Dear colleagues,

Past IRNOP conferences took place all around the world – this year I am delighted to welcome you to Berlin for IRNOP IX. Thanks to your contributions the International Research Network on Organizing by Project has grown steadily over the past 15 years.

The great interest in the ninth edition of the conference with a record number of about 100 paper submissions from all over the world shows again the increasing importance of “Organizing by Projects“ in theory and praxis. During the two and a half days of the event we will have an exciting and busy program with 64 presentations and two symposia in four parallel tracks. Overall we are more than 130 researchers participating in the conference.

The venue is located in the heart of city with the special flair of Berlin and its history. The conference dinner will take place high above the rooftops of Berlin.

I am looking forward to an exciting IRNOP IX conference with you all!

Sincerely,

Prof. Dr. Hans Georg Gemünden
**IRNOP-Conference 2009 Program Overview**

**SUNDAY, October 11th, 2009**

<table>
<thead>
<tr>
<th>Event</th>
<th>Time</th>
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<tbody>
<tr>
<td>START of Conference REGISTRATION</td>
<td>17:00</td>
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<tr>
<td>DRINKS and FINGERFOOD</td>
<td>18:00</td>
</tr>
<tr>
<td>WELCOME by Prof. Hans Georg Gemünden</td>
<td>19:00 – 19:15</td>
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<tr>
<td>PM-Journal 'Paper of the Year Award' by Prof. Christophe Bredillet</td>
<td>19:15 – 19:45</td>
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**MONDAY, October 12th, 2009**

<table>
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<tr>
<th>Event</th>
<th>Time</th>
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<tbody>
<tr>
<td>Conference OPENING</td>
<td>09:00 – 09:30</td>
</tr>
<tr>
<td>PLENARY I</td>
<td>09:30 – 10:30</td>
</tr>
<tr>
<td>Parallel TRACKS</td>
<td>11:00 – 12:30</td>
</tr>
<tr>
<td>Lunch Break</td>
<td>12:30 – 13:30</td>
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<tr>
<td>Parallel TRACKS</td>
<td>13:30 – 17:00</td>
</tr>
<tr>
<td>Departure BUS TRANSFER to Conference Dinner</td>
<td>18:15</td>
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<tr>
<td>Start of Conference DINNER</td>
<td>19:30</td>
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**TUESDAY, October 13th, 2009**

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<tr>
<td>Parallel TRACKS</td>
<td>08:30 – 11:45</td>
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<tr>
<td>PLENARY II</td>
<td>12:00 – 12:45</td>
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<tr>
<td>IRNOP Best Paper Awards</td>
<td>12:45 – 13:00</td>
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<tr>
<td>Lunch Break</td>
<td>13:00 – 14:00</td>
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<tr>
<td>Parallel TRACKS</td>
<td>14:00 – 15:30</td>
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<tr>
<td>PLENARY III</td>
<td>15:45 – 16:30</td>
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<tr>
<td>Conference CLOSING</td>
<td>16:30 – 17:00</td>
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<tr>
<td>END of Conference</td>
<td>17:00</td>
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**IRNOP-Conference 2009 Sightseeing Tour**

For the transfer from the conference venue (ESMT) to the dinner location (Solar) we offer a free bus transfer service to all dinner participants.* The transfer is combined with a short Berlin sightseeing tour. The bus starts at 18:15 at ESMT and will arrive around 19:15 at Solar. There are two different guided tours:

**A SHORT TRIP THROUGH BERLIN - „EASTWARD BOUND”...**

We start at the heart of Berlin, the former site of the City Palace. Over Berlin’s most beautiful square, Gendarmenmarkt, we head towards the Brandenburg Gate: site of Reagan’s famous speech. Then we drive back across the somber former Soviet Embassy towards the GDR’s main-square. We pass Alexander Square, site of great demonstrations. Through Prenzlauer Berg we reach a communist „commemorative landscape”. We see Karl-Marx-Avenue, former Stalin-Avenue. Along the „East-Side Gallery”, a part of the Wall, we turn back to the center. Through Leipziger Strasse, with its typical communist skyscrapers, we get to famous „Checkpoint Charlie”. From there we reach our final destination: the Solar Berlin, with its wonderful vista.

**A SHORT OVERVIEW OF BERLIN’S ARCHITECTURE**

Berlin’s legacy of artistic innovation and chaotic political change has created a spectacular mix of buildings. Neoclassical and baroque masterpieces line the streets of the historical centre. Unexpected turns into East and West Berlin neighbourhoods display competing efforts towards post-WWII reconstruction. We will see some of the most important places of Berlin’s Architectural History such as the Pariser Place, the Brandenburg Gate, the DZ-Bank of Frank Gehry, the American Embassy, the Holocaust Memorial of Peter Eisenman, the Reichstag modified by Norman Forster, the Berlin Railway Station by Meinhard von Gerkan and the Potsdamer Platz constructed by Renzo Piano, Hans Kollhoff, Helmut Jahn and others.

---

* Bus transfer is optional. Please feel free to come to the conference dinner by yourself. By taxi it will take approximately 10 minutes from ESMT to Solar. The conference dinner starts at 19:30.
**SESSION I**

**10:00**

I. **State of the Art PM Research**

**C. Bredillet**

The Landscape of Australian Project Management Research

J. Oenec: Watt/A. Sense

II. **Risk Management Approaches I**

**E. S. Andersen**

Two Types of Project Strategy-Empirical Illustrations in Project Risk Management

K. Arts/M. Lahtonen/K.Ahonen/P.Ahonen

J. Kujala/S. Lindemann/M.Martonen

11:00

Paradigms in Project Management Research: Examples from 15 Years of IRNOP Conferences

T. Bäckström/R. Müller

11:30

Theoretical Models of Project Management: Historical Perspective and Critique

P. C. Lalonde/M. Bourgault/A. Findel

12:00

Coffee Break

12:30

Lunch Break

**SESSION II**

**13:00**

I. **PM Practices**

**M. van Omna**

Comparing Chinese and Northern American Project Management Practices

C. Boer/M. Robb

II. **Risk Management Approaches II**

Simulation modeling for managing post-construction risks in public-private partnerships projects

H. Ounb. A. Pharo

14:00

Management Practice in Short-Duration Projects

A. Nilsen/A. Slorderg

Risk Based Fuzzy TOPSIS Bird's-Rid Decision Making Model

M. Ravanbodh/H. R. Abasineh/R. Rajae

14:30

Living with paradox in project contexts: a clue to the way forward

T. Brady/H. Mayor

Price Optimization using Business Risk Analysis and Game Theory

I. Falace/R. Konoly

15:00

Coffee Break

**SESSION III**

**15:30**

I. **Exploring the Social Reality of Projects**

**T. Blomquist**

The Social Reality of the Organisational Project Management

M. Aubry

II. **Risk Management Approaches III**

Critical risk factors of public construction projects

S. BucD. Dijak

Risk management in a mega-project: the Universal EXPO 2015 Case

G. Locatelli/M. Marconi

16:00

Bounded knowing: exploring the nature of projects

V. Soji

16:30

Exploring the Popularity-Failure Paradox in Projects

E. Molyneaux Steart

The most critical success factors for World Bank projects: the Task Team Leaders' perspective

L. Karl/D. Thuiller

**SESSION IV**

**16:00**

III. **Teams**

**J. Kratzer**

Cross functional teams in new product development projects: Effect of project innovation on project cycle time

R. M. Labov

How the Virtualness of Project Teams effects their Performance

F. Wamn/E. Scott/M. Polsko

17:00

Role stress, learning and team performance

C. Savsalberg/P. Stelm/K. Kupers

18:00

A collaborative learning environment for Project Management

I. Lidon/L. Caro/R. Rabbol

**IV. Collaborative Learning**

**D. Dvir**

Engaging 'Meaning' in the analysis of the Project Start-Up Workshop

M. Nagapi/F. Healy/C. Baydaj

Liminality Problems in Project-Based Firms: Coping Strategies and 'Collectivities of Practice' in Advanced Engineering

E. Borg/ K. Beuth/P. Siderlind

**IV. Control and Autonomy in Projects**

**J. Söderlund**

Project Control Mechanisms in Non-Project Based Organizations in Asia

P. Gaway/Y. Taor/R. Müller

Exploring and exploiting inventors at Westco

A case of contextual ambidexterity in IMD

H. Andersson/R. Johansson

19:00

How much championship can NPD teams bear? The relationship between champion roles and creative performance

J. Kratzer/G. Hipt/H. Gommer

19:30

The program manager’s leadership style and program success: a literature review and research outline

J. Shaar/R. Turner/R. Miller
<table>
<thead>
<tr>
<th>Time</th>
<th>Session I</th>
<th>Session II</th>
<th>Session III</th>
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<tr>
<td>09:30</td>
<td>Inter-Organizational Project Capabilities: An Enhanced Model to Explain the Strategic Ambivalence of Routinisation in Inter-Organizational Project Settings L. K. Wessel/M. Gerlch/C. Biele/E. Schussler</td>
<td>Mastering Complex Projects by radical Restrinking of PM: The Project Management 2nd Order (PM-2) M. Saynisch</td>
<td>The exploitation of outcomes within European research projects: the spin-off strategy A. Sarronnet/A. Dati</td>
</tr>
<tr>
<td>10:00</td>
<td>Coffee Break</td>
<td>Complexity and the Paradox of Project Control S. Comin/G. Coile/Davis/ L. Crawford/K. Richardson</td>
<td>Investigating an interpretive framework to manage complex information technology projects G. Sydd/S. Samaran</td>
</tr>
<tr>
<td>10:15</td>
<td>How to set up R&amp;D projects with universities? – Project starting conditions and interaction quality as success factors for university industry projects C. Schub</td>
<td>Relating sustainable development and project management R. Ganis/M. Huemann/A. Martinuzzi</td>
<td>Perspectives of project professionals on project complexity in the process and energy industry M. Bosch-Rekveldt/H. Moor/ A. Vedrack/K. Balk</td>
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KOMPETENZ

GPM Deutsche Gesellschaft für Projektmanagement is a neutral trade association and a counterpart for project managers, assistants and controllers, executive project leaders and consultants, ensuring their objectives are met with success.

GPM stands for:
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- geared towards enhancing expertise
- neutral and internationally recognised certification for persons in project management
- latest research results in project management
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Borg, Elisabeth Linköping University     Sweden
Bourgeon, Laurent ESSEC Business School     France
Brady, Tim University of Brighton     United Kingdom
Bredillet, Christophe N. ESC Lille     France
Buc, Sanjana Institut IGH d.d.     Croatia
Cano, Juan L. University of Zaragoza     Spain
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Crawford, Lynn Bond University     Australia
Doloi, Hemanta The University of Melbourne     Australia
Dorn, Karlheinz GPM Gesellschaft f. Projektmanagement e.V.     Germany
Dörenberg, Florian GPM Gesellschaft f. Projektmanagement e.V.     Germany
Dvir, Dov Ben-Gurion University of the Negev     Israel
Dwivedula, Ravikiran Indian School of Business Hyderabad / ESC Lille     India

IRNOP-Conference 2009 List of Participants
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<td>Martin Otte Projektmanagement</td>
<td>Germany</td>
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**IRNOP-Conference 2009 Abstracts**
There is a lot of activities in an R&D department that are of a clear exploitation or incremental character while there is radical and explorative things going on at the same time. It is thus not a far-fetched conclusion that R&D departments in many respects are ambidextrous, i.e. have the ability to be aligned and efficient at the same time, or to exhibit exploration and exploitation characteristics simultaneously. However, there are very few studies that employ these concepts at the micro level of projects and individuals. While there is no shortage of incremental product development in the literature, there has been much less attention paid to those who are creative and invent and even file for patents in that kind of projects and processes. Focusing highly productive inventors in the context of product development projects, using interview data from an ongoing study of inventors in patent-intensive companies’ R&D organizations, we find that Westco’s R&D department show several traits of ambidexterity. Inventors shift back and forth between different kinds of projects, are trusted to use their discretion whether to engage or not in cooperative/supportive relations within the department and engage in both long and short-term oriented activities as part and their daily work.

We show that incremental creativity and invention are important aspects of R&D organizations that raise the question whether not only HR but also R&D are in need of a more ambidextrous orientation in order to facilitate all kinds of inventiveness needed and to motivate inventors of different orientations.

Corresponding Author:
Hans Andersson
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Phone: +46 13 282994
In this paper we suggest that there are two types of project strategy: project’s business strategy and project’s execution strategy. The project’s business strategy focuses on the purpose of the project, addressing the question: Why does the project exist? The project’s execution strategy addresses the question: How is the project executed? We conduct a conceptual analysis of the distinctive contents of these two project strategy types by focusing on the project management literature. We also analyse the links of the two types of project strategy to other stakeholders in the project’s environment than the parent organisation, and to other contextual factors in the project’s environment. Our analysis suggests that the formation of these two types of project strategy is a complex process that is affected not only by the corporate level strategies and guidelines of the project’s parent firm, but also by stakeholders and contextual factors in the project’s context. In the empirical study, we investigate risk strategies and risk management strategies in eight power plant delivery projects in one major energy system supplier company. For the empirical study, we define the corresponding project strategy concepts in the project risk management application area. Risk strategy corresponds to the project’s business strategy by addressing the “why” question for the management of risks being in place. The risk strategy includes the project’s approach to different kinds of risks, and it includes statements of the project’s attitude to risks: for example, what kinds of risks are acceptable and what kind of risks must be avoided. Risk management strategy corresponds to the project’s execution strategy by including the project’s approach to organize its risk management in a most effective way (“how”) to meet goals for risk management as defined in risk strategy. The results of our study suggests that in addition to the parent firm, also the customer, subcontractors and local authorities are major stakeholders that have an influence of strategy formation of the two types of the project’s strategy. The influence of these stakeholders on the project’s strategies varied, depending on the case project. The parent firm has a significant influence on the risk strategies (or business strategies) of the case projects. The other stakeholders’ impact can be seen more clearly on the risk management strategies (or execution strategies). The parent firm thus sets the purpose of a project, but the project sets its management strategies by taking into account the contextual factors and stakeholders.

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Phone: ++358 50 5604751
Fax: ++358 9 4513665

Two Types of Project Strategy
Empirical Illustrations in Project Risk Management

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This paper proposes an exploration of the social reality surrounding organisational project management. It presents empirical results from four organisations by looking at the interface of two structural arrangements, hierarchy and networks. This paper presents an exploratory empirical contribution to the understanding of the political system surrounding organisational project management based on the Actor Network Theory. In this framework, diverse points of view are not only taken into account, but participate in the construction of networks through the process of negotiation. A journey inside the organisation is presented through the exploration of one of the most common project management deliverables, the project status report. It has been shown that project status reports follow a long and invisible itinerary with multiple translations taking place in numerous arenas through discussions and negotiations. The novelty of this approach stems from the application of a dynamic sociological framework to the field of project management, which makes it possible to take into account the power system in the study of organisational project management.

The contribution from this exploratory research is double. For the business field, ANT makes networks visible and, in doing so, questions arise on hyper-coordination. For the theoretical point of view, it shows that the sociological approach to project management is quite promising to highlight the dynamic social reality surrounding the organisational project management.

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This paper presents empirical results from a research on Project Management Offices (PMO) in transition. While PMOs are now a prominent feature of organizational project management, the underlying logic that leads to their implementation or renewal is still not understood. The conceptual framework proposes a process view of PMOs in transition in three parts: conditions that lead to a change in the PMO, resulting PMO structure and consequences of the change. The unit of analysis is the PMO transformation. The focus of this research bears on existing conditions that act as drivers for PMO changes. Descriptive data from 17 case studies was primarily obtained through interviews and analyzed using qualitative text analysis methods. Thirty-five unique factors have been identified as drivers. They have been grouped in six categories forming a typology of drivers of PMO change. In addition, three patterns of PMO change are presented. The major contribution of this research is to gain a better understanding of the dynamic evolution of PMOs. In short, it confirms that the PMO is deeply embedded in its host organization, and that the two co-evolve. For researchers, these findings contribute to the project management theoretical development within the field of organizational change. For practitioners, it challenges the paradigm of considering the PMO change as a sign of failure.

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The question of whether risk management contributes to IT project success has occupied both academics and practitioners for a long time. This research builds on the approach in which project risk management is considered a collection of related activities, executed in a fixed sequence, aiming to improve project planning, budget and quality. This research departs from a model in which the use of risk management activities individually may influence the perceived project success by means of intermediate factors of stakeholder communication and collaboration. This model was applied to a case study that has been conducted in an ERP implementation project. The results of the case study present clear indications for the influence of individual project risk management activities on the success of this IT project. According to project stakeholders, risk identification, risk analysis and risk allocation are risk management practices that contribute individually to project success by means of influencing stakeholder communication and stakeholder collaboration.

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Collaboration between organizations is often viewed as being inherently stable and open-ended. In this article we aim to advance a contrasting stream of literature which rather studies temporary inter-organizational collaboration in the form of project networks. Based on a review of extant literature from which we extract eight important dimensions of project networks and an original dataset of 1,496 small and medium size enterprises (SMEs) in the Netherlands, we establish the prevalence of project networks among SMEs and empirically develop a typology of different types of project networks. Implications of the variation between each of the six types are discussed in the context of recent theory development.
This paper is part of ongoing research on the reality of project management practices worldwide. The research seeks to measure the use and perceived value of project management practices, tools, and techniques. The focus of the present paper is on comparisons between Chinese and North American project practice on both information technology and telecommunication (IT) projects and engineering and construction (E&C) projects. The 358 respondents from both China and North America are experienced practitioners. The basic toolboxes of project managers from China and North America and from IT and E&C projects show both similarities and substantial differences. Practitioners from both regions and both types of projects recognize that cross-project learning has the highest potential to improve project success, but tools related to lessons learned are more extensively used by the Chinese project managers. The paper discusses other important variations in practice and analyses the impact of differences in respondent demographics, organisational contexts and project characteristics. The results shown here provide new evidence concerning some issues that are somewhat contentious in the existing literature, for example, the attitude toward conflict and the use of contract penalties.

Approximately 1,450 respondents have answered surveys to date on the use and value of the project management practices, tools and techniques. Demographic information on the respondents (position, education, level of experience, authority, etc.), organisational context (industry, public/private, maturity, structure, etc.), and project characteristics (type, size, complexity, etc.) allow control and investigation of variations in context, industry and project type. The research aim is to provide guidance for practitioners and organisations and to contribute to the development of project management knowledge.

**Comparing Chinese and North American Project Management Practices**

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This paper addresses the past, present and potential future of the philosophical and methodological underpinnings of project management research. We investigated the project management research paradigms by looking at underlying ontological and epistemological stances and methodologies used in 116 IRNOP conference papers between 1994 and 2007.

We linked methods and methodological descriptions within the papers with the related epistemological stances, and from there we concluded on the ontological stance of the researchers. Results show a dominance of ontological subjectivism and epistemological interpretivism, with a preference for case studies and qualitative methods. Trends indicate a growth of positivist studies and, at the same time, an increase in multi-case studies. We related the findings to the Nine Schools of Project Management to identify the associated research paradigms of the different schools of thought.
This paper is about people in project-based firms, in particular the type of project-based firm that resemble collectivities of practice. We focus on contracted engineering consultants involved in complex problem solving. The study has been carried out at Advanced Engineering (code name), one of the major engineering consultancies in Sweden. The study is based on two primary sets of data: (1) interviews with managers, and (2) interviews with experienced consultants/problem-solvers. We develop the idea that project work in these settings could be seen as performed in a condition of liminality with possible positive and negative effects. Such liminality generally spurs the feeling of being “betwixt” of being in the threshold between organizations and assignments. We identify two types of liminality: social liminality and technical liminality. Thereafter we identify four working situations with special reference to liminality and based on these situations pinpoint the coping strategies relied on by the project workers. It is argued that the study of liminality among project workers, adds to our understanding of the practice of project-based organizations, in particular what people do in these organizations, what problems they experience and how they cope with them.

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Increasing project complexity is assumed to be one of the causes for project failure. However, it is not clear yet what typically makes a project complex, and whether different people involved in the project have the same opinion about the project's complexity. This paper presents findings of empirical research in which project complexity in the process and energy industry was investigated by taking the perspectives of different project professionals in the same project.

Six cases were selected from each of which three persons involved in the project were interviewed: the project manager, a team member, and an owner representative. An information-based case selection was applied to cover a broad spectrum of projects in terms of performance, location, newness of technology, newness for the business, and capital expenditure.

From the interviews it was concluded that, although all projects had a highly technical character, technical complexity was hardly indicated as the most complex aspect of the project. More often organizational aspects were indicated as contributing mostly to project complexity. Despite the overall agreement about the important contribution of organizational aspects to project complexity, the interviewees did have different perspectives on project complexity and its dynamics, also depending on their role in the project. Project complexity was shown to be highly subjective; it meant different things to different people.

A single project complexity measure like size was shown to conflict with the empirical outcomes. To enable a more objective classification of project complexity, all aspects that contribute to project complexity should be integrated in an extensive framework. With such a framework, currently under development, the different perspectives of project professionals could be further investigated.

**Perspectives of Project Professionals on Project Complexity in the Process and Energy Industry**

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The emergence of project-based structures and the resulting questioning of company structure based on centres of competence necessitate a new portrayal of organizational knowledge. Exploring existing definitions of knowledge, this article proposes a typology of the various forms of organizational knowledge encompassed in the concept of Organizational Knowledge Cube and taking into account the horizontal and action oriented dimension of the company structure: the projects.

Through the progressive transformation of the Opera de Paris, the second part of the paper offers a dynamic view of the project competence’s development process following the implementation of a project-based organization in the company.
This paper argues that as researchers of projects and project management we should pay more attention "to the opportunities offered by tensions, oppositions, and contradictions among explanations of the same phenomenon" (Poole and Van de Ven, 1989, 562) to help build theories of project management and project organising.

The idea for this paper emerged over a period of three years during which the authors have struggled to make sense of a phenomenon they had observed in the course of some fieldwork, the non-adoption of established good practice on a failing project which would have been beneficial to the project, its subsequent adoption and, following that, its heralding within the organisation as 'best practice'.

We tried to analyse this phenomenon using a variety of theoretical lenses – none of which could satisfactorily explain what we had been observed. We then attempted to construct our own theorisation of the phenomenon which we called 'complicity theory' because the phenomenon was only allowed to persist because of the complicity between the organisation and its major customer and between multiple levels of the organisation. But our theory of complicity proved to be very narrow in context – it is only useful where complicity exists. Where it is absent there is no need for the theory.

We compared our original case study with another on-going major project case where many best practice/accepted/promising practices had been adopted – the construction of Heathrow’s Terminal 5. At the time this was being heralded as a great success and an example of a breakthrough innovation in project management. However, a year later the Terminal opening was described as a national disaster when multiple problems emerged which resulted in the cancellation of numerous flights and thousands of pieces of baggage being separated from their owners. So here was another paradox: how does a major success become a major failure almost overnight?

The paradoxes highlighted above are just two examples of the many paradoxes in the world of projects and project management that researchers and practitioners in the domain have identified. We realised that by focussing down too narrowly on specific examples of paradox we researchers can only develop theories of limited scope. Given the prevalence of paradoxes in the world of projects perhaps we should move beyond labelling these phenomena to explore them and to contribute insights more in tune with organizational complexity and ambiguity” (Lewis, 2000).
Public construction projects are usually complex projects that are demanding from professional point of view but also because their execution are influenced by many interest groups and finally judged by political and wider public interest groups. The main objective of the research, presented in this paper, is identifying of critical risk factors in public construction projects.

The survey was conducted on the projects from the Program of subsidized housing construction in Croatia. In this research a project was rated as successful if it got the occupancy license (quality) and one of the following conditions are fulfilled: (1) costs are lower or the same as the planned estimate, (2) time of realization is shorter or in stipulated time. Only 40% of respondents answered that their project was successful. The research shows that critical risk factors of public construction project are: slowness of local and state structures, lack of skilled professional personnel, flaws in project documentation and additional user demands, low communication integration level and poor coordination of all participants as well as level of utility equipment and land availability. One of ten most critical risk factors is also inefficient or non-existent risk management system. The research results have been basis for building a model for risk management.

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In recent years, literature about management control has expanded considerably. However, only a limited number of publications within this area have been devoted to multi-project organizations. This is somewhat a problem given the increasing rise and importance of project-based structures and the role of project management as a significant part in the management control system of the firm. This paper draws on these observations and elaborate on a contingency framework of management control in multi-project organizations. In particular, we aim at investigating the issues in multi-project organizations that call for holistic frameworks of control mechanisms. Relying on a case-study methodology, we cope with how control mechanisms are deployed in MPOs and with the implications of different choices of management control systems on the organizational structure of MPOs.

**Getting Control of Multi-Project Organizations:**
Combining Contingent Control Mechanisms

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In recent years, literature about management control has expanded considerably. However, only a limited number of publications within this area have been devoted to multi-project organizations. This is somewhat a problem given the increasing rise and importance of project-based structures and the role of project management as a significant part in the management control system of the firm. This paper draws on these observations and elaborate on a contingency framework of management control in multi-project organizations. In particular, we aim at investigating the issues in multi-project organizations that call for holistic frameworks of control mechanisms. Relying on a case-study methodology, we cope with how control mechanisms are deployed in MPOs and with the implications of different choices of management control systems on the organizational structure of MPOs.

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Radical innovation in software industry is designed by start-up focussing on their own technology and products (Cusumano, 2004). In the same time, literature on software design stresses that a new software concept becomes a new software product after it’s been implemented for customers. In addition to that, combination of software can result in new software platforms that can become standards (Gawer and Cusumano, 2002). This leads us to the following research question: what is the role of the first customers in the design process of a multi-actor radical innovation in the software field. To answer this question, we study the case of an innovation designed by two independent software companies that have had to cooperate for the first time, since a customer had asked them to build a new software solution combining their innovative software. Then, the two software companies have had to implement the newly designed platform for a second customer.

At the end of those two projects, a new kind of software platform has emerged (“automated knowledge base creation platform”). We have realized a longitudinal study of those two projects, to characterize a new kind of modularization process, including new product architecture design, and to analyse the role of the two first customers in that process. This leads us to define four kinds of roles that those customers have to play and to enrich the lead user notion too. We show that customers can play a unique role in defining new software architecture, although they can't succeed in carrying out the whole innovation process.

When Customers Design New Product Architecture: The Case of the Software Industry

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During the past decade, there has been an increasing tendency to draw attention to the particular challenges posed by complex projects. At the same time, complexity in and of projects has emerged as a theme for discussion and debate in response to growing concern about the dominance of various versions of control theory, operations research, systems theory, and instrumentalism in studies of projects, project management, and project settings in general. Research and critique have questioned the relevance of the traditional project management research to the challenges experienced in contemporary project environments at three levels: (1) discrepancy between “project management best practice” recommendations and what is really being enacted in practice; (2) observations of paradoxical, unintended consequences in practice that emerge from following the project management prescriptions in “the book”; and (3) the need for alternative theoretical conceptualizations and thinking about projects and project complexity in practice.

This paper reports on research, undertaken with support from the Project Management Institute, that aims to contribute to the theoretical basis of the field of project management, by examining the landscape of “complexity theory” and illuminating those developments within it that have high relevance to project management, notably the concept of “complex responsive processes of relating in organizations” (CRPR). In practical terms, this research aims to propose and encourage a critical but constructive way of explaining, debating, and deliberating on project management and project performance issues leading to a wider awareness, knowledge, and development of skills and competencies that match the actuality and complexity of projects as experienced by practitioners in contemporary organizations. CRPR is used as a theoretical lens for understanding the lived experience of project teams, including executive sponsors, project managers, and project team members through examination of interviews with more than 70 participants in 27 projects conducted on three continents.

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Public-private-partnerships (PPP) is one of the widely used methods for procuring public projects. In the PPP arrangement, a collaborative partnership is developed between government and private consortiums where both partners agree on the stakes and share of responsibilities over construction and operation phase of the project. There is a significant risk in accurate estimation of getting a steady return of investment and making decisions at the bid evaluation phase of these projects. Simulation model plays a significant role in evaluating the what-if scenarios for accurate estimation of risks associated in bid evaluation phases, integration of which adds significant value in the upfront decision process. Based on the case study conducted on a PPP road project in Australia, this project demonstrates a simple but yet practical model to assist decision makers in evaluating operational risk in typical PPP projects. Such outcomes allow to make realistic decisions upfront for the greater success of the PPP projects.

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The content and context of work significantly influences employees' satisfaction. While managers see work motivation as a tool to engage the employees so that they perform better, academicians value work motivation for its contribution to human behaviour. Though the relationship between employee motivation and project success has been extensively covered in the literature, more research focusing on the nature of job design on project success may have been wanting. We address this gap through this study.

The present study contributes to the extant literature by suggesting an operational framework of work motivation for project-based organizations. We are also advancing the conceptual understanding of this variable by understanding how the different facets of work motivation have a differing impact on the various parameters of project performance.

A survey instrument using standardized scales of work motivation and project success was used. 199 project workers from various industries completed the survey. We first 'operationalized' the definition of work motivation for the purpose of our study through a principal component analysis of work motivation items. We obtained a five factor structure that had items pertaining to employee development, work climate, goal clarity, and job security. We then performed a Pearson's correlation analysis which revealed moderate to significant relationship between project outcomes and work climate; project outcomes and employee development. In order to establish a causality between work motivation and project management success, we employed linear regression analysis. The results show that work climate is a significant predictor of client satisfaction, while it moderately influences the project quality. Further, bringing in objectivity to project work is important for a successful implementation.
This paper takes an empirical point of departure in a study of a product development project – the Turbine project – with the aim of developing a new steam turbine. The way in which this project was managed displayed some interesting features. Project work relied on a process of iteration between a small core group of experienced members and other groups with less of that currency. Based on this case study our theoretical interpretation focus on how knowledge integration was achieved.

In conclusion, our case study findings suggest that ‘complexity’ could be a matter of not only structural complexity, as traditionally conceived, but also as dynamic complexity and that a knowledge integrating team need not presuppose equal participation by all its members, nor be a communication context operating solely on the basis of responsiveness and we introduce the concept of a ‘segregated team’ to account for these findings.

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We have developed a new approach to supporting business decisions that can be used to evaluate the risks inherent in the competitive environment. We have shown that the results of business risk analysis can be used for building a game theory model. By using risk analysis and game theory together, we have been able to take into account the expected behavior of the competitors and the inter-relations among them. We present a case study in the Hungarian telecommunications sector to show how the result of the risk analysis of the net cost of a given product can be built into a game theoretic model.

Keywords: business risk analysis, risk management plan, real options, Monte Carlo simulation, game theory, oligopoly market, price competition, demand curve, migration function, provider selection
Over the last 20 years sustainable development has become a recognized integrative component of political and entrepreneurial decision-making. Sustainable development is considered in societies and companies and receives increasing attention in management literature. Sustainable development in temporary organizations such as projects and programs is rarely considered. First attempts to relate sustainable development and projects can be found in literature and practice. But the challenges and potentials of relating sustainable development and project management have not yet been researched in depth.

In this conceptual paper we bring these two concepts together to see how project management can be further developed by explicitly integrating the principles of sustainable development. For relating sustainable development and project management we develop a model, which is based on a process related sustainability definition. We use the model to discuss selected relationships between these two concepts and offer first propositions on the challenges and potentials for project management, when considering sustainable development principles. We then point out the need for further research and show which next steps we have planned in the research project SD&PM.
Projects play a key role in implementing strategy. Organizations of all kinds implement projects. As the importance of the projects grow, their monitoring and controlling becomes crucial for strategy achievement. However, non-project based organizations lack distinctive project management approaches, their projects are controlled and monitored by the inherent control system of the functional organization. Several studies highlighted the variance in organizational control mechanisms. However, there is a dearth of these studies done in the context of project. One recent study done by Nieminen and Lehtonen (2008) however, done in a program context and focusing on organizational change revealed three organizational control mechanisms and 23 control tools being used in four case programs. Building on studies outlining the need for a contingency between project type and project management approach, this study focuses on understanding how the control mechanisms vary across different types of projects executed by non-project based organizations employing the project classification developed by Turner and Cochrane (1993).

A qualitative study employing semi-structured interviews was conducted with nine project managers of seven companies from China and Nepal. The study revealed the dominance of distinct organizational control mechanisms contingent on type of project, even though there was presence of all types of organizational control mechanisms in the sampled projects. Furthermore, the application of the control tools within a control mechanism varied across projects of similar type. Results are important for organizations with little project orientation in order to align their control mechanisms to the types of projects they have.

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A Project Management Research Framework Integrating Multiple Perspectives

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To address the ongoing change in project management research, a research framework with the three areas Design Dimension (sub-categories: Organization/Structure; Interaction/Social Processes; Culture), Context Dimension (Complexity; Dynamics; Uncertainty), and Goal Dimension (Innovation Ability; Organizational Adaptability; Value added) is developed. The model aims at systemizing the different approaches apparent in project management research and utilized foundational theories from other disciplines while taking into account previous research insights and advances. We broaden the scope of project management research by integrating multiple perspectives and elaborating on the cross-links between the different dimensions.

A review of current literature shows strengths and weaknesses of existing models and lays the base for including those results in the framework introduced in this paper. Based on this framework, a project management research agenda is presented, pointing out the research deficits in project management in a systematic manner.

Both project management research framework and agenda were developed to integrate as well as further support the change in paradigms in project management: In literature and practice, it is noticeable that a transition from regarding projects as tools for the fulfillment of non-standard tasks to dealing with projects as regular means of value creation – including the application of adequate management concepts – is taking place.

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Few individuals grow up with the dream of one day becoming a project manager. It is neither a well-defined nor a well-understood career path within most modern organizations. Generally, the role is thrust upon people rather than being sought. (cf. Pinto und Kharbanda (1997), p. 216). This paper presents empirical findings on individual Research & Development (R&D) project managers’ requirements and motivation for continually leading R&D projects.

Although a lot has been done with respect to qualification and certification programs for project managers, the special role of motivation and retention of project managers has not intensively been researched so far. Furthermore, project and human resource management has neglected career possibilities and career design for R&D project managers. As the individual project manager’s requirements for his or her career path vary depending on individual factors such as personality, education, and previous project management knowledge and also on organizational factors such as the kind and scope of the project or the organizational setting, such a career path is a multi-dimensional construct.

We build our research on a quantitative study, where an internet-based, interactive, and conjoint-based questionnaire is used to learn more about the true motivation of R&D project managers. In the questionnaire, the respondent is confronted with factors for a project management career path such as organizational structure, qualification, certification, pay, etc. The study has resulted in a total of 102 completed questionnaires. The individual project manager’s preferred job descriptions are conjoint-analytically disaggregated into key success factors based on a customized computerized conjoint-algorithm. Hence, for each key success factor, an overall and individual preference value can be calculated. Moreover, based on the overall results, a model for a project managers’ career path can be assembled and a preference value for this specific career path calculated (as opposed for example to an expert career path). Additionally, clusters for different preference structures are calculated, e.g. which factors are chosen by young vs. experienced project managers or how the requirements of R&D project managers vary from other project managers.

Our results extend the understanding of the project manager in R&D projects. Researchers get first insights on the true motivation and requirements of project managers in R&D projects and also how this can be adequately measured. Managers can use this knowledge for designing designated career paths for R&D project managers or creating a holistic career system in the organization.

Incentives for R&D Project Managers – What do they truly want?

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Project-oriented organizations make the strategic choice to use temporary organizations, such as projects to develop new products, perform organizational change and to deliver products, services to clients. To support this strategic choice, they should adopt human resource management (HRM) practices in the temporary organizations as well as in the routine, line organization. HRM theory suggests these practices on the project and in the line should be aligned, to be mutually consistent and supportive. We interviewed 15 companies from six countries to analyze if and to what extent HRM practices in project-oriented organizations meet these requirements. We found firms tend to adopt traditional HRM practices, which reinforce the dominance of the line over projects. A few organizations ensure that line HRM and project HRM support each other. In this paper we provide an analysis of their alignment practices.
The research base in Scotland’s universities is regarded as a strength in the nation’s economy, yet Scotland has difficulty in exploiting such research bases. For Scotland, the commercialisation of university research has evolved as a key area for development. However, there is little evidence on how institutions should design, facilitate and manage such a process. With this in mind, the research reported here seeks to help address two important gaps.

Firstly, the research aims to help close the gap between the theory of commercialisation and the practice of commercialisation within practical constraints: resources available, university context and academic culture. The paper explores the commercialisation processes advocated by academic writers and adopted by different universities, identifying the steps involved and examining how value is added. These findings are supported with empirically-based evidence from a case study approach to the investigation. Secondly, there are few examples in the literature that consider both the process of commercialisation and its environment, despite the need to bridge the gap between the two as advocated in Scotland’s Science and Technology strategy. This is the second gap addressed by this research.

The evidence shows that there is no single ideal process for commercialising university research. A best practice model is proposed. The importance of the transitions between each phase and the context in which the process operates are fundamental to its effectiveness. The process cannot be static and rigid and needs to be tailored on a case by case basis whilst ensuring milestones are met. The following recommendations are presented alongside the acknowledgement that they cannot be implemented overnight and will take time to become embedded in university infrastructures:

1. Commercialisation needs to be actively championed by senior management alongside research and teaching in order to optimise the strategy and achieve business objectives.
2. Commercialisation needs to be reflected in the academic promotion criteria.
3. The importance of commercialising research needs to be cascaded down from its place in strategy and actively demonstrated in day to day operations. This requires more effective governance of the process of commercialisation in universities.

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A lot has been written over the past twenty years about the critical success factors (CSF) in PM literature. However, little of this research pays adequate attention neither to industry-specific CSF nor to non-traditional PM areas. More specifically, very little has been written on international development projects (IDP) despite the size of the international development industry sector. Very few contributions address the perceptions of National Project Coordinators (NPC), the project managers in that non traditional PM – although project-oriented – industry sector. But the perspective of their counterparts located at the headquarters of the aid Agency, in particular, the World Bank Task Managers or Task Team Leaders (TTL), who supervise project implementation and makes sure the guidelines of the World Bank are strictly respected by NPC and their project implementation unit, has not been examined thus far.

This paper highlights self-perceptions of TTL about project success and reports on the empirical validation of a specific set of CSF for IDP. Data were collected from questionnaires completed by TTL, and analyzed through factor analysis (principal component analysis) and regression analysis. The results show that, for these key players, the most significant CSF are: project monitoring, coordination, participation, design, team training, technical expertise, institutional environment, resource management, Agency support and absence of catastrophe. In accordance with both theory and professional experience, these results are paving the way for better evaluation of programme and project management and the performance of both World Bank TTL and the National Project Coordinators (NPC).

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With a strongly increasing share of companies’ spending for project organized undertakings, a generally expected advantage in controllability for single projects comes along with a loss of transparency and effectiveness of the overall project landscape. Consequently a structured and proactive management of the project portfolio, called Multi Project Management, becomes more and more important for organizations. While the majority of project management research is still on single projects as object of investigation, our research aims at that multi-project level.

This paper conceptualizes a comprehensive approach showing how organizations can affect their project portfolio effectiveness on both the strategic and the tactical level. As measures for a successful Multi Project Management we focus on project portfolio and business success, derived from earlier empirical studies. Our model differentiates between a strategic and a tactical level of project portfolio management, which are both components of the overall project portfolio management process.

At the strategic level we focus on project portfolio structuring as the crucial mediator between business strategy and portfolio success. Project structuring is positively influenced by quality measures of strategy like sustainability of strategy and the strategic planning process.

At the tactical level we focus on project portfolio steering as the crucial second mediator to portfolio success closing the gap between planned and realized portfolio. Project portfolio steering is influenced by characteristics like intensity of controlling, centralization of responsibilities, and action-oriented decision-making culture.

Both levels are influenced by the role models that senior management, multi-project management coordinators, and line managers in middle management play. We are looking at the distribution of influences, the adherence to governance rules, and the competences in multi-project management.

Beyond that the extent of positive influence from both levels to the success criteria varies depending on environmental variables such as complexity of the project portfolio, market dynamics, portfolio mixture or products. These combined considerations of strategic perspectives on portfolio structure and capabilities of flexible portfolio steering that are moderated by contextual factors allow drawing causal conclusions.

Theoretical framework is the basis for a large empirical study on Multi Project Management with around 200 major enterprises in Germany, Austria, and Switzerland to be conducted in 2009.

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Projects typically require the input of specialist expertise from a variety of disciplines to deliver effective solutions. In this paper we examine the particular situation where client organisations must engage outside firms to provide necessary expertise and resources.

The creation of this temporary coalition of firms is facilitated by procurement systems that provide the mechanisms through which firms can engage and transact with one another throughout the project lifecycle. Procurement is a major issue for projects, particularly in the construction industry where traditional systems in use for decades have resulted in poor project performance. Recent attempts to reform the construction industry both in Ireland and the UK appear to be directed at developing a relationship based approach to procurement. We argue that a network perspective is a useful means through which the effects of different procurement systems on inter-firm relationships can be investigated.

We develop insights from previous work using social network analysis and demonstrate how new developments in simulating and estimating statistical models can be used to reveal underlying structural influences that govern information exchanges between firms. We construct a network based on suggested procurement reforms aimed at achieving efficient and effective network structures and compare these with 3 cases observed using different procurement systems. Initial results confirm that the cases using integrated and mediated procurement systems show a stronger structural tendency towards an efficient cluster based structure than the traditional procurement case. We conclude by outlining the future direction for this research work.

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This conceptual paper draws attention to the autopoietic epistemology as a potential means to explain a project-based company’s knowledge creation (i.e. learning). First, the concepts of general system theory and the role of the autopoietic system within it are described. Then the discussion deals with autopoietic epistemology. After that the notions of knowledge and knowledge flows are highlighted. The main content of this paper then follows – namely the study of the project-based company as an autopoietic knowledge system. The paper ends with conclusion relating to which knowledge in project-based companies is autopoietically produced and reproduced, and a result of which is that in order to make it possible for a company to create new knowledge it becomes necessary to produce perturbations (e.g. new and different projects) in the company’s environment.
Having creative NPD teams is often the basis of a company’s competitive position since it is
the design, development, marketing, and selling of products and services rather than their
manufacturing which are at the core of the business. Of all the forces that impinge on people’s
daily experience of the work environment in teams, one of the most immediate and potent is
likely to be the social networks in which the team members are embedded. NPD teams act as
quasi-autonomous units often within larger projects and communication is coordinated among
the members of the teams. Therefore, the distribution of communication roles among the team
members is crucial to their creative performance. NPD teams require ‘local leaders’ who co-
ordinate the other member’s access to knowledge and information in various ways and hence
balance the communication networks of NPD teams.

Next to the rather general role of champions more in-depth role characteristics might help to
explain the link between those ‘local leaders’ in various communication networks and highly
creative NPD teams. These in-depth role characteristics may be found in the theory of the
promoters. In a study of 51 NPD teams we investigated the existence of champions and va-
rious promoter roles and their effect on creative performance. Our results show that a certain
degree of championship facilitates the creative performance of NPD teams. In particularly,
overcoming external barriers seems to be the most important contribution. There three impli-
cations that can be derived from the results. First, power promoters and process promoters
facilitate the creative performance of NPD teams most when focussing on defeating external
barriers. Second, the existence of technical gatekeepers in NPD teams is a precondition for
their creative output. And third, expert and relationship promoters restrain the creative perfor-
mance of NPD teams.

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Life-cycle solutions are receiving an increasing amount of attention in project-based firms. The locus of value creation has shifted focus from short-term project deliveries to long-term operations and the maintenance of a base of delivered systems. This has led project suppliers to employ new business models for the delivery of solutions. In order to be fully involved in the solution’s use-phase, a project supplier can either choose a project-led or a life-cycle-led business model to deliver its solutions.

We analyze the business models of five project-led and life-cycle-led solutions delivered by a power plant supplier firm. We suggest that business models have a solution-specific nature; although existing literature argues that, on a general level, a firm can have several business models, we conceptualize the notion of solution specificity of business models and provide empirical evidence for it. This contributes to prior literature. This paper also contributes to the existing knowledge of business models by identifying seven factors that influence a project supplier firm’s choice between project-led or life-cycle-led business model: (1) the existence and (2) the skill level of the customer’s maintenance organization, (3) the complexity of delivered technology, (4) the proactive marketing approach used in promoting the solution, (5) the customer’s own core business, (6) the customer’s financing possibilities, and (7) the supplier’s and the customer’s accepted business practices. We also formulate eight propositions how these factors influence the choice of a business model for a particular solution.
The consistently successful delivery of projects remains an ambition that many organizations have yet to achieve. Whilst the reasons behind project failure are many, one recognized factor is the ‘planning fallacy’ – over-optimism in the planning phase of a project. Managers ‘make decisions on delusional optimism, rather than on a rational weighting of gains, losses and probabilities’ (Lovallo & Kahneman, 2003). Plans are based on successful scenarios in which little goes wrong.

Whilst the planning phase of a project may be a battle for acceptance and resource allocation, the execution phase is a battle for delivery. In the execution phase managers are faced with changing circumstances and the consequences of ‘optimism bias’. Given that organizations expend financial and material resource in the execution phase, the persistence of optimism bias beyond the planning phase would have major implications for both project managers and organizations. Therefore our initial question is ‘does optimism bias occur in the project execution phase?’

In this paper we review the literature on optimism bias in planning. We establish that whilst optimism bias in the planning stage is a widely studied phenomenon, little has been published on optimism bias in the execution phase of a project. We would expect optimism bias to be evident during execution, as planning takes place on an ongoing basis throughout a project, but this appears to have received little attention. Based on both qualitative and quantitative data gathered from a project management simulation, we have established that optimism bias persists beyond the planning phase and into the execution phase. We conclude with directions for further research in this area and suggest some implications for practice.
This historical overview of the project management field highlights two major generations of models, identifies their limitations and questions their scope. We first review the main critiques of “project management” over the last twenty years. We then critique these critiques in turn. Although the upsurge in research in project management has underscored the epistemological and methodological limitations in the field, it appears that this movement has neglected to critique itself, as we have a right to expect. We argue the need to identify the epistemological limitations and shortcomings in current theoretical models in order to properly address project management as a practice. This paper adopts a complex and holistic approach to the project and the professional practices associated with project conduct, and attempts to reconcile the too distant poles of theory and practice.
Cross Functional Teams (CFTs) have become a feature of New Product Development (NPD) projects. The aim of this paper is to explore whether CFTs are beneficial, in terms of reducing development cycle time, for all projects regardless of their level of innovation or whether they are beneficial for highly innovative projects only.

This research question is addressed in two steps. First, the project innovation factors are determined for NPD projects. Second, a System Dynamics (SD) simulation model is developed to represent NPD project management processes including the effects of project innovation factors.

The model results indicate that the use of CFTs reduces development cycle time for all projects regardless of their level of innovation. However, the extent of this reduction decreases as the level of project innovation factors increases. It was also found that projects with high levels of innovation take longer to complete and this valid even CFTs are used in the project.

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There is a widespread agreement in the managerial literature that projects produces much more than what they deliver. However, most of the literature focuses first and foremost on what project delivers (new products, processes, services...), the question of projects contributions to the firm dynamic capabilities being frequently left for post-project review... and rarely done in practice. Thus we believe that the question of project evaluation deserves further research. Indeed the focus on project deliverables can be misleading, especially for highly innovative projects. This question is fundamental in today’s competitive environment that leads firm to rely on projects to explore new innovation fields. Indeed research in the management of innovation demonstrates the difficulty for highly innovative projects to survive the resource allocation process in large organizations. By highly innovative, we mean projects for which neither the goals, nor the means to reach it, are clearly defined at the beginning. We will call them exploration (or exploratory) projects.

The evaluation of this kind of projects is an important question in contemporary research on project management both from an operational and a strategic perspective. Works on the management of exploratory projects have stressed that, in this case, the “rational” view of project management as the accomplishment of a clearly defined goal in a specified period of time, within budget and quality requirements is inappropriate since it oversimplifies the processes at stakes. Thus contemporary research argue for an alternative model in which project management is first and foremost a way to organize and structure the exploration/search processes. But then, the interesting question becomes the definition of a framework to evaluate the project results (success or failures). In this paper we wish to explore this question by bridging project management and design literature. We believe that research on design processes propose tools that could help managers to better understand the processes at stake in exploration projects. We will rely on the Manhattan case to illustrate the fruitfulness of this approach that allows to represent what has been delivered and learned during the exploration journey.

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A learning environment for Project Management is presented. This has been developed in the
last few years by teachers of the University of Zaragoza for teaching and research in this field.
The learning environment developed has achieved most satisfactory results to date, as shown
by the opinions gathered from the participants: teachers, students, and companies.
Furthermore, it has made research possible on certain aspects of Project Management, having
to do with causes of failure in projects, studying the variables involved in the functioning of
project groups, and the project definition process.
The article begins by describing the theoretical framework in which the learning environment
has been developed. Next, the most significant results generated by this environment are sum-
morized, followed by discussion, conclusions, and future developments of this work.

A Collaborative Learning Environment for Project Management

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The modern principles and techniques of project management are often born as support or lessons learned from mega-projects. However, the performances in this class of projects are still quite unsatisfactory. This paper aims to manage the risk of optimism in the planning phase of mega-project considering EXPO 2015 as a case-study.

The international literature references about mega-projects reveal that performances, in terms of cost and users estimations, are quite poor usually. This background is used to analyze the upcoming mega project in Italy: the Universal Exposition (EXPO) 2015. After a brief introduction of the event the paper presents the related Project Balance under different discount rate, integrating the bid dossier with the most recent data from business and financial newspapers.

Then the paper focuses on the main criticality: the estimation of the number of visitors, which appears too optimistic. Presenting the rationale behind this idea and the negative impact on the project balance, the paper provides some guidelines to deal with the risk of few visitors.

The magnitude of a negative risk is reduced working on the probability and/or the impact: in this case a cost reduction and visitors increment. Since it is very difficult to decrease the costs (cause the budget is mainly allocated to necessary projects for the event’s success), the focus must be directed on the possible approaches to increase the amount of visitors respect to the previous editions. Nowadays the number of EXPO 2015 visitors seems too optimistic (so probably the event would have an overall negative Terminal Value), but since this project represents a precious incentive to create the infrastructure that the territory struggles to have (indirect projects), a stronger effort must be directed in the next 2 years in the incrementation of possible revenues starting from the number of visitors.

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Project autonomy has received increasing attention both as a project-specific feature possibly associated with the project's success, and as a contextual factor influencing a project's strategy. Previous research has investigated project autonomy primarily in the context of one single parent organization. As a contrast, delivery projects often operate in the context of multiple stakeholders with powerful roles and competing interests. More knowledge is needed on whether and how delivery projects take and use autonomy in complex stakeholder networks.

The purpose of this paper is to increase understanding on project autonomy in turnkey and system delivery projects, and to identify factors that may promote the autonomy of projects operating in complex stakeholder networks. We use a qualitative multiple-case study methodology. The context and use of project autonomy are investigated in two system delivery projects and two turnkey delivery projects based on interviews and their analysis.

As results, we report various ways in which the case projects used goal-defining, structural, resource, and social autonomy, and how the different dimensions of autonomy were enabled and withdrawn by the complex stakeholder network. The clients, parent organizations, and suppliers all generated pressures towards the projects, but the projects employed their unique tactics to influence the stakeholders as well as to cope with the external influence. Turnkey and system deliveries differed from each other particularly in the degree of autonomy available to them, and the use of external influence tactics and internal coping mechanisms. Furthermore, we discovered that the project managers’ proactiveness in influencing the stakeholders varied across the case projects.

This study contributes to research on project autonomy and project strategy by showing evidence on the use of project autonomy in complex stakeholder networks, by revealing subtle differences between turnkey and system delivery projects, by reporting both externally and internally oriented tactics to promote autonomy, and by highlighting the role of project managers as potential strategists in the complex stakeholder environment.

**Project Autonomy in Complex Delivery Projects**

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This paper explores the question of why project-based organizing appears to be increasingly popular when evidence suggests that most projects fail, a phenomenon we term the “project popularity-failure paradox”. To do so, we analyze over sixteen hundred occurrences of combinations of the terms project/program and success/failure in a wide spectrum of English language texts. Data is provided by the Oxford English Corpus (OEC), a structured and coded database of two billion words of naturally occurring English collected from the World Wide Web.

The analysis shows that the general estimate that two-thirds of projects fail is not reflected in the way that projects and programs are represented in the English language at large. Within the OEC, the terms project and program are twice as likely to be associated with the term success as failure. However, the associations vary in relation to non-linguistic factors such as mode, register and domain of usage. Several explanatory options are proposed and implications for future research are discussed.
Management Practice in Short-Duration Projects

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Classification - case study, conceptual paper

Purpose - how does first level project managers, team leaders and team members use project plans and how do they deal with the uncertainty under which they have to work.

Methodology - intensive case study

Findings - categories of management practices are presented utilized by project managers to carry out their projects under high degree of uncertainty and complexity

Practical implications - the findings help project managers to better understand their daily and short run challenges and can be used to develop personal skills as well as to reflect on personal practices

Originality/value - the paper adds to the knowledge on the practice of project management, it introduces the lowest level of projects as a valid area of study within the field of project management and provides fundamental insights on the conditions under which management on this level is carried out

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Meaning' provides a valuable concept in the explanation of project management (PM) practice. It offers an understanding of the basis of human behaviour and action. In this paper, we present a model of meaning that we employ in the examination of PM practice.

Our model consists of a simplified definition of meaning, a description of introspection leading to understanding and a process of interaction between people. This process enables the construction, destruction, and development of meaning. We demonstrate this approach by analysing an autoethnographic case study of a project start-up workshop to test our model.

Such a model requires a shift to an interpretivist paradigm, and to achieve this we draw on ideas and concepts from the Chicago School of Sociology and the Continental Philosophers in examining the PM practice.

Our interpretivist model makes a significant contribution to the understanding and application of meaning in the context of Project Management practice. It provides an enabling methodology that allows the Project Manager the authority to be introspective in their analysis of their respective role and place in project success.

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Particularly in the ongoing transition from industrial to post-industrial societies and to a global service economy characterized by service solutions, it is important to study how developing societies can interact in the service-minded world. This study focuses on the delivery of a teaching project from Finland to Ghana with emphasis on understanding the problems from an African point of view. The purpose is to create a frame of reference for understanding the Ghanaian environment and the local networks required for successful project preparation and realization, and to describe the delivery of an ICT project to Ghana passing through the stages of a typical project marketing process.

A frame of reference is introduced which includes the Ghanaian macro and micro contexts for the delivery. In the empirical part we present the research methods and describe how the project was prepared and realized. Finally, the results achieved at this stage of the project will be highlighted and the validity of the frame of reference will be discussed. Possible implications for ICT transfer to the African continent in general are also considered.

Developing countries as recipients of services solutions are particularly challenging. A change in the orientation of the supplier might be needed, as well as adaptability and special skills and capabilities. In retrospect it is obvious how difficult it would have been to achieve any results without having a native Ghanaian on the project. He managed to engage the Ghanaian recipients in the implementation of the solution and mobilized their existing know-how to build up their capacity and prepare for the technology transfer and on-line learning. The project indicates that collaboration with a supplier of service solutions keeps the recipient organizations and the local people in touch with the global service economy.

As assumed in the preliminary frame, the technology transfer itself as well as the suitability and compatibility of the technology were important issues in the project. However, additional network actors were needed before the project could be realized; a couple of companies and universities outside the originally assumed system had to be engaged.

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Projects in the Emerging Global Service Economy.
A Model for Transferring IC Technology to Ghana

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This paper presents and analyses findings from the first comprehensive survey of project management research currently being undertaken in Australia. It will narrate the landscape of Australian project management research and in particular, will profile the typical Australian project management researcher, the research topics pursued and the range of methodologies employed. The paper will also illustrate how new project management research and researcher development is being supported in Australia with suggestions of ways to sustain and further develop these generative aspects of the project management discipline.

These findings will be compared to the research agenda outcomes of the 2003 Engineering and Physical Sciences Research Council (EPSRC) funded project on ‘Rethinking Project Management’. Consequently, this paper will contribute to the debates raised in publications developed from that research revolving around project complexity, social process, value creation, project conceptualization and practitioner development. Moreover, as this paper offers one indicative national perspective on project management research activities, it may contribute to international discourse on the shaping of future project management research agendas and on industry or industry representative bodies pragmatic support for project management research worldwide.

**The Landscape of Australian Project Management Research**

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This paper presents and analyses findings from the first comprehensive survey of project management research currently being undertaken in Australia. It will narrate the landscape of Australian project management research and in particular, will profile the typical Australian project management researcher, the research topics pursued and the range of methodologies employed. The paper will also illustrate how new project management research and researcher development is being supported in Australia with suggestions of ways to sustain and further develop these generative aspects of the project management discipline.

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This article gives an overview of the research topic Process-oriented Project Quality Management (PPQM) using the example of road construction.

The introduction of this article contains a brief description of the statement of the problem, the objectives and the methodology of the study of PPQM. This is followed by a statement of systems theory, organization theory and the formative elements and tools of project and quality management that form the basis of the PPQM to be developed. Chapter 3 deals with the special nature of road construction projects, because PPQM has been conceived for them. This is followed by a description of the requirements made of PPQM, based on the theories and interviews carried out so far as well as document analysis, and the prerequisites that have to be fulfilled for the successful use of PPQM in practice.
The purpose of this paper is to propose a research method to investigate the application of project marketing principles and techniques in the field of project management. Due to globalization, complex communities with networks of alliance members and strategic suppliers, power and politics have been overplayed. Additionally, time-to-market and global competition, and rapidly changing technologies prove the need for a dynamic shift in mental framework adopted toward project management. With such a multi-faceted business model, projects that implement new business systems are becoming complex. And, we can notice the increased significance of project management in the society today. Projects, however, increasingly need marketing actions and therefore the dynamic link between marketing and project management needs sufficient attention. This paper lays out the research perspectives that are necessary to be adopted to successfully merge between the two disciplines.

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The issue of customer involvement in development projects is studied and discussed since the late 70s. The willingness of producer and customer organizations to involve customer representatives in projects is explained by theoretical concepts such as the Information Processing Concept and the Resource Dependence Theory. Empirical studies further explore the costs of such involvement, the characteristics of project and customer types that affect customer involvement, and the project phases in which such involvement is frequent and most contributing. However, the current literature does not provide an adequate answer to the “how” question of adapting the customer involvement style to the project, the customer and the producer’s characteristics, and specifically does not provide any guidance as to the working mode of customers’ teams along the supervision-participation continuum.

Customer involvement in projects is especially important in defense projects, where customers are generally deeply involved in technical and managerial aspects, and along all project phases. Customer involvement requires considerable resources and may have significant consequences to large-scale defense projects.

This paper reports the main results of an exploratory study investigating customer involvement practices in the Israeli defense industry. The study identifies the main characteristics defining such practices, and lays the foundation for a full-scale study to examine the main research questions: How are modes of customer involvement in projects affected by the characteristics of the project, customer, and producer; and How do different modes of customer involvement affect projects success, given the projects, the customers, and the producers characteristics. Proposed model and preliminary findings are presented.

Towards a Contingent Approach of Customer Involvement in Defense Industry Projects: An Exploratory Study

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Bid/no-bid decision-making is a critical activity for a construction company. Because of the complex and uncertain nature of projects, incorrect bidding decisions are probable. Particularly, at corporate level there are numerous risk based factors that affect the bidding. Current paper attempts applying an MADM approach for bid/no-bid decision making. To cover the vagueness of the linguistic description of variables a fuzzy logic approach is adopted. From MADM methods, TOPSIS is focused as it is more practical and nearer to the nature of the problem. This paper attempts to present a model that applies fuzzy TOPSIS to help a contractor decide whether to bid or not to bid considering the risks of a tender.

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Using the concept of ‘time’ as a lens this paper focuses on an organisational change project in order to compare thinking underpinning project management and the parallel discipline of change management. Observations which have time as a central element in their construction are reported from a case study, in which one of the authors was involved as an action researcher over a period of two years. They are illustrative of different paradigms that exist within an organization. The paper investigates four aspects of time which may be constructed differently by individuals, by professions and within organizational cultures. These four aspects include: future versus past orientation, differences between professional constructs of time, personal constructs of time and finally the quantitative concept of ‘clock time’ or chronos as opposed to the qualitative time concept of kairos. A case study involving personnel from a large public sector service organisation is observed through the lens of time and in relation to these four ways of understanding time.
There is increasing agreement that understanding complexity is important for project management because of difficulties associated with decision-making and goal attainment which appear to stem from complexity. However, the current operational definitions of complex projects, based upon size and budget, have been challenged and questions have been raised about how complexity can be measured in a robust manner that takes account of structural, dynamic and interaction elements. Thematic analysis of data from 25 in-depth interviews of project managers involved with complex projects, together with an exploration of the literature reveals a wide range of factors that may contribute to project complexity. We argue that these factors contributing to project complexity may define in terms of dimensions, or source characteristics, which are in turn subject to a range of severity factors. In addition to investigating definitions and models of complexity from the literature and in the field, this study also explores the problematic issues of ‘measuring’ or assessing complexity. A research agenda is proposed to further the investigation of phenomena reported in this initial study.
A New Governance Approach for Large Projects: Lessons from Olkiluoto 3 and Flamanville 3 Nuclear Power Plant Projects

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This paper opens up avenues towards a novel theory of governance in large projects. In the empirical study, we analyze two nuclear power plant projects: Olkiluoto 3, Finland, and Flamanville 3, France. We suggest that in the governance of large projects, any of the prevalent well-known governance approaches on market, hierarchy, or hybrid, are not as such adequate. A large project and its performance are affected by complex institutional environments, and by the underlying business network of organizations, which combines the past, present and future into a network of business actors that are or could potentially be involved in mutual business activities in current or future projects.

This paper analyzes and compares the governance in two nuclear power plant projects Olkiluoto 3 and Flamanville 3. Both projects faced somewhat similar problems concerning the quality issues, and both projects have faced budget overruns and delayed schedules. Yet the governance approach of the main players of these two projects were different: whereas the owner (TVO) in Olkiluoto 3 selected to use the turnkey contract with fixed price allocating all responsibility and inherent risks of the whole project to a single prime contractor (AREVA), the owner (EDF) in Flamanville 3 carried considerable responsibility itself by serving as an architect-engineer, while AREVA in Flamanville served just as one of the prime contractors with more limited responsibility. Indeed, governance of these two nuclear power plant projects differed considerably, and the same players (AREVA and the construction company Bouygues) had different overall responsibilities and risks in the governance these projects. The governance is reflected by the set-up of the project’s internal supply chain, which is a complex supply network with multiple relationships and ties between the actors.

We argue that the owner’s business approach and relationship to the 1st tier prime contractors influence the selection of the approach of how 1st tier contractors subcontract from 2nd tier subcontractors. Furthermore – accordingly – the 1st and 2nd tier subcontracting relationship influence the approach between the 2nd and 3rd tier actors, and further relationships of the tiers towards the upstream of the project’s supply chain. We argue that the owner’s approach reflects on how the governance unfolds throughout the entire supply network, as a result of the seemingly independent but still in a complex manner interrelated transactions and relationships between the players. We welcome further research that would elaborate further these novel findings of the governance in large multi-firm projects, with an emphasis on the complex supply network, various business approaches of the network actors, relationships, and the impacts of the complex institutional environments where the projects take place. Further studies are also needed on the business performance implications of various governance schemes: for example, despite different governance approaches, Olkiluoto 3 and Flamanville 3 faced similar types of problems in project implementation.

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In the European framework, the governance, organization and exploitation of research projects is an interesting and suitable theme related to the development and implementation of research and technology development activities.

Nowadays, the large increasing of number and typology of the projects developed within European Programmes has amplified the issues related to the governance and management of them.

In the view of these phenomena, this paper analyses the particular field of the co-operative research projects developed within the European Research Framework Programmes identified by a trans-national approach and by an open co-operation among different public and private partners.

This new framework, characterized by a sort of 'open innovation', encourages the sharing of knowledge and intellectual propriety and the development of innovative solutions in order to exploit project outcomes.

Therefore, the adoption of this 'open innovation' paradigm allows to design new solutions in order to organise and manage the R&D projects and to capitalize tangible and intangible knowledge.

Under the specific framework of the European co-operative research projects, this paper analyses the spin-offs strategy as one of the most innovative and effective solution to exploit research outcomes. At the end, an innovative spin-offs framework related to the exploitation of research projects outcomes will be designed. The case study of the LD-CAST project, developed within an European research co-operative project in the field of interoperable e-business services and transnational knowledge, closes this work.

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Role Stress, Learning and Team Performance

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This paper reports on the theoretical background and the results of an investigation regarding the relationships between role stress, learning behaviour and team performance in project teams. The results show that role stress, in particular role overload, is negatively related to team performance. In addition the results show that this effect of role stress can be reduced by team learning. Limitations on the validity of the investigation are described and suggestions for future research are made.

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Mastering Complex Projects by Radical Rethinking of PM:
The Project Management 2nd Order (PM-2)

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Purpose and features:
PM-2 is based on new insights and perception in natural and social science (evolutionary and
cosmology theory, self-organization, synergetic brain research, social systems theory, theory of
complex systems, etc.). This has been analysed in the Research Programme “Beyond Frontiers
of Traditional Project Management”.

“Project Management Second Order (PM-2)” is the highlighted result of the research pro-
gramme, as a new paradigm in project management for mastering complex projects. PM-2
gives an answer of the challenge for an advanced understanding and radical redefinition of
Project Management. The performance and processes, of PM-2, described in this article, has
been priced with the IPMA Research Award 2007.

The overall systemic aim of this paper is to initiate rethinking of PM as a new paradigm, as an
answer of today’s and tomorrow’s challenges.

Scope:
PM-2 is an integrated approach of the two cybernetic cycles with several processes and tech-
niques. The architecture of the systemic structure consists of four WORLDs. The model repre-
sents a reference model, a conceptual framework.

First of all, the nature of complexity as well as characteristics of complex projects and the
research programme “Beyond Frontiers of Traditional Project Management” will outlined at a
glance. Analysis of scientific theories as well as scope and results of the research program
will draft. Limits of Traditional Project Management will analyse. Subsequently fundamentals
of PM-2 will demonstrate in detail. Adaption of PM-2 for implementation in different project
types will study. Then, principles, methods and processes in PM-2 will explain.

Conclusions:
Real examples of transfer evolutionary and self-organizational management principles in a
real project life will demonstrate. An adjustment to the “Competency Standard for Complex
Project Managers” CPMCS of ICCPM, Australia, as well as multi-project firms at the edge of
chaos (MUPEC) will discuss. Finally, Integration aspects of PM-2, CPMCS, MUPEC, IPMA-
ICB3, and PMI-Standards as a future view will exhibit. Perspectives and future developments
conclude the paper.

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In times of open innovation the relevance of joint R&D projects of university and industry partners increases. For both partners as well as from a national perspective university-industry collaboration offers substantial benefits for developing and implementing new technologies and knowledge. However, in the same time major barriers occur that hinder partners to find each other, to collaborate successfully and to transfer generated results effectively. In order to close a still existing gap in the literature this paper focuses collaboration issues and analyzes which effects interaction quality and project starting conditions have on the economic success of joint university industry projects. Economic success is assessed by the industry partner and reflects the impact a particular university-industry project has on new products.

To elaborate a set of hypotheses I rely on existing literature in innovation management and learning alliances to develop hypotheses. Central aspects are on the one hand the roles of common goals and high planning quality and on the other hand the importance of trustful and strong relationships. The core construct interaction quality is based on Heider's balance theory. In line with this approach a shared understanding of the innovation task reflects a high interaction quality.

Hypotheses are tested on a sample of 142 industry-university projects with a global technology-oriented firm. As interview data from industry and university project leaders is used for each project common source bias is reduced. Partial Least Squares is used as a structural equation model.

The results show that shared understanding of the innovation task as well as mutual trust between both partners reflect interaction quality and are key success drivers. Furthermore, cognitive fit between partners has a significant impact on the existence of mutual trust and in addition directly on success. Intensive upfront planning is the basis for a shared understanding of the innovative task.
Projects and their management are currently enjoying a considerable popularity. In this context, it is not surprising that this form of temporary organizing is increasingly adopted by a wide variety of organizations. Still, despite this growing interest, in-depth qualitative studies that devote their attention to the nature and particularities of “doing projects” are lacking (Söderlund, 2004); consequently, the actual work done in projects and its social dimensions are left in the shadows. Interested in the social dynamics of projects and how projects are accomplished by the people taking part into them through time, I conducted an ethnographic case study of one project in the field of software development, aiming to explore the situated activities of people that contribute to create, to realize and to complete a project. My study shows that it is through a number of collective practices that the project studied was accomplished. From the identification of collective practices, I describe challenges associated with each practice, thus revealing some of the sources of difficulties that can be experienced while working on projects. Ultimately, this reflection leads me to consider the nature of projects, which can in this light be described as bounded becoming.

Although limited to one case, my study contributes to shed light on the nature of work and of challenges in the context of projects. It is important for the development of the project management field that investigations of lived experienced in the setting of projects be pursued, as these investigations can help us to better tackle the challenges posed by this form of organizing. In addition, what I uncover about projects as a form of temporary organizing has important practical consequences: It allows practitioners to sharpen their sensitivity to the consequences of their actions. Such an increased sensitivity could be beneficial to individuals and organizations alike, since they both would gain in reflexivity, which would in turn lead them to develop more adapted ways of managing and working in projects.

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Program management as a governance structure to deal with the constant change and achieve the organizational strategy is increasingly adopted by organizations. Program, for its ambiguous and complex nature, brings a great challenge for program managers to manage it into success. Whether the program manager’s competencies have effect on program success is the concern of this paper. By reviewing the literature on the program management realm, this paper hypothesizes that program manager’s competencies, especially their leadership style, have a positive relationship with program success, and this relationship is affected by program context. Based on these findings, a research model is proposed, and further research to test the validity of the model is suggested.
The aim of this paper is to describe a doctoral research being undertaken by a practising project manager managing a variety of information technology projects in the telecommunications sector in Australia. I feel that the current methods of handling IT projects using normative approaches are ineffective as they do not help to comprehend the reality of the project situations which are emergent and uncertain. I plan to study these projects using five lenses derived from a review of the literature and personal observations to find better ways to deal with the complex nature of these projects. I plan to use a multiple case study approach using participant observation, interviews and secondary data from a purposive sample of projects to explore the complexity of these projects. I will use grounded theory techniques to analyse data. I plan to triangulate my findings by discussing key themes derived from my data analysis using a focus group of experienced project managers in Australia. I have conducted a pilot case study in my organisation and presented my research for a trial assessment at the faculty where I am enrolled as a doctoral student and obtained feedback from academics and practitioners. I am now preparing for my assessment in May 2009 before I am allowed to apply for human research ethics approval to the University to start real data collection. I expect that some initial findings from the data collected could be presented at the IRNOP conference in October.

The paper is jointly written by me and my supervisor who was also a practising project manager of large-scale distributed control systems projects in industry before becoming an academic.

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Small to Medium Enterprises (SMEs) make a key contribution to the economy in terms of employment, innovation and growth. Project management can play a significant role in facilitating this contribution, but SMEs require less bureaucratic forms of project management than those used by larger organizations.

We are undertaking this research to identify the nature of project management required by SMEs, and the results of the qualitative stage of our research are reported in this paper. We interviewed people from companies of the three sizes of SME, micro, small and medium, from a range of industries and from four countries. SMEs use project management both to manage operations, to deliver tailored or bespoke products to customers, and manage innovation and growth. We found similar project management approaches used for both purposes. The main differences occurred by size of company and country. Both Ireland and Sweden looked for more laissez-faire management styles, while people in Austria and Romania were willing to accept more autocratic styles. People in Sweden wanted more structure than people in Ireland. Also laissez-faire styles of management were more appropriate in micro and small companies, whereas more democratic or autocratic styles were needed in medium-sized companies. All three sizes of company wanted less bureaucratic versions of project management than traditional forms, but medium sized-companies need more structure than small and micro companies. We identified the elements of project management commonly used.

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When complex projects go wrong they can go horribly wrong with severe financial consequen-
ces. We are undertaking research to develop leading performance indicators for complex pro-
jects, metrics to provide early warning of potential difficulties. The assessment of success of
complex projects can be made by a range of stakeholders over different time scales, against
different levels of project results: the project’s outputs at the end of the project; the project’s
outcomes in the months following project completion; and the project’s impact in the years
following completion.

We aim to identify leading performance indicators, which may include both success criteria
and success factors, and which can be measured by the project team during project delivery
to forecast success as assessed by key stakeholders in the days, months and years following
the project. The hope is the leading performance indicators will act as alarm bells to show if a
project is diverting from plan so early corrective action can be taken. It may be that different
combinations of the leading performance indicators will be appropriate depending on the na-
ture of project complexity. In this paper we develop a new model of project success, whereby
success is assessed by different stakeholders over different time frames against different
levels of project results. We then relate this to measurements that can be taken during project
delivery. A methodology is described to evaluate the early parts of this model. Its implications
and limitations are described. This paper describes work in progress.

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The area of information systems development is rife with failed projects. The reasons for these failures are numerous, and include globalisation and scarce expert resources. To conquer the problems of globalisation and scarce expert resources project teams are often distributed over different geographical areas. Various communication techniques, such as email, skype, instant messaging, groupware and text messaging, are supposed to help team members handle project tasks in a distributed or virtual team project environment. Special technologies and tools are necessary for carrying out projects in a virtual environment but they also add risks to the success of such projects. Often face-to-face teams have many characteristics in common with virtual teams, contributing in lesser or greater extent to their degree of virtualness.

This case study based paper takes a closer look at how the triangular relationship of Internet and communication technology (ICT), social context and project team performance is influenced by the virtualness of teams. We claim that in our context there is a close relationship between performance and success and based on our findings we argue that media richness, media usage and project success go hand in hand. We also found that the limited Internet availability and bandwidth has a strong impact on the communication processes within the project team. Project teams with limited Internet availability and bandwidth seem to perform at a lower level than other teams without these problems. This is strongly influenced by the social context of the individual team. In this relationship the social steering process plays a special role in building up trust and avoiding communication breakdowns. Project teams with a low project performance do not only have reduced media richness but also a reduced media usage profile in all categories from face-to-face meetings to text message usage, including Internet technologies. This points to a communication breakdown caused by the team’s social context.

How the Virtualness of Project Teams Effects their Performance

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Reproducibility of interorganizational relations has shown that agents in project-based industries repeatedly engage in interorganizational projects within similar or even the same partner constellations, so-called project networks. As a consequence, routines and project capabilities develop between the partnering organizations. However, how specifically such routines emerge in project networks and which strategic consequences arise from an interorganizational routine emergence in project networks has not yet been studied in detail. Therefore, the core contribution of this paper lies in the leverage of Brady’s and Davie’s well-established ‘Project Capability-Building Model’, which explains routine emergence inside the project-based organization, to the project network level. This transfer demands certain conceptual modifications of the model, which we achieve through applying structuration theory.

Based on this modified ‘Project Capability-Building’ model this paper unfolds a dynamic perspective on how routines emerge over repeated interorganizational projects and elaborates the two-fold strategic consequences that an increasing amount of routinized project organization has. Based on this, we suggest that a systematic reflection on network ties can help to cope with routine-based consequences. All in all, the perspective on evolutionary interorganizational practices is widened since this paper fosters a deeper understanding of routine-based phenomena in interorganizational projects.

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Adaptive Project Management and Project Capability

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The capability to organize through projects represents a significant key success factor and source for competitive advantage especially in project-based industry. Within the field of industrial project management, the contextual factor of project capability somewhat remains neglected although some projects are less unique for the company than others.

The main objective of this paper is to establish that project capability is context-dependent and the firm’s ability to adapt to the nature of its projects is a key project capability. Our results show that project capability is contextual and therefore it needs to include the capability to monitor and manage the portfolio. The monitoring capability needs to be linked to the other capabilities (such as leadership and organizing capability) in order to provide them with information regarding how to adapt to changes. By installing such a monitoring capability, the project-based company is able to make its overall project capability adaptive.

Our results indicate that project capabilities are not equally needed in all four project types we defined, and that the way these capabilities are applied varies as well. For example, we found that project organizing was more needed in complex and advanced projects, and that also the kind of organizing changed between project types.

Project management should become more adaptive to the changes in the context and content of projects which would allow project management to become a component in the project that can be both – mechanistic or reflective – depending on which type of project management is required.

This could mean in practice that the company can develop its project capability for example by considering the project and portfolio monitoring information in its competence management and establish career paths for project managers that better reflect the nature of the company’s project and business.

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This paper presents two large-scale multi-site programme cases and identifies two contrasting programme strategies leading to different outcomes. One is the decentralised approach that focuses on managing inter-operational business processes and associated data structures. This approach contributed to the success of a large-scale complex information systems-based change programme. The other is a monolithic approach that attempts to deliver standardised systems for client organisations with diverse practices and processes. This approach led one of the case programmes through a troubled path to its ultimate failure.

The implications of the two strategies are analysed in terms of programme resource mobilisation, client-supplier relationship and systems quality control. Since it affects programme performance fundamentally, any programme manager should consider the options available carefully. The paper suggests that programme strategy is not a simple extrapolation from the concept of project strategy and calls for further studies in terms of its content, formulation and implementation.
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GPM currently has more than 4,800 members from various companies, universities, and public institutions. GPM is the German representation within the IPMA (International Project Management Association).

For more information on GPM please visit: www.gpm-ipma.de

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