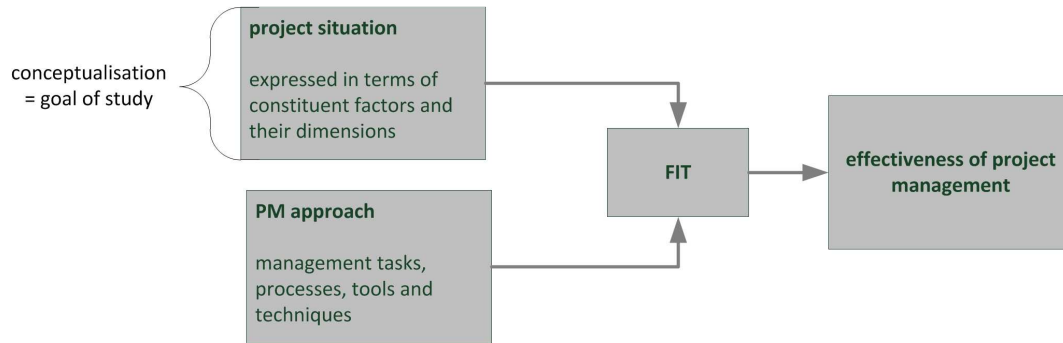


Figure 1. Theoretical framework – Overall objective of situational PM and focus of current study

Methodology

We seek to understand the complexity and characteristics of different situations within a specific project type. Thus, a qualitative study design which allows for an intense contact with the field of study to gain the required understanding of a certain phenomenon was chosen as most suitable for this research (Creswell 2009). Methodologically we ground our research in thematic analysis. Thematic analysis provides a set of detailed procedures and techniques to see and search for ‘codable’ moments and analyse data with respect to themes that emerge as being relevant for answering the research questions (Boyatzis 1998). In the context of this study relevant themes correspond to the identification of concepts that describe and distinguish project situations in collaborative IS research projects (see Figure 1, Figure 2 and the research question stated in the introduction). Within thematic analysis we followed the process proposed by Braun & Clarke (2006) which provide a detailed step-by-step guide for this research method. Where necessary we complemented this approach with further low-level steps and techniques provided in other sources (e.g. detailed analysis techniques outlined in Glaser et al. 1967; Miles et al. 1994). The analysis process was supported by the Nvivo software tool and is documented in Figure 2.

To collect empirical data, we conducted 20 open-ended interviews with experienced project managers. We were presented with the opportunity to conduct the interviews within a large software provider that has a lengthy experience in EC-funded research projects and currently runs over 50 projects in parallel. Within this company project managers have undergone similar PM training courses and are involved in all phases of the projects’ life-cycle. This set-up allows for comparability across interview partners and generalisation of situation descriptions. Our sampling strategy followed typical case sampling according to Miles and Hubermann (1994) and the selection of the interview partners was based on the following parameters:

- Experience in the field: Managers that have managed a minimum of one project were selected. They are expected to have the necessary experience to provide a description of PM relevant situations in their projects. It was important to discuss the details of the situations experienced by each manager in terms of the characteristics and management challenges.
- Variability in the project content, stage in project life-cycle, and role of case company: The projects of the selected managers differ in terms of (a) the detailed technical sub-challenge that they address (for details see EuropeanCommission 2007a), (b) the status of the project (initiation, running or closed), and (c) the role of the case company in the project (consortium lead or partner).
- Availability for interviews: Project managers needed to be available for the initial interviews within this study as well as further interviews to validate the findings.

The interviews were conducted in June/July 2012 as well as November/ December 2012 and each interview lasted around one hour. Each interview was recorded and later transcribed for the analysis step. Based on a pre-defined and tested interview guide we asked each interviewee to describe typical situations that they had encountered in their projects including the applied management approach. These situation descriptions formed our unit of analysis.

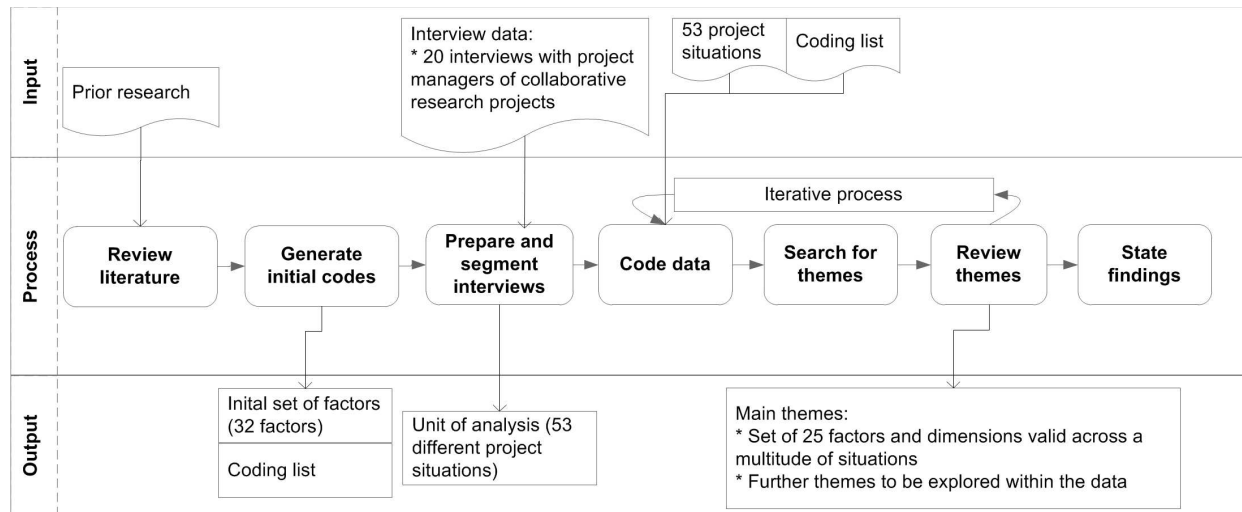


Figure 2. Process of thematic analysis

Thematic analysis can be performed inductively and deductively with respect to the use of existing knowledge (Boyatzis 1998). We derived initial themes and codes based on prior research due to the availability of related knowledge (c.f. the previous section) and thus our study is classified as ‘research-driven’. The development of the initial set of factors and resulting coding schema was based on a literature review as the underlying research method (Webster et al. 2002). Within this literature review we searched and analysed the following research streams: (a) studies on project characteristics of collaborative research projects, (b) the fields of PM contingency theory in general, and (c) the application of PM contingency theory specifically to IS projects. These research streams were expected to provide previously identified factors that can be used to describe and conceptualise different situations and that thus could be transformed into codes. The factors that were derived in this step were used to provide a coding list for the subsequent process of coding interview data. To compile the coding list we followed the structure proposed by Boyatzis (1998), which includes a label, a definition of the code, a description of the underlying theme, and in-/exclusion criteria. Next we analysed the interview data to be able to derive factors that are more specific to the project type under discussion. We divided each interview into sections covering the project situations that were discussed. In total we retrieved 53 different situations from the interview data. These situations were then coded using the pre-defined coding list and developing new codes where necessary. By confirming, extending or erasing this initial set of factors we aimed to discover and conceptualise factors that were identified by the project managers as relevant. We ended this phases with a collection of initial themes. The results of these steps are now presented in the next section. Further iterations within the process including further means of analysis are still outstanding and are thus presented as part of future research.

Initial Results

Our study aims at the identification of concepts that are suitable to describe and distinguish different PM relevant situations within collaborative IS research projects. We assume that these can be described as set of constituent factors and their dimensions. Our data analysis confirms this assumption and we are able to derive these factors from the literature review and the subsequent analysis of interview data.

Initial set of factors - results from literature review: We derive a set of 32 factors which we chose from the literature based on the following criteria: (a) the factors had the prospect to change during the project duration (to account for different project situations), (b) possible occurrences or ranges were described, and (c) an influence on the choice of PM approach was indicated. In case of doubt, factors are initially added for a most comprehensive list of possible factors. We initially group the factors into four high-level categories. These include the project stakeholders involved in a certain situation, the underlying project activities to be managed, the results to be produced, and others (see Table 1 for a list of all identified factors). The categories have been chosen based on the traditional distinction in PM between project resources (which we extend to stakeholders), activities and results (Project Management Institute

2008). For most factors we were also able to identify concrete dimensions as assumed in our conceptual framework. For example the type of activity that needs to be managed can include administrative processes, demonstration of results, development work, dissemination & exploitation, or research work (EuropeanCommission 2012; König et al. 2013; vom Brocke et al. 2010; vom Brocke et al. 2011). Another example related to the ambiguity of the framing device which we define as the differences in sense-making between different stakeholders. This ambiguity can vary in intensity, ranging from indistinctness, through confusion to tension and conflict (Dewulf et al. 2007; Hadorn 2008; Inganäs et al. 2009). The complete set of factors is depicted in the following table, however we have to leave out the dimensions for each factors due to readability reasons.

Table 1. Initial set of constituent factors	
selected literature	set of factors
<ul style="list-style-type: none"> ○ <i>characterisation of collaborative IS research projects</i>: (Calamel et al. 2012; Dewulf et al. 2007; Erno-Kjohede 2001; EuropeanCommission 2012; Fraunhofer-Institut für Systemtechnik und Innovationsforschung 1995; Hadorn 2008; König et al. 2012; Morron 2013; vom Brocke et al. 2010; vom Brocke et al. 2011; Vulturescu et al. 2012) ○ <i>PM contingency theory in general</i>: (Crawford et al. 2004; Heupers et al. 2011; Inganäs et al. 2009; Shenhar et al. 2007; Turner et al. 1993) ○ <i>PM contingency theory in IS projects</i>: (Andres et al. 2001/2002; Barki et al. 2001; Koopman et al. 1996) 	<ul style="list-style-type: none"> ○ <i>related to stakeholders</i>: involved roles, affiliation, geographic location, level of cooperation efforts, amount, applied success criteria, sector of activity, ambiguity of framing device, experience of working together, level of trust ○ <i>related to results</i>: type, tangibility, novelty, clarity, complexity, uncertainty, number of solution options, structuredness ○ <i>related to activities</i>: complexity, pace, type, steps in research process, degree of expertise, predictability of working steps, task dependency, formality ○ <i>other</i>: occurrence, politics, criticality, law and regulations, technical environment

Second set of factors – concretization through interview data: The starting point of our empirical analysis is a set of 53 situations that were derived from the interviews. We code each situation against the coding list and we derive a first set of 25 factors. We confirm 11 factors from the literature review and add 14 new ones. We are able to turn some of the conceptual codes from the literature review into concrete factors applicable in the context of IS projects, in particular concerning dimensions of each factor. This includes for example the geographic location which according to the interviews only plays a role for development teams as well as the technical outcome of certain situations (type of result) for which we could identify precise dimensions: prototype, implementation roadmap, solution architecture, etc. To ensure generalisation of factors we perform a matrix query that shows the relevance of each factor across various situations. Factors were only included if they re-occur in a minimum of 5 situations. The following table depicts the initial set of factors in each category. Dimensions are not added for readability reasons; factors derived and confirmed from the literature review are presented in italics.

Table 2. Second set of constituent factors			
involved stakeholders	activities	results to be achieved	other
<ul style="list-style-type: none"> • <i>affiliation</i> • <i>geographic location (of developers)</i> • <i>involved roles</i> ○ clarity of roles ○ political influence ○ motivation of 	<ul style="list-style-type: none"> ○ clarity of work description with respect to working steps ○ granularity of tasks • <i>predictability of working steps</i> 	<ul style="list-style-type: none"> ○ clarity of work description with respect to results • <i>tangibility</i> ○ importance of results • <i>type of results</i> 	<ul style="list-style-type: none"> • <i>occurrence of situation</i> • <i>law and regulations</i> ○ criticality for internal organisation ○ expected formality

<ul style="list-style-type: none"> partners ○ level of agreement • <i>experience of working together</i> ○ agenda ○ experience of technical project manager 	<ul style="list-style-type: none"> • <i>type of activity</i> • <i>task dependencies</i> ○ adherence to schedule ○ time constraints of activities 		of PM approach
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To provide further details on the dimensions of the factors, we will discuss one exemplary situation and exemplary factors. A typical technical management task in collaborative research projects is the development of the solution architecture across all partners and work-streams. This was described in three interviews as follows: it usually starts towards the beginning of the project and updates/iterations occur during the whole project duration. This activity is project internal, would be led by the technical project lead and involves at a minimum the leaders of different work-streams (work-packages) as well as further researchers, developers and decision making bodies where necessary. The outcome of this situation is expected to provide an overall architecture definition as well as documented guidelines to follow within the project. This description can be turned into the factors presented above as shown in Table 3 (dimensions relevant for this situation are shown in bold letters).

Table 3. Factors and dimensions for exemplary situation		
factor relevant for situation	description of factor	Possible dimensions (relevant dimension in bold)
occurrence of situation	refers to the duration or re-occurrence of a certain situation	short timeline and once; long timeline ; short time-line and reoccurring
affiliation	refers to background stakeholders involved or with an interest in a certain situation	partner internal; project internal ; European Commission ; external parties
roles	refers to the roles of stakeholders in a certain situation	partner ; sub-contractor; technical project manager ; administrative project manager; researcher ; developer ; member of the project coordination committee; member of technical steering group ; work-package lead ; member of external advisory board
type of result	refers to the type of result that needs to be produced	report ; prototype; artifact (solution architecture) ; theory; demonstrator; other;

Further themes within the data: A second theme emerges from our data which we identify as an additional concept that is important to conceptualize project situations. We observe that each situation has different aspects that on the one hand need to be managed simultaneously, while on the other hand require different management approaches and also often involve different roles and stakeholders. An example derived from the data is the management of a non-performing party. In this case it is important to ensure that project results are still met and a solution is found with respect to the technical work. This can include a re-assignment of the work to another partner or a change of scope. Dealing with a non-performing party also always yields a political aspect which includes discussions with this party on the reasons and consequences and the management of partner relations. Furthermore, contracts are usually in place which govern how to deal with the situation from a legal perspective and these need to be managed and followed. We observe that when describing a certain situation, project managers only focus on one of these aspect at a time, even if in most cases more than one had to be managed. So far we could identify the following aspects within the data: (a) the management of project content and the generation

of research results, (b) the management of political issues, and (c) administrative and legal processes and constraints that govern the project work.

Discussion and Future Research

The previous section documents the findings of a first cycle of coding and analysing our data. The results provide constituent factors to describe situations in collaborative IS research projects which are grounded in two sets of data, that are secondary sources and in-depth interviews. We can observe that in particular the heterogeneity and autonomy of project partners and the clarity of the research steps and goals play a major role in distinguishing project situations. Collaborative research requires different levels and mechanisms of consensus building depending on the stakeholders and their interests and agendas. Possible tensions are eased and work-plans and responsibilities can more easily be established in case of more clearly defined goals and work descriptions. The current set of factors shows a strong focus towards analysing stakeholders and working activities in a given situation, thus matching well the aspects of research work and collaboration as discussed in the conceptual background section. These are also the aspects for which most factors have been added. The content domain of IS research, which was introduced as a third aspect relevant for collaborative IS research projects, is still underdeveloped and will need further investigation and a strong focus within our on-going research.

Our research is currently in progress and research design, data collection as well as early analysis have been completed. To describe future research we distinguish steps that will be conducted as part of this study and further studies to enable a situational PM approach for collaborative IS research projects. First, the aspects of the content domain of IS are currently not fully reflected in the set of factors and need further investigation. Here we expect that a second round of analysis with a specific focus on characteristics for IS research will provide improved results. Second, we are expecting the high-level categories of factors to be improved due to many dependencies between the factors. An example can be given concerning the clarity of the goals and the agenda of the stakeholders. The clearer the goals in the project proposal, the lesser can each partner misinterpret the aim of the work and/or push for their own interests. This shows that project situations show many different facets to be considered simultaneously when selecting suitable management approach. Third, further evaluation foresees claim verification through feedback by interview partners. Interview partners will be presented with the framework and asked to describe the situations from the interviews using the identified concepts.

To link our results to the overall goal of a situational PM approach, we suggest the following directives of research: Based on our framework, a set of PM contingency profiles can be developed. These profiles characterise a certain situation within the project and suggest a fitting management approach. A survey among a larger sample of project managers can be used to identify the most common profiles in collaborative IS research projects. These are directly usable by project managers and improve the day-to-day work of this emerging project type.

Conclusion

We presented the motivation, conceptual background, methodological details, and a set of initial results of a thematic analysis applied in the context of collaborative IS research projects. We focused on pre-existing research and the description of project managers and derived constituent factors suitable to describe different project management relevant situations in this project type. We identify a set of 25 factors specific to this project type which we initially divide into four high level categories, namely the stakeholders involved in a certain situation, the activities that need to be managed, the results that are being produced, and other, miscellaneous factors. From a scientific perspective, our research contributes to understanding and conceptualising the dynamics of different project situations in collaborative IS projects and the different management conditions that occur in them. Project managers can use our results to analyse each situation in their project in a structured way and decide on a management approach that matches the identified factors and dimensions.

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