

# **MANAGING RISKS IN THE INTERNATIONAL GROWTH BUSINESS OF FINNISH CONSTRUCTION CONTRACTORS AND BUILDING PRODUCT SUPPLIERS**

Lauri Palojarvi

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Supervisor	Professor Juhani Kiiras, Helsinki University of Technology		
<p>Abstract</p> <p><b>Major changes inside Finland catalyzed the internationalization of its construction industry</b> to initial growth in the late 1960s/early 1970s. In the year 2008, the value of its international business was app. 16 Bn€ i.e. at the same level as that of new building production in Finland. <b>It is forecast to grow.</b> Practitioners understand that by <b>effective risk management (RM), the occurrence and significance of failures (or successes) can be reduced</b> (or, alternatively, increased). <b>Two research questions</b>, to explain causal links in real-life interventions and look for a positive effect on RM practices, are posed: “How can the main internationalization process risks of leading Finnish construction contractors and building product suppliers be managed?” and “What are those main risks, and how can they be managed?”</p> <p>The <b>purpose of this study</b> is to find better ways to manage major risks within the context. The impact of proven project RM methods at the business level is analyzed and the major risks embedded within key managers and their competencies in managing, in particular, cross-cultural issues and contractual arrangements, are identified. <b>Hypothesis 1</b> is that proven project RM methods can be applied reliably at the business level and the effectiveness of managing major international business risks can be improved. <b>Hypothesis 2</b> is that major risks related to the business objectives are inherent within key managers’ competencies, in particular in (2a) managing cross-cultural issues and (2b) contractual arrangements. Overall, <b>the scope</b> encompasses Finnish firms managing international businesses and projects and the related risks, in growth situations. <b>The main parts are a literature review and qualitative insider action research with case studies.</b></p> <p><b>In the reviewed literature</b>, international aspects are covered thinly or in a country-specific manner. RM is increasingly being transformed into uncertainty or opportunity management, and becoming more proactive. “Early warnings” are relied upon more frequently. Besides, RM is ever more important in international projects and acquisitions, while new tools and models are being created. <b>Hypothesis 1 is a novelty</b> i.e. it is not addressed in the reviewed literature. The hypothetical management competencies, as sources of success and failure, surface frequently but in unstructured ways. Thus, <b>Hypothesis 2 cannot be considered as a novelty</b>, although, within the context, the <b>cross-cultural risks are a novel research object when connected to key managers’ competencies</b> to manage cross-cultural issues. <b>The challenge for RM research</b> is to replace “management by rear-window view” with the management of more multi-cross-cultural, complex, and global networks which look actively into the future.</p>			

The **action research is based on authentic documentation**, as systematically collected by the researcher since the completion of his licentiate thesis (Palojärvi 1986), except for Case 1, which sums up the findings of five construction projects in the years 1974-1984. **Cases 2-9** are growth strategies, mergers, and acquisition and delivery projects in the years 1984-2006, and they are causally coupled to deepen the longitudinal analysis. **In the cases**, the formal risk identification mostly meant “what can go wrong?” However, the product suppliers recognized the opportunities as well. Early risk identification at the business level often led further to proactive RM. **The case evidence conforms well to Hypothesis 1. To manage the hypothetical major risks, it was more beneficial to take measures proactively, i.e. early on and at the business level**, rather than to wait until firm commitments had been made. It was useful to have ample calendar time available when analyzing contractual role alternatives, key appointments, or the entry mode, which are difficult to change at the project level. **The case evidence also conforms well to Hypothesis 2.** In all the cases, the **major risks that occurred were inherent in at least one or often even both of the two hypothetical managerial competencies**. Other major risks appeared only sporadically. Thus, at least the two hypothetical major risks should always be identified and further managed in each project. The key managers’ competencies regarding cross-cultural issues were a more common major risk (or source of one) than the selected contractual role and other arrangements, although major risks were also inherent in the contractual arrangements.

**Other interesting observations** include the following. (i) Uncertainty management may be well suited to projects with unclear objectives. Traditional RM, focused on goal attainment as a “positive outcome”, needed clear objectives for the most appropriate response. (ii) The development of practical RM over time was also reflected in the cases. In the focal business, the formal identification of risks and their responses became standard relatively late. (iii) Complexity reduction should be the goal when fighting risks with potentially negative consequences, which may rapidly develop into crises.

**The main result** of the internally valid study, i.e. **proven project RM methods could be applied at the business level**, thus enabling the major risks inherent in the key managers’ competencies regarding cross-cultural and contractual issues to be managed early and proactively, is **a novelty**. It is considered reliable and applicable to any investment project businesses with cross-cultural, e.g. international contexts.

**The main contribution to practice is to convert the hypotheses to practical action.** The novel, early (i.e. business-level) response-oriented risk and opportunity management method (EROM) should be further developed for growth and other change business transactions, with the capacity to identify and respond to – but definitely not to ignore – opportunities. Besides, the key managers competencies, related to the areas of the major contextual risks, must be managed. The **potential gain** from better contextual RM is **quite significant**.

Keywords: building product suppliers, contractors, complexity, contractual, crisis, cross-cultural, international construction, risk management, uncertainty

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<b>Tiivistelmä</b> <b>Suomen rakennusteollisuuden kansainvälinen toiminta käynnistyi 1960/1970-lukujen vaihteessa taloudellisten muutosten seurauksena.</b> Kansainvälisen liiketoiminnan arvo oli jo 16 miljardia euroa vuonna 2008 eli yhtä suuri kuin koko kotimaan uudisrakennustoiminnan arvo, ja <b>sen ennustetaan edelleen kasvavan. Tehokas riskienhallinta (RH) on käytännössä hankkeiden onnistumisen edellytys ja RH:n puuttuminen on merkittävä epäonnistumisten syy.</b> Siten asetettiin <b>kaksi tutkimuskysymystä:</b> "Miten voidaan hallita johtavien suomalaisten rakennusteollisuusyritysten kansainvälistymisriskejä?" ja "Mitkä ovat yritysten kansainvälistymisprosessin tärkeimmät riskit?"  <b>Tutkimuksen tarkoituksena</b> on löytää parempia tapoja hallita aihealueen riskejä. Yleisesti käytettyjen projektin RH-menetelmien käytön vaikutuksia liiketoimintatasolla analysoidaan ja riskejä, jotka liittyvät avainjohtajien osaamiseen, erityisesti kulttuurien vuorovaikutuksen (cross-cultural) ja sopimuksellisten kysymysten (contractual arrangements) hallinnan yhteydessä, tunnistetaan. <b>Hypoteesi 1</b> on, että koetellut hankkeiden RH menetelmät soveltuvat luotettavasti myös liiketoimintatasolle ja että kansainvälistymiseen liittyvien tärkeimpien riskien hallintaa voidaan näin tehostaa. <b>Hypoteesi 2</b> on, että liiketoimintatavoitteisiin liittyvät tärkeimmät riskit aiheutuvat puutteista avainjohtajien osaamisissa erityisesti (2a) kulttuurien välisten ja (2b) sopimuksellisten kysymysten hallinnan alueella. <b>Tutkimus käsittelee</b> suomalaisten yritysten kansainvälisiä liiketoimia, hankkeita ja näiden riskejä erityisesti kasvutilanteissa. <b>Pääosat ovat kirjallisuustutkimus ja laadullinen, sisäinen toimintatutkimus yhdistettynä tapaustutkimuksiin.</b>  <b>Tutkittu kirjallisuus</b> käsittelee kansainvälisiä kysymyksiä vain suppeasti tai maakohtaisesti. RH samaistetaan yhä useammin ennalta aktiiviseen epävarmuuden (tai mahdollisuuksien) hallintaan. Heikkoihin signaaleihin tukeudutaan usein. Kansainvälisten hankkeiden tai yritysostojen RH on yhä tärkeämpää ja uusia välineitä ja metodeja ehdotetaan. <b>Hypoteesi 1 on uutuus</b> , ts. kirjallisuus ei käsittele sitä. Hypoteesin 2 mukaista johdon osaamista käsitellään (hajanaisesti) epä- ja onnistumisten synnä. Siten <b>Hypoteesi 2 ei ole uutuus mutta</b> kulttuurien välisiin kysymyksiin liittyvien <b>riskien kytkentä johdon osaamiseen on uusi tutkimuskohde.</b> Kirjallisuuden mukaan <b>RH:n haaste</b> on luopuminen "peruutuspeili-johtamisesta" ja siirtyminen tulevaisuushakuiseen tapaan johtaa monikulttuurisia, monimutkaisia ja globaaleja verkostoja.  <b>Toimintatutkimus perustuu autenttiseen, aikanaan systemaattisesti kerättyyn aineistoon</b> poikkeuksena <b>Tapaus 1</b> , joka koostaa viiden rakennushankkeen havainnot vuosilta 1975–1984. <b>Tapaukset 2-9</b> käsittelevät kansainvälisiä yritysostoja ja -yhdistämisä, muutos- ja toimitushankkeita vuosina 1984–2006 sekä niiden taustana olleita strategioita pitkittäisanalyysin syventämiseksi.			

**Tapauksissa** riski yleensä tarkoitti ”Mikä voi mennä huonosti?”, joskin rakennustuoteteollisuus tunnisti myös mahdollisuuksia. Ajoissa tehty riskien tunnistaminen johti usein ennalta aktiivisiin vastatoimiin. **Tapausperusteiset havainnot tukevat merkittävästi Hypoteesia 1. Tarkasteltujen tärkeimpien riskien hallinta onnistui paremmin, kun RH käynnistettiin ajoissa jo liiketoimintatasolla,** verrattuna käynnistämiseen vasta, kun tärkeimmät sitoumukset oli tehty. Oli eduksi käyttää riittävästi aikaa esimerkiksi sopimusrakenteen, avainnimitysten tai investointitavan pohtimiseen, koska näitä ratkaisuja on vaikeaa muuttaa hanketasolla. **Hypoteesi 2 saa myös merkittävää tukea tapausperusteisista havainnoista.** Kaikissa tapauksissa tärkeitä riskejä liittyi vähintään toiseen ja useissa molempiin tarkasteltuihin johdon osaamisalueisiin. Muitakin merkittäviä riskejä ilmeni ilman säännönmukaisuutta. Johtopäätös on, että vähintään Hypoteesin 2 mukaiset riskit tulee tunnistaa ja hallita kaikissa hankkeissa. Avainjohtajien kulttuurien välisten kysymysten osaamiseen liittyvät riskit olivat yleisempiä kuin sopimusoosaamiseen liittyvät, vaikka tärkeitä riskejä liittyi jälkimmäiseenkin ryhmään.

**Muita merkittäviä havaintoja** olivat mm. seuraavat: (i) Epävarmuuden hallinta saattaa menettelytapana sopia hankkeisiin, joiden tavoitteet ovat epäselvät. Perinteisen RH:n puitteissa tavoitteiden saavuttaminen katsotaan jo ”myönteiseksi seuraukseksi”. Käytännössä saavuttaminen vaati selkeät tavoitteet. (ii) RH:n kehittyminen vuosikymmenten aikana tuli hyvin esille myös tapauksissa. Tarkastellussa liiketoiminnassa riskien muodollinen tunnistaminen ja siitä seuraavat vastatoimet muuttuivat standardiksi kuitenkin melko myöhään. (iii) Monimutkaisuuden vähentäminen tulisi olla tavoitteena, kun on tunnistettu riskejä, joiden suuri kielteinen seuraus voi kehittyä kriisiksi.

**Päätulos (uutuus)** on, että **koeteltuja hankkeiden RH-menetelmiä ja -välineitä voidaan käyttää liiketoimintatasolla,** ja siten hallita ennalta aktiivisesti tärkeitä riskejä, jotka tässä kontekstissa liittyvät avainjohtajien osaamisiin kulttuurien välisissä ja sopimuksellisissa kysymyksissä. Sisäisesti validia tulosta voidaan soveltaa rakentamisen lisäksi muussa liiketoiminnassa, jossa kohteena ovat investointihankkeet kulttuurienvälisissä, tyypillisesti kansainvälisissä konteksteissa.

**Käytännön kannalta merkittävintä on muuntaa hypoteesit toiminnaksi.** Uusi, ennalta aktiivinen (liiketoimintatasolla käynnistyvä) riskien ja mahdollisuuksien hallintamenetelmä (EROM) tuleekin nopeasti kehittää yritysten kasvu- ja muiden suurten muutosten tilanteiden hallintaan. Menetelmän avulla tulee kyetä tunnistamaan ja hyödyntämään myös mahdollisuudet. Lisäksi avainjohtajien osaaminen kontekstin mukaisten tärkeiden riskien alueilla tulee varmistaa. Vaikka vain tarkasteltu konteksti otetaan huomioon, on **hyötypotentiali merkittävä.**

Asiasanat Epävarmuus, kansainvälinen rakentaminen, kulttuurienvälisyys, kriisi, monimutkaisuus, rakennustuoteteollisuus, rakennusurakointi, riskienhallinta, sopimushallinta.

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## FOREWORD

My professional background includes **more than 30 years in management and top management positions within the Finnish construction industry, mainly involved in duties related to the internationalization processes** of those firms. On top of that, I have served the Finnish Government for 5 years on duties related to the management of public risk financing for the benefit of firms and enterprises. Many of my assignments included a long-term stay abroad (in Africa, South-East Asia, and Western Europe), besides extensive business travel from my home in Finland into Europe and Russia, Africa, the North America, the Middle East, and Asia. During my career, I have continuously come across the phenomenon of “risk” via its numerous definitions, sources, and derivatives in various businesses and projects. Mostly, it was spiced by the peculiar circumstances and conditions of the international or foreign business environment. The management of such risks, whether foreseen or not, has always been an issue in all the business and project endeavors of my career.

At the TKK/CME, in turn, Professor Juhani Kiiras has, with the help of a great number of his co-researchers and students, businessmen and administrators, conducted an extensive range of the studies on construction project management focusing on various forms, sizes, and types of projects. Within the same unit, University Teacher Pekka Huovinen has focused his research and teaching on the strategy issues in the international construction business from the Finnish point of view. Previously, these two gentlemen supervised and instructed me to complete a **licentiate thesis (1986) on the risk management of Finnish construction project exports**. On the basis of that work, I decided to proceed with a doctoral dissertation to complete my earlier attempt to enter the research community, and commenced a **systematic collection of authentic documentation on interesting risky situations** connected with my respective work duties. However, I managed to turn to **full-time research only from the beginning of the year 2007**, within the office premises of the TKK/CME. After that, the work for this dissertation went on, almost without an interruption, until the end of the summer of 2009.

During the work, **several important sub-issues have been put forward in a form of seven papers presented at the international conferences**, particularly within their scientific tracks. The organizers invited the researcher to give the oral presentations on the papers in Reykjavik (2007 and 2009), Shanghai (2008), Rome (2008), and Helsinki (2008 and 2009). These papers appear within the List of References. Additionally, the researcher has had an opportunity to participate in various round table and panel discussions on the subjects related to the research within the construction business community.

This research was financed by myself but leaned heavily on the significant contribution of the Wood Product Industry of Metsäliitto at the start of the work in the year 2007. The expensive tours to the international conferences, for the oral presentations of the papers above, were financed by the TKK/CME. The minor financial contributions were received from the Confederation of the Finnish Construction Industry (RT), Association of Finnish Civil Engineers (RIL) and LIP Consulting Inc. Many of the books included within the reviewed literature were purchased by the TKK/CME.

Espoo, 5<sup>th</sup> of August, 2009

Signed by:

Lauri Palojärvi

During this thesis work, I received a lot of important support from quite a large number of individuals. Due to the limited space, however, I can put forward **only a few names which thus stand for a much larger community**, besides their own personal contribution to my work. The combined support and encouragement of that **entire community deserves as sincere thanks as well**. In that spirit, I wish to direct my most sincere and humble Thanks firstly to **mr. K.H. Pentti, the long-serving Chairman of Lemminkäinen Corp., Minister Sakari T. Lehto (+) , the CEO of Partek Corp., and Professor Antero Kallio, the long-time Managing Director of Mec-Rastor Corp.** Their continued and restless efforts to develop the entire Finnish construction industry, besides managing their own wide organizations, included the extensive support for higher education, research and brave, yet controlled, internationalization of the industry as well. Their achievements encouraged me to start up related research work with the completion of my modest licentiate thesis in 1986 already. Open sharing of experiences from many consequent projects and business transactions with many **colleagues at Lemminkäinen, Partek and Metsäliitto** provided me with the vital pre- understanding to continue on a doctoral thesis thereafter. Especially the **cross-cultural teams of the cases** selected for and described in this thesis, in and for Africa, Middle East, Asia, Europe and Northern America, deserve warm thanks.

Further, I wish to thank **Dr. Anna Saarsalmi**, a forest expert of METLA, and a working colleague from the concrete industry, **PhD. Kauko Karvinen**, for providing a great example and an encouragement to me when they accomplished a doctoral thesis only after accumulating a certain length of working experience. **The seasoned colleagues** Heikki Castrén (ex-Metsäliitto) and Leo Sandqvist (ex-Partek), who kindly read through and gave valuable comments on several case descriptions, deserve my most humble thanks as well. The leading industry magazine **Rakennuslehti** kindly let me use their extensive archives for background data- thanks for that, too. **The Finnish Civil Engineers Association (RIL), and Confederation of the Construction Industry (RT)**, directed very motivating scholarships to me in 2008 and 2009 - warm thanks for those. **Many close friends and associates**, upon hearing about my plan already in 2006, supported me thereafter with gentle "pushing" and repeated querying about the "progress of the project". Obviously, it was wise to tell them the plan "early" – many thanks for your support.

**TKK/CME** provided me- free of charge- the office facilities and related services – thank you very much for that. **Several CME students** helped me, when working on vital parts of the literature reviews, and also advised many nuances of the modern IT. Ms. Liisa Ahonen, and the entire group, deserve thanks for such efforts, as Ms. Paula Riikonen for finalizing the tables, figures and some other parts of the manuscript, and Ms. Leena Honkavaara as the key officer of **TKK administration**. Naturally, I also wish to thank **Metsäliitto Wood Product Industry** for their major contribution in 2007 – that made this work financially possible. Quite paramount, yet, were the encouragement, support, constructive critics and counter- argumentation from **my Supervisor, Professor Juhani Kiiras**, and his long-time closest aide, **University Teacher Pekka Huovinen**. I am extremely grateful for having had the opportunity to share of their vast, profound knowledge of the construction industry and on top of the actual subject of the thesis. Moreover, Pekka Huovinen has restlessly tutored me, given valuable advice on methodological issues and provided his huge "article library" for free use. Professor Eila Järvenpää (TKK) has kindly advised me in finalizing the text on the vital issue of measuring managers' competencies – thank you.

**My dear wife Inna** and her firm LIP Consulting Inc., **our son Jussi and his oldest child Santeri**, have all greatly supported me throughout the work. For that, I will be grateful for the rest of my life.

Finally, I wish to thank the Opponent, Professor Roger Flanagan from Reading University, UK, the Pre-examiners, **Professor George Ofori from NUS, Singapore, and Dr. Kalle Kähkönen from VTT, Espoo**, for their determined and constructive work. It enabled me to properly finalize this doctoral thesis now at hand.



## EXPLAINING THE ROLE OF THE RESEARCHER within this dissertation

This doctoral dissertation was prepared within the unit of Construction Management and Economics (CME) at the Helsinki University of Technology (TKK) within the time period between January 2007 and August, 2009. **The novelties, innovations, and other theoretical or practical advances have been found, developed, or suggested solely by the researcher himself** on the basis of, on the one hand, his nearly 40-year-long business career, mainly in the service of the Finnish construction industry and Government, primarily in international duties in top management positions, and, on the other hand, of an extensive review of the relevant literature and a deep longitudinal case study.

Previously, the researcher has completed a licentiate thesis on an entangling and yet more limited subject (Palojarvi 1986). **The licentiate thesis at HUT is performed by the post-graduate students after completing the Master's degree** (HUT Guide for Doctoral Students, 2007). In that, they must demonstrate a sound, in-depth knowledge of their research field and an ability to apply scientific research methods independently and critically. Researcher has also spent more than 10 years abroad (i.e. in Africa, the Middle East, Asia, and the Western Europe).

The important roles of **supervising, instructing and tutoring the researcher**, regarding various issues, were vested in the following persons:

- **Professor Juhani Kiiras, the Supervisor and Instructor, TKK/CME**
- **University Teacher Pekka Huovinen, the Tutor, TKK/CME.**

In connection with this dissertation, one Master's Thesis was completed by Ms. Liisa Ahonen, who **reviewed the literature** on enlarged risk management (ERM). Several special assignments, also in a form of literature reviews with a narrower focus, have been completed by the students of TKK/CME, i.e. Ms. Laura Evälahti (contractual issues), Mr. Nicodemus Jansson (an article review on ERM), and Ms. Ulla Judström (crises in the construction business).

The **authentic case documentation**, including the scoring results on the competencies of the key managers in the cases, was collected by the researcher himself. The Supervisor has verified its existence and is acquainted with its contents. To protect the intimacy of the respective key managers, the competency assessments are presented on a team basis only.

**The partial results** and the early conclusions **have been published** at the six international scientific conferences in Reykjavik (Nordnet), Rome (IPMA), Shanghai (CIB), and Helsinki (CIB, IPMA) in the years 2007-2009, via the seven papers (used as the references of the dissertation) co-authored by the researcher (the prime author and presenter), the supervisor, and the instructor. Some professional articles have also been published in the magazines on the respective topics, authored by the researcher alone or with the others.

The dissertation contains an imperative to develop early risk and opportunity management (EROM) methods for contextual and other applicable uses. The scientific ground for such methods, i.e. this dissertation, has been laid by the researcher, who has extensively, solely, and on his own studied the literature and carried out the nine challenging case studies as the insider action researcher.

Espoo, 5<sup>th</sup> August, 2009      Signed by:

Lauri Palojarvi, Lic.Sc. (Tech.)

I hereby declare that the role of Lauri Palojarvi in this study fully complies with the criteria for the independence as set for a dissertation.

Juhani Kiiras, Professor

**Lauri Palojarvi**

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## LIST OF ABBREVIATIONS OF GENERIC TERMS

BOT	Build-operate-transfer, a procurement method or a contracting form
CEO	Chief Executive Officer
CM	Construction management
CV	Curriculum vitae
EC	European Community
EU	European Union
FIDIC	The International Federation of Consulting Engineers
GM	General Manager
HRD	Human resources development
IAR	Insider action research
JV	Joint venture
PM	Project management
RAKLI	The Finnish Federation of the Building Clients and Owners
RC	Relational contracting
RM	Risk management
RT	The Finnish Federation of the Building Contractors and Product Suppliers

## LIST OF ABBREVIATIONS OF NAMES OF CASE FIRMS

<b>LOY</b>	<b>Lemminkäinen Company Ltd.</b> Its subsidiary: AAP Alfred A. Palmberg Company Ltd.
<b>Partek</b>	<b>Partek Corporation or Partek Group.</b> Its subsidiaries: CBR Cimenterie Belgique Royale – a cement-arm of Societe Generale EP Eastern Partek Private Ltd. – an associate company in Singapore PC Partek Concrete – a division (or a sector) that was an incorporated as a subsidiary in the 1990s PCE Partek Concrete Engineering (PCE) Company Ltd. PCI Partek Concrete International - a holding arm established to own firms in Benelux countries VBI Vereinigte Bouw Industries N.V.
<b>ML</b>	<b>Metsäliitto Group (a cooperative).</b> The owner of: FF Finforest Company Ltd – an arm for mechanical wood product business

## **LIST OF DEFINITIONS**

### **Capability**

Capability is a repeatable pattern of action in the use of assets to offer products to a market. (Sanchez et al. 1996b).

### **Catastrophe**

Catastrophe is herein used as a synonym for **disaster**.

### **Chaos**

Chaos is present when fully stochastic phenomena appear within a deterministic system. Within a chaotic system environment significant changes may occur completely unexpectedly. Chaos theory has been applied on project management by Kiiras (2001).

### **Crisis**

Crisis is a low-probability, unexpected, high-impact event that is not covered with contingency plans (Booth 1993). Crisis is looked at as a special consequence of mismanaged risk. Depending on how the crisis is managed, the consequence can be positive or negative till the extreme i.e. disaster.

### **Competence**

Competence [organizational] is an ability to sustain coordinated deployment of assets in a way that helps a firm to achieve its goals. (Sanchez et al. 1996b)

### **Competency**

Competency [individual] is an individual competence of a human being.

### **Complexity**

Complexity is a characteristic of a system. The rate of complexity of a system depends on the number of its elements and their interconnections (Shenhar and Dvir 2004).

### **Contractual arrangements**

Contractual arrangements include herein, apart of preparing and signing the contract itself, particularly the selection of the contractual main partners and their roles, the contractual form and the way of managing the contract in all aspects.

### **Disaster**

Disaster is the consequence of a mismanaged crisis (Loosemore 2000).

### **Finnish construction contractors and building product suppliers**

Finnish construction contractors and building product suppliers (often shortened to “construction industry” or “industry”) are industrial firms which are essentially managed from Finnish soil, regardless of their ownership. Design and engineering firms (often consultants), nor administrative organizations are not included because they are not considered “industrial”.

### **Enlarged risk management (ERM)**

Enlarged risk management (ERM) is a causal chain of uncertainty (often shortened to “UnC”) management >> risk management (shortened to RM) >> crisis management, in conditions of high complexity. ERM’s holistic aim is to grab all activities during the transaction from an early idea till the goals either have been attained or cannot be any more.

### **Foreign investments**

A foreign investment is either a green field operation or a company acquisition. Passively acquiring a minor share in a company actively run by other shareholders is generally not considered as a “foreign investment” measure. Such a measure may, however, support or even manage export activities.

### **Goals**

Goals are (here: business) objectives which motivate a firm’s decision making (Sanchez et al. 1996b).

**Growth situations** are situations where the focal company is actively and knowingly looking for an opportunity to grow by transactions serving the purpose e.g. entering new market, increasing the previous business volume considerably, accepting new type of orders, and so forth.

### **International construction projects**

International construction projects include projects undertaken by an enterprise both outside its home country (Strassman and Wells 1988) and in a home country but which involve foreign competitors (Momaya and Selby 1998).

### **International market entry**

International (or foreign) business covers export, contractual and investment entry modes that make possible the entry of a company’s products, technology, human skills, management or other resources into a foreign country (Root 1994).

### **Level of strategy**

Project or production level involves decisions on an operating or production strategy, and the competencies of site or production management is a key issue. Business level involves decisions on what business the firm should be in and also how to compete successfully (Langford and Male 2001).

### **Risk**

Risk is a possibility that the expectations – as often set e.g. in business plans and project schedules – will not be met (Palojarvi 1986). A risky event has a probability (p) of occurring.

### **Risk consequence**

Risk consequence is the outcome of an event, considered as a risky event from the observer’s point of view. It can be given a value (M). The consequences may not be known for certain, but their distribution might be known or at least it can be given a sufficient estimate (aligning with Flanagan and Norman 1993). The magnitude of risk at hand is thus  $p \times M$ . A **major risk** may, if it occurs, by itself prevent a firm from meeting its business objectives.

### **Risk management; proven (or traditional) risk management**

Risk management (RM) is herein considered as a process which has two major objectives: to avoid the downside risks and to exploit the opportunities (includes at least the steps of goal setting, risk identification and response. In some other definitions goal setting is excluded, while e.g. risk analysis and risk control are included (e.g. Flanagan and Norman 1993).

Proven (or traditional) RM is defined as RM measures generally recognized and applied by the practicians.

**Uncertainty**

Uncertainty is considered here as a source of risk. Uncertainty prevails when a decision maker has no historical data (e.g. a group of instances) relating to a situation for an event, conditions, etc. to occur (Knight 1921, Smith 2003).

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## 1. INTRODUCTION

### 1.1 Contextual background

**The internationalization of Finnish construction firms and building product suppliers** is interrelated with the overall development of the Finnish construction industry. Major changes inside Finland catalyzed its internationalization in the early 1960s and its initial growth in the 1970s. The further international growth in the 1980s, the painful domestic recession and the consequent restructuring with the exits from foreign markets in the early 1990s, and the recent developments in the new millennium have resulted in the international and profitable growth of the business of the Finnish construction industry. In the year 2008, the value of the industry's international business was app. 16Bn€ i.e. at the same level as that of new building production in Finland. It is estimated that this international business will grow further both in absolute and relative terms. **The nine major breakpoints** in the internationalization process of the Finnish construction industry are here perceived to be as follows (Figure 1-1).

- The export of Finnish construction was pioneered with projects in the Middle East in the late 1950s and the 1960s.
- The Finnish construction industry secured many large Soviet contracts, mainly close to the border between the Soviet Union and Finland, in the 1970s.
- The long-term international commitments resulted in the need for competent Finnish managers and staff in the 1970s.
- The foreign order books grew to an all-time high in the early 1980s.
- The adoption of the construction management (CM) approach in the domestic markets in Finland in the early 1980s.
- The Nordic recession and the collapse of the Soviet market wiped out about 50% of the Finnish construction capacity in the early 1990s.
- The various forms of CM have been relied upon extensively since the mid-1990s.
- The EU membership of Finland did not make much difference to the internationalization towards the end of the 1990s and the early 2000s.
- Finnish construction contractors and building product suppliers have achieved high international growth in their businesses in the 2000s.

**(i) The pioneering construction export projects to the Middle East** in the late 1950s and the 1960s were the indicators of the opening of post-World War 2 Finnish society. Besides the Soviet-Finnish barter trade, only the Finnish forest industry developed its exports in the early 1950s. In turn, the construction industry also stepped over the national borders. Its leaders had a boom time thanks to post-war reconstruction inside Finland. Some of them wanted to know what foreign business was like. The early try-outs in the Middle East were not significant in comparison with domestic business, except for one major loss in a bridge project in Iraq as a result of a lack of knowledge of the local environment. Nevertheless, a few leading personalities, e.g. Antero Kallio and some others<sup>1</sup>, were soon recognized as “the export experts” within the business community in Finland. Strong relationships were built between key Iraqis (e.g. Mr. Mohammed Makzoumi) and the respective Finns during the first joint contracts. Those contacts were re-established in the 1970s and the 1980s, when Finnish contractors secured huge contracts in Iraq (e.g. Brax 2005).

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<sup>1</sup> Otto Vanttinen and Ville Korhonen

**(ii) The Finnish construction industry was able to secure many large contracts, mainly close to the Soviet border, in the 1970s.** Finland paid its war compensation to the Soviet Union mainly by delivering goods, equipment, and construction projects. This barter trade flourished until the mid-1980s. For example, a new town and industrial complex was constructed in Kostamuksha. These huge and profitable contracts dominated in the minds of the management of the leading Finnish firms. Consequently, actual efforts to develop true competitiveness – i.e. new competencies – for targeted foreign markets were reduced, particularly as a result of management capacity and for financing reasons. The most important risk management strategy was to establish Finn-Stroi Oy – a joint venture of over 10 construction contractors – which was able to obtain vital governmental guarantees and share the remaining risk efficiently concerning its contracts. At the same time, this setup reduced competition inside Finland. Thus, the impact of the Soviet contracts on the internationalization of the Finnish construction industry was mixed. While the financial positions of most companies were strengthened, project exports to non-Soviet foreign markets were only taken on as sporadic ventures and not as strategic businesses. Nevertheless, long-term commitments were made by some firms, e.g. by YIT and Partek in Saudi Arabia, Polar in Iraq, and Lemminkäinen in Iraq and Africa. Through these ventures, the companies tried, among other features, to learn as much as possible about the “problems and peculiarities” of the local environment as a key response in managing risks and repatriating as much as possible of any profits earned (Brax 2005).

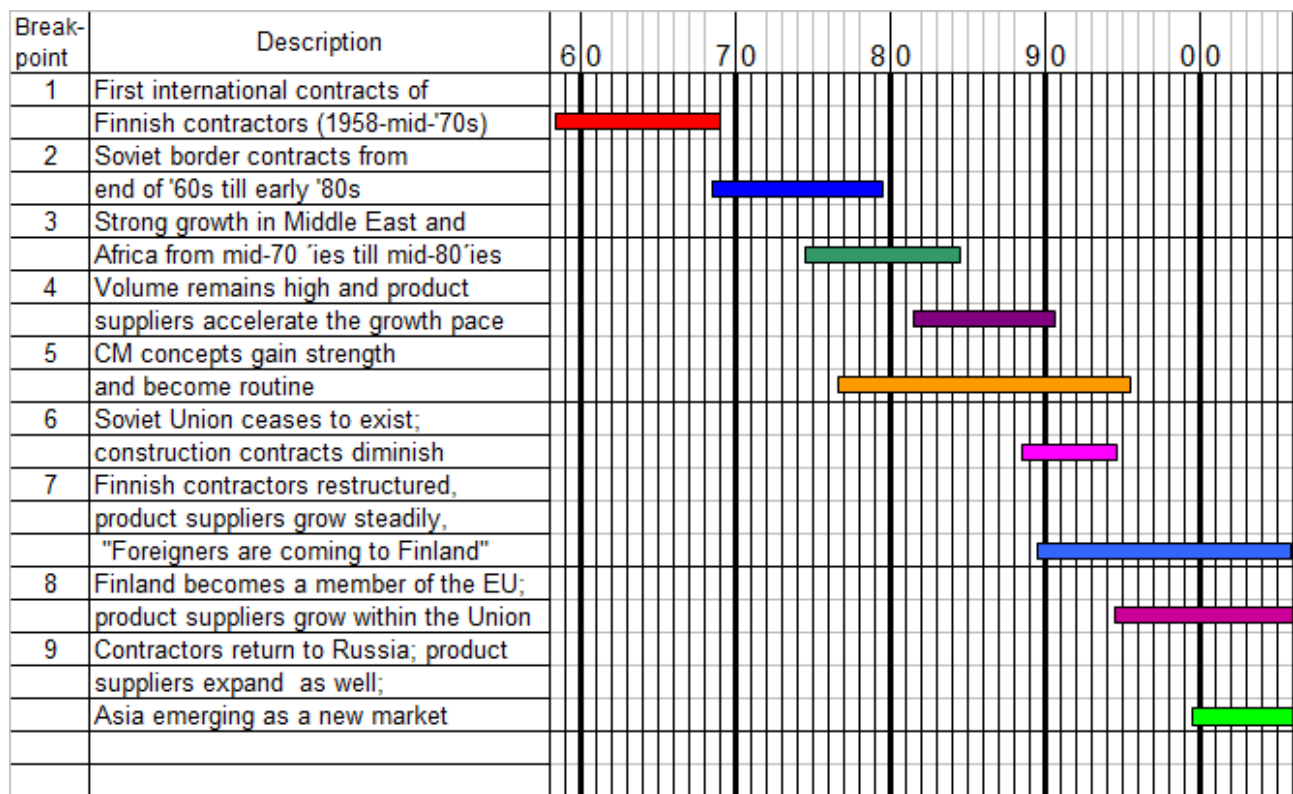


Figure 1-1. Timeline schedule of the nine major breakpoints of the internationalization process of the Finnish construction industry from the late 1950s until the 2000s.

**(iii) The long-term international commitments resulted in a need for competent Finnish managers and staff in the 1970s.** They had to take care of the rapidly-growing order books of the contractors, followed by building product suppliers, particularly in the Middle East and Africa. An alarming sign was the sudden growth of the order books to exceed 400 million euros in the year 1978, i.e. more than triple the value in comparison with the past years' values (see Figure 1-2).

However, the universities of technology in Finland were neither able nor willing to set up any permanent educational structure to enable companies to solve their key personnel needs. Therefore, some trial recruitments were carried out mainly from among British nationals. Their performance was not encouraging for **problems related to their adaption to the Finnish employers' corporate culture**. The only available solution to ensure the managerial resources for the imminent contracts was for the Finnish companies to organize extensive training courses by themselves, assisted by the universities, in the late 1970s.

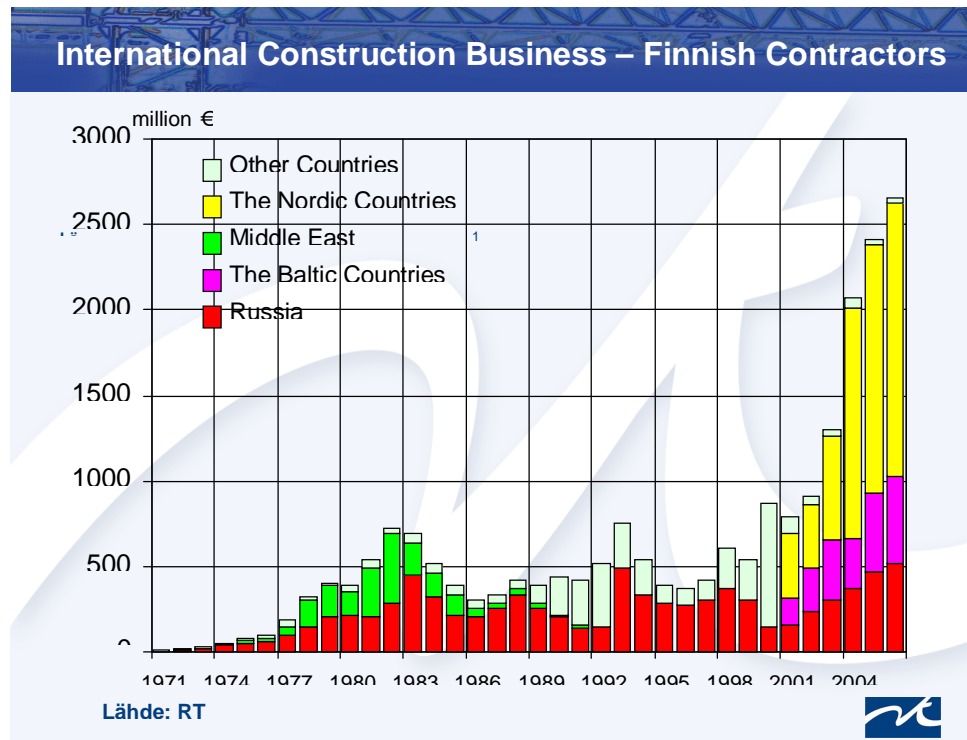


Figure 1-2. Value of the international construction business of Finnish contractors during the years 1970-2006 (published by the Confederation of Finnish Construction Industry (RT) in 2007 in Finnish; translated by the author).

(iv) **The foreign order books grew to an all-time high in the early 1980s.** Despite the exits from Nigeria (when the government stopped paying its bills at the end of the 1970s), the foreign order books peaked in the early 1980s. The share of the foreign business in the Middle East (and the Soviet Union) became strategically important, in particular in the case of YIT and its parent, Perusyhtymä. The latter had pioneered the export of construction projects to Nigeria. Lemminkäinen grew in Africa but it ended up with a heavy loss in its joint venture with Polar and the Conference Palace contract in Baghdad in Iraq. Likewise, the joint venture of the other Finnish contractors had to leave Iran as a result of the revolution and to re-establish themselves in Egypt. On the other hand, large contracts were secured in Iraq, Saudi Arabia, and Libya. In turn, the building product industry followed the contractors and it soon surpassed the international business volume of the contractors (see Figure 1-3). Partek expanded its Saudi concrete operation, entered the Iraqi and Southeast Asian markets with precast concrete plants, and expanded its concrete technology sales. Lohja, the archrival of Partek, went to Alabama in the USA for its ready-mix and precast operations. The attainment of strategically significant foreign business volumes was a result of this decade, particularly for the leading building product and contracting firms. The cadres of managers and specialists for foreign business were recruited and trained under tailor-made

corporate training programs, again assisted by the Finnish universities. In the 1980s, the building product industry recruited many key managers from the contractors' organizations. In the early 1990s, the Russian business was scaled down after the collapse of the Soviet Union. Barter trade was not possible any more and the Russian building contracts diminished.

**(v) The adoption of the construction management (CM) approach by the Finns in the early 1980s.** The Conference Palace in Baghdad was built with a large amount of Finnish skilled labor, along with foreign labor from various developing countries. At the same time, the idea of sending only small teams of key managers and some special experts was being adopted by most Finnish firms. Only a few Finnish (or other expatriate) construction managers were sent from the home offices in the case of the leading building product (plant) suppliers. The latter considered large, traditional general contracts as risky on the basis of the well-known examples in e.g. Nigeria, Iran, and Iraq. In addition, it was realized that new contenders from developing countries, e.g. South Korea, Taiwan, and China, could offer much lower contract prices than those that Finns considered feasible. In turn, the Finnish contractors had to limit their intake of foreign orders because of a lack of competent personnel, despite their well-planned, systematic training efforts. **At the same time, Finnish building product suppliers hired Finnish key managers, which already had gained relevant experience abroad at the service of the Finnish contractors, for their new subsidiaries and associate companies abroad.**

**(vi) The Nordic recession and the collapse of the Soviet market wiped out about 50% of the Finnish construction capacity in the early 1990s.** The two fairly internationalized contractors, YIT and Lemminkäinen, were competitive enough to strengthen their relative positions (along with Hartela and Viitaset). However, Haka, Polar, and Puolimatka (which had started to internationalize later) were taken over by foreign contractors. The bankruptcy of Haka was particularly striking because it was trying to fill up its ailing owner's (Cooperative EKA) coffers with badly needed cash from the advances of several low-priced Russian Military Village orders. Although the bankruptcy caused a severe risk for its business associates, such as Partek (because of its long-planned Sertolovo contract; see Case No. 7 for the details), this resulted in a major, well-hidden move by Skanska AB of Sweden to establish itself in Finland with the ex-Haka managers on the ruins of Haka. In addition, NCC AB of Sweden acquired Puolimatka. In turn, Polar and Ruola became additional victims of the restructuring process of the construction industry in Finland. In turn, the two leading Finnish building product suppliers, Partek and Lohja, were forced to merge their primary operations. Lohja's concrete venture in the USA was closed. Partek's readily internationalized precast concrete operations were able to continue. The third player, Novera (containing the former Puolimatka) ceased to exist, while its versatile building product subsidiaries were sold. The recession implied that the survivors had to succeed in developing their domestic cost competitiveness. At the same time, the recession reduced their desire to re-invest in foreign operations, not to mention any significant R&D projects (unless financed from public funds). For the remaining contractors, the domestic real estate development business, with very few foreign competitors, was more lucrative and profitable than focusing on competitive bidding. Later, many more leading suppliers of cement, concrete, bricks, blocks, and rock wool – including all the ex-Partek and/or ex-Lohja subsidiaries – were acquired by major foreign players (e.g. Palojarvi 1993). The ultimate decision-makers in the restructuring process were the Finnish banks. Ex post, it is assessed here that this restructuring was prolonged too much and was thus expensive for all the stakeholders, including the banks themselves.

**(vii) The extensive reliance on the various forms of CM after the mid-1990s.** Lemminkäinen was already a CM pioneer in the 1970s, but CM forms were widely adopted in Finland only after

the mid-1990s. In essence, the adapted, national CM concept enables owners to mobilize a string of various specialty contractors and suppliers under the management of an independent CM consultant or CM contractor (e.g. Kähkönen and Kiiras 2009). The most visible standard-bearers of this fundamental change were two CM contractors, the SRV Corporation (originally Viitaset) and Lemminkäinen, and one CM consultant, CM-Urakointi (today Sweco PM). Thus, the leading building contractors became more selective in obtaining new orders. The CM approach also encouraged the building product suppliers to add services to their standard products and to offer system solutions and specialized subcontracting (e.g. the erection of building products). Thus, the companies were able first to pilot the CM forms and improve their competitiveness inside Finland. Thereafter, they applied similar CM forms successfully in foreign markets as well.

**(viii) The EU membership of Finland did not make much difference to internationalization** towards the end of the 1990s and the early 2000s. Finnish construction designers, however, won many foreign orders from the Commission. The contractors increased their foreign business fast, especially in the Nordic countries. Most importantly, the product suppliers' foreign business continued to grow steadily, particularly within the EU countries (Figure 1-3). The growth was both organic and acquisition-based, despite the fact that no efficient standardization was put through within the EU, as many believed would happen. This indicates strongly that the construction business still remains local by nature. The question of "what to do globally and locally?" is of the utmost importance. This differs from the earlier slogan of being "multinational", which was advocated e.g. by Nokia's management in the late 1990s.

**(ix) Finnish contractors and building product suppliers have achieved high levels of growth in their international business in the 2000s.** In particular, the leading Finnish (or ex-Finnish-owned) firms include Kone Elevators, Consolis, Ruukki Construction, Rockwool, Rettig, YIT, and Lemcon. Asia, particularly China, has been the target market of pioneering ventures and try-outs with some major permanent establishments. In addition, Russia has experienced its long-awaited economic growth, primarily fuelled by growing global oil and gas prices. The construction markets have boomed in Moscow, St. Petersburg, and the other bigger cities. This has also benefited many Finnish firms. The housing development business has also been ventured into, e.g. YIT was developing many blocks with thousands of apartments in early 2009. In turn, the leading building product suppliers have been cautious about establishing production plants in Russia. In addition, the export of building products and systems, particularly HVAC systems (e.g. Halton), has grown rapidly.

**In the case of Finnish construction contractors,** it is here summarized that internationalization was commenced in the late 1950s from scratch in the form of export projects. The export operations of the leading contractors peaked in both absolute and relative terms from the end of the 1970s until the mid-1980s. Thereafter, the value and importance of the international business of Finnish contractors diminished compared with their domestic business as a result of e.g. the increasing competition on the part of Turkish and Asian contractors. The domestic recession and the disappearance of the Soviet market overnight accelerated this development and caused major restructuring among the biggest Finnish actors in the early 1990s. Moreover, some leading firms, e.g. Puolimatka, ended up under foreign ownership. During the 2000s, the remaining contractors have become more local and established themselves inside targeted foreign markets in order to grow, as well as to sustain and to deepen their competitive positions. In the autumn of 2008, the global credit crunch had its negative consequences across all markets in terms of postponed, downsized, and canceled construction investments. During the spring of 2009, Finland-based

contractors experienced moderate growth in their international business because of the rising economic expectations around the Baltic Sea region, Eastern Europe, and Asia (Figure 1-2).

**In the case of Finnish building product suppliers**, it is here summarized that after starting slightly later than the contractors, this industry internationalized itself consistently and fairly fast, primarily in continental Europe, until the early 1980s. After the recession during the early 1990s, the value of the foreign turnover of the building product industry grew significantly. It reached a total of 13 billion euros in the year 2005 (Figure 1-3). During the same 15-year period, many building product suppliers were acquired by foreign owners, e.g. Partek and Lohja's concrete divisions (now Consolis), Partek Rockwool (now Paroc), and Partek and Lohja's cement divisions (now Finnsementti and Lohja Rudus). During the spring of 2009, internationalized, Finland-based suppliers have already experienced the first positive signs of a global market recovery.

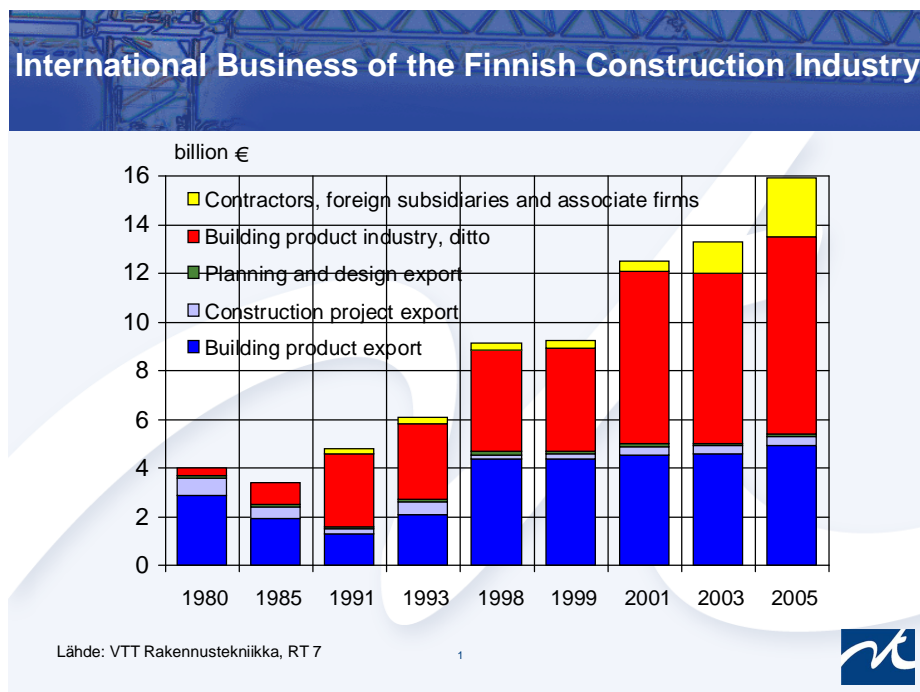


Figure 1-3. Value of the international business of the Finnish construction industry during the years 1980-2005, by business type (published by RT 2007 in Finnish; translated by the author).

**Overall**, it has been forecast that the international growth business of the Finnish construction industry will continue. It is here re-evaluated that the total international turnover will exceed the domestic one by the year 2015 (Figure 1-4).

## 1.2 Two contextual research questions

It is likely that the Finnish construction industry will continue to operate in the EU, Russian, and Asian markets in the future and companies will continue to seize new opportunities, as well as to take and to manage risk in this growing international business. Otherwise, there would be no growth. Among the Finnish practitioners, the general understanding has been that **effective risk management (RM)** can reduce the occurrence and significance of failures, as well as being able to increase the occurrence and significance of successes.

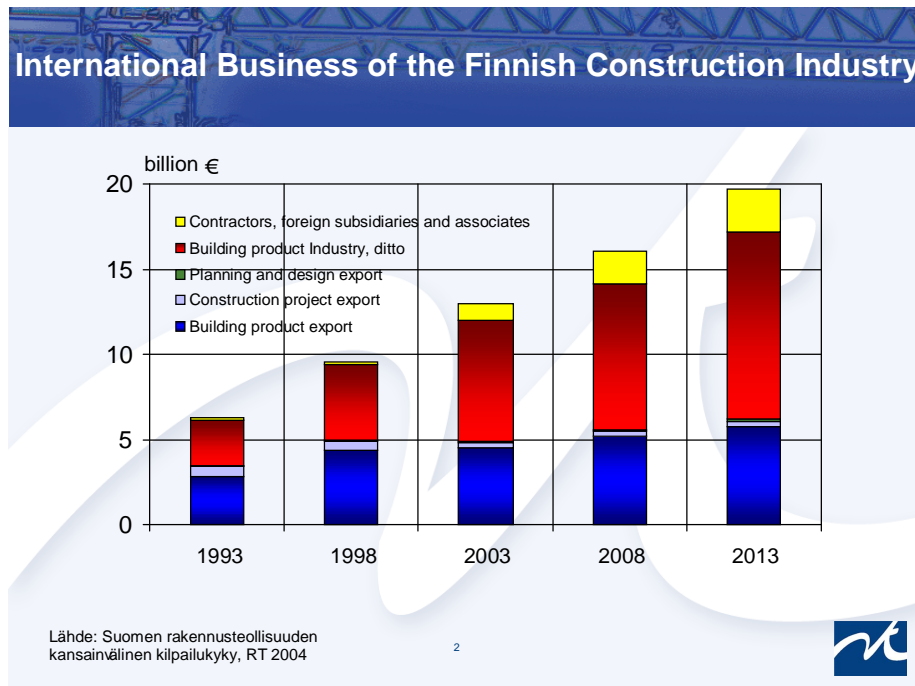


Figure 1-4. Actual and forecast value of the international turnover of the Finnish construction industry in the years 1993, 1998, 2003, 2008, and 2013, by business type (published by RT 2004 in Finnish; translated by the author).

In reality, the past performance of the Finnish companies provides more valuable experience of failures and less of successes. The practitioners usually assume that international transactions may well be at least as risky as transactions on average. **In the US context, Schweiger (2002 p.4) has reported that only 20-30% (depending on his references) of all merger and acquisition transactions lived up to their financial expectations, which is also the researcher's belief.**

In the literature, many key authors (e.g. Flanagan and Norman 1993) posit that **contextual risk identification** is the base of RM. If identification fails, one usually has to deal with more costly consequences, should a risk occur, or an opportunity might be entirely lost. Both the past outcomes of the internationalization of the Finnish construction industry and the relevant literature (e.g. Ahonen 2007) indicate that severe losses can be avoided and/or opportunities can be seized with sound RM. In general, the more competitive the international operations of companies are, the better their performance also is in the domestic market (Palojarvi, 1991).

Since the late 1980s, the author has been convinced that it is up to **this longitudinal study** to analyze the phenomenon of the international growth business of Finnish contractors and building product suppliers and to come up with some relevant answers and proposals for the further development of the art of RM practices. When the Confederation of the Finnish Construction Industry (RT 2004) forecast a 5-billion Euro growth during the five-year period from 2009-2013, it is easy to see the size of the RM issue, both as negative problems and positive opportunities. Therefore, the author believes that it is highly appropriate to push on and to develop better RM ways for growth business situations. It is here evaluated that the success rates of Finnish contractors and suppliers could be improved significantly.



Within the focal context of the internationalization of the Finnish construction industry, **the two research questions** for this study are posed as follows. “How can the internationalization process risks of the leading Finnish construction contractors and building product suppliers be managed?” and “What are the main risks of the internationally growing Finnish contractors and suppliers, respectively, and how can they be managed, in particular in the selected evolving EU, Russian, and Asian construction markets?”

### **1.3 Purpose, hypotheses, and limitations of the study**

The risks inherent in the international growth business situations of Finnish construction contractors and building product suppliers are approached in this study. **The roots** of the study were, however, laid down in the mid-1980s with the author’s licentiate thesis on the management of risks in Finnish construction project exports. On the basis of its findings, it was posited that the most significant risks were twofold. They were related to key managers and the contractual balance between project stakeholders. Against the general expectation in the prior literature, this thesis revealed that the much-feared political risks had not directly caused severe problems for Finnish actors (Palojarvi 1986). Nevertheless, the two principal risk types, i.e. political risks and economic risks, are hidden in all the country contexts of international construction, which is beset with more types of risks than domestic construction (Han and Diekmann 2001, Ling et al. 2005).

Accordingly, **the purpose** of this study is to find and to develop better ways for construction contractors and building product suppliers to manage their major risks in both business-level and project-level situations on the basis of a literature review and combined case and insider action research. In broad terms, the impacts of (i) applying proven project-level RM methods at the upper business level within the focal context (“transfer upwards”) will be analyzed, (ii) the combined use of business-level RM methods and project-level ones within the focal context (“combined use”) will be studied, and (iii) the risks embedded within key managers and their competencies on managing, in particular, cross-cultural issues and contractual arrangements within the focal context (“major risk identification”), will be identified. Contextually, the outcomes should benefit focal Finnish companies in their operations, e.g. in the strongly emerging Asian and Russian markets.

**This dissertation will focus on the two hypotheses**, which are examined empirically as part of the combined case and insider action research. **The first hypothesis** was developed after the author’s licentiate thesis. Proven project RM methods can also be applied reliably at the business level and, thus, the effectiveness of managing major international business risks can be improved within the focal context. **The second hypothesis**, which is addressed in two subparts “2a” and “2b” for the clarity sake, stems from the grounds of the author’s licentiate thesis. Major risks related to the attainment of targeted business objectives are inherent within key managers’ competencies and the insufficiency of these in particular to manage: (2a) cross-cultural issues, and (2b) contractual arrangements within the focal context.

Overall, **the scope** of this study encompasses firms managing their international businesses and projects, including the related risks. The focus is on growth situations, the major risk types, and proven project RM methods and their applications at the business level. Enlarged risk management (ERM) is here defined as a causal chain of uncertainty => RM => crisis management, in conditions of high complexity. The focal context involves the internationalization of Finnish construction contractors and building product suppliers, as well as the international operations of foreign-owned subsidiaries based in Finland.



**The basic limitations** are as follows. (i) **Chaos has been excluded** from among the units of analysis, because the available case data do not contain any situation which could be characterized as truly chaotic, e.g. in which new plans are continuously prepared but they are never implemented (e.g. Kieras 2005). (ii) **The measurement of the managerial competencies** has been limited to three basic components, i.e. education, experience, and motivation, which are considered to be sufficient vis-à-vis the examination of the hypotheses. (iii) **In this work, the main features, as a foundation, of a novel, proactive RM will be laid out. The further development will follow after the dissertation, also to protect this study** from the possible argument that it is just another R&D project rather than a scientific endeavor. (iv) **Financial RM** and its derivatives (e.g. Busch 2005) are not addressed. (v) The subject is not the project export, nor the strategic management of the Finnish contractors but the RM in international construction business. (vi) The focal issue is not the uncertainty management.

## **1.4 Overview of the report**

The report of this study includes 10 chapters (Figure 1-5). **Chapter 1** contains the contextual background, the contextual research questions, the purpose, the objectives, the hypotheses, the limitations, and an overview of the report's structure. **Chapter 2** explains the reliability of the research methods, the rationale for selecting them, and the respective discussion. Both one extensive literature review of **enlarged RM (including uncertainty, crisis, and complexity management)** and some limited literature reviews of the contextual, hypothetical major risks are presented. The main method is longitudinal insider action research based on 9 real cases, where the author assumed the roles of an active insider over a period from the year 1974 until the year 2005. The combination of the selected methods makes possible a relevant comparison of the findings, besides the examination of the two hypotheses. Some interesting new references have emerged as well.

**Chapter 3** reports on the conduct and findings of the extensive review of “enlarged” RM, including uncertainty, complexity, risk, and crisis management. The results of some limited reviews of the areas of hypothetical, contextual, major risks are also presented. In addition, the author's insights into these findings are revealed. The relevant literature on project-level RM in general is abundant. On the other hand, very few references deal with the international context. The scarce contextual literature on cross-cultural and contractual issues points to key managers' competencies and contractual arrangements as the two potential success or failure factors, i.e. major risks and/or their sources. However, the literature does not provide any advanced, structured framework for a further analysis in the context of international construction.

**Chapter 4** includes the reporting of the design, conduct, and justification of the methodological choices behind the combined insider action and case study. The main features of the RM method that the author and his colleagues applied within all the 9 cases are described. This reflects the development of RM thinking in the case companies from the early 1970s until the early 2000s. It also complements the background of the study (presented in Ch. 1). In all the 9 cases, the applications of this RM method contained at least the setting of business objectives, major risk identification, and the launching of a response (if any did take place).

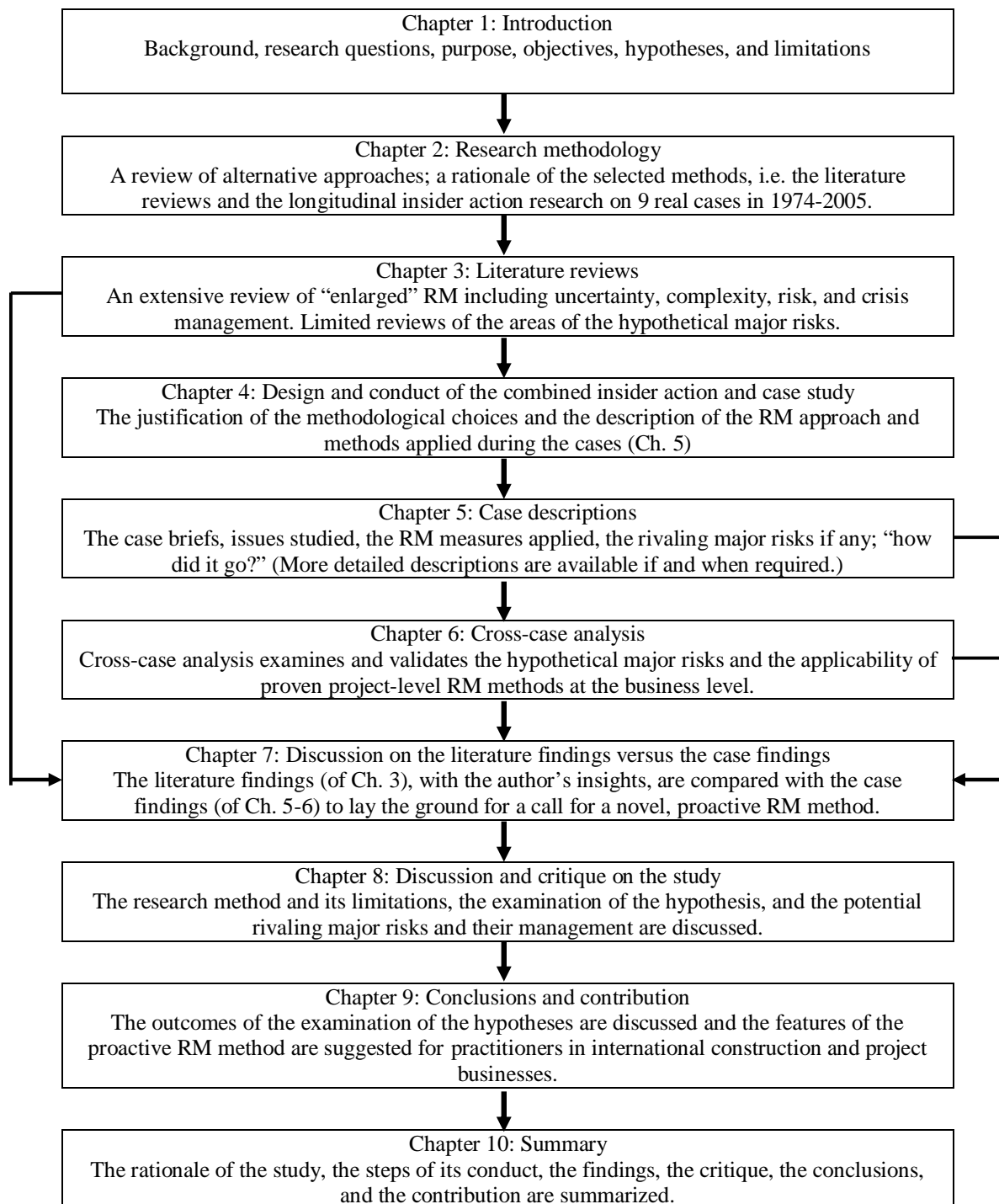


Figure 1- 5. Structure of the report.

**Chapter 5** contains the essentials of the case descriptions. They all have a similar structure and are all presented in a similar order: (1) the case in a nutshell – product, organization, schedule, etc.; (2) the key issues to be observed and studied; (3) the RM measures applied both at the business level and the project level, if any, versus the occurrence of the two hypothetical and possible rivaling major risks, and (4) a concluding note on “How did it go?”. The essentials of each case are packed into 5-7 pages. The first case consists of a summary of the findings of five limited cases of Lemminkäinen Oy between the years 1974 and 1984. Originally, these cases were already reported

upon as part of the author's licentiate thesis (Palojarvi 1986). The eight other cases are either business-level cases or project-level ones that are also causally coupled. These couplings deepen the longitudinal explanatory analysis.

**Chapter 6** contains a cross-case analysis, i.e. an examination of the two hypotheses. The case findings are used to test and validate the hypotheses, that is, to see whether the findings conform to each of the hypotheses or not. Initially, it is here revealed that the findings seem to support the hypotheses. In addition, some potentially interesting observations are brought up within this chapter (but the related discussion and the critique take place later, in Ch. 8).

**Chapter 7** includes a comparison of the findings of the literature reviews (Ch. 3) and the cross-case analysis (Ch. 6). No framework, which could have been considered (contextually) as "advanced", surfaced in the reviewed literature. The corporate-level RM was not on the focus, and as one of the consequences, the financial RM was limited outside of the work. In turn, the cases validate the significance of the two hypothetical major risks. Moreover, the case findings lay the ground for a further imperative on a novel, proactive RM method, which could be launched at the business level well before the forthcoming implementation of respective transactions or projects.

**Chapter 8** contains the discussion and the criticisms. Many relevant issues are raised, such as: (i) the lack of a structural framework for studying the international construction industry; (ii) the scarcity of the literature reviewed; (iii) the joint long span of the selected cases and reflections on them, and (iv) the rivaling major risks (whether identified or not) and their significance versus the major outcomes.

**Chapter 9** contains the conclusions on the major outcomes and the contribution of the study. The hypotheses seem to withstand the examination, yet they are also the subjects of a certain critique, discussion, and the obvious need for further research. The need to develop more proactive hands-on RM method for practitioners is suggested. Only the main features of the suggested novel proactive RM method are presented. The method is particularly applicable for managing growth and major change situations within the international construction business. A rough estimate of the possible financial benefits ("significance") is also presented. Some typical growth situations of the building product business, such as market entries, company turnarounds, corporate acquisitions and post-merger integrations, capacity expansions, and complex deliveries are addressed within the selected cases to point out the suggestion that building product suppliers can also benefit from this novel RM method as long as there is a notable change involved. (It is hoped that this chapter will invite many constructive comments and critiques to contribute to the complementary development work, which, it is foreseen, will be continued until the year 2010.)

**Chapter 10** contains a summary of the design and conduct of this study, its key findings, critique, conclusions, and contribution.

## 2. RESEARCH METHODS AND DATA

### 2.1 Relevance of the study

The relevance of the study is grounded on: **(i) the past failures** of Finnish construction firms and building product suppliers (e.g. the Diyala bridge project of JV Finnish Contractors in Iraq, where the floods destroyed the unfinished constructions twice; the housing business of Lemminkäinen, Ruola, and Perusyhtymä in Nigeria, where the Government stopped the payments and the companies had to cease their operations; the precast concrete business of Lohja and the rock wool business of Partek in the culturally and contractually quite new US environment, both resulting into great losses; the conference palace of the IRCO consortium in Iraq where the Client demanded, based on the turn-key clause, scope of works and design far above the view of the contractor; the housing business of SRV in Berlin, and the cross-culturally and contractually demanding Russo-German-Finnish housing projects of Teräsbetoni and Haka, eventually at too low price, as part of the military program of 90s in Russia; **(ii) the past successes** of the same (e.g. the Kostamuksha town of Finn-Stroi, as part of the competition-free barter trade between Soviet Union and Finland; the projects of Lemminkäinen in Liberia where cross-cultural and contractual competences were coupled with motivated and solid construction performance; the precast concrete business, particularly on floor slabs, of Partek in Western Europe, the housing project of Puolimatka as one of the very first projects of the military program in Russia, and the project export business to all over of the world, with already more than three decades of experience, of Lemcon), and **(iii) the literature on the failure and success factors** of managing businesses and project actors in general and in non-Finnish contexts. The author realized that the analysis of the accumulated knowledge, the finding and design of effective ways of managing major risks, and the application of the outcomes to the forecast high international business volume of the Finnish construction industry (Figure 1-3) together provide **an exceptional research opportunity** (Figure 2-0). The author strongly believes that Finland-based firms, public organizations, research institutes, individual researchers, and other actors may benefit from this effort.

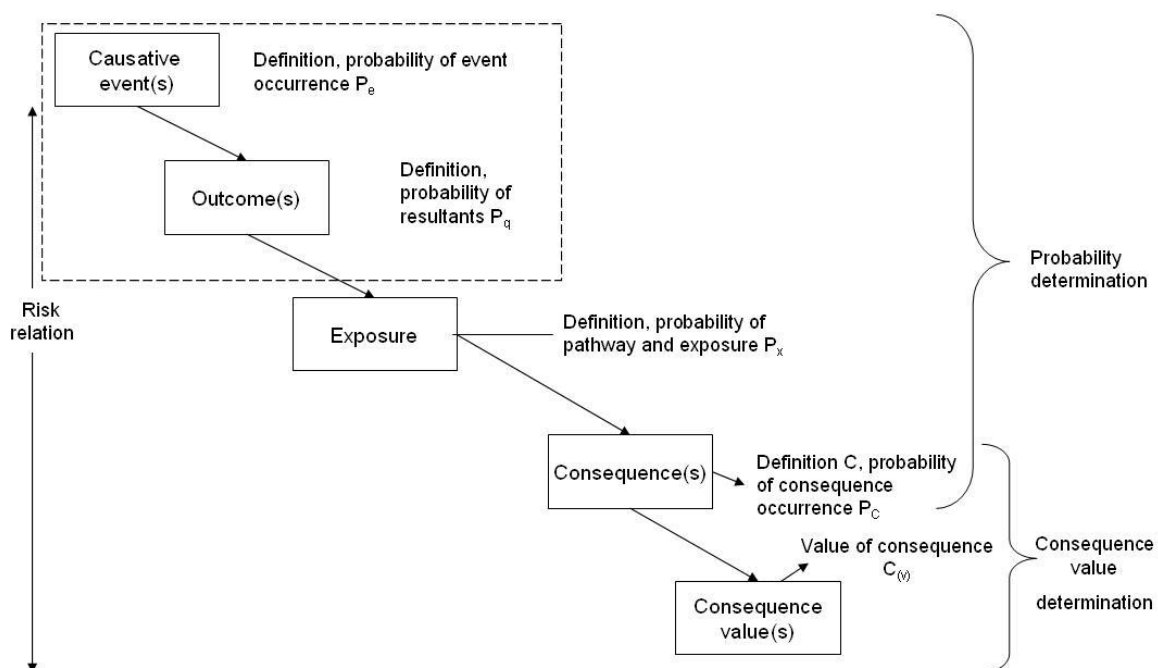


Figure 2-0. Anatomy of risk (Rowe 1976).

Thus, **the purpose** of this study was chosen to be the ground-laying and development of better ways of managing major risks inherent in the international growth operations of Finnish construction firms and building product suppliers. At the outset, it was perceived that most effective ways can be based on **the 2-level management** of a firm's business, its projects, and the inherent risks, and, in particular, on the better identification of major risks and, consequently, a better response to risks. Moreover, such better ways would help firms seize new business opportunities in e.g. the growing EU, Russian, and Asian markets. The outcomes of the study should also facilitate the further development of practical RM tools for practitioners both inside and outside Finland.

**The two methodological parts** of the study are as follows: (i) a state-of-the-art review in the form of one comprehensive RM literature review and two focused ones, and (ii) an examination of the two hypotheses via longitudinal insider action research on 9 real-life cases of the three leading corporations of the Finnish construction industry that were carried out between the years 1974 and 2005. The case selection resulted in both business-level cases and embedded, project-level cases of the same corporations, respectively, to deepen the longitudinal analysis.

## **2.2 Rationale for the study**

### **2.2.1 Role of the literature review**

**Reliance on a literature review** is recommended by many scholars, e.g. Sekaran 1999, Walker 1994, and Rahman 2003. The latter states that four typical methods, i.e. literature reviews, case studies, interviews, and surveys, can be employed in research on project management or construction management. **The purpose of the literature review** as part of this study is: (i) to find support, if any, for choosing the hypotheses for the examination; (ii) to find competing hypotheses, (iii) to reveal any progress that may have been made in managing risks in construction since the licentiate thesis (Palojarvi 1986), (iv) to synthesize insights in traditional and enlarged RM, and (v) to identify the key concepts or elements that could be assessed as belonging among the targeted "better" RM methods.

In the 1980s, contextual RM literature was practically non-existent. By the mid-2000s, some hundreds of relevant references on RM had been published as part of the management of (construction) projects. However, a limited number of such books and articles address international RM at the project level and only a handful deal with RM at the business level. This was surprising in comparison with the growing volume of international construction business across the globe. Instead, such coverage is broader vis-à-vis the other internationalized industries and, for example, their failure and success factors. Therefore, it was considered essential **to screen the recent books and journal articles** published primarily in English, the traditional main lingua franca of international construction business, between the years 2000 and 2006.

The emerging most effective 12 RM concepts have been selected from the reviewed literature. These concepts are placed on a timeline in Figure 2-1, i.e. they were published between the years 1982 and 2007 (see sub-chapter 3.3). In turn, the nine real-life cases were carried out between the years 1974 and 2005. They are placed on a timeline in Figure 2-2. This rough comparison indicates that it is likely that most of the 12 RM concepts were not applied to the management of the nine real-life cases for an obvious reason, i.e. the non-coupled timing. During the early stages of the primary review, it was discovered that the identified enlarged RM literature published between the years 2000 and 2006 does not contain any relevant references related to the two hypothetical major



industry, test projects or other business transactions cannot be implemented only for the purposes of research. (ii) Official statistics lack valid information (and basic data). (iii) No RM studies with valid case projects were available for the purposes of the examination of hypotheses or comparison as part of future studies such as this one. One reason for this state of affairs may be that the case documentation for a deeper analysis is not easy to accomplish with the context of the construction industry. (iv) In addition, interviews, surveys, and Delphi techniques were considered unreliable (see sub-chapter 2.4) for various reasons.

On the other hand, **the conduct of a set of longitudinal case studies on individual projects** was found easier to justify. The methodological guidelines for conducting case studies were sought primarily within Yin's original and revised handbooks. A case study investigates a phenomenon in order to understand its dynamics in respective case settings (Yin 2003a-b, 2004). Recently, Yin (2003b pp. 10-11) has strongly encouraged the use of case studies. In performing a case study, the goal is to expand and generalize theories – not to enumerate frequencies. Further, a case study covers the contextual (i.e. international and growth-related) conditions, which are highly pertinent in this study. A case study is particularly applicable to explain presumed causal links in real-life interventions that are too complex for survey or experimental (research) strategies. In addition, Eisenhardt (1989) posits that case studies are a suitable method for theory-building when current perspectives seem inadequate or conflicting. On the other hand, Stake (1995) states that qualitative case studies are used to extrapolate from data and not to make generalizations.

Thus, the author decided to compile **more case-based data** for the likely examination of hypotheses as part of a study that would meet the requirements of a doctoral thesis. Since the mid-1980s, the author has collected the key documentation of the major international business growth projects at hand during the phases of his career and while serving with the two corporations. The design and conduct of the investigation and examination of the hypotheses with the help of the nine real-life cases is reported upon in more detail in Chapter 4.

### **2.2.3 Choice of insider action research**

In this study, the case study approach was combined with **insider action research (IAR)** for the following reasons. In other words, the question “Why adopt a case study research with this author's active involvement, i.e. action research?” is here addressed as follows. In general, action research is considered valid vis-à-vis hypothesis testing (e.g. Alderfer 1993). The roles of action researchers may vary between e.g. that of an insider action researcher (Coghlan and Brannick 2005), an observing participant (Alvesson 2003), a participating action researcher as participating fully in the organizational life (Ottosson 2003), and a research-oriented action researcher (Roth et al. 2007). All of them exclude more passive roles, such as that of “a fly on the wall”.

For this study, the most important choice was to rely on **case studies where the author will have a direct, strong influence**. This principal choice was made because: (i) it had not been possible to collect relevant new data on risks from “outside” cases, particularly if they had turned out to be the failures of competitors. Most firms are not willing to share their experiences except in the case of positive marketing efforts; (ii) the cases published in the reviewed literature are thin and short and, thus, they do not render sufficient information for a deeper (comparative) analysis; (iii) it seems that the samples within the literature are based on questionnaires and/or semi-structured interviews (even recently, e.g. Ahadzie et al. 2008, Jha and Devaya 2008). Despite of the questionnaires' relative advantages of speed and limited cost, their reliability is severely weakened by the fact that many real respondents are randomly chosen from within firms' younger cadres of employees; (iv)

Lewin (1946), the initiator of the action research “school”, argued early on that research for social practice should be concerned with “... two ... questions ... study of general laws ... and the diagnosis of a specific situation.” The latter is what the construction business, with its one-of-a-kind projects, is all about.

Admittedly, it has taken a long time to collect the case documentation – nearly a quarter of a century. The main reason is that international growth projects (e.g. entries, acquisitions, and complex and large delivery projects) tend to take a long time to mature when counting from an embryonic idea or their strategy planning phases until their implementation phases. This long period of time has, however, brought along with it **five advantages** of the selected empirical research methodology, as follows. There was ample time: (i) to build a solid pre-understanding of the targeted situations (Gummesson 1991) or focal business contexts (Eden and Huxham 2006); (ii) to assume the multiple role sets of an insider action researcher, and (iii) to gain familiarity with the case-specific, organizational politics. These factors trigger the complex dynamics of IAR (Coghlan and Brannick 2005). At the same time they exclude the optional role of an outside research-oriented action researcher who is not trusted enough to gain access to classified or secret meetings, documents, and other forms of information. (iv) An additional advantage of the longish “maturing” of this researcher is mentioned by Eden and Huxham (2006 p. 401), as **when theoretical constructs develop over many cases and often many years, the range of their validity will be extended**. (v) Over the years, some key parts of the “total picture”, not fully recognizable within the occurrence of the respective cases, have surfaced more clearly. This has made it easier **to explain the process of the exploration to others**, as suggested by Eden and Huxham (2006).

Many features of Eden and Huxham’s (2006) well-defined research-oriented action research (RO-AR) approach have also been incorporated into this IAR approach, i.e. pre-understanding, multiple role sets, and the development of new organizational capabilities. Concerning **the issue of validity**, i.e. to what extent each finding is interpreted in a correct way, the explainability of the process of exploration to others is here recalled. Kirk and Miller’s (1986 p. 20) statement on the trade-off between validity and reliability is also taken into account. Therefore, systematic methods and critical reflection are relied upon when the validity of this study is being assessed (Eden and Huxham 2006). In this respect, the time that elapsed from the first case until the last one has turned out to be an advantage.

The above-mentioned rationale resulted in the conclusion that the empirical approach of this study has been like **qualitative IAR** with the practical aim of solving typical severe management problems – instead of trying to follow the RO-AR approach. This understanding surfaced while this researcher was reading Eden and Huxham’s (2006 p. 403) statement on RO-AR, i.e. “it is not an achievable challenge”. Besides, this study is looking for a positive effect on management practices (Ford et al. 2003), i.e. on RM practices within the focal context. Moreover, the IAR has been about undertaking RM measures and studying those measures as they took place **while being a member of the organization** (in alignment with Coghlan and Brannick 2005).

This study also aligns with Alvesson (2003), who posits that in qualitative research **the action being investigated must be understood from the actor’s viewpoint**. This criterion is fulfilled because the author has acted, through most of his nearly 40-year-long professional career, in relevant managerial positions within the case firms and/or projects or businesses (see the timeline, Figure 2-3). The ground is laid with Case No. 1, which is a summary of the five cases of Lemminkäinen carried out between the years 1974 and 1984. In these, the author assumed the role



of a semi-insider action researcher. The author has already used the same five cases as part of his licentiate thesis (Palojärvi 1986).

Since the year 1986, the author has systematically compiled a large amount of authentic documentation on the selected construction project, building product project, and building product business cases. They are due for reporting only now because of the lack of time caused by the author's mainly international duties. Consequently, the author himself has been directly involved as an insider action researcher with each of the eight cases or international growth projects, Nos. 2-9, at Partek Group between the years 1984 and 1995 and at Metsäliitto's Finnforest Corporation between the years 2000 and 2006.

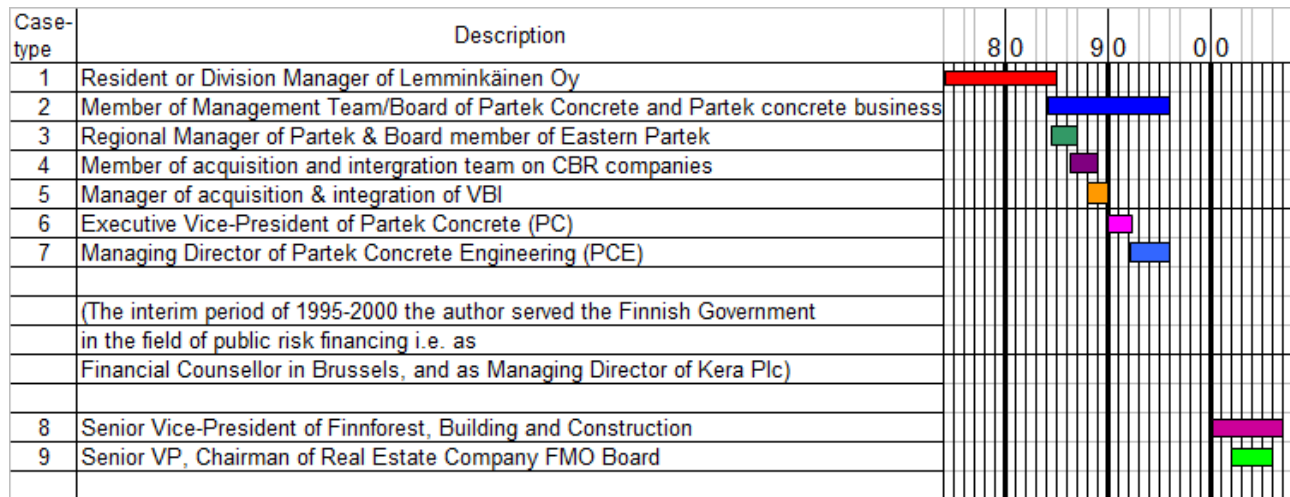


Figure 2-3. Timeline schedule of the action researcher's multiple roles within the cases Nos. 1-9 between the years 1974 and 2005.

#### 2.2.4 Awareness and avoidance of biases inherent in the combined approach

A bias is a tendency to observe a phenomenon in a manner that differs from a "true" observation in some consistent fashion (Simon and Burstein 1985). **Biases** are here fought against by relying on the original case documentation, evaluating the data chronologically and logically, and identifying any discrepancies within such "messy" data. This study is also **self-ethnographic** as a result of the direct involvement of an insider action researcher. In this approach, a common danger is to remain in **frozen positions**. The reliance on the authentic case documentation has helped avoid such a danger. Instead, this researcher has targeted the opportunity to come up with really new and interesting findings, such as some underlying currencies of a theoretical nature, even when picked out from a fully practical business. The richness of one or a few risky situations is explored and fairly typical features are compared with what is outside the mainstream, based on the author's general knowledge (applying Alvesson 1996, 2003). An additional danger is inherent in cross-cultural contexts, i.e. researchers believe that the whole research system rests on **dominant assumptions** and they are afraid of challenging them (Usunier 1998 p. 137). In this study, both dangers have been avoided. It is perceived that this researcher has been competent enough to analytically and logically draw the findings from the cases (and the references) as well as to validate them. This is so because the researcher has performed the relevant duties and he has experienced many divergent project- or business-level situations of change during his long career.

In addition, this researcher has followed with keen interest the public discussion on the suggested shortcomings in the validity of Laitila's (2008) doctoral dissertation at the University of Jyväskylä

in Finland. It seems that the examiners' critique stems from the fact that the reporting of the results of the research and development work is an essential part of the dissertation. In other words, that dissertation is not sufficiently theory-based when it aims at solving practical problems. In this study, the empirical, case-based part was, however, launched on the basis of the theoretical findings of the licentiate thesis (Palojarvi 1986). The screened cases, in turn, serve as the data for the examination of the hypotheses, as the prevailing emphasis in action research assumes (Alferder 1993). Therefore, a risk of an IAR-related bias is to be managed accordingly. Thus, **only the main features** of a novel contextual RM method are determined as part of this study (see Chapter 9). The actual development of such a method will be an independent piece of R&D work after the finalization of this study (as a doctoral dissertation).

### **2.3 Design and examination of the two hypotheses**

**The design of the two hypotheses** is based on the theoretical and empirical findings of the licentiate thesis (Palojarvi 1986) and the author's real-life experiences during the subsequent quarter of a century. The licentiate thesis serves as an important developmental phase of the author's thinking. Besides, this theoretical background was sufficient to design the hypotheses, to describe the cases systematically, and to examine the hypotheses. Alternatively, the hypotheses could have been designed solely on the basis of empirical data, provided that at least a series of semi-structured interviews could have been organized. In alignment with Alvesson (2003), the results of such interviews might not have been reliable enough for various reasons.

During a 20-year period, the author compiled a large amount of relevant literature and documentation on his project and business assignments (Figure 2-3). At the outset, this systematic follow-up was justified by: (i) the relative scarcity of the contextual literature with a focus on the management of risks in international construction, and (ii) the fact that longitudinal observations upon RM practices within the construction industry have not exploited any computer-aided simulation methods for risk identification, assessment, or response actions. Instead, it seems that many older and recent references alike suggest that human expert knowledge is still the main tool for both risk identification and response measures (e.g. Flanagan and Norman 1993, Palojarvi et al. 2008c).

In general, **the validation of hypotheses** can be carried out by applying the theory of consensus, pragmatism, coherence, or correspondence (Alanen 1989). In particular, Niiniluoto (1997) analyzes this issue in a profound way. In turn, Johnston et al. (1999) recommend an assessment of each research question for every case of a multiple case study, in particular when case studies are being conducted in business-to-business contexts.

In this study, **each of the two hypotheses is examined against the findings from within the literature and the results of the case studies** by applying the theory of pragmatism. The most important encouragement to examine the hypotheses with the combined insider action and case study research was found within Yin's (2003b p. 111) notion that the most preferable strategy to analyze case study evidence is to follow the theoretical propositions (i.e. the hypotheses) that led to your case study. In other words, Yin considers it relevant to have a proposition (i.e. a hypothesis in this study) already designed at the time when the actual research begins. Case studies are then used as a tool to measure the key variables that were supposed to be measured – which brings us back to the two hypotheses in this study. Yin adds that other interesting findings may emerge from within the cases even to an extent that forces the researcher to change his proposition. In this study, this did

not happen. But the internal priority order of the two hypotheses did change. Further details on the conduct of the examination of the hypotheses are reported upon in Chapter 4.

To ensure the sufficient balance on the discussion of the case study approach, the potential difficulties of the retrospective accounts have been extensively discussed in further chapters, e.g. in 4.1., 4.4., and quite thoroughly in 8.4.

## **2.4 Exclusion of alternative research methods**

In industrial contexts, most strategic and risky decisions are **qualitative** by nature, e.g. whether to internationalize or not, whether to accept the very first major contract in a new foreign market or not, whether to stop work on a site in a culture that is foreign to the focal actor, or whether or not to divest a production unit without certain knowledge about the future. Therefore, **statistical or quantitative research methods are not valid** in this study, which addresses management situations without a history. No firm-, business-, or project-specific situation in construction has such a long history that quantitative research methods would become a highly valid tool for actual decision making. Available data are often too scattered across individual projects, even in the case of one focal firm. The old slogan “every project is unique” applies to business decisions as well. Nevertheless, the firm-specific compilation of project data serves well as background information.

**Structured interviews** were initially considered among quantitative research approaches. The reliance of interviews aims at “the angle of the actors”. The conduct of such interviews would have been limited by the experience and memory of each of the interviewees. Besides, interviews themselves are a highly social setting and sometimes quite far from objective (Alvesson 2003, 1996). Similarly, Rahman (2003) posits that personal interaction between an interviewer and an interviewee is troublesome and no similarity is to be found with other data collection methods.

**Surveys based on questionnaires** are used in many construction management studies across national contexts. However, the data gathered via questionnaires were deemed to be unreliable for the reasons given in sub-chapter 2.2. **Delphi techniques**, in turn, were found to struggle with the danger of too low a response level and a tendency towards consensus (e.g. Robinson 1991). Consequently, the adoption of a Delphi technique was dismissed.

Regarding the potential difficulties of retrospective accounts, as a part of the selected case study approach, the last note of the above 2.3. is referred to here as well.

### 3. LITERATURE REVIEW

#### 3.1 Purpose of the literature review

**The purpose of the literature review** is: (i) to find support, if any, for choosing the hypotheses for the examination in this study; (ii) to find competing hypotheses; (iii) to reveal any progress that may have been made in managing risks in international construction since the licentiate thesis (Palojarvi 1986); (iv) to synthesize and gain insights into traditional and enlarged RM, and (v) to identify the key concepts and their elements that could be assessed as belonging to the targeted “better” RM method.

#### 3.2 Search for the key concepts and insights from within the literature

Besides the literature on RM, the review was enlarged to encompass the key references on three entangling areas, i.e. uncertainty, complexity, and crisis as well. Various authors have considered for a long time that **uncertainty** is inherent in all circumstances and RM becomes an issue when a probability is assigned to uncertainty, subjectively or objectively. Therefore, it was considered necessary to review the representative literature on uncertainty, i.e. an entangling area of RM. Indeed, it seems that RM becomes a concern only after a decision to give uncertainty a probability (e.g. Flanagan and Norman 1993 p. 22). In some other industries, e.g. financing and venture capitalism, risk and uncertainty are considered to be almost two synonymous expressions. **Complexity** is an important characteristic of businesses and projects. The recent literature on complexity was also reviewed because complexity has a direct impact on risk. The more complex a business or a project is, the more risk there is to be managed. **Crisis management** is here seen as a special case of RM. When complex construction involves many actors and interdependencies, the mismanagement of major risks – with negative consequences – may escalate rapidly into a crisis, which Booth (1993) characterizes as a state of “no reserve plan prepared”. Loosemore (2000) emphasizes that a mismanaged crisis can in turn escalate further into a disaster.

As a whole, **the primary literature review** is here reported as one with 116 eligible references on **enlarged RM** published between 2000 and 2006. **The “eligible” reference was (i) to have a view on uncertainty, complexity, risk and/or crisis, and (ii) to be written in English and (iii) to be published within the years of 2000-2006. Out of the large number of potential references , excluded were typically those with (i) no emphasis on RM, (ii) only technical risks in construction projects handled, and (iii) focus on a limited market (e.g. a country) or distinct business (e.g. pharmaceutical) without an analogy to construction contracting and building product supply.**

The reporting is based on two sub-reviews. Ahonen (2007) reports the results of a book-focused review of 64 references. In turn, these books were complemented by a sub-review of 52 articles. The article review, for the time being an unpublished one, was conducted by Huovinen, Palojarvi, Kiiras and Jansson (2007). The reviewed literature was selected on the basis of the relevance of each reference from the hypotheses’ point of view. This was deemed necessary because a large proportion of the identified books and articles address only fairly narrow areas of RM outside the focal context of international construction. In addition, **the other two reviews** focused on the identification of relevant references on the hypothetical major risk types, i.e. competencies to manage cross-cultural aspects (see sub-chapter 3.6) and contractual arrangements (see 3.7) in international construction.

### 3.3 Overview of the key concepts identified

The selected 116 references on enlarged RM – written in English and published between the years 2000 and 2006 – are overviewed as follows. Most, i.e. **81 references (71%), address traditional RM**, 19 references (16%) offer frameworks around uncertainty, 10 references (9%) approach complexity as an amplifier, and only 6 references (5%) deal with crisis management as a derivative of RM. **The majority, or 67 references (58%), are generic or they deal with non-construction contexts** from four viewpoints. Nevertheless, **the literature on construction-related enlarged RM** is now more abundant than in the 1980s. 40 references (34%) address traditional RM with construction-related contexts. On the other hand, only 6 references (5%) deal with uncertainty and 3 references (3%) with crises in construction. No references were found that addressed complex construction (Table 3-1).

Table 3-1. Distribution of 116 references (published between the years 2000 and 2006) by views on enlarged RM and focal contexts (Ahonen 2007).

Views	Generic references and/or those with non-construction contexts		References with construction-related contexts		Sum	
	No.	(%)	No.	(%)	No.	(%)
Uncertainty	13	(11%)	6	(5%)	19	(16%)
Complexity	10	(9%)	0	(0%)	10	(9%)
Risk	41	(35%)	40	(34%)	81	(70%)
Crisis	3	(3%)	3	(3%)	6	(5%)
Sum	67	(58%)	49	(42%)	116	(100%)

Overall, **69 references (59%) deal with enlarged RM as part of managing a project**. Of those, 50, 13, 4, and 2 references were written from the primary viewpoints of managing traditional risks, uncertainty, complexity, and crisis at the project level. In turn, 47 references (41%) deal with enlarged RM as part of managing a firm and/or a business. Of those, 31, 6, 6, and 4 references were written from the primary viewpoints of managing traditional risks, uncertainty, complexity, and crisis at the firm level or the business level (Table 3-2). **The construction-related RM literature mainly deals rather with the project level than the business level.**

Table 3-2. Distribution of 116 references (published between the years 2000 and 2006) by views on enlarged RM and the level of management (Ahonen 2007).

Views	References with a focus on firm/business management		References with a focus on project management		Sum	
	No.	(%)	No.	(%)	No.	(%)
Uncertainty	6	(5%)	13	(11%)	19	(16%)
Complexity	6	(5%)	4	(3%)	10	(9%)
Risk	31	(27%)	50	(43%)	81	(70%)
Crisis	4	(3%)	2	(2%)	6	(5%)
Sum	47	(41%)	69	(59%)	116	(100%)

**International or foreign aspects** are not covered well. Among the 64 books, only 11 authors (17%) focus on international or country-specific management in non-construction contexts. Of those, 6 and 3 references were written from the primary viewpoints of managing traditional risks at

the firm/business level and the project level, respectively. Only 2 references address complexity as part of firm-/business-level management (Table 3-3). Thus, the reviewed literature (Ahonen 2007) findings support the claim of Ofori (2003) and Huovinen (2003) that there is no suitable framework for international construction.

Table 3-3. International focus within the 64 reviewed references on enlarged RM published between the years 2000 and 2006 (Ahonen 2007).

Area of management	View	Context	Total no. of references	No. of references with an international focus
Management of a firm and/or a business	Uncertainty	Non- construction	4	0
		Construction- related	1	0
	Complexity	Non- construction	6	2
		Construction- related	0	0
	Risks	Non- construction	17	6
		Construction- related	0	0
	Crises	Non- construction	3	0
		Construction- related	1	0
Managing a project	Uncertainty	Non- construction	2	0
		Construction- related	3	0
	Complexity	Non- construction	4	0
		Construction- related	0	0
	Risks	Non- construction	13	3
		Construction- related	8	0
	Crises	Non- construction	0	0
		Construction- related	2	0
SUM			64	11

As to the reviewed books, the most interesting ones are referred to by several times in this work at appropriate spots. As to the articles, the researcher found that some reviewed **articles contain interesting new trends in enlarged RM, not yet appearing as visibly in the books** (e.g. Chapman, 2001; Han and Diekmann, 2001; Nikander and Eloranta, 2001; Raz and Michael, 2001;

Ward and Chapman, 2003; Fang et al, 2004a, 2004b; Wang et al, 2004; Kaliprasad, 2006; Touran, 2006) as follows: (i) RM is increasingly being transformed into uncertainty or opportunity management; (ii) RM is becoming more important in international projects and acquisitions, and (iii) new tools and models for enlarged RM are being created and more frequently used.

In addition, **the other two reviews** focused on recent articles on competencies to manage cross-cultural aspects and contractual arrangements in international construction. The latter indicate that embeddedness (managerial competences) and contractual arrangements are sources of success and failure. However, the verification is so far based on questionnaire data or case descriptions only (see sub-chapters 3-6 and 3-7). In particular, the 20 articles on **managing contractual risks** within the focal context of international construction are of interest because they highlight the trends in construction management (Table 3-4). In turn, no such trend setting could be compiled vis-à-vis competencies in managing cross-cultural issues related to the focal context.

Table 3-4. Topics of the 20 relevant articles on managing contractual risks.

Key: RC refers to relational contracting, BOT refers to build-operate-transfer, and CM refers to construction management.

		Primary party	
		Owner	Contractor
Context	Developing countries, Asia, China	✧ Contractual risks (Japan)	✧ Conditions in contracts (FIDIC)
		✧ RC (Hong Kong)	✧ RC/disputes (Saudi Arabia)
	✧ RC (Hong Kong)	✧ BOT contracts (China)	
		✧ RC/Risks (China/Hong Kong)	
		✧ Contractual risks (China)	
		✧ Profit/risks (South Korea)	
OECD, USA	✧ Contractual risks (UK)	✧ CM contract risks (USA)	
	✧ Contract strategy	✧ Partnering contracts (USA)	
	✧ Mistakes in contracts (USA)		
	✧ Contract changes (USA)		
	✧ Alliancing and contracts (Australia)		
	✧ Procurement contract strategy (Norway)	✧ Subcontracts and relationships	
		Vienna Convention	

### 3.4 Traditional and enlarged risk management

#### 3.4.1 Representative definitions of risk, crisis, disaster, and complexity

**Risk** is defined as arising from uncertainty by assessing – either rationally or intuitively – the probability and impact of an uncertain event (e.g. Flanagan and Norman 1993). Within the recent references (Ahonen 2007), the variety of **risk typologies** is rich (Table 3-5). Loosemore's (2000) external and internal risk types may be the broadest list. Flanagan and Norman (1993) emphasize external risks such as economic and political scenarios, a lack of awareness of social conditions, and the governing authority in an international environment. Besides the tabulated typologies, the richness can easily be shown with many additional typologies, e.g. those of Perry and Hayes (1985), Kangari (1995), Tah and Carr (2001), Smith (2003), Busch (2005), Cooper et al. (2005), and

Kähkönen (2006). In particular, the detailed list of Songer et al. (1997) includes political, financial, market, intellectual property, social, and safety risks. In turn, Hastak and Shaked (2000) classified risks on the country, market, and project levels.

Table 3-5. Risk typologies as part of 10 typical references published between the years 1993 and 2006 (Ahonen 2007).

Author (year)	Typology	Basis
Flanagan R. and Norman G. (1993)	Types of risk: Pure risk (specific risk) and speculative risk (market risk)	Relevance for management
Sawczuk B. (1996)	Sources of risk: the brief, team, finance, construction process, information, variations, poor workmanship and design failures	Sources
Turner J. (1999)	Typology: Business risks, insurable risks	Relevance for management
DeLoach J. (2000)	Sources of uncertainty in a business: Externally-driven (environment), internally-driven (process), decision-driven (information)	Sources
Gomes-Casseres B. (2001)	Risks in alliances: "co-opetition", scope, governance, relationships, trust, internal support system	Sources and consequences
Knight R. and Pretty D. (2001)	Enterprise risk typology: Market risk, hazard risk, operational risk, strategic risk	Sources and consequences
Meulbroek L. (2001)	Risk categories: Product, market, operational, input, tax, regulatory, legal, and financial risks	Sources and consequences
Westney R. (2001)	Risk categories: External, technical, PM, site-related	Sources
Construction Industry Research & Information Association (2002)	Risk categories: Political, environmental, planning, market, economic/financial, natural, project, human, criminal, safety	Sources and consequences
Olsson C. (2002)	Various typologies, e.g. 8 possible risks for a construction contract: Country, credit, environmental, legal/compliance, liquidity, market, operational, reputational	Sources and consequences

Here, **the broadest typology is adopted**, i.e. external, internal, and unforeseen risks. Such risks are assigned to firm-, business-, and project-specific situations for the purposes of effective management. This preference is partly due to the uniqueness of the construction industry compared with other industries, and partly to favor a pragmatic approach relying on human expert knowledge, supported e.g. by computer-aided simulations (e.g. Palojarvi et al. 2008c).

Within enlarged RM, a **crisis** is understood as a consequence of mismanaged risk (Loosemore 2000). A crisis is a low-probability, unexpected, high-impact event that is not covered by



contingency plans (Booth 1993). A **disaster** (or catastrophe) is the ultimate negative outcome of a mismanaged crisis. In turn, **complexity** is a characteristic of a system arising from the individual elements and the interactions between them. Project complexity depends on the number and varieties of elements, and the interconnections between them (Shenhar and Dvir 2004).

### **3.4.2 Risk management versus uncertainty management**

The two groups of diverging approaches can be easily identified within the books on RM (Ahonen 2007). Within **traditional one-way approaches**, project risks are treated as events which may have only negative consequences. The focus is more on how to deal with such events when they occur and less on how to avoid or to reduce their negative consequences. In turn, **two-way approaches** – where risk is assumed to have positive and negative consequences – are relied upon to manage uncertainty rather than risky conditions (e.g. Lifson and Scheifer 1982, PMI 2000, Smith 2002, Hetland 2003). Typically, Chapman and Ward (2002 p. 6) deal with the upside and downside of uncertainty. Therein, RM begins by giving an uncertain event – considered a risky event – a probability (e.g. Flanagan and Norman 1993 p. 29). Thus, more explanatory views were sought through the review of articles .

Overall, **the most relevant views and trends** are considered as boiling down as follows.

**(i) There is unanimous agreement only on the profound importance of proper risk identification** between the various authors and their preferred RM approaches. Risk identification is the cornerstone of all further RM actions (e.g. Flanagan and Norman 1993, Artto et al. 2000).

**(ii) RM can be transformed into uncertainty or opportunity management.** The increasing emphasis on uncertainty and opportunities changes RM from being purely an attempt to avoid negative outcomes to one that also considers possible positive outcomes. The upside of risks is recognized and a new terminology on uncertainty management is developed on a continuous basis. Typically, Ward and Chapman (2003) transform project RM into project uncertainty management.

**(iii) The importance of RM increases in the context of international projects and acquisitions.** There are many risks associated with international projects and acquisitions, such as country, economic, and political risks. Risks are addressed as country-specific and especially the risks encountered in Chinese markets are frequently addressed in the journals. China's entry into the WTO has opened a huge market with new opportunities for international firms, but the country-specific risks may eventually have consequences of very high impact, due to the exceptional scale of activities in comparison with e.g. European countries.

**(iv) Efforts to integrate the views on uncertainty, risk and crisis under conditions of high complexity.**

The enlarged RM is defined as causal chain of **uncertainty, risk and crisis** management, as being based on the uncertainty of all events, including risky events. It further facilitates the discussion on many important subfields e.g. on **proactiveness** in RM leading to the growing importance of the **foresight** , applying the **proven project RM methods on business level**, management of crisis as a consequence of mismanaged risk, etc. However, this study will focus on risk and RM and will only lightly touch the uncertainty and crisis when appropriate. Yet, **the first hypothesis**, i.e. to apply the proven RM of the major risks already in the business level, **could, at will, be considered as an holistic effort to integrate the three views** on uncertainty, risk and crisis as well. **In relation to**

**the view of enlarged RM**, as applied to the focal context, this study relies in particular on the following references:

- (i) Flanagan and Norman (1993) for managing risk in construction
- (ii) DeLoach (2000) for managing risk in international non-construction businesses
- (iii) Loosemore (2000) for managing crises in construction projects
- (iv) Lichtenberg (2000) for uncertainty in firms, businesses, and projects
- (v) Shenhar and Dvir (2004) for complexity in non-construction projects.

From many edited **significant manuals and guide books**, perhaps the most applicable one is:

- (vi) Institute of Civil Engineers (2005) Risk analysis and management for projects (RAMP) manual.

**(v) The overlapping development of models and tools for enlarged RM is taking place.**

Based on the above, it is understandable that many existing models and tools are being improved and new ones developed. The utilization of appropriate IT technology is the main trend. Most models and tools are computer-based and program-enabled. Typically, Raz and Michael (2001) investigate the use and benefits of tools for project RM. However, it seems that it is still difficult to find the most suitable and effective models or tools vis-à-vis managing a specific project at hand effectively.

### **3.5 Insights into enlarged risk management in international construction**

#### **3.5.1 Managing uncertainty, risk, crisis, and complexity in international construction**

It seems that **the rare definitions of risk of the 1980s** are still valid in the focal context of international construction in the 2000s (Table 3-6). **Uncertainty** prevails when a decision maker has no historical data (e.g. a group of instances) relating to a situation for an event, conditions, etc. to occur (Knight 1921, Smith 2003). **Chapman and Ward (2002)** define uncertainty as a lack of certainty and **uncertainty management** as managing perceived threats and opportunities and their risk implications but also managing sources of uncertainty which give rise to and shape risk, threat, and opportunity. Langlo et al. (2007) consider uncertainty management as a project owner's way to tap into opportunities, while RM is the domain of project management (PM). It is here defined that **uncertainty is an everlasting framework of all future events, including risk events.**

**Lifson and Scheifer (1982)** posited that risk is a possibility that expectations will not be met. This definition was created for the construction management (CM) contracting business, where risk was usually understood as the possibility of an event with a negative consequence. Later, **Flanagan and Norman (1993)** defined risk as arising from uncertainty by assessing the probability and impact of an uncertain event (Flanagan and Norman 1993 p. 22). Here, **the latter definition is supported**, without a statement on the quality of the consequences. In turn, the following three definitions of risk highlight the development from a one- to two-way position in RM. Risk is a potential for unwanted or negative consequences of an event or an activity (Rowe 1976). Risk is uncertainty of outcome, within a range of potential exposures, arising from a combination of an impact and the probability of potential events (HM Treasury 2000). Risk is adverse but as it is unknown by nature it can have positive and negative effects (Smith 2002). The definitions also acknowledge the magnitude of the consequences as an impact. Here, **risk and consequence (impact) are kept separate** for the sake of clarity. Probability alone, without an idea of impact, makes no sense. In

turn, low-impact, high-frequency risks should not be considered as risks but rather as normal units of managing e.g. costs, time, etc.

Table 3-6. Founding definitions of risk published between the years 1976 and 1993. The definitions were reported in Palojärvi (1986), except that of Flanagan and Norman.

Reference	Definition
Rowe (1976)	Risk is a potential for the realization of an unwanted negative consequence of an event.
Lifson and Scheifer (1982)	Risk is an uncertainty related to estimated consequences and risk means that the results may be worse or better than expected.
Palojärvi (1986)	Risk is a possibility that the set expectations will not be met.
Flanagan and Norman (1993)	... a decision is made under risk when a decision-maker can assess, either intuitively or rationally, the probability of a particular event occurring.

This synthesis of uncertainty and risk leads to a pre-conclusion that a construction firm or a building product supplier has to be prepared to **face a certain amount of uncertainty**. It is most likely that some amount of uncertainty is converted to e.g. project risks which can be managed. In addition, the remaining part of the uncertainty – e.g. over time spans longer than 1 to 2 years as a standard for construction projects – must somehow be dealt with as well. For this purpose, there are many generic or non-construction-tailored ways and tools for managing uncertainty e.g. foresight capacity, flexibility, the ability to change and react quickly, and the avoidance of capital commitments. However, there are no applied business-level RM methods to be found from within the literature within the context of international construction. In the same vein, opportunities are rarely grasped within this context. Consequently, proven project RM methods are here also applied to managing risks at the business level and exploiting a prolonged time frame to maneuver.

A crisis is a low-probability, unexpected, high-impact event that is not covered by contingency plans (Booth 1993). In more common words, a crisis is a consequence of a risk which is not properly managed (e.g. Kiiras 2005). Mismanagement of a crisis may result in a disaster (Loosemore 2000 p. 6). Herein, **a crisis is perceived as a type of consequence of risk, and crisis management as a special case of RM.**

Complexity is a characteristic of a system arising from the interactions between its individual elements rather than from those elements (Bar-Yam 2003). Likewise, project complexity depends on the number and variety of elements, as well as the interconnections among them (Shenhar and Dvir 2004). However, Whitty (2007) argues that so far complex PM has not been properly defined. Here it is assumed that **complexity has a direct impact on risk**. The more complex a project or business is, the more risk there is. When the number of the elements or their interconnections increases, risk increases consequently. Therefore, the probability of mismanaging a risk and thus a crisis (as a consequence of a risk) increases, too.

### 3.5.2 Managing risks in traditional, proven ways in international construction

The literature review highlighted many recent converging and diverging RM approaches and concepts. However, **the similarities to Palojarvi's (1986) "old" design of an RM process** (Figure 3-1) can still be traced within the more recent references, e.g. Flanagan and Norman's (1993) RM framework (Figure 3-2), Fang et al.'s (2005) risk assessment model (Table 3-7), and the Institution of Civil Engineers and the Actuarial Profession's (1998/2005) risk analysis and management process or RAMP (Figure 3-3).

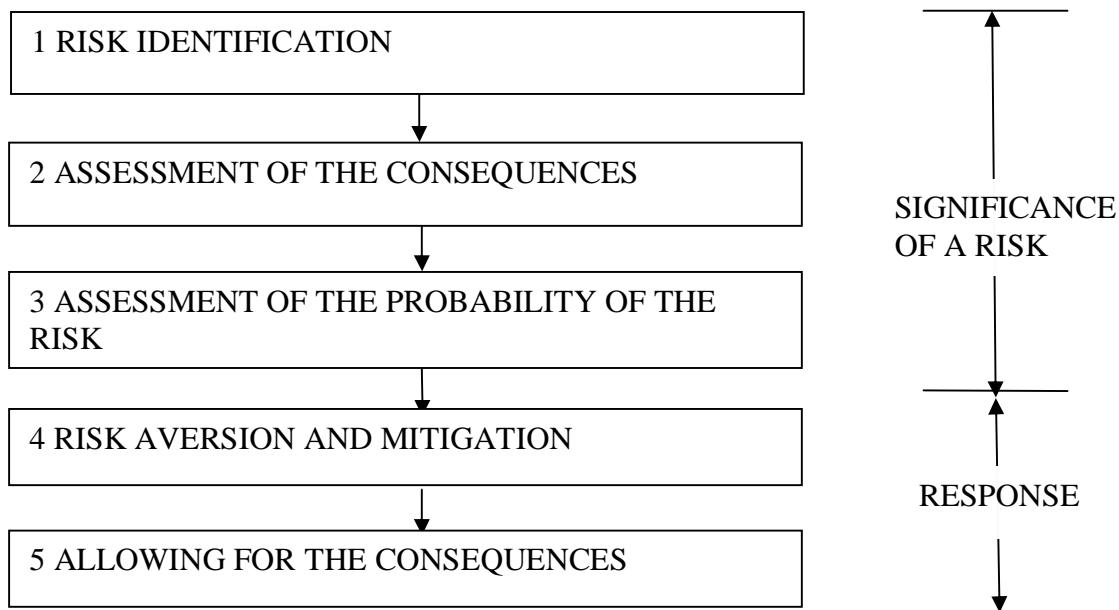


Figure 3-1. Phases of an RM process (Palojarvi 1986).

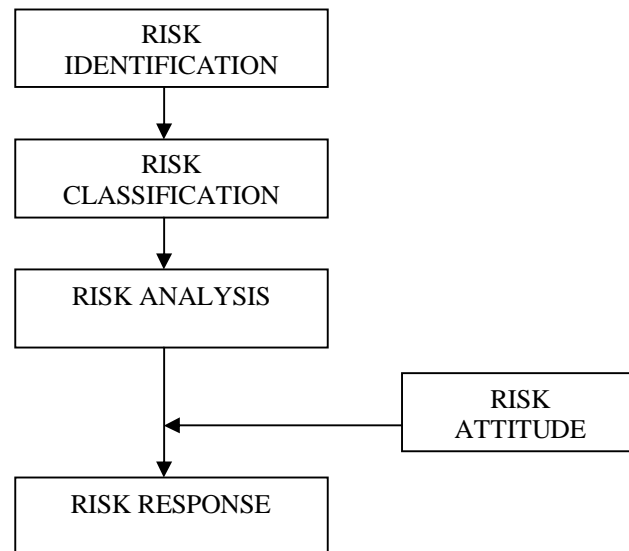


Figure 3-2. RM framework (Flanagan and Norman 1993).

Fang et al.'s (2005) model exemplifies risk assessment in complex projects for the construction of the venues for the 2008 Beijing Olympics. Understandably, the construction time is prioritized

among the project objectives. The Analytical Hierarchy process (AHP) is adopted to evaluate the overall risk (Table 3-7), which is authentic and includes eventual typing errors).

Table 3-7. Risk assessment model (Fang et al. 2005).

Category	Risk factor/event	Attribute at the 3rd level	Measure		Answer
			Variable	Scale	
Project scope (to be continued)	Inception?	High technical and functional standards			
	1. Improperness of inception of the Olympic venue construction program; 2. Vagueness of facility operation during the Olympic competitions; 3. Vagueness of facility post-Games usage; 4. Technical and functionality requirements of BOCOG is so high as to contradict budget and facility post-Games usage; Design? 5. Ambiguity of requirements of BOCOG and owner; 6. Drawings are not detailed enough; 7. Delay of design job, especially shop drawings; Bidding? 8. Quantity of works can not be estimated accurately; Construction? 9. Frequent and large-scale changes of works caused by owner	Vagueness of scope	How much does the shop drawings absent influence your work?	1 No influence for at least 3 months; 2 No influence during a short time (about one month). For instance, construction of foundation and ground-work is not influenced by the shop drawings of superstructure; 3 Influence exists during a short time but can be remedied. For instance, pipelines and embedding parts; 4 Only shop drawings of part of structure are available. For instance, column has but beam not. 5 Shop drawings of some part is incomplete and the construction could be not undertaken. (Once undertaken, rework is highly possible.)	
		Change of scope			

Table1. Project Risk Assessment Form (Sample)

Among the generic or non-construction RM concepts, there are also topic-related concepts with alternatives such as avoidance, abatement, retention, transfer, or allocation. Within the contextual literature, no RM strategy concept was, however, found to be designed for managing international construction businesses and projects. Thus, **Flanagan and Norman's (1993) RM method is perceived to be highly applicable** to managing international construction businesses and projects. The conversion of uncertainty to specific and market risks and the response planning also accommodate the management of risks versus the attainment of the objectives at the business level. This RM approach enables a firm to identify proactively the most serious risks as early as possible, which ensures a maximal period of time for response plans and measures. In addition, early risk identification is a prerequisite for better proactiveness, which is advocated within the recent literature. Thus, **novel and better RM models should be based on robust foresights and agile structures** inside the respective firms vis-a-vis the proactive launching of measures within firm-specific control (e.g. Smith 2002 p. 21, Kiiras and Huovinen 2005, Palojarvi 2009). Otherwise, risky situations have to be managed by dealing with the consequences instead of the timely avoidance or reduction of negative impacts, let alone the grasping of opportunities.

**Activity A: Process launch**

**1. Plan, organise and launch RAMP process including:**

- confirm perspective
- appoint risk process manager and team
- define investment brief
- determine timing of risk reviews
- decide level, scope and purpose of RAMP
- establish budget for RAMP

**2. Establish baseline, covering:**

- objectives and key parameters of investment
- baseline plans
- underlying assumptions.



**Activity B: Risk Review**

**1. Plan and initiate risk review**

**2. Identify risks**

**3. Evaluate risks**

**4. Devise measures for responding to risks, including:**

- reducing
- eliminating
- transferring
- insuring
- avoiding
- aborting
- pooling
- reducing uncertainty
- optimising favourable outcomes and define response strategy.

**5. Assess residual risks and decide whether to continue**

**6. Plan responses to residual risks**

**7. Communicate risk response strategy and response plan.**



**Activity C: Risk management**

**1. Implement strategy plans:**

- integrate with main stream management
- manage the agreed risk response initiatives
- report changes

**2. Control risks:**

- ensure effective resourcing and implementation
- monitor progress
- continually review and categorise 'trends'
- identify and evaluate emerging risks and changes
- initiate full risk review, if necessary.



**Activity D: Process close-down**

**1. Assess investment outturn:**

- consider results of investment against original objectives
- compare risk impacts with those anticipated.

**2. Review RAMP process:**

- assess effectiveness of process and its application
- draw lessons for future investments
- propose improvements to process
- communicate results.

Figure 3-3. Risk analysis and management process (RAMP) (Institution of Civil Engineers and the Actuarial Profession (1998/2005). Redone from the original one.

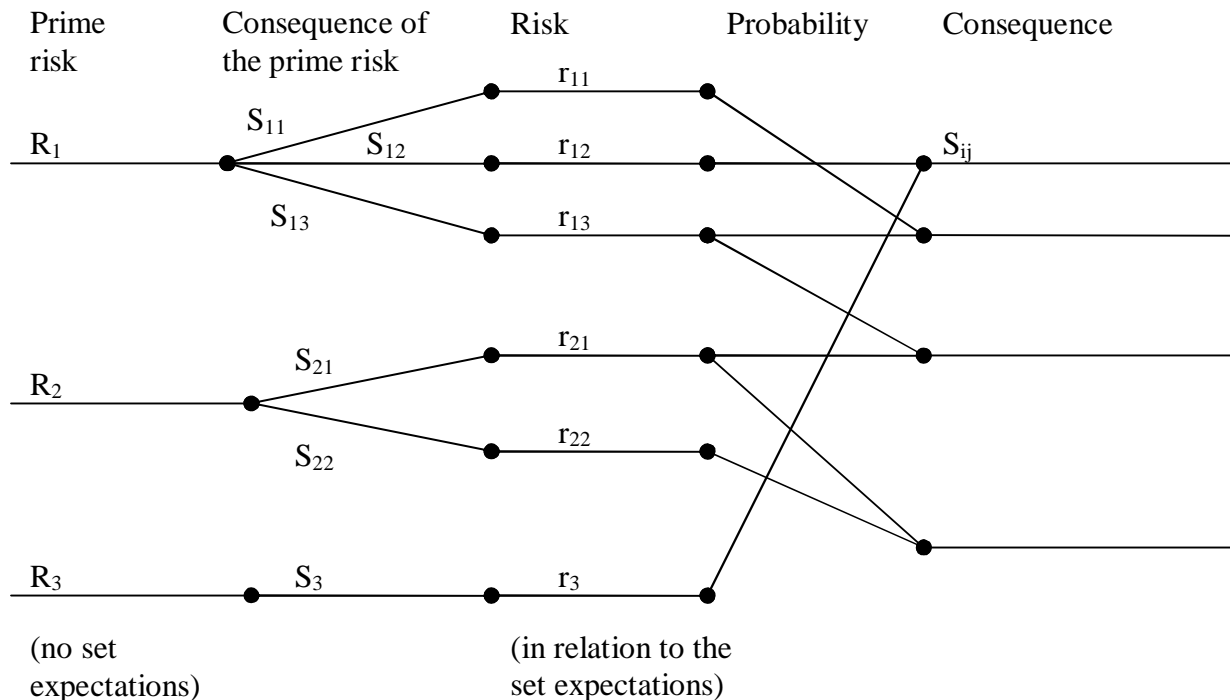
For the sake of order, risks are usually classified upon identification (e.g. Palojarvi 1986, Flanagan and Norman 1993). Risk types vary considerably and consequently RM strategies and responses do, too. **Diversified lists of situation-specific risks** are emphasized in the literature. Walewski and Gibson (2003) report on four major sections made up of 14 categories which are broken down into 82 risk elements in international projects. Cooper et al. (2005) suggest that organizations develop their own lists of risks. For example, Sun et al. (2008) report on a list of the identified safety risks of the construction of the Beijing Olympic venues. Zhang and Zou (2007) also provide a list of situation-specific risks within a context of Sino-foreign construction joint ventures. In principle, risk typologies are built on the basis of the two primary criteria of causes (sources) or consequences. **Risk typologies based on causes (sources)** support proactive RM approaches (Figure 3-4). Emerging requirements on the part of e.g. stock exchanges concerning corporate information on their management and business risks accelerate the adoption of cause-based typologies. Typically, risks are divided into **external and internal risks** (e.g. Loosemore 2000, Palojarvi 1986, Abrahamson 1984) or market and project risks or technical, organizational, and financial risks. Additional references on cause-based typologies include e.g. Leung et al. (1998), Baloi and Price (2003), and Li et al. (2005). Business or project objectives are coupled with external risks, such as political, social, and economic risks, which actors have no control over (e.g. Kurtzman and Yago 2007). In turn, **unforeseen risks** are not predictable, but possible.

**Risk typologies based on consequences** are defined along the dimensions of actors' performance, quality, time, cost, etc. Among unforeseen risks, **force majeure risks** occur **with overwhelming consequences** for the respective actors. Contractually, such risks are dealt with by specific clauses (see 3.7). In well-defined construction contracts, a force majeure event has to fulfill certain criteria, such as "overwhelming", "beyond a party's control", "it could not reasonably be... provided against", or "not substantially attributable to the other party" (FIDIC 2005).

The insurance coverage is payable by consequences (e.g. death), not by sources. It seems that the impact of the insurance- and other consequence-based approaches may undermine the importance of the identification of causes of risks. Moreover, if the preprepared risk registers or lists are used without going to the root causes of risks, the same might happen. Therefore it is here perceived that within the contextual construction project business, the **pre-prepared risk registers or lists are by no means exhaustive** and they can serve as check lists only.

**Appropriate risk identification** is mandatory for any consecutive proactive RM steps. Loosemore (2000) posits that the purpose of maintaining an alignment between a firm's organizational goals and performance cannot be achieved without the identification and reaction of events that may cause major deviations. Risk identification is built on predefined expectations. If expectations (e.g. objectives) are ill-defined, or entirely missing, it is neither possible to define whether they will be met or not, nor to identify a respective risk and to respond to it. In construction projects, objectives are usually set in terms of cost (and/or profit), time and quality (comprising scope and standard), embedded in contracts. Other objectives may be expressed e.g. in the form of building the corporate image, too. At the firm/business level, two-way approaches are more common. In many references, computer-aided models for risk identification and assessment are suggested to produce distributions for risky and uncertain parameters, e.g. cost and time schedules, or their consequences. Alternatively, sole reliance on human expert knowledge is advocated for typically one-of-a-kind decision situations where no statistical history is available. Among others, Gruneberg et al. (2007 p. 692) emphasize (in short) that buildings are too dissimilar for statistical RM methods, and state that, in turn, the inputs (e.g. supplying bricks, concrete or labor) could be scrutinized statistically.

The next figure (Figure 3-4) is to recall how the structure between the roots of the risk, the risk itself, and the consequences of the risk, was presented as the early state of this research (Palojarvi, 1986), to clarify the that-time common confusion on risks and their consequences, particularly prevailing among the practitioners.



#### EXAMPLE

##### Prime risk:

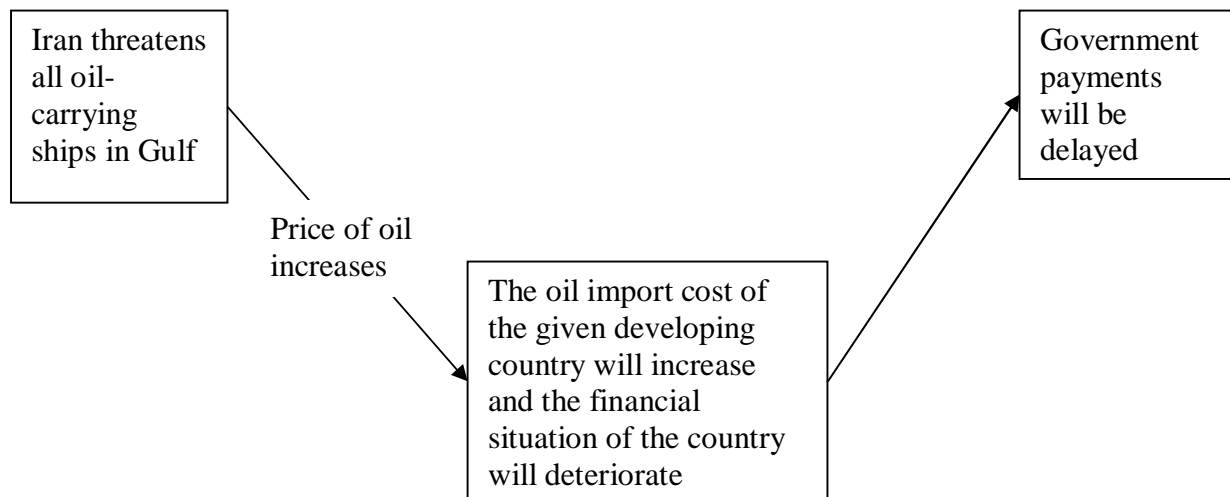


Figure 3-4. Prime event, risk, and consequence (Palojarvi 1986).

Here, it is perceived that – **instead of searching for theoretical statistical distributions of risk occurrence or their consequences** – **managers' attention and expert knowledge should be directed to proactive RM**, i.e. (a) competent risk identification, (b) RM strategy formulation, and (c) response action planning in order to manage major risks (e.g. Palojarvi et al. 2008c).



### 3.5.3 Converting uncertainty to risk management in international construction

**Each construction project is one of a kind. No prior history exists and future events are uncertain.** This uncertainty is amplified, i.e. a new project type or a new business environment results in a high degree of complexity. In order to convert uncertainty to competent RM, one has to identify risks and to assess the probabilities and impacts of such uncertain events and consequently to launch responsive measures. As a matter of fact, a more holistic view, i.e. combined uncertainty and risk management, exists in the literature. For example, the context of Langlo et al. (2007) is the Norwegian oil and gas industry. However, there are only a few applied concepts for the context of the construction industry (Ahonen 2007). Thus, **Lichtenberg's (2000) successive principle** is here perceived to be also applicable in the context of international construction. It is based on the proactiveness and iterative rounds of expert work for the identification of uncertainties, action planning, and the definition of unavoidable “minimum uncertainty” levels (Figure 3-5). The remaining uncertainty (e.g. for events not converted to risks) has to be managed as well.

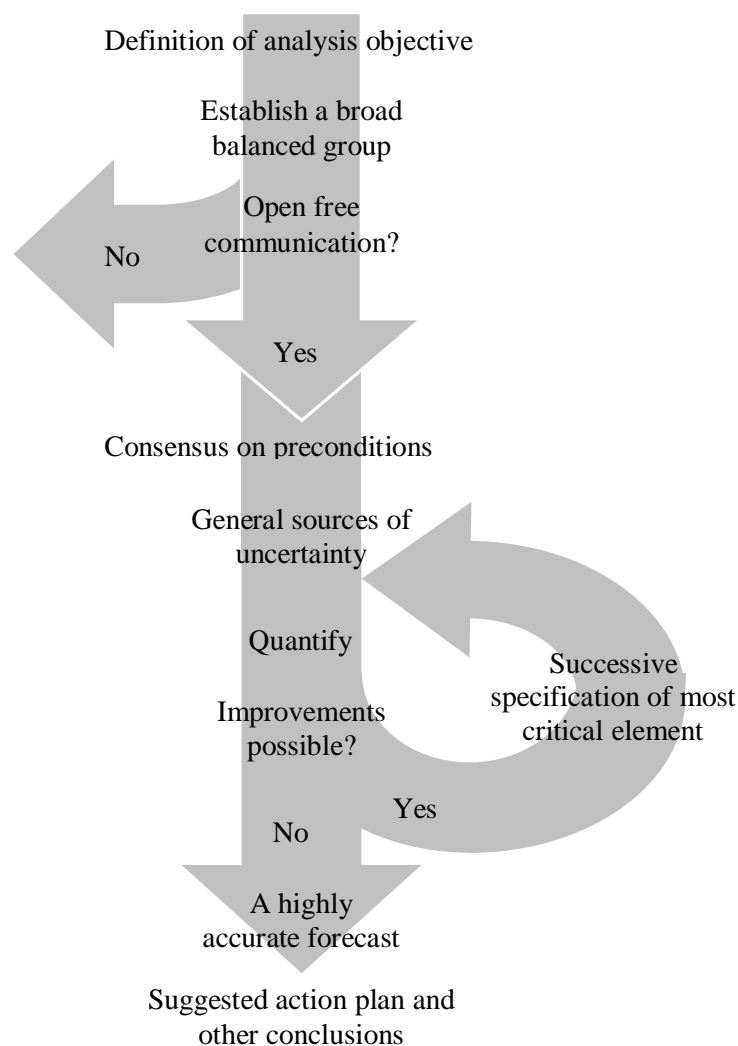


Figure 3-5. Successive principle (Lichtenberg 2000). Redone from the original one.

In this study, uncertainty management is not the focal issue. This is why uncertainty management is not elaborated further as part of this review. However, some additional observations of a broad nature are briefly made in Chapter 9.

### **3.5.4 Managing crisis as a consequence of a mismanaged risk and the Black Swan phenomenon in international construction**

Here, **crisis management is considered to be a special case of RM. In practice, a disaster as a consequence cannot be accepted** even in the case of a low probability of its occurrence. The researcher considers that **Loosemore's (2000) concept**, based on trust, open culture, and structural flexibility, is applicable for managing crises in international construction because it deals with the context of construction. Risks should be eliminated, e.g. by transferring them to other firms, or their consequences should be reduced to a tolerable level before any of them leads directly or via a crisis to a disaster. Competent risk identification is again the first action. Risk identification capacity may be a source of risk as well. Thus, this capacity should be enhanced among firms and other actors. Therein, an understanding of the Black Swan phenomenon may help. **A Black Swan is an event, such as a crisis, with respect to unpredictability and a huge impact.** Its signifying feature is that ex ante it seems to be less random and more predictable than ex post, i.e. how it turned out to be (e.g. Taleb 2007). It may be spotted outside the usual field of observation. Theoretically, however, the concept boils down to the issue of competent risk identification. Therein, a search for unique features, such as a Black Swan versus the rest of the flock, may help. "What is unusual?" is the question to be posed. Consequently, divergent opinions within an organization are such Black Swans to be watched. Without trust and an open culture, no divergence may emerge and be expressed in words inside organizations.

### **3.5.5 Managing complexity in international construction**

Herein, **complexity is considered to be a condition of a system or an action** rather than an intermediate step between uncertainty and risk. The greater the complexity of the system, the higher the related risk. No construction-related complexity management concepts could be identified from within the reviewed literature (Ahonen 2007; several article references in 3.3.). Thus, it is perceived that **Shenhar and Dvir's (2004) generic concept and Van der Velde and van Donk's (2002) notion** are also applicable in the context of international construction. The former is based on a number and variety of elements and their interconnections. The latter reminds us that the engineering of large industrial construction projects is a complex task because of the many co-operating actors. Van der Velde and van Donk (2002) suggest to owners "bi-project management", where engineering offices assume responsibility for the construction-related part, anticipate risks, and postpone the works to the last possible moment. This exemplifies complex networking as a success factor. Networking is also increasing in international construction. In turn, increased networking also leads to a higher degree of uncertainty and risk.

## **3.6 Relevance of managerial and cross-cultural competencies in international construction**

### **3.6.1 Contextual introduction to managers' competencies**

When Finnish construction firms and building product suppliers enter new international construction markets, they find that many conditions differ from those of their domestic market. Technologies and resources differ or they are applied in different ways. Knowledge (managerial competence) embedded in local environments varies from the local conditions in developing countries to those in industrialized countries. Besides, an entrant's capabilities to act in new conditions are usually weaker than those used in their domestic ones. In alignment with Ofori (2003), new business environments cause firms to encounter new "problems and peculiarities in

overseas conditions”. (We may note that what is “peculiar” for one focal actor may not be so for another.) Here, it is perceived that **local cultures differ, too, and such differences, often as prime sources, explain at least in part most difficulties that entrants meet in new international construction markets.**

In international construction, it is uncertain whether the managers assigned are competent to manage various e.g. cross-cultural issues. This uncertainty is converted to risks when managers are assigned to their tasks. **The issue of cross-cultural risk** boils down to the following questions. Are key managers competent to manage cross-cultural issues, e.g. “problems and peculiarities”? How can managerial competence be assessed? If the available competence does not match that required, how is this situation to be solved? A lack of cross-cultural competencies at the managerial level may jeopardize the attainment of a business growth goal (Palojarvi et al. 2008b).

### **3.6.2 Relevance of managerial competencies**

According to Sanchez et al. (1996b p. 8), **an organizational competence** is an ability to sustain the coordinated deployment of assets in a way that helps a firm achieve its goals. Management, when considered as a (part of a) competence, should be organizational and intentional, and its primary task is to attain goals (of a firm). **Competences are leveraged** e.g. by producing and marketing current products. In this, existing managerial competencies are necessary. However, the development and production of new kinds of products require **competence building** first. Overall, managerial components can be traced within many generic definitions suggested by e.g. van den Bosch and van Wijk (1998 p. 165), Langford and Male (2001 p. 206), Robinson et al. (2002 p. 212), and Huovinen (2003 pp. 195-202).

Jubb and Robotham (1997) posit that it is a myth that there is one precise and widely-accepted definition of competence. It seems that this is still the state of affairs today. Knowledge and values (or attitudes) are often mentioned as part of the content of competence. Knowledge alone is understood to be more passive than competence as if it meant “knowing but yet not doing”. Huovinen (2003, 2006) states that no research tradition exists concerning construction-related business management. With a reference to Beer (1985), Huovinen states that a competence consists of all the technology, embedded knowledge (which Haapalainen (2007) defines as representing e.g. products, prototypes, process technology, roles, routines, and rituals), capabilities, and resources needed for the attainment of a firm’s business goals.

In alignment with Sanchez et al. (1996b) and Huovinen (2003), it is here considered that **managerial competencies are a pivotal component of a firm’s competence that help a firm attain its goals.** Managerial competencies are considered to comprise both acquired knowledge on management issues and capabilities (or skills) to put that knowledge into use. The term “expertise” is later used as a synonym for a managerial competency in a given specific area or field.

### **3.6.3 Relevance of managers’ cross-cultural competencies in international construction**

Sanchez and Heene (1996 p. 48) refer to a need to identify and to build new organizational competencies in dynamic, uncertain competitive environments (managerial cognition). Kiiras and Huovinen (2005) specify that **a firm’s management-driven business competences** are embedded in management teams and individual managers, as well as in management systems and processes (applying Sanchez 2001b). Much individual knowledge must be shared with other members before joint and coordinated measures are taken. The competencies of individual managers refer to the

knowledge, skills, and values of individuals in order to perform management tasks. To enter successfully a new environment, where new cultures or disciplines will be encountered, a firm may have to build new cross-cultural or cross-disciplinary competences. For that, aligning with Kiiras and Huovinen (2005), the firm's management systems and processes are central **to implant the new knowledge (cross-cultural or cross-disciplinary)** into the internal knowledge base.

**The recent generic references on successes and failures in international business** address two main themes, **expatriate failures** and **an inability of headquarters' managers to appreciate the cultural challenges of doing business overseas** (e.g. Johnson et al. 2006 p. 525). Gratton and Erickson (2007 p. 103) discovered that the qualities required for success are the same ones that undermine success among more than 100 factors. Four general categories, i.e. executive support, HR practices, the strength of team leaders, and the structure of teams, support success. Among practices, it seems that key enablers become involved in particular task- and relationship-oriented leadership, as well as role clarity (task ambiguity). Olson and Olson (2000) state that cultural differences form the single biggest factor that affects global projects. Mäkilouko (2004) found that relationship-oriented project leaders (rather than task-oriented ones) may have a greater potential for success since they tend to be able to maintain multicultural team cohesion. The design of an organization can potentially be used to mitigate multicultural problems. Fisher and Ranasinghe (2000) stress that **people do not have competences independent of context**. Jubb and Robotham (1997) have stated that certain competences could be regarded as being situation-specific.

**In the context of international construction**, the Construction Industry Institute (1993) stresses future needs and points out some success factors, i.e. leadership, efficient resource allocation, innovation, and organizational effectiveness. Flanagan (1994) mentions speed in innovation and delivery, flexibility in a delivery mix, environmental consciousness, human resource development (HRD) and deployment, automation and information, joint ventures, alliances, and partnering, as well as financial engineering. Langford (2000) stresses the **importance of culture** in international construction projects. Fisher and Ranasinghe (2000) consider JVs as a cultural factor playing a role in uncertainty avoidance. In turn, success (and failure) factors have been investigated with many questionnaire-based studies on e.g. Korean or Turkish contractors in international contracts; e.g. Han et al. (2007) and Kim et al. (2008) emphasize a contractor's crucial ability to manage its functions. Mawhinney (2001) and Oz (2001) even suggest government measures as an important source of a firm's competitiveness. In particular, Ofori (2003) posits that an internationalizing contractor must possess certain prerequisites and that **managerial expertise is considered the most important factor** (for competitiveness) because of the peculiarities and problems of overseas projects. In the same vein, Flanagan (1994 p. 388) made an early call for flatter organizations that enable a firm to move quickly into new markets.

In alignment with Sanchez et al. (1996b), **a manager's cross-cultural competence is here defined as an ability to achieve a firm's goals by managing cross-cultural issues well**. "Cross-cultural" implies that at least two different patterns of human activity are present and active in focal events such as international business growth situations. **Cross-cultural encounters** involve a variety of presentations, negotiations, social gatherings, writing and reading documents, etc. In these, national, ethnic, religious, and moral values and other cross-cultural factors typically clash with each other. Similarly, differences in strong industrial cultures or technology patterns – which may simultaneously reflect a cultural background – often diverge as well. In turn, a multicultural issue is here seen as being more complex than an issue along only one cross-cultural dimension. Thus, collaboration is one of the success factors.

### 3.6.4 Insights into managing cross-cultural risks in international construction

Within the reviewed literature, no risk typology is suggested in the area of the related hypothesis on key managers' cross-cultural competencies. These risks have, however, been approached indirectly. For example, Keillor et al. (2003) point to the political behavior of firms. Nevertheless, there is **a risk that a key manager's competency to manage cross-cultural issues** and "peculiarities and problems" in international construction **is not adequate** and its consequences can be disastrous. When key managers cause real trouble, the underlying source of such a failure is often sheer ignorance of cross-cultural issues and consequently incompetence in managing them. Thus, **a set of insights into the necessary cross-cultural competencies are here synthesized**; they are based on the findings from within the literature and the author's (admittedly subjective) experiences in various international business environments (partly published in Palojarvi 1986).

The generic literature on international business stresses the importance of cultural issues at all levels of management. Unfortunately, the business-level competencies of managers have not been studied much in the contexts of international construction. Likewise, this limited review has brought up only some sketchy notes on how managers should perceive the requirements of international construction in the future. The lists of various success factors have been reported upon without stipulating the connections between those factors (e.g. a contractor's ability or a team's structure) and managers' competencies or other key management issues. However, the project-level competencies of managers and staff in international construction are covered more. Overall, **Ofori's (2003) rare view on necessary managerial expertise vis-à-vis managing overseas projects' cross-cultural problems and peculiarities** is acknowledged here.

No formal suggestions as to how to perceive, assess, or build cross-cultural competencies were found within the relevant literature. This state of the art reflects a lack of (analytical) management frameworks suitable for international construction. In the early 2000s, Ofori was able to summarize that there was no suitable framework for analyzing success in international construction. (Ofori 2003). Practicing managers must deal with various cross-cultural issues and the related risks along with the standard issues involved in general or project management. For the enhancement of the understanding of the required competencies, the author has compiled **an exemplary list of the typical problematic cross-cultural issues in international construction** (Palojarvi et al. 2009) as follows:

- (i) **Local indigenous cultures** have their own ways. In West Africa, the starting point could not be marked in its place for the measurement of the streets, the sewer lines, and the locations of 1200 residential dwellings. The main hindrance was that the Resident Engineer was hesitant to take the responsibility. After two weeks of hassling back and forth, the Project Manager decided to tramp down the mark with his big rubber boot and the surveyors started from there. The rest of the project went according to the plans.
- (ii) **Visible local statement projects** in order to demonstrate political ambitions, innovations, new technologies etc. are indicators of good intentions. In reality, many projects disturb local political ambitions. For example, an industrial dockyard in Vietnam, donated by Finland, was not suitable for the surrounding infrastructure. The dockyard turned out to be a big waste of the money, time, and efforts of the stakeholders.
- (iii) **Local corruption** of all magnitudes is a highly peculiar and local venture. For example, the Russian Military Village Program, funded by Germany, was coordinated well by the client parties and thus it did not get "out of hand". Many leading Finnish companies decided to stay out of the program and let the German main contractors deal with the projects.

However, one of the Finnish contractors, Haka, decided to obtain the huge advance payments. Despite this, Haka went bankrupt. Since then, an unsettled legal process has been ongoing. In some other regions, similar problems have been avoided by “sponsorship”. In the Middle East, foreign entrants are required to enter relationships with local, high-level sponsors.

- (iv) **Local national frictions** may affect organizational structures. In an acquisition and merger project in the Benelux countries, it turned out that it was not advisable to place a Dutch manager and a Belgian one on top of each other in the organizational scheme despite the fact that they spoke similar languages, Dutch and Flemish. In Nigeria, two sewerage systems must be built separately for Moslem residents and Christian ones, even in the same building. In South America, the Argentines were angry at a modern pulp plant being built in Uruguay instead of on the Argentinean side of the border. On many similar occasions, Finns have been effective intermediaries in mitigating frictions, provided that they have understood local peculiarities deeply enough.
- (v) **The choice of and reliability on a local partner** may be right – or wrong – when it comes to winning orders, obtaining approvals and permits, or seeking political acceptance.
- (vi) **Expatriates** are often in a weak position in many countries. Employed by foreign firms, expatriates negotiate on issues of vital interest with e.g. local JV partners. Local stakeholders control many critical issues, e.g. work permits in their native environments.
- (vii) **Local currencies** may cause considerable risk. In Kenya, the Finnish contractor made a significant gain on the local Shilling, because it had contracted a large part of the contract sum to be payable in Swiss Francs.
- (viii) **Local geology, climate, and other natural conditions** often differ from the domestic conditions of foreign entrants. Such differences in construction cultures involve potential risks. Entrants need to learn such differences in order to perform professionally.

It is here perceived that firms inevitably face unexpected cultural behaviors on the part of local actors when firms assume new roles in international construction business or enter new environments. **Proper “cross-cultural homework”** allows for the early anticipation of such risky behavior. Homework may lead to building new competencies for each new culture. Firms and their decision makers can ensure a sound basis for cross-cultural RM **by relying on human expert advice. It is a task of human experts to formally assess the required and available competencies** vis-à-vis managing cross-cultural issues as part of each managerial job or position. In turn, competent experts are selected on the basis of their proven record of mastering this focal area. Graphic tools and descriptions are widely used for cross-cultural competency assessments (see sub-chapters 4.7 and 6.5).

### **3.7 Managing contractual risks in international construction**

#### **3.7.1 Contextual introduction to contractual risks**

Although no generally accepted contextual theory was found on “what is the most important success (or failure) factor, the **culture-related issues seem to be highest ranking** (e.g. Johnson et al, 2006; Olson and Olson, 2000; Langford, 2000; Fisher and Ranasinghe, 2000). The **contractual issues seem** often to appear as **the next frequent one**, within the reviewed literature and in construction contexts, too.

As to the uncertainty and risk, typically, Onishi et al. (2002) advocate that a contract should contain agreements as to how to deal with expected incidents which may or may not occur. Besides a contract document, there are a number of other contractually specified documents and formal activities (attached to a contract or not) to be complied with. These complementary documents include e.g. general and business-specific conditions, concurrent knowledge of general and local business practices, and relevant laws and bye-laws. **“Contractual arrangements” is used later to refer to contractual structure, partners, and documents, as well as contract management.**

The management of a contract is primarily **an owner’s tool** to ensure that his contractually defined and documented objectives are met. In return, he is ready to take care of payments and to meet his other obligations. In the context of Finland, state-of-the-art contract management includes an owner’s choice of a valid structure for a contract and its attachments, the selection of competent consultants, contractors, and suppliers, and the conduct of efficient supervision and control measures (Kiiras 2005). In many countries, traditional main contract forms are still widely used. In these, many owners find that the supervision of a main contractor (or a main supplier) is enough to ensure that their contractual objectives will be attained satisfactorily.

The behaviors of the parties include uncertainty and they are a source of contractual risk in project-specific contracts (Onishi et al. 2002). Thus, it is here posited that **contractual risk is a possibility that a party’s actual behavior will differ from the contractually specified expectation – i.e. what a focal actor (e.g. an owner) expects.**

### **3.7.2 Key approaches to managing contractual risks in international construction**

Within the reviewed literature, no risk typology is suggested in the area of the related hypothesis on key managers’ contractual competencies. These risks have, however, been approached indirectly. For example, Brouthers and Brouthers (1998) posit that for firms investing in entering Central and Eastern Europe, both culture risk and contractual risk have only a minimal influence. The reviewed articles on the approaches of managing contractual risks in international projects address the competent management of changes and contingencies, risk-sharing, preferred contract forms, the avoidance of claims and disputes, public procurement improvements etc. (Evälahti 2008). **The four key approaches** to managing contractual risks include: (i) relational contracting (RC); (ii) partnering/alliancing; (iii) specific ways in evolving country-specific contexts, and (iv) owners’ alternative contract strategies and procurement strategies (see Table 3-4).

In the mid-1980s, Palojarvi (1986) stated that **effective, contract-based RM** is based on: (a) the equilibrium of the benefits of the parties, (b) the mutual application and offer of incentives to other parties, and (c) the specification and adjustment of contract documents. More recently, Turner (2002) warns us that, within win-lose games, clients negotiate hard to achieve the lowest possible prices from vendors. He prefers correct ways in which owners assemble resources and motivate them to achieve the owners’ own objectives. Shumway et al. (2004) put it more bluntly, i.e. the biggest risks that contractors face today may have nothing to do with timely or efficient performance but with terms and clauses in prime contracts.

According to **“best-for-project” approaches**, critical competencies are mobilized for successful performance. Contractual parties should look for win-win situations rather than each party seeking only his own interest at the expense of others. For example, Rahman and Kumaraswamy (2002) propose co-operative relationships and even “joint RM” in the contexts of Hong Kong and the rest of China. Humphreys et al. (2003) mention the vital prerequisites of alliances, i.e. trust and common

goals, as well as understanding each other's expectations and values in the UK context. Sakal (2005) suggests project alliancing for services that are difficult to define or that have a scope likely to be changed in the context of heavy civil engineering in Australia. Cost savings or over-runs are shared among all the project parties. Rowlinson et al. (2006) are crystal clear in connecting the advantages of project alliances to proactive RM, i.e. parties openly expose "hidden" risks, as well as sharing all outcomes and risks in the context of Australia. In addition, many authors mention the issue of incentives in order to streamline the objectives of the contractual parties. Therein, changes and variations are seen as the structural sources of eventual disputes.

The Institution of Civil Engineers and the Actuarial Profession (2005 p. 62) posit that **the interests of parties should be defined by contractual arrangements which also take full account of residual risks**, i.e. those risks that remain after response measures have been taken. Responsibilities for each of these risk events, should they occur, should be clearly defined. Under the term "risk", the General Conditions for Construction Works of FIDIC (2005: 17.3 and 17.4) define only a list, from a to h, of Employer's risks and their consequences, which call for actions such as "Contractor shall promptly give notice ..." and "... rectify this loss to the extent required by Engineer." The contractor is entitled to an extension of time or to a payment of cost and, in certain cases, a profit on cost as well. Losses and damages on works and a contractor's equipment and resulting from causes not listed in FIDIC (2005: 17.3) must be insured (18.2.) subject to some further qualifications.

Onishi et al. (2002) compare the General Conditions of Construction Works of FIDIC and those used in Japan. Both of them connect uncertainty to contractual risk. Hart (1995) states that it is impossible to draft a contract in large-scale projects with much uncertainty. On the other hand, Kobayashi et al. (2001) complement this by saying that such contracts cannot help being incomplete, i.e. contracts with much uncertainty are bound to be incomplete, whether we like it or not. Instead of specific responses for all contingencies, Onishi et al. (2002) refer to **incomplete contracts** that provide rules to cope with contingencies, e.g. a risk-sharing rule. Consequently, they refer to FIDIC's contract forms as a typical example of incomplete contract forms and advocate that the optimal design of a contract prevents endogenous (i.e. internal or project-related) risks. Further, Onishi et al. (2002) define **the peril of internal contractual risk as being inherent in the behaviors of the contract parties**. These parties may identify a risk that some party will not behave as expected and as contractually specified. In turn, Posner and Rosenfield (1977) argue that **the sharing of external (or exogenous) risks** in contract law boils down to which party would bear a loss if they could have foreseen that contingency.

### **3.7.3 Insights into managing contractual risks in international construction**

In the reviewed literature, international construction is frequently coupled with **a high degree of complexity. The main idea of viable risk management has traditionally been to shift each risk to that contractual party who is the one most capable of managing it** (Gruneberg et al. 2007). **Contracts need to be able to respond to unforeseen circumstances** (Turner 2002). The key issue is the sharing of the consequences of more or less unforeseeable risk events, especially when the outcomes of those events are vaguely determined (FIDIC 2005: 17.3). Parties should be able to trust that various **unforeseeable events causing risk should, when occurring, be dealt with in a fair and reasonable manner**. In this way, bid prices and bidding costs could be optimized, as well as bonds and guarantees being kept at a reasonable level. Contractors and suppliers should not need to cover their bids unnecessarily or prepare for long, expensive court cases resulting from the unpredictable settlements of lower courts.



FIDIC has had, due to the strong position of English language in international construction, a considerable impact on nation- or industry-borne **general conditions of contracts of construction works** published nationally or internationally. FIDIC's (2005) chain of action goes as follows. A contractor identifies an unforeseen risk and gives notification of this, an engineer requires the rectification of damage and loss, the contractor takes the respective measures, and the engineer determines the extension of the schedule and the payment of the cost. This procedure serves well the parties' aim of limiting and possibly minimizing the consequences of a risk that occurs. However, there are a number of events outside the parties' control and with a great potential impact on parties' objectives that are not taken into account in these general conditions of contracts. For example, cost escalation and changes in market demand and supply are usually not considered as the employer's risk. In particular, force majeure risks are contractually dealt with by specific clauses resulting from overwhelming consequences. Such rare events may be an extreme case where the behavior of a party could inflict major or even disastrous consequences. If a contractual arrangement is not clear upon how to share this risk, then a prudent actor will certainly cover its bid with some contractual measure.

Overall, it is here perceived that **a clear contractual structure with aligned objectives and balanced interests between parties allows for mobilizing combined expertise to manage risks (also inherent in unforeseeable events) proactively.** Early risk identification, balanced risk-sharing, and proactive response measures result in joint benefits. **A win-win-win approach** may turn out to be highly effective when dealing with unforeseen change and variation situations, including force majeure events. A balance of interests should belong to each party's management strategy for contractual risk. Owners (clients) should act as key enabling parties. A balance of interests is the key to success inside and across all cultures. The interest alignment motivates towards the "best-for-project" approach. Contractors and other suppliers can also place their trust in fair contractual arrangements in the case of unforeseeable events. Contract prices are optimized. Contractors and suppliers may even share their special expertise with owners for joint benefits. Indeed, **the expertise of the parties to the contract should be combined, mobilized, and exploited earlier for better performance** rather than relying only on in-house or hired expertise mobilized by an owner. Various concepts, e.g. relational contracting, many sorts of partnerships, alliances, joint risk management (JRM) concepts etc. are readily suggested in the recent literature.

However, **the enhancement of public sectors and owners** requires extra care across the construction globe. There, the combination of the expertise of public and private parties may result in cooperation that is too close. If abused, this development disturbs healthy competition and particularly procurement. Typically, the European Union's (EU) competition rules on public procurement may hinder any elaborate discussions between public clients, contractors, and suppliers, even if their common aim is "the best for the project". At a minimum, public clients may continue to nurture in-house experts and to rely on truly independent consultants. It is not clear how to incorporate these principles of proactive, contractual RM into the international construction industry without disturbing competition rules.

For the enhancement of an understanding of the required competencies, the author has compiled **an exemplary list of the typical problematic contractual situations faced by Finnish firms.** This list is extracted from recent seminar proceedings (Brax 2005), issues of the key Finnish weekly magazines, and the author's licentiate thesis (Palojarvi 1986). The situations are well known to Finnish stakeholders. In these situations, the behavior of one main party has not been as expected by the other one(s). Contractual risks have occurred and their consequences may have been very painful, as follows.

- (i) **Iraq/Diyala Bridge.** Floods – unforeseen by Finnish contractors in the 1960s – destroyed the bridge twice during the subsequent winters. The Iraqi Government (the client) refused to pay for the damages, considering the floods were foreseeable, although they were “unexpected” to the Finns (at least that is what they claimed). After contractual negotiations over 10 years, the client finally paid for the bridge once, the insurance company once, and the Finnish contractors once (Brax 2005).
- (ii) **Nigeria, the housing development business.** The federal government became insolvent, despite its high oil income, at the end of the 1970s. This was a surprise to the Finnish contractors. Many large negotiated construction contracts were stopped as a result of an unexpected lack of payments. In the case of Finn-Niger Ltd, the shareholders (Lemminkäinen and Ruola) were able to limit their losses, in part because their contractual bonds were submitted by the local insurance firm without any counter-guarantees (Palojarvi 1986).
- (iii) **Iraq, Conference Palace.** A Finnish consortium signed a turnkey contract in the 1980s with the Iraqi government, which unexpectedly demanded during the contract period a much larger building than had been foreseen during the contract negotiations. The client’s contractual behavior was partly based on the contract’s turnkey clause and the overall quality specification of “best available” in the Conditions. The burdensome negotiations resulted in a very heavy financial loss to the Finnish consortium (Brax 2005).
- (iv) **Iran, the complex for the Shah’s life guards.** The Finnish consortium IRCO had entered this contract when the Shah was unexpectedly removed and the mullahs took power in the 1979. IRCO abandoned the site and argued that it was no longer possible to continue the work. The unconditional performance bond, submitted by IRCO in favor of the Iranian Government, was called upon by the new Iranian Government. Under the international banking rules, the respective Finnish banks had to honor that demand. However, a local court in Finland stopped the transfer of the funds, which it found contractually inappropriate (Brax 2005). Different behaviors can be explained by different contractual cultures.
- (v) **Russia, Sertolovo project.** Haka, the Finnish building contractor, went bankrupt just before the single largest project of the Military Village Program was to start in the year 1994, against the client’s expectations. For Partek, the technology contractor of the same German client (GWU), Haka’s bankruptcy caused no contractual problem because Partek had no contract with Haka. This contractual arrangement with the German client in Russia was a better solution for Partek in comparison to the assignment of a direct contract with the big, old Finnish client in a very complex mega-project. It was an efficient response measure against the unexpected bankruptcy of Haka, which could have been the source of a catastrophic risk for the project and its main parties (Brax 2005).
- (vi) **Finland, wooden systems business.** Finnforest’s contractual role in the residential building business was enlarged at the turn of 2004-2005 from the originally planned and communicated “supply and erection of building elements” to the much more demanding role and business culture of a residential building developer. This unexpected change in the contractual behavior was beyond the acceptable role of the company belonging to the Finnish wooden product industry. This new role was soon reversed by the owners (Rakennuslehti 2005).
- (vii) **Finland, Olkiluoto nuclear power plant.** It seems that the problems of this project are in part caused by the cross-cultural situation between the French turnkey contractor, its Finnish client, and the local construction industry. It remains to be seen how the parties will settle

this highly problematic contractual arrangement and in particular the mutual disputes on the serious delay of the completion and the huge cost over-run (e.g. Kauppalehti 17.10.2008).

**During the implementation of the seven cases above**, one main party's behavior – e.g. the client's starting position of not paying for the changes and/or variations or the supplier's refusal to pay for the delay and/or damages – was not acceptable to the other party when foreseen or unforeseen difficulties materialized. In addition, the change of the traditional role of the product supplier to that of a housing developer was not as smooth as the top management expected. The amicable solving of the disputes depend(ed) on the respective contractual arrangements and, indirectly, on the parties' negotiating power and skills. **In several other cases**, the contractual arrangements have rendered contractors and suppliers additional profits without any particular disputes. Currency clauses, basic cost indexes, and daily work schedules have often turned out to be generous sources of additional profits for Finland-based contractors and suppliers.

To give some additional insights into the contractual arrangements in the case of **international mergers, acquisitions, market entries, and joint ventures**, some problematic samples are drawn on here to exemplify eventual surprises as well (Palojarvi, 1992).

- (viii) In mergers, the future obligations of the buyer and those of the seller were specified unclearly, and the post-merger activities were hampered by the poor transfer of the duties between the two organizations, as well as discontinuities of some vital measures and interruptions of communication taking place. The price mechanism was determined vaguely. On the other hand, well-aligned and mutually set objectives encouraged the selling and buying parties to maximize the performance of the traded company or business, resulting in a great success.
- (ix) Market entry projects through joint ventures with local partners suffered as a result of a misunderstanding of the partner's local culture in general and the contractual culture in particular. This led to misinterpretations of the parties' intentions and actual behavior on the given vital business issues.

Finally, it is here perceived that firms inevitably face unexpected behaviors on the part of contract parties when firms assume new roles in international construction business or enter new environments. **A proper “contractual homework”** allows for the early anticipation of such risky behavior. Homework may lead to the building of new competencies before each new venture. Firms and their decision makers can ensure a sound basis for proactive contractual RM **by relying on contractual expert advice. It is a task of contractual experts to formally assess the required and available competencies** vis-à-vis managing contractual arrangements as part of each managerial job or position. Various graphic tools and descriptions can be used for contractual competency assessments (see sub-chapters 4.7 and 6.5).

## **4. SELECTION AND CONDUCT OF THE COMBINED INSIDER ACTION RESEARCH AND CASE-BASED STUDY**

### **4.1 Why these cases?**

The theoretical thinking behind an effective RM approach is rooted in the two-level, embedded case-based findings of the author's licentiate thesis (Palojarvi 1986). Since the mid-1980s, the author has collected authentic documents on major international business growth projects as an insider action researcher for the examination of the hypotheses. The grounds for the case studies were found in Yin (2003b) and Eisenhardt (1989). The grounds for the insider action research were found in Alvesson (2003) and Eden and Huxham (2006). At the same time, the alternative qualitative and quantitative research methods were assessed to be non-valid (see Chapter 2).

**The nine cases were selected to be included in this study on the basis of the following six criteria :** (i) The licentiate thesis indicated export management competencies and the contractual balance as potential sources of major risks (Palojarvi 1986). Thereafter, the prequalification of the relevant cases was based on the existence of these two issues. (ii) The selection of the business-level cases and the related project-level cases (e.g. Group 1 contains one business case and three related project cases; see sub-chapter 4.2) implied the use of a longitudinal research approach. This enables one of the hypotheses to be examined, i.e. whether proven project RM methods can also be applied reliably at the business level and, thus, whether the effectiveness (defined herein as the ability to (i) clarify the set goals, (ii) identify at least most of the major risks, and (iii) launch viable response) of managing major international business risks can be improved within the focal context, or whether combined RM is more efficient with coordinated execution at the two levels of management. Within the reviewed literature, no similar longitudinal case frame could be identified. (iii) The selected cases were pioneering ventures or the means by which the focal firm sought to achieve growth within targeted markets in South-East Asia, Western Europe, Russia, and even more globally. Therefore, the shortcomings within the key managers' cross-cultural competencies and the eventual building of the new competences can now be reported. Similarly, selections of the focal actor's contractual roles and the consequent contractual arrangements for managing the complexities can be extracted and assessed. (iv) It was possible to document these cases well, including the decisions made as part of 'business as usual' management. Thus, it is possible to map and report on the actual business objectives, the relevant management decisions, and their outcomes against each of the two hypotheses. (v) The most typical risky situations of international growth needed to be covered. Such situations include market entries in terms of new establishments or acquisitions, market expansions through acquisitions and capacity investments, large and complex project deliveries, and implementing new business concepts in foreign markets. (vi) The targeted varieties could be reached with these nine cases in terms of times of occurrence, sizes, and outcomes. In particular, the latter varied from crisis (and eventual disaster) to great success, thus providing more evidence for the cross-case analysis.

The "international" aspect appears in all the cases except one. Case 9 was built in Finland. However, it qualified for the group, (i) because it was contractually extremely challenging, and (ii) because the old culture of a giant bulk building product supplier and the targeted culture of a sophisticated developer were intersecting with each other in very complex conditions. Besides, one of the business-level objectives was to apply the new concept to operating in foreign markets and, thus, to grow internationally.

Finally, the author decided not to use routine cases or ordinary ones which did not contain the element of a change within a cross-culturally and contractually challenging business environment and/or a similar situation. Potential cases were also excluded when the author did not have the opportunity already to be involved from the business level onwards. Therefore, **the majority of the projects with the author's active involvement did not qualify** for the selected group although they were also documented in the same satisfactory way as the qualified ones. The strategy documentation and the minutes of the meetings of the management boards and teams also deal with all projects of some importance. Of course, the pioneering growth projects were followed up with keener interest than the routine ones.

## **4.2 Arrangement of the nine cases into four groups**

Each of the nine cases occupies a relevant place in the main phases of the internationalization process of the Finnish construction industry from the 1970s until the year 2006 (see sub-chapter 1.1). The nine cases were selected in such a way as to **form four groups**, understandably inside the four corporations, as follows (Figure 4-1):

Group 0 Five pioneering construction projects of Lemminkäinen in Nigeria, Iraq, Liberia, and Kenya (based on Palojarvi, 1986 ; "0" stands for the embryonic state of RM in the case)

Case 1. The summary of the findings of the five projects

1. Satellite town, Lagos, Nigeria, 1976-1978
2. Dorah civil infrastructure & foundations, Baghdad, Iraq, 1976-1980
3. Matadi civil and electrical works, Monrovia, Liberia, 1977-1980
4. Mau-Kisumu road works, Kenya, 1980-1984
5. Underwater foundations for the Mano River railway bridge, Liberia, 1982-1984

Group 1 Growth of Partek's precast concrete business in South East Asia and Western Europe

Case 2. International growth business in SE Asia and W. Europe, 1984-1991

Case 3. Joint venture project, Eastern Partek, Singapore, 1984-1987

Case 4. Acquisition project, CBR's business, Benelux countries, 1987-1990

Case 5. Acquisition project, VBI companies, the Netherlands and Germany, 1989-1992

Group 2 Merger, restructuring, and growth project of Partek Concrete Engineering

Case 6. Restructuring of technology contracting business, Partek Concrete Engineering, 1992-1995

Case 7. Delivery of the precast product plant financed by Germany, Sertolovo, Russia, 1991-1995

Group 3 "Adding value to wood products" growth strategy and signature project of Finnforest

Case 8. International wood product-based growth business of Finnforest, 2000-2005

Case 9. Development of Finnforest modular office, Tapiola, Finland, 2002-2005.

This enabled the hypothesis to be examined, i.e. proven project RM methods can also be applied reliably at the business level and, thus, the effectiveness (defined here as the ability to (i) clarify the goals, (ii) identify at least most of the major risks, and (iii) launch a viable response) of managing major international business risks can be improved within the focal context (Figure 4-1). Preceding the three later groups, **Group 0 (Case 1)** is a summary of the licentiate thesis containing short descriptions of Lemminkäinen's five sub-cases that occurred between the years 1974 and 1984. This contractor's RM was still in its embryonic phase, particularly during the first three sub-cases.

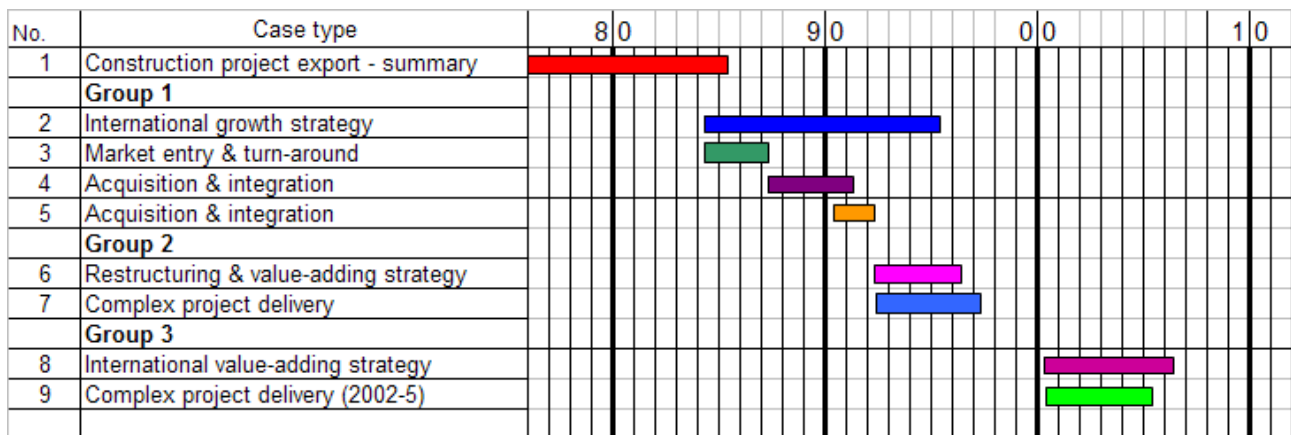


Figure 4-1. Timeline schedule of the real-life business-level and project-level cases Nos. 1-9 between the years 1974 and 2005.

Thereafter, each of the longitudinal **GROUPS 1-3** consists of one business-level case with its internationalization strategy (i.e. Unit of analysis 1, according to Yin 2003 p. 40) and embedded within it one or three project-level cases, such as market entry or the delivery of the project (Unit of analysis 2). **GROUP 1** contains: **Case 2:** International growth of Partek's precast concrete business in SE Asia and Western Europe between the years 1984 and 1991; **Case 3:** Eastern Partek's market entry and turnaround project; **Case 4:** CBR, and **Case 5:** VBI as acquisition and integration projects. **GROUP 2** contains: **Case 6:** Partek Concrete Engineering's (PCE) start-up during the years 1992-1995 and **Case 7:** the PCE Sertolovo project. **GROUP 3** contains **Case 8:** Metsäliitto/Finnforest's value-adding strategy and **Case 9:** the FMO Tapiola office building project.

### 4.3 Reporting on the key issues of risk management within the nine cases

#### 4.3.1 Risk management practices

The RM practices within the nine cases are here previewed as follows. The formal corporate-level RM function was assigned to deal only with insurable risks and it did not have much to do with lower-level RM. Thus, RM was one of the duties of the business management and project management, respectively. Therefore, a study has been performed of **how the RM process elements** – setting goals and identifying and assessing risks, as well as responding to them – **were conducted in the cases.**

During the 1970s and the early 1980s, **the project management of Cases 1-3** dealt with identified risks that could have prevented the achievement of project-specific objectives. The RM actions were usually launched at the same time as the project as a whole without any proactiveness (Palojarvi 1986). From the mid-1980s onwards, **the respective management related to Cases 4-9** launched the RM process at the business level well before the implementation of each of the projects. This method gave the focal actors more options to play with, e.g. risk avoidance and mitigation, as well as dealing with consequences early. Besides, the major risks inherent in the key managers' competencies, if identified, had to be dealt with before the project implementation because the option of replacing eventually incompetent manager(s) was painful and often this resulted in no actual improvement.

As a rule, **the following six tasks were pre-guided** to be performed during each RM process: (i) to acquire a relevant foresight regarding an actor's mission; (ii) to confirm business objectives as

clearly as possible; (iii) to identify major risks in terms of asking what can cause a deviation from business objectives; (iv) to assess the consequences of major risks; (v) to plan and launch an efficient response, and (vi) to follow up and repeat the entire process (usually in principle only; the repetition of the process was rarely actually implemented). In reality, the four last tasks (iii-vi) were commonly carried out. On the other hand, the first two tasks (i-ii) were not usually connected to the RM process, which was primarily designed for the project level (see e.g. Flanagan and Norman 1993).

#### **4.3.2 Setting of the business objectives**

Peter Drucker (1954) published **the concept of management by objectives** as early as in the mid-1950s. Among others, Steiner (1969) designed more detailed versions for practicing managers. This thinking was also easily adopted among the leading Finnish firms (e.g. Lemminkäinen) in their domestic construction business and exports in the 1960s. Traditionally, at least cost and time objectives had been used at the project level. Over the decades, many applications (e.g. Voutilainen et al. 1987) became standard in Finland. Typical objectives in construction and product business growth and/or change projects are quantitative e.g. financial, market share, or volume objectives. Complementary objectives are operational (e.g. a capacity of...), functional (e.g. control procedures are completed, a contract is signed, and a management system is established), or even qualitative (e.g. a cross-cultural management team is in operation).

Palojarvi (1986) treated “objective” and “expectation” as synonyms when defining risk. It was applicable as the founding step to prompt the RM process. Applicable business objectives had only one mandatory feature, i.e. to be clear enough to allow the identification. This enabled aim attainment to be assessed, too. **In Case 1**, the objectives may have been set with or without some trigger events being identified as the roots of the risky events with their consequences. **In all of Cases 2-9**, the business objectives were adequately set as the concept of management by objectives was already standard within the big Finnish companies. The objectives contained the basic element of money added with or without other objectives. The corporate risk-taking was to cover the possibility of coming out with an outright business or project loss. The corporate or business level was expected to withstand even the worst estimated loss of a given project. The negative examples (e.g. the Conference Palace in Baghdad) and the similar literature findings (e.g. Busch 2006) both confirm that the corporate or business-level management had beliefs that were too optimistic.

#### **4.3.3 Focusing on the major risks**

The construction-related references overwhelmingly favor the thinking of “consider negative consequences only”. One early deviation from the mainstream, however, is Lifson and Scheifer’s (1982) view on the two-way approach. Still, the culture of the practitioners has generally been to avoid severe negative consequences and to ignore eventual positive consequences. Thus, attention has been given to major risks with negative consequences.

In each of the nine cases, **a major risk** has been identified as one which can, independently of other risks, prevent the focal actor from attaining the set goals. The value (a probability x a consequence) of a major risk is high. Some very big and negative consequences even caused disastrous damage in relation to the objectives. Force majeure events were taken into preliminary consideration particularly by the contractors (Cases 1, 7, and 9) but also in one acquisition case (Case 5). Positive consequences were usually not accounted for within the cases, which corresponds to the standard attitude in construction at that time.

**In the developing countries**, the Finnish actors recognized many major risks, such as sudden unfavorable political or economic change, catastrophic weather conditions, and claims of corruption. Several times those risks occurred and escalated into crises. Major risks also emerged from among the expatriate personnel and the contractual arrangements. On the other hand, no technical risks turned out to be major ones (e.g. Palojarvi, 1986). A worst case scenario, i.e. the risk of losing all the invested capital, was considered in all the cases within the developing countries. Usually, the possibility of that loss was limited to a given maximum (although this was sometimes defined sporadically).

**In the industrialized countries**, economic development and the acceptance of the offering (e.g. technology) were considered the major risks. On the other hand, political developments were not among the major risks. In turn, the managers' competencies were identified as the success factor and analyzed by the specialists. Such analyses were used as additional information to screen unfit candidates out rather than to select the best one. The selection of the key managers was the task of the higher-level management, with or without their own direct experience of the respective environment.

#### **4.3.4 Identification and documentation of the major risks**

**The major project risks** – also called as threats - were identified and documented by the management teams and/or boards. The managers listed the risks as they felt appropriate on the basis of their own experience and the advice of experts. The planning of the responses, the launching, and the follow-up were the standard management measures. Only a little time, if any, was used to go systematically through the pre-prepared risk registers. The risk typologies and the classification of the identified risks were applied to various extents. When the actors could influence the major risks, they also addressed and monitored such risks actively. The other risks were monitored and responded to, too, but not as keenly as the major risks.

**The broad risk typology** consisted of two types: (i) external, e.g. political or macro-economic risks outside an actor's control, and (ii) internal risks within an actor's control. Unforeseen risks (e.g. weather, revolution, or currency depreciation) were classified into both types. No force majeure events (e.g. overwhelming weather conditions, material quality on site, or striking labor at the factory) occurred within the cases that were studied. However, many such events were identified and at least the appropriate prevailing legislation and/or the contractual clauses were adopted as well as possible. This fact further stresses the fact that the risk must always be considered from the respective actor's point of view.

#### **4.3.5 Risk assessment and response measures**

Quantitative computerized techniques were not used for the RM measures per se. Only in the most recent cases, Cases 8-9, were computerized databases used to build up the knowledge base, to compare the design and/or implementation alternatives. In all the nine cases, the identified risks were responded to in various ways, depending on their assessed impacts. **No disasters** could be tolerated in any circumstances, regardless of the probability. Each such risk and its catastrophic consequences were avoided, reduced enough, or transferred. **The use of human expertise** was the only practical way to identify the possibility of these disastrous consequences of the risks (via crises or directly) and to plan appropriate counter-measures (Palojarvi et al. 2008c). **The other major risks**, with less severe consequences, were also managed by measures that were selected by experts. The early measures included dealing with the risky events or their triggers by reducing the



probabilities of the risks. Later, the same or new experts suggested additional response measures. In the case of conflicting expert advice, ordinary managerial expertise was relied upon when selecting the most appropriate measure(s).

**Some of the planned response measures were launched earlier than the project implementation activities.** These included e.g. the gathering of vital intelligence, the building-up of personal contacts, insurance, re-designs, changes in the implementation techniques, the ensuring of motivation, and the development of new competences in the form of recruiting, educating, and training new key managers and staff. Some measures were a part of the business or project development, while some were launched as part of project planning, an investment decision, the preparation of tenders and contracts, or at certain moments of the physical implementation of the project. **A fairly large number of ad hoc measures** were also launched as a result of unidentified risks, i.e. these risks were not responded to until they occurred. Some planned measures related to the perceived consequences were never launched because the preceding risks never materialized.

The early response measures were mostly efficient. **Expert evaluations** on the proper execution of the planned response measures were not made systematically. **Some identified risks matured very slowly**, i.e. although the direction of the general political or economical development within the business environment was correctly identified the pace yet was slow and did not really result into major risk within the relatively short 1-3-year time schedules of the projects (e.g. Overholt, 1982). There are many examples of relatively slow-maturing and well-identified risks which did not materialize within the foreseeable project span or even the business span. E.g. risks of “creeping” socialism, European regulations on standardization, the impact of European integration on economic growth, German unification, Russia’s decision to take control of its important natural resources, the Russian export duty on logs, the availability of skilled labor, and climate change increasing the occurrence of floods). If identified, such risks were monitored by following up the indicators and the symptoms of such (undesired) development in order to launch the planned response, if any, early enough. The experts provided lists of the indicators to be watched. Besides the firms’ own corporate cadres, many banks, insurance companies, and industry consultants, and researchers (e.g. Overholt, 1982, Nikander 2002) have compiled lists of such indicators since the 1970s.

#### **4.3.6 Management of uncertainty, complexity, and crises within the nine cases**

In the nine cases, **the conversion of uncertainty to RM** was the standard management procedure. Every case was unique and whether its variables could be reasonably managed or not had to be assessed. Similarly, an assessment had to be made of whether new competencies or knowledge should be implanted into the management team by e.g. permanent or temporary recruitments or even by outsourcing. The management teams contained specialists in PM and general management. The other competencies were assigned (or at least attempts were made to do this) to some other areas as well. Some managers were “specialists on local issues” on the culture of the host countries. The “production specialists” mastered the respective “problems and peculiarities” of the product or production process, e.g. the concrete structure, the laying of the asphalt, or the production of the structural beams and columns of wood. Moreover, there were variables related to the expectations and (limitations) of the client or the financier. In **Case 1**, Lemminkäinen’s way of partnering with the Finnish pulp and paper corporations for their plant projects or bidding for the projects of the international development agencies are examples of “specialists in client issues”. In **Case 5**, the Dutch VBI bid likewise for the system delivery of hollow-core slabs for low-storey housing builders in the Netherlands. In both cases, the overall uncertainty was reduced markedly and turned

into RM because one or several key business variables could be pinned down reliably. Consequently, the complexity and the magnitude of the total risk were reduced as well.

**The reduction of complexity** was achieved by relying on the available competencies and restricting the number of new issues – requiring new competencies – to an acceptable and manageable level. Combinations of a new product and a new market (or client) were considered too risky. However, in **Case 4** and **Case 8** this situation clearly emerged. The new location increased the complexity as well. Contractual qualifications, the choice of the business roles, partnering, and subcontracting were the most common ways to limit complexity to an acceptable degree.

**The positive consequence of a risk was not usually considered as an opportunity.** If at all, the opportunity was discussed at the business level (e.g. Cases 6 and 7), where it was considered to be an opportunity to grasp potential growth. In all the cases, the project-specific objectives were ambitious and their attainment was considered a major success.

**In the cases from the 1970s and 1980s, no preparations were made for the possibility of an emerging crisis that was caused internally.** Should a crisis occur, it would be dealt with as a normal management problem without any specific contingency plan, except preparations for the replacement of the project manager, his boss, or both of them. **External reasons**, such as political changes, economic crises, and changes in the legislation, particularly in Africa and the Middle East, were keenly watched whenever such events were considered likely to have an impact on the business objectives. The measures to be taken were planned for as the respective business and/or project management saw fit. Demobilization plans became standard in Africa after the first demobilization materialized in **Case 1** (e.g. Nigeria and Liberia). Besides, the consequences of the conceivable worst cases, including full demobilization, were pondered at the business level and they were expressed e.g. as a maximum loss in financial terms. The corporate financial management took that figure into account when monitoring the liquidity and solvency of the firm.

**In the cases from the late 1980s and thereafter, the preparations for the possibility of an emerging crisis were better.** The preplanned methods to detect an emerging crisis included solid management in all the cases, an extended amount of intelligence and communication between the key parties in some cases, and the implanting of the acquisition and integration team physically within the acquired organization in the others. **Many internal reasons** caused the crises in **Cases 6-9**. A crisis could have occurred in both the acquisition **Cases 4-5** as well, e.g. major friction between the new and old owners or several key managers deciding to leave. In those cases, no contingency plan existed because the primary source of such a crisis had been identified as the risk and the response measure had been readily taken. Beyond that precaution, the respective management was supposed to deal with the crisis, if any, as best as it could.

In turn, **external reasons** were not considered likely to cause crises in the western business environment. For example, the development of technology, the general economy, or politics were easy to watch and respond to without any surprises. In the Russian **Case 7**, it was duly accounted for, i.e. the eventual crisis – leading to e.g. the abandoning of the site and/or full demobilization – was eliminated with extensive intelligence and careful contractual arrangements, including large advance payments and currency terms.

## 4.4 Role of the case reporting

**The main purpose of the case reporting is the examination of the two hypotheses.** This boils down to an inquiry into whether and how the cases support or do not support each of the hypotheses. Secondly, **possible imperatives for a novel and concurrent model** for contextual RM are sought on the basis of a comparison of the case findings and the insights gained from the literature review. Hypothetically, efficiency in managing major contextual risks should be improved by: (i) transferring RM upwards onto the business level; (ii) combining the use of business- and project-level RM methods, and (iii) developing techniques of situation-specific risk identification.

Therefore, **the role of the case reporting** is to facilitate the discussion of: (i) the effective RM process, i.e. setting business objectives, conducting major risk identification, and launching response measures, (ii) the key managers' cross-cultural competencies, and (iii) the contractual arrangements and their management vis-à-vis success and/or failure, respectively. In other words, the case reporting facilitates the cross-case analysis in Chapter 6, the comparison of the case findings and those of the literature review in Chapter 7, the discussion and the critique in Chapter 8, and the consequent conclusions and suggestions in Chapter 9.

## 4.5 Data and case-specific descriptions

### 4.5.1 Case-specific data and other sources

The **type and collection of the data**, which has been used to write the compact case descriptions, **is an essential part of the research method.** Thus, the author has saved the most crucial, authentic case-specific documentation of the key elements of the RM method applied, i.e. the setting of objectives, the identification and assessment of the major risks, and the response between the years 1984 and 2006, in Cases 2-9. In Case 1 the licentiate thesis has been used as the documentation of the data. Besides the case-specific documentation, a large number of less crucial, non-listed data (internal company memos, messages, monthly reports, even personal notes) has been used to write the initial descriptions.

Within each **Group**, the time span covered the origins of the case business idea and the implementation of the case internationalization strategy, coupled with the marketing and implementation phases of each case project.

**The documentation consists of the minutes of the decision-making meetings** of the management teams and boards, and/or Boards of Directors. During these three decades, these meetings were run in ways that changed along with the changes in the guidance routines within large Finnish corporations. The other important data sources were typically **formally approved strategy or action plans of the respective companies.** Except for the Cases 8 and 9, where the data exists in electronic files, the documents are paper documents only and available in the office files. Typically, and apart of the routines of dates, participants and so forth, the minutes include decisions and also proposals and discussion notes. **The complementary documents** included the memoranda, the expert studies, or the other messages, which the minutes may or may not observe, pertaining to each case. **Besides the case-specific data, a substantial amount of background information** was collected, too. Many books, reports, presentations and other relevant documents explain the general and specific issues of international construction in the respective periods of time although they may not always fall exactly on the same years than the Cases. In this way, the author has gained a deeper understanding of the major situations.

**The inclusion of case-specific documents** in the case-specific descriptions was based on the following criteria. In order to be quoted, a relevant issue such as objective, risk, decision, and measure had to be mentioned in the relevant formal documentation, e.g. minutes of meetings or their complements. **The case-specific documents are listed by special “endnotes” (e.g. /C1-1/ for Case 1) to keep them separate from public references, and shortly described at the end of each case description.** The causally related information was combined into chains of interrelated events. After the identification of a risk, the planning and launching of the efficient response measures often took place much later.

**Some conclusions, ex post**, do not exactly follow the past thinking of the actor’s management cadres of that time. Some crucial reported facts may have surfaced many years after the actual moment of the decision-making e.g. in Cases 4-5 (the reasons for PC’s planned acquisition in the ex-GDR), Case 7 (Haka’s bankruptcy), and Case 8 (Metsäliitto/Finnforest’s “adding value to wood products” strategy). This has enabled the author to draw more valid conclusions (compared to sole reliance on the documents written during the actual case period).

#### **4.5.2 Structure of a case-specific description**

Initially, most case-specific descriptions contained 12-15 pages. For the reporting, the initial descriptions were shortened down to five pages or so. The **structure of the nine case-specific descriptions** consists of most of the following six parts.

1. Introduction: The case in a nutshell. The background in the light of uncertainty, complexity, and RM. Observation level (business/project). The focal firm’s role (contractor/building product supplier), the type of business transaction (e.g. a market entry, an acquisition, or a delivery project).
2. Brief of the case business and/or the case project: business objectives of the respective actors and their eventual changes in the relevant phases.
3. RM process: risk identification and assessment, and response measures. A list of the identified and non-identified major risks and their sources and consequences. A list of the primary RM measures. Comments on the risks that occurred and the actual risk-specific management.
4. Combined RM at the business level and the project level: the measures at the business level and those at the project level, their possible causal relations, the application of the project-level tools at the business level, and their effectiveness.
5. Evidence related to the two hypotheses: the required competencies and the key managers’ competencies, particularly related to cross-cultural and contractual issues.
6. Conclusions: a statement on “How did it go, overall?”, i.e. the type of outcome (e.g. a big success or a major failure). The conformity of the outcome to the hypothesis. Discussion of the findings, including the potential rivaling major risks.
7. List and a short description of case-specific confidential references.

#### 4.6 Assessment of the main outcomes of the nine cases

The main outcomes of each of the nine cases include their overall success and conformity to each of the two hypotheses. All assessments are qualitative, i.e. they are presented in a verbal, descriptive manner instead of being e.g. on a Likert's scale (Table 4-1). In Chapter 5, the case-specific assessments are presented in the last conclusive part of each description. In Chapter 6, the cross-case analysis is made possible by compiling the same case-specific assessments in four tables (Tables 6-1, 6-2, 6-3, and 6-4).

Table 4-1. Assessment of the main outcomes of the nine cases. Key: The scale for "overall success" is 5 (very high), 4 (high), 3 (medium), 2 (low), and 1 (very low). The scale for "conformity to hypotheses" is high, medium, low, and not applicable.

Case	Overall success rate	Conformity to Hypothesis 1	Conformity to Hypothesis 2a	Conformity to Hypothesis 2b
...				
Case 3	High	Medium	Low	High
...				

**The overall success** is assessed on a scale of very high, high, medium, low, and very low, corresponding to the evidence in the case-specific descriptions. "High" is applicable when the main objectives were met. For "very high", an additional opportunity had to be grasped on top of the attainment of the objectives (**Case 7**). "Medium" is applicable when only some main objectives were reached. "Low" implies that none of the main objectives were met but the project itself was completed or a struggling business continued. "Very low" is characterized by the occurrence and mismanagement of unidentified major risk(s) that should have been reasonably identified, besides none of the main objectives being met.

**The conformity** to each of the two hypotheses is assessed on a qualitative scale of "high", "medium", and "low" support, corresponding to the evidence in the case-specific descriptions. The assessment is presented in the conclusive part of each description. **For Hypothesis 1**, "high" implies that the project RM method was applied at the business level at least to the setting of objectives, the identification of most of the major risks, and the launching of a response. "Medium" is applicable when some but not all of the major risks that occurred were identified at the business level. "Low" is applicable when none of the major risks that occurred were identified. When an unidentified major risk occurred, ex post the question "Could that major risk have been reasonably identified?" is posed and answered. If the answer is positive, it supports conformity to Hypothesis 1, and vice versa.

**For each of Hypotheses 2a and 2b**, "high" implies that a hypothetical major risk was identified or it should reasonably have been identified, and it also occurred – directly related to cross-cultural issues or contractual issues. An assessment is "medium" when a hypothetical major risk was identified or it should reasonably have been identified, but it did not occur, or when such a risk was not identified and yet it occurred. An assessment is "low" when a hypothetical major risk was not identified, or it could not reasonably have been identified, and it did not occur either. **In many of Cases 1-9**, the two hypothetical risk types were either identified or they could reasonably have been identified. Such an identification of two simultaneous hypothetical major risk types suggests a need to clarify whether one of them is actually the source of the other one, which again encourages the launching of the respective RM at the business level. If the two risk types remain unidentified and

yet both of them occur at the project level, the PM has a more complex RM task ahead to deal with than in a situation where only one major risk type remains unidentified and yet it occurs.

#### **4.7 Assessment of key managers' cross-cultural and contractual competencies**

##### **4.7.1 Introduction to managerial competency assessment**

In **Cases 2-9**, the personnel department and/or the HRD consultant prepared a **required competency profile** for each open vacancy. These profiles were worked out during discussions with the upper-level manager(s) assigning the new key manager. The basic characteristics (e.g. experience, education, and general motivation) and a number of other task-specific issues (e.g. personal, managerial, contextual, and cultural characteristics) were used to screen out 2-4 candidates. The business manager exchanged views with his colleagues on each of the remaining candidates. Thereafter, the business manager made the final choice.

In alignment with Alvesson (2003), similar “interesting material” was sought for and found within the case-specific data. Overall, new key managers are assigned on the basis of the results of the assessment of all relevant competencies, i.e. (i) general business management, (ii) project management, (iii) product management and expertise, including assembly, (iv) design management and expertise, (v) international business management and expertise, including cross-cultural issues, (vi) business contract management and expertise, and (vi) innovativeness.

Here, **only the key managers' cross-cultural and contractual competencies are roughly assessed, as follows**. To protect their intimacy, the results of these assessments are here reported by revealing the average of the group of six key managers only, in each case. Most of the assessed groups contain 1 corporate-level manager, 1 business-level manager, 1-2 project managers, and 1 financial/administrative manager. The number of key managers and their positions reflect the prevailing assumptions on the most vital roles in projects and project-like transactions in these big Finnish companies. Besides, they also reflect the relative complexity of the transactions being considered on an indicative scale of very complex, large, not necessarily “monstrous”, and definitely not beyond the risk-taking capacity of the firm. Naturally, many managers have been left outside the nine 6-manager groups as they played only secondary, supportive roles in the decision making.

##### **4.7.2 Grading and scoring scales of education, work experience, and motivation**

In each case, **the author has selected the six key managers** partly on the rational basis of the organizational hierarchy and their primary involvement in formal decision making, partly subjectively. Their competencies to manage cross-cultural and contractual issues are assessed by **three components**, i.e. relevant education, experience, and motivation versus the requirements of performing the focal managerial tasks in the nine cases, respectively. This resembles a simulation of the methods that the case firms used to assess the potential candidates and that could be repeated if one re-lived the same cases again. The grading of education and experience is objective, i.e. they can be verified on the basis of e.g. the respective individual's curriculum vitae (CV). However, the grading of motivation is subjective only.

Education in general and academic education in particular are highly appreciated in Finland because they are perceived as preparing employees well for the challenges and requirements of key managerial positions. The taking of additional relevant courses to update and complement one's

basic education is considered a plus. For managerial careers, primarily the universities of technology and the schools of business administration and economics are considered relevant. Therefore, this broad grading favors these two factors, which are quite easy to verify in the context of Finland. **For the grading of the relevance of the education**, a 5-step Likert scale is used, as follows: 5 (academic, relevant, post-academic courses), 4 (academic, relevant), 3 (non-academic, relevant), 2 (academic, non-relevant), and 1 (non-academic, non-relevant).

The Finnish mentality in the construction business appreciates relevant work experience to a high degree. Therefore, experience is here graded to favor time spent on relevant duties, which again is fairly easy to verify in the context of Finland. **For the grading of the relevance of the work experience**, a 5-step Likert scale is used, as follows: 5 (> 10 years), 4 (5-10 years), 3 (3-5 years), 2 (1-2 years), and 1 (0-1 year). Language skills are also a part of relevant experience.

Concerning motivation, Schneider and Barsoux' (1997) list of the competencies that are required when managing internationally is illustratively referred to. This list includes nine variables, as follows, i.e. (a) interpersonal (relationship) skills, (b) linguistic ability, (c) motivation to live abroad (cultural curiosity), (d) tolerance for uncertainty and ambiguity, (e) flexibility, (f) patience and respect, (g) cultural empathy, (h) a strong sense of self (or ego strength), and (i) a sense of humor. Personal motivation varies a lot. Key managers may be highly motivated by the new challenges and opportunities rendered by a new growth task. However, they may sometimes consider that their power is not adequate or that their efforts are not reasonably rewarded. In some cases, they are not confident in themselves. The grading logically favors high motivation. **For the grading of the motivation**, a 5-step Likert scale is used, as follows: 5 (very high), 4 (high), 3 (fairly high), 2 (low), and 1 (demotivated). The author has assessed each key manager subjectively.

**The total score ("available competency") of each individual manager** is a multiplication of the sub-scores of the three components to amplify the eventual differences and to demonstrate the importance of each of the three components. The grading of each key manager is not displayed in this report, to protect their intimacy. However, interested parties may request the author to show them (for confidential purposes only).

**The total score of each group** is the total of all individuals, ranging from 1 to 5, and it is reported in sub-chapter 6.5 only roughly to reflect each group's available competencies to manage the respective tasks ahead, after the cross-section of the focal years.

## 5. NINE CASE DESCRIPTIONS

The nine case descriptions are here presented in sub-chapters 5.1-5.9. Except Case 1, they follow the same structure of (i) introduction, (ii) brief and objectives, (iii) RM process and measures, (iv) combined RM at the business and project levels, (v) evidence related to the hypotheses, and (vi) conclusions (see sub-chapter 4.5.2). The case-specific documents are listed by special “endnotes” (e.g. /C1-1/ for Case 1) to keep them separate from the public references, and shortly described, at the end of each case description.

### 5.1 Summary of the five selected construction projects of Lemminkäinen in Africa and the Middle East between the years 1974 and 1984 (Case 1)



Map 5.1. Five selected projects of Lemminkäinen Oy between the years 1974 and 1984.

#### 5.1.1 Introduction (Figure 5.1-1)

Case 1 encompasses **the RM of the early internationalization of Lemminkäinen (LOY)**, the pioneering Finnish contractor overseas between the years 1974 and 1984. It sums up the findings of five selected construction export projects of LOY at its early phase of the internationalization. LOY's construction project export business is highlighted. Consequently, Case 1 as “Group 0” lays the organizational and personal ground to investigate the subsequent RM processes and measures during Cases 2-9, too. The reporting is based solely on Palojarvi (1986), where the five sub-projects have already been analyzed /1/. The rare opportunity to re-exploit the same authentic documentation is seized here. It would not have been possible to gather these old documents today after 25-35 years. The original report has also been complemented by recent ex post observations made even by the managers involved themselves (see /2/, /3/, /4/). Consequently, **Case 1 is a summary of the RM process and measures at the project level, during the five overseas construction projects** (see Figure 5.1-1). No formal documentation on the business-level RM was available while the respective strategy was “to go overseas”. This insider action researcher occupied the five roles of Resident Manager in Nigeria (1974-1976) and Liberia (1978-1980), Contracts Manager of the Project Export Unit at the head office targeting Iraq (1976-1978), Director of the Africa Division (1980-1983), and Marketing Director of the Overseas Division (1983-1984) during his career with LOY.



Description	76	77	78	79	80	81	82	83	84	85
Satellite Town Nigeria 1976-1978 (entry)										
Dorah Housing Baghdad, Iraq 1976-1980 (entry)										
Matadi West Monrovia, Liberia 1977-1980 (entry)										
Mau-Kisumu, Kenya 1980-1984 (entry)										
Mano River Monrovia, Liberia 1982-1984 (business-as-usual -project)										

Figure 5.1-1. General timeline schedule of Lemminkäinen's five sub-projects from their identification until their completion between the years 1976 and 1984.

### 5.1.2 Brief and LOY's business objectives in Case 1

#### (1) Satellite Township in Lagos, Nigeria in 1976-1978 /1 pp. 109-116/

The first sub-project consisted of 1200 residential units and the related civil infrastructure for the Federal Housing Authority near Lagos. The turnkey contractor was the **Fin-Niger Company**, in which the shares of LOY, another major Finnish building contractor, and the influential local partner Harold Sodipo were 30%, 30%, and 40% respectively. Fin-Niger had already completed an entry contract of EUR 2.5 million with an acceptable financial result. By 1976, the Finnish partners had a staff of about 20 Finns with varying amounts of experience in Nigeria. The total contract value was about EUR 25 million (about 40% of LOY's turnover). The combined turnover of the partners was about EUR 160 million. The works proceeded as usual until 1978, when the Nigerian Government stopped payments as a result of its overall liquidity problems and possible partnership-related problems. The Finnish partners had to demobilize the joint venture (JV) company and leave Nigeria. They won the consequent contractual litigations on the partnership disputes in the UK courts much later.

#### (2) Dorah Housing Project in Baghdad, Iraq in 1976-1980 /1 pp. 117-122/

The second sub-project contained the construction of the foundations and the complete infrastructure and roofing for 1200 precast concrete residential units for the State Organization of Housing according to its design. The contractor was **the "Malempo" consortium**, where the shares of Palmberg Oy (AAP, a subsidiary of LOY), the second leading Finnish building contractor Polar Oy, and the influential local partner Mohammed Makzoumi were 25%, 25%, and 50%. A prior consortium of the local partner, AAP, and 13 other Finnish contractors had completed one quite difficult contract in 1968-1972. Therefore, the Finnish partners had available several Finns with the relevant experience in Iraq. The contract value (1978) was about EUR 25 million. The combined turnover of the partners was about EUR 250 million. The winning tender was submitted in 1977 and the respective works were completed in 1980. The actual profit was as planned. It was even more important that this contract led to subsequent 5-million-euro contracts for similar works as part of the same scheme.

#### (3) Matadi Western Sector, Civil and Electrical Works in Monrovia, Liberia in 1977-1980 /1 pp. 122-125/

The third sub-project contained the construction of the complete infrastructure of 1200 residential units for the National Housing Authority according to its design. The area was financed by Citibank (of the USA). The contractor was **LOY (Liberia)**, without any local partner. LOY had gained the relevant African experience in Nigeria (the 2nd contract was still ongoing). The contract value (1978) of the works in the Matadi Western Sector was about EUR 9 million. The turnover of LOY was about EUR 90 million. In 1977, the first broader tender (including the residential units too) was submitted by the JV with the major Finnish building contractor. In early 1978, LOY re-tendered for the civil and electrical works alone, excluding the residential units (an Italian contractor won them). In 1980, the works were completed on schedule and with a high profit that was more than planned. It was even more important that this contract led LOY to continue its active and profitable contracting during its 15 years in Liberia.

(4) Mau-Kisumu Road, in Western Kenya in 1980-1984 /1 pp. 125-131/

The fourth sub-project contained the reconstruction of 136 kilometers of the national main road, including 300,000 tons of asphalt pavement and 300,000 m<sup>3</sup> of crushed rocks for the base layer and the pavement for the Ministry of Transport and Communication with Sir Alexander Gibb and Partners for the design and supervision. The road was financed by the World Bank. The contractor was **AAP** (a subsidiary of Lemminkäinen). The job was handled as **an internal JV** between the Africa Division and Pavement Division. LOY had gained the relevant African experience in Nigeria during 1974-78 and Liberia (the 1st contract was completed in early 1980 and more was to come). In this internal JV, the Pavement Division worked abroad for the first time. The contract value (1980) was about EUR 25 million. The turnover of LOY was about EUR 140 million. The contract was completed in 1985, behind schedule. The loss was sizable, in part because the imported heavy equipment i.e. the trucks, the asphalt and crushing plants, the other civil engineering equipment, the machinery, and the site camp were depreciated fully. It was important that this contract led LOY to continue active and profitable contracting over 10 years in Kenya and elsewhere in East Africa. Finally, the imported plants and equipment were further sold on to British contractors.

(5) Mano River Bridge in Liberia in 1982-1984 /1 pp. 132-137/

The fifth sub-project contained the technically extremely demanding reconstruction of the underwater concrete foundations of a heavy iron railway bridge for the state-owned National Iron Ore Corporation on its very broad design. The reconstruction was financed by the World Bank. The contractor was the branch **LOY (Liberia)**, a part of the Africa Division. It had gained the relevant African experience in Nigeria in 1974-1978 and in Liberia (several contracts completed and more were to come). The contract value (1983) was about EUR 5 million. The works were preceded by an underwater study carried out by LOY (Liberia), without a tender, in order to finalize the client's preliminary design. The works were started in 1983 and completed in 1984 on schedule and with a mighty profit, even considerably more than planned. It was also important that this contract re-confirmed the determined, long, and profitable stay of LOY in Liberia until the mid-1990s.

### **Lemminkäinen's business objectives in Case 1**

**LOY's first international projects** were considered to be (i) a strategy to exploit the surplus capacity when the business cycle in Finland was going down. It was certainly the case with the Soviet border projects. This was less so in the remote areas of the Middle East and Africa, where the oil-rich countries were attractive. Nevertheless, (ii) local building and construction capacity was lacking within the targeted markets. (iii) An additional drive was caused by the great personal

interest of the young, dynamic Finnish managers who desired to internationalize the firm and themselves (Brax 2005). The idea of the setting of **sustainable logical strategic objectives for LOY's international business** emerged from the many valuable lessons gained in the first projects. This surpassed the prior individual and occasional projects. **LOY's objectives** for the five sub-projects were also shared with the PM. These objectives were as follows.

- The profit objectives were confirmed during the finalizing of the tender prices by LOY's top management (MD) in all the five sub-projects. Sometimes they were changed during the contract negotiations.
- Compliance with the design and the specifications as set by the clients in all the five sub-projects.
- The strategic objective of entering the new host country was coupled with the three sub-projects (Dorah Housing in Iraq, Matadi in Liberia, and Mau Summit-Kisumu in Kenya).
- The strategic objective of expanding and/or continuing in the same market via the two sub-projects (Satellite Township in Nigeria and Mano River Bridge in Liberia)
- The strategic objective of opening up the internationalization of LOY's real core business, i.e. asphalt-making via one sub-project (Mau Summit-Kisumu in Kenya).

The first four sub-projects were obviously linked to LOY's overall goal of early 1970s, although this did not appear within the project documentation, Likewise, LOY's strategic objectives of entering Nigeria and Saudi Arabia were not openly shared at the project management level or they did not exist. LOY's early goal was **to become an international contractor**, just like several Swedish contractors, e.g. Skanska, John Mattson, and Armerad Betong, had become /3/. This was a way to grow outside the limited domestic market. Besides, the internationalization was a strong reinforcement of LOY's image. This mattered in Finland when exploiting the juiciest fruits of the barter trade with the Soviet Union via the Finn-Stroi consortium, which included nearly all the major firms in Finland. The second, much smaller potential market was emerging on the basis of Finnish aid to preferred developing countries in East Africa and Vietnam. When LOY had already entered that region in Africa in the open competition for the development banks' projects, it was no longer so serious about pursuing the Finnish development aid projects.

### 5.1.3 RM process and measures during Case 1 (Table 5.1-1a-d)

The reporting is excerpted from Palojarvi, 1986 (pp.138-139). **The obvious confusion between risks and their consequences** was typical for the Finnish construction project exports in the 1970s. The accumulating experience, however, improved the accuracy of the risk identification and the consequent RM. **The most fatal risks that occurred** were inherent within the national business environment of the project or embedded inside LOY's staff, i.e. the Finnish or other expatriate managers. Risks with positive consequences often occurred, too. **The most positive risks that occurred and the second most fatal ones that occurred** were both inherent in the contractual forms, the partnerships, or again the key personnel. The political risks caused only minor positive consequences. The much-feared payment delays occurred regularly and they were well identified by interviewing the local partner, several seasoned representatives of other foreign contractors, bankers and the very well-connected commercial attaché of Finland, and responded to. The technical construction methods often contained unidentified risks that occurred with negative consequences. **Field studies** turned out to be the best way to identify the country and force majeure risks. The risks inherent in the contracts, the partnerships, and the staff were common, which suggests that there were problems in identifying them. Therefore, the seasoned construction project "exporter" should also become competent in the management of contract techniques and project staff.

Table 5.1-1a. RM during the five projects of LOY in Africa and Middle East between the years of 1976 and 1984. (Data source: Palojarvi, 1986.)

Sub- case	Source	Risks	Consequence	Management
Satellite Township, Lagos, Nigeria 1976-1978 (entry)	Tribal and religious rivalry; post-Biafra war tension	<b>Identified risks</b> (at tender stage) : Political changes Financial turmoil Various administrative delays Profit repatriation	Disorder Payment delays Financial losses	Monitoring; <b>relying on local partner;</b> hefty advance payment; <b>local guarantees; no capital investments;</b> incentives
		<b>Unidentified risks:</b> Contractual Finno-Nigerian partnership structure created a lot of problems; Reliance on West African expatriate “old hands” as managers , to solve the stalemate between the local and foreign partners	The new (expatriate) GM, who was hired as an external recruitment, mixed Fin-Niger Ltd. into inappropriate transactions which finally led to the stoppage of contract payments, interrupting the works, and enforced demobilization.	At early stage, seeking help from high-calibre personalities, incl. the future President Obasanjo, and UN_ambassadeur Adebo. Later, recruiting a non-Finnish expatriate GM and other top managers.
Dorah Housing Project in Baghdad, Iraq in 1976-1980 (entry)	The political change into communistic system within the suddenly oil-rich country	<b>Identified risks</b> (at tender stage): Political changes Various delays caused by the administration Profit repatriation	Disorder Payment delays Financial losses	Monitoring; <b>relying on the local partner known for more than 10 years already;</b> <b>contractual clauses</b> on. e.g. imports, currency transfer, etc; ample time for tender and contract preparations.

Table 5.1-1b. RM during the five projects of LOY in Africa and Middle East between the years of 1976 and 1984. (Data source: Palojarvi, 1986.)

Sub -case	Source	Risks	Consequence	Management
	Cross-cultural set-up : The ever-lasting tension between the Moslem communities	<b>Unidentified risks:</b> War between Iran and Iraq	Minor delay of works and payments - the war broke only at the end of the contract	
Matadi Western Sector, Civil and Electrical Works in Monrovia, Liberia in 1977-1980 (entry)	West African and Liberian cultural habits;	<b>Identified risks</b> (at tender stage): Various delays caused by the administration	Delays of works Payment delays Financial losses	Careful planning Strong local presence and push to speed-up various routines <b>"Fair but cheap"</b> - company profile
	The tension between the US-originated and original citizens; leaning on US support			
Mau-Kisumu Road, in Western Kenya in 1980-1984 (entry)	Israeli contender had close relationships to Kenyan political leaders while Lemminkäinen had no prior knowledge on Kenya.	<b>Identified risks</b> (at tender stage): Winning the contract as a way to enter the Kenyan market	No entry at the most crucial growth stage of Lemminkäinen's internationalization;	Careful monitoring and intelligence; teaming-up with local Indian businessmen to fight the Israeli competitor
	Kenya's economy depended on the world market price of coffee.	Kenyan economy;	delays of payments;	World Bank control; active pushing

Table 5.1-1c. RM during the five projects of LOY in Africa and Middle East between the years of 1976 and 1984. (Data source: Palojarvi, 1986.)

Sub -case	Source	Risks	Consequence	Management
	This was the largest foreign project of Lemminkäinen alone, ever	Competence of the project management	Various problems on site	Culturally and contractually capable staff employees on site. Later, some key expatriates replaced.
	British contractual procedures were different than the Finnish contractual standard practice	Compliance with the top-class British contract management	“Stop the works” – unpaid change and variation orders; financial losses	Careful homework, including the contractualities of FIDIC; contractually and culturally capable key staff employees .
		<b>Unidentified risks</b>		
	Ignorance of the raw material quality.	The quality of the crucial raw material of asphalt, i.e. the crushed rocks	Big delay of works when trying to comply with the strict requirements of asphalt quality>> heavy extra cost	Time-consuming and expensive expert work; improvements on plant and procedures.
	Overall conservatism in currency dealings.	The devaluation of the Finnish Mark against the cover currency Sw.Fr. (opportunity)	Contract payments increase in Finnish Mark values (which was a very positive surprise).	The already selected currency clause enabled the full benefit of this development.
Mano River Bridge in Liberia in 1982-1984 (expansion in Liberia)		<b>Identified risks</b> (at tender stage):		
	Tension between the native and US-originated Liberians	Sudden political change General economy	Disorder; delays and/or stoppage of works; financial losses	Monitoring and intelligence; World Bank´s financial control; high bid price and advance.

Table 5.1-1d. RM during the five projects of LOY in Africa and Middle East between the years of 1976 and 1984. (Data source: Palojarvi, 1986.)

Sub -case	Source	Risks	Consequence	Management
	Client´s designers had only modest experience of this calibre of work.	Performance at the quite demanding underwater works	Poor performance would lead to considerable financial losses; company reputation would be tarnished.	Careful pre-studies, before final bids, to find a viable working method. The responsibility on design was turned to the Client. Strong project management. Finnish very skilled subcontractor chosen for the actual underwater work.
	The repair work was badly overdue. A heavy iron ore train could have caused a collapse of the entire bridge, without a prior warning signal.	Bridge collapse just when the teams were working on its underwater foundations.	Catastrophe; human lives lost.	Responsibility was totally declined, and turned to the Client, who insured the Works..
<b>Unidentified risks: None</b>				

#### 5.1.4 Business-level versus project-level RM in Case 1

**The strategic objectives of LOY reflected its desire to enter the international market. The first and second sub-projects in Nigeria (1974-1978) and Iraq (1976-1980)** were won by relying on a local partner, while the expatriates performed the PM. The major business-level risks feared and studied before the first contracts were related to political changes and/or the consequent financial disturbances. The competencies regarding partnerships or cross-cultural issues, e.g. the FIDIC types of contractual arrangements, were addressed only at the project level. The possible consequences had to be dealt with as best as one could. In Nigeria, the problems of the contractual partnership resulted in a disaster. In Iraq, the contractual relationship with the partner Makzoumi and, consequently, with the client as well worked out much better and the result was good.

**The third and fourth sub-projects in Liberia (1978-1980) and Kenya (1980-1985)** displayed the second finding. The project-level managers, with experience from Nigeria, considered that the Nigerian problems arose from the partnership which was created by LOY's top management at the business level. They wanted to use the competencies they had gained and to open up the Liberian market with a great amount of motivation. No Liberian partner was there to interfere with the conduct of the focal business. The key project-level managers built and exploited solid

competencies for the Liberian conditions. The reliable project financiers, e.g. Citibank, the World Bank, the African Development Bank, and the US Navy, also guaranteed LOY's long and successful stay. Moreover, the core managerial cadre for LOY's future large foreign project business was built /3/. In the Kenyan project, all the PM competencies, including the ones on the FIDIC contracts, were available. The complicated technical issues of asphalt-making spoiled the result of this first road project because their solution was far too costly as a result of the time that elapsed during the contract period. Most probably, the technical problems could have been identified and even solved earlier at the business level. However, this entry was worthwhile as a strategic step to the East African road construction market funded by the World Bank and the African Regional Development Bank, and later even to the tiny but profitable contracts in the Finnish development aid market.

**The fifth sub-project** in Liberia (1982-1984) shows how good results can be achieved: (i) the difficult entry phase can be passed; (ii) all the most vital competencies, i.e. regarding cross-cultural and contractual issues, are in place, and (iii) the motivation is high. Besides, the possibly disastrous risk inherent in the complex technical solution in the underwater conditions was already well identified and responded to at the business level. In part, this was understood in time because of the very recent negative incident in the fourth sub-project in Kenya.

#### **5.1.5 Managing major risks inherent in cross-cultural and contractual competencies in Case 1**

**In the first and second sub-projects**, the crucial choices on the local partnerships differed entirely. **In Nigeria**, the local partner came to Finland to look for a partner. This unknown African party was, however, accepted by LOY's management because the spirit and the drive to enter oil-rich Nigeria were high. The lack of experience and skills at the business level to assess foreign characters and their motives, and further to draft the respective contracts, resulted in the decision being made quickly and its consequences could no longer be rectified at the project level. There may not have been any other way (these lessons cannot be learned from the literature). However, LOY's management could have listened more carefully to their first young expatriates dispatched to Nigeria and have assessed the early experiences with the partner. The JV agreement could have been redrafted. Again, the first contract might never have been obtained. **In Iraq**, a number of the Finnish key managers and the local partner knew each other well and they had developed a personal respect and liking. That resulted in a sound partnership contract and also a carefully prepared first contract with the client (the Iraqi Government). **The third and fourth sub-projects** displayed competencies regarding African cross-cultural issues to a fair extent, as well as the personal pride and motivation of the key managers. But they also displayed the emerging internal competition at the business level within LOY. **In Liberia**, the internal rivalry between the asphalt and African business divisions did not matter because of the relative smaller size and lack of complexity. The internal cooperation was not of the utmost importance for the project-level managers. **In Kenya**, the core process was to be supplied internally by LOY's Pavement Division, which was involved in a large foreign operation for the first time. The solving of the unidentified risks that occurred took too much time and expense at the project level. The road was a loss project. In turn, **the fifth sub-project** in Liberia displayed the value of the vital competences regarding cross-cultural and contractual issues, including the significance of the motivation of the key managers.

**In the managerial competency assessment of all the five sub-projects, the group of LOY's six key managers** received a total competency score of 3.79 on average (see Tables 6-5a, b, p. 145) regarding cross-cultural issues and a score of 3.80 on average regarding contractual issues. At that time, these scores were relevant in order to succeed with the very complex task ahead, i.e. to



achieve the international growth of LOY by carrying out projects mainly in the cross-culturally and contractually challenging conditions of Nigeria, Iraq, Liberia, and Kenya from the mid-1980s onwards. The average scores over the entire period of one full decade are clearly higher than if the scoring had been given over the period of the first one or two projects only.

### 5.1.6 Conclusions on Case 1

It is here assessed that **LOY's success rates and financial results varied between very high and very low** in the five sub-projects carried out between the years 1976 and 1984. Overall, LOY attained its main goal of becoming an international contractor through these five contracts and the other concurrent ones. The five sub-projects reflected the current managerial thinking and processes during this first decade of LOY's internationalization. All the project objectives included a hefty profit. **The business-level RM plans**, if any, were not shared with the project management. The actual responses mitigated many country, project, and force majeure risks. The business-level measures included e.g. the isolating of the project from the parent firm and the arrangement of the local financing. **At the project level**, the risk considerations were a standard issue when finalizing the bids. The business-level managers raised the question "What if something goes wrong?" and either the replies included satisfactory responses or some additional cost and/or time allowances were added to the bids, besides the contractual qualifications in the cover letters. The project management faced the risks that occurred and dealt with these risks in the best ways they could. However, **the major risks that occurred** were inherent in the contractually abiding partnerships or the (key expatriate) staff. These were proactively identified and mitigated only at the project level, or not at all. In the first sub-project, all the capital committed locally in Nigeria was lost – fortunately, the value of this capital was low compared with the total volume of LOY's business.

**Case 1 conforms with varying degrees (between very high and low rate of support) to Hypothesis 1**, i.e. the project RM approach was also applied at the business level in limited, viable ways. Case 1 also supports **Hypothesis 2**, i.e. the major risks were inherent in the contractual partnerships with the local partners and/or the clients. The cross-cultural risks were embedded within the (expatriate) staff.

The three ex post observations are as follows.

**Ex post observation 1:** Unfortunately, the next project, the Conference Palace in Baghdad, was tendered for and won in a great rush by a JV of Palmberg (of Lemminkäinen), Polar, and Teräsbetoni. This huge turnkey contract nearly resulted in a financial catastrophe. It was conducted without the Iraqi partner and the experienced Finns (of the prior Dorah project). At the same time, two small contracts were completed in Qatar, and monitoring and futile efforts to enter Saudi Arabia and some other areas of the Middle East were going on, but not with great interest.

**Ex post observation 2:** Had LOY not been able to enter the international market, its image and competitiveness would have become very different. Its later growth within Europe and Russia could have been sacrificed. Besides, LOY attracted high-quality younger entrants from the universities and elsewhere. Among them, the label of being international has always been a positive factor. Consequently, many managers of LOY's major foreign operations have reached the top management level. Moreover, LOY, YIT, and Hartela Oy were the three pioneering Finnish contractors abroad in the 1970s (YIT in the 1960s). In 2009, all three of them are still strong and independent. However, many other major contractors (e.g. Haka, Polar, Puolimatka, and Ruola) – that went abroad later

and independently in the 1980s – have either been taken over or ceased to exist. Thus, it seems that entrants can improve their competitiveness in international construction business provided they invest on their competitiveness. If not, they will lose even their domestic market position.

**Ex post observation 3: The most fatal consequences of the other Finnish projects, e.g. the Diyala Bridge (1968-1974), Perusyhtymä (1984) and LOY leaving Nigeria (1978), and the Conference Palace in Iraq (1978-1984) could not be analyzed because of the great difficulty in obtaining the relevant data and information.** For example, the only relevant magazine, *Rakennuslehti*, published very little information on those contracts (1966-1985), and usually only positive news until the outbreak of the Iraq/Iran war forced the business leaders and the magazine itself to make statements about the serious problems of the ongoing works and the threatened future in those markets. Moreover, the tenders lost because of too-cautious risk allowances could not be studied for the same reason – a lack of reliable data and information. The unstructured pieces of information on the very unsuccessful projects of that time, however, support the opinion that systematic RM containing at least a process of risk identification, consequence assessment, and the appropriate response could have improved the situations.

**The key published references** on Case 1 are as follows (in Finnish, if not stated otherwise):

/C1-1/ Palojarvi, L. (1986) *How to manage risks in construction exports*. Licentiate thesis. Construction Economy and Management Publication No. 76. TKK Helsinki University of Technology. Espoo. (also in English). Primary data for case description.

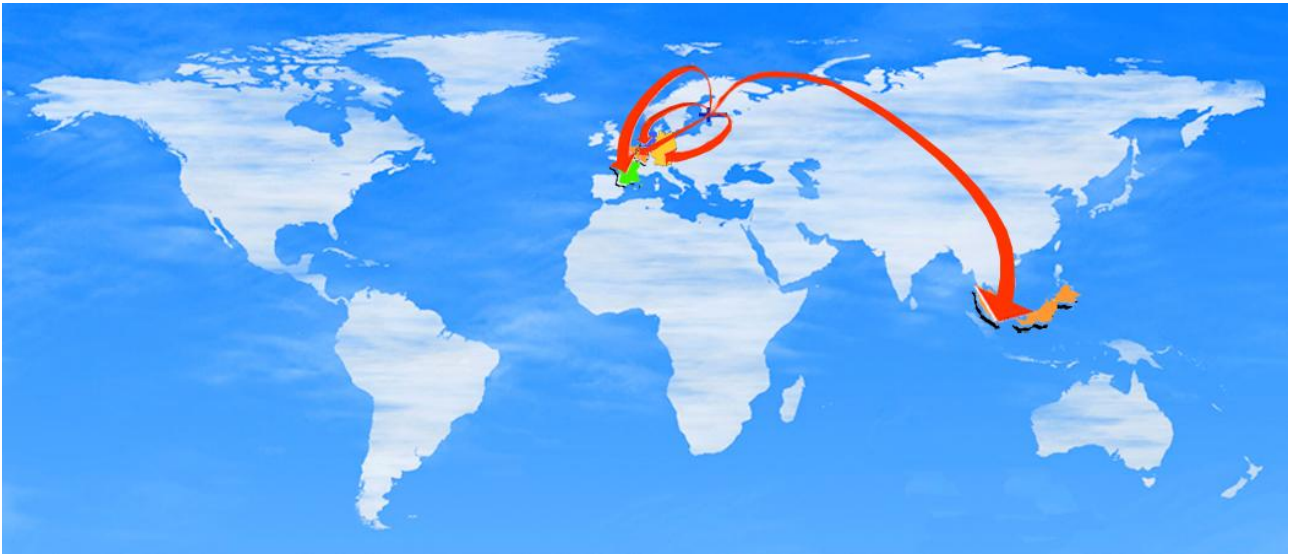
/C1-2/ Tuuri, A. (2008) K. H. Pentti – A Finn. Helsinki. Background data to analyze the start-up.

/C1-3/ Mantere, M. and Tervilä, K. (2005) Overseas construction project exports from the 1970s onwards. In Brax, J., ed., *Internationalization of the Finnish construction industry*. Report No. RIL 228-2005. Association of Finnish Civil Engineers (RIL). Helsinki. pp. 22-30. Contains assessments, on the key success factors.

/C1-4/ Kauppila, V. (2005) History of the Finnish construction exports. In Brax, J., ed., *Internationalization of the Finnish construction industry*. Report No. RIL 228-2005. Association of Finnish Civil Engineers (RIL). Helsinki. pp. 6-14. Background data for LOY's objectives.

/C1-5/ *Rakennuslehti*. A large number of issues of the magazine between 1966 and 1985. General background data for the ex-post observations.

## 5.2 International growth of Partek's precast concrete business in South-East Asia and Western Europe between the years 1984 and 1991 (Case 2)



Map 5.2. Map of focal areas in Case 2.

### 5.2.1 Introduction to Case 2 (Figure 5.2-1)

Case 2 encompasses **the RM** – uncommon in Finland at that time – **of the international growth of the Partek Corporation's (Partek) precast concrete business** between 1984 and 1991. The **Partek Concrete (PC)** Division was the leading supplier in Finland. The main purpose is: (a) to analyze retrospectively PC's international growth as a huge growth project that contained unusually high degrees of uncertainty and complexity, as well as major risks and their management with varying success; (b) to give the background and business-level frame for the subsequent implementation of Cases 3-5 as part of PC's international growth, and (c) to enable the longitudinal observations to be made throughout all of Cases 3-5 (Figure 5.2-1). **This insider action researcher** was assigned to the three roles of Regional Manager of Partek in Kuala Lumpur (1984-1986), Strategic Advisor related to the acquisition and integration of CBR firms in the Benelux countries and France (1987-1989), and Executive Vice-President of PC assigned to manage the acquisition and integration of VBI into PC on the spot in the Netherlands (1989-1990), and further.

Description	84	85	86	87	88	89	90
Eastern Partek in SE Asia - start-up and turnaround							
CBR precast companies in Benelux and France - acquisition and integration							
VBI companies - acquisition and integration							

Figure 5.2-1. Timeline schedule of the growth Cases 3-5 of Partek's precast concrete business in South-East Asia and Western Europe between the years 1984 and 1991.

### 5.2.2 Business brief and Partek's objectives in Case 2

In the late 1970s and the early '80s, Partek became engaged with **internationalization at the corporate level**. Partek decided to invest in the international growth of precast concrete technology, with notable results. The machinery technology, e.g. Elematic, was acquired, too. Risky foreign start-ups were participated in as a minority shareholder, e.g. in Saudi Arabia (Mabco). Significant technology contracts were also secured in Iraq. The unit of Construction Materials International (CMI) was established as the spearhead to which many external and internal experts were assigned to cover the sub-areas. Following their archrival the Lohja Corporation's (Lohja) example, Partek's management later gave the business sectors, e.g. concrete and project exports, the responsibility of carrying their internationalization further. In the early 1980s, the leaders of the Finnish construction business no longer considered the Middle East to be a very attractive market (Rakennuslehti 1981-1984).

During the 1980s, Partek set **the objectives for the international growth of its precast concrete business** as shown below (Table 5.2.-1). Accordingly, Partek established **Eastern Partek (EP) in Singapore (Case 3)** with a local top-class partner in 1983 in order to secure a large order for concrete machines and equipment and to gain the reputation of being permanently established in the potential market in South-East Asia. By the summer of 1984, EP's new floor slab factory was standing idle without any orders. Finally, EP was able to secure several orders for the Government but at prices that were far too low, as was soon discovered. Partek's management determinedly accepted the forthcoming loss of EP and, along with their partner, restructured EP as a turnaround. Thereafter, EP started to expand in Singapore and also in Malaysia. The later profits more than covered the losses of the start-up.

Table 5.2-1. Partek's strategic objectives for the internationalization of the precast concrete business in South-East Asia and Western Europe between the years 1984 and 1991.

1984	Financial business objectives were not set formally - EP was rather a project to secure - a large technology order in SE Asia and then a permanent and successful establishment
1987	- To safeguard the position in concrete technology internationally >> EP to become a viable bridgehead >> the takeover of CBR's firms and then the doubling of their capacity
1990	- Business objectives were set directly to the respective divisions for the growth, i.e.: >> To create the mutual organization structure of PCI & VBI, and, in the meantime, a coordinated approach inside Germany >> Joint R&D in Norway >> EP to grow further
1991	- Need for cash and profitability (i.e. to fight the recession) - Relative size (i.e. to be big enough) - Internal development

By 1984, PC had only decided to develop its precast concrete and mineral wool technology sales on a project export basis /1/. After starting to carry the responsibility itself, PC started to plan its internationalization systematically. In 1986, PC received an invitation **to buy CBR's precast concrete firms in the Benelux countries and France (Case 4)**. With its conditional acceptance, Partek's management considered this an "opportunity in its major strength area, i.e. concrete, while the only realistic alternative ... is to stay in Finland" /2/. The main objectives were "the major expansion opportunities", although several risks were identified as well /2/. In May 1987, to justify

the attractive CBR opportunity, **new and fairly cautious business objectives** were set for the internationalization (Table 5.2-1). PC wanted to safeguard its position in concrete technology internationally /1/. “EP could be a viable bridgehead to analyze further development in South-East Asia” /1/. Within this frame, the Board approved the CBR option /2/. At the end of 1987, PC’s new strategy and organization were confirmed and the internationalization became the priority /3/. The main objective was the well-managed takeover of CBR firms and the doubling of the turnover /3/. PC’s organization was strengthened. The Project Export unit was dissolved. **Partek Concrete International (PCI)** was established for the “Central” European markets. The ample presence of PC’s CEO was considered mandatory. The local managers were in charge of the business operations /4/, /5/. In this way, the high cross-cultural risks inherent between the Finnish-Swedish, Finnish, Belgium, Dutch, and French cultures were managed /4/.

In May 1988, **the main objective for PCI was “first consolidation and then expansion”**. PC internationalized itself fast. In November 1988, an opportunity for major expansion emerged when the owner of the Dutch VBI, the European leader in the precast concrete slab business, indicated the desire to sell his lifetime’s creation. The opportunity was exploited and **the acquisition of VBI Group (Case 5)** was closed in due course in September 1989. PC became a truly international player and the leader in its industry in Europe through the integration of VBI in 1990 and a large acquisition in Norway. **The next objectives for the continued international growth** were set in December 1990 /6/. PC’s main corporate objectives included profitability and effective, fast reactions. Close co-operation between PC’s business units was emphasized as the main tool /6/. The cost efficiency of PCI was emphasized and, besides that, “a mutual organization structure between PCI and VBI will be created to encourage synergy...” /6/. In the case of VBI, no hint of “a mutual organization” appeared in its strategy document /6/. Instead, several other risks are identified. For Germany, a somewhat unstructured plan was presented. It called for co-ordinated approaches between VBI (which already had a large plant near Hamburg) and PCI that “will start to study selling system solutions”. In Norway, the emphasis was on the joint R&D. EP’s objectives were profitable growth and a bright future.

**PC’s German venture** was organized in a confusing way. The partner candidate was Imbau, the leading precast concrete supplier in Germany. Imbau became confused by witnessing the poorly co-ordinated discussions initiated by VBI and PCI. Imbau had wished for the establishment of a strong joint venture company with PC in order to participate in the vast rebuilding task of the ex-GDR, to buy from Treuhand the huge ailing precast concrete capacity of the leading construction conglomerate IHG, and then to re-engineer it. This was truly “a golden opportunity”. In turn, Partek’s 10%-associate company, the leading Finnish building firm Polar, interfered by badly miscalculating its bid for the whole of IHG. Soon Polar had to cancel its unrealistic bid. Finally, the enraged management of Imbau concluded that Partek had not been open and ended all further discussions on the joint venture.

At the PC Management Conference in 1991, **the first big losses in the Nordic market as a result of the recession were noted**. Partek’s corporate call was to extend its operations outside Scandinavia, particularly into Western Europe (as PC had already done) /7/. Partek’s CEO did not put forward any clear objectives for PC except the need for cash and profitability, along with the qualitative objectives of relative size and continuous internal development. The recession years implied **the merger and restructuring of Partek’s and Metra’s plant engineering and contracting subsidiaries (Case 6)**. With the downturn of the Nordic markets, the idea of entering the Russian market and e.g. **participating in the Military Village Program near St. Petersburg (Case 7)** was proposed, too /7/. In turn, PC could not repeat its past successful acquisitions, at least

in the near future. As things went on, the building production capacity was soon greatly downsized in Finland, e.g. 50% in the case of concrete. PC could not develop new structures on a significant scale. The South-East Asian operations were divested in the mid-1990s and Partek's entire precast concrete business a little later, when the owners decided to focus on metal-based businesses.

### **5.2.3 Business-level versus project-level RM measures during Case 2**

Overall, the start-up, growth, and end (as the pure Partek company) were the phases of the internationalization of PC between the early 1980s and the late 1990s. The related RM measures are compiled in Table 5.2-2. **At the project level**, the needs for the new competencies were recognized in order to keep up with the clients, who expected a larger variety of PC products, including the new floor slabs, to be delivered on a subcontracting basis, not just as products supplied.

**During the start-up phase in South-East Asia**, no major risks were identified at the business level related to the finding of a first-class partner and the establishment of EP with Partek's minority position, except the general economic growth in the region. However, **the market in Singapore** was misjudged, i.e. the local contractors of the residential sector were not willing to become the "guinea pigs", i.e. the first users of the prestressed slabs. These risks were identified and also handled at the JV project level with great pain (Case 3). The risk taken on the uncertain future paid off for EP itself as a company. EP provided PC with a badly-needed successful reference on sufficient management competency in a remote area. Thus, the personal quest of the business-level management for a highly internationalized PC was able to continue.

**In the growth phase of PC in Western Europe in 1987-1991**, the risks of the acquisitions and integrations (Cases 4 and 5) were identified well and early by the experts at the business level. Many of these risks were also managed well. In the case of VBI, the experts suggested keeping the Dutch and Belgium operational structures separate in order to manage the ethnic cross-cultural risk. PC decided to co-ordinate the units first and then merge them with PCI as the Belgian manager lobbied strongly for this with his own candidacy for PCI's top position. Likewise, the industrial cross-cultural risk was related to the competencies needed to manage PCI's costly expansion into the high-class architectural business, which had to be entirely stopped later on. When the Dutch operations were merged under the Belgian boss, a major cross-cultural risk was taken at the business level and it was not sufficiently well managed. However, the main negative outcome of this cross-cultural risk was the lost opportunities in the particularly attractive floor business in Germany and France. At the operational level, VBI was still able to stay quite profitable thanks to its superior competence in its own business. However, PCI was not able to improve its performance at all.

**During the end phase after 1991**, Partek did not invest in PC and the precast concrete business any more. The Nordic recession was just over. The respective General Managers of PCI and VBI had suddenly died, for visibly stress-related reasons. Partek's owners did not wish to take further risks and sold the precast concrete business.

Table 5.2-2. RM during the phases of the international growth of Partek's precast concrete business between the years 1984 and 1991.

Phase	Source	Risks	Consequence	Management
START-UP 1984-1986	Over-cautious Asian attitude	<b>Identified risks:</b> General economy Slab demand	Demand Financial losses	Monitoring CIDB support
		<b>Unidentified risks</b> on P/L :		
	Local market structure	CIDB support not good enough	Slabs not accepted	Turning to new products and contractual roles
		Lack of competencies	Big losses	New competencies had to be built
GROWTH 1987-1991	<b>Identified risks</b>			
		General economy Finnish policies Acquisition risks	Demand No impact See respective Cases	Timing of investments Monitoring case descriptions
	<b>Unidentified risks</b>			on P/L:
	Inexperience; linguistic capacity	Multi-cross-cultural operation is complex and difficult to manage	Relying on locals	Business level: taking the risk!
	Attitude to lobbying in French versus Finnish cultures	Incompetent local managers	High risk-taking e.g. system deliveries, project export, architectural products	Business level: increased post-control
END PHASE 1992 - onwards	<b>Identified risks – not specified</b>			
	<b>Unidentified risks</b>			on P/L:
		Scandinavian recession	Serious liquidity problems; lay-offs	Project level: cost- cutting; Business level: restructuring
		Lack of synergy	Slow exploitation of slab synergies	Business level: more co-operation
		Losing the main opportunities in Germany, France	PC's position at Partek falls	No specific measures

#### **5.2.4 Managing major risks inherent in cross-cultural and contractual competencies in Case 2**

PC's major business operations (including Cases 3-5) were much more complex cross-culturally than contractually. Before 1988, **no cross-cultural issues** were addressed as part of managing PC's internationalization. Those issues were simply to be managed by relying on the local key managers. Unfortunately, this response measure created consecutive major risks focused within the competencies of the local "Mr. Partek" and the operational management, besides the business fundamentals. The top management of Partek and PC also had **difficulties in managing the multi-cross-cultural business operations** after the successful integration of the three PCI firms and VBI, as well as after the concurrent positive outcomes of the turnaround of PC's operations in Singapore and Malaysia. Only interpretative reasoning can be presented here, as follows. (i) Prior to the acquisition of PCI, Partek's management had gained **very little experience** of such a multi-cross-cultural operation, which is more complex than one or two cultures only. All the previous cases had taken place on the axis of Finland and a target country, such as Finland-Singapore, Finland-Sweden, and Finland-Saudi Arabia. Those cases had been simpler to manage. For example, the Finnish business manager located in Finland usually had another Finn down as the prime "subling" and the key Finn on the spot usually had additional Finnish expatriates at the next level. (ii) During the first years, **the linguistic capacity of PC's management was not good enough** to conduct the complicated business negotiations, not to mention mastering the history and cultures of various business environments and numerous partners. Therefore, the Finnish managers went along the easy style of "hands off – let locals run the business". This is the right style in established "business as usual" conditions, but it is the wrong one when making major changes. For the Finnish managers, this "hands-off" style rendered it difficult to "know your people", which, in the Finnish management style, is a necessary prerequisite for good management. Some clear misunderstandings occurred vis-à-vis the basic facts, besides many inevitable counter-incidents with their nuances and details. In part, these shortcomings left room for (iii) **internal lobbying and politics**, which, in turn, prevented any new improvements in the results.

**Contractually**, the establishment of EP (Case 3) was a straightforward deal without any particular complications. The business-level partnership agreement of EP was also formally standard. The deadlock of a 50/50 position was avoided. The success of the EP turnaround project was, however, more an indication of trust – created between the partners when the business was in bad shape – than of a smart partnership agreement. EP went into a new subcontractor role which required additional contractual competencies to be secured. In turn, the CBR and VBI acquisition deals (Cases 4-5) were contractually also without any complications at the business level. For Partek, the price performance clause and the selling party's minority position during the transition period gave additional safety. However, the project-level outcomes were different in each case. The reason was partly the different cross-cultural setup and partly the different contractual roles assumed by the firms that were acquired. Specifically, the newly structured CBR group assumed a new contractual role as the "system supplier" without sufficient competencies. This led to large and complex projects with large deficits, particularly in the Belgian and French firms. However, VBI continued with the same contractual role as before the acquisition, including heavy involvement in the design and erection of the slabs.

**In the managerial competency assessment, the group of PC's six key managers** received a total competency score of 3.98 on average (see Tables 6-5a, b, p. 145) regarding cross-cultural issues and a score of 3.55 on average regarding contractual issues over the years 1984-1991. These scores



were also relevant to the very complex task ahead, i.e. to achieve the international growth of PC from the early 1990s onwards.

### 5.2.5 Conclusions on Case 2

**The success rate of the overall outcomes of the RM of the internationalization of Partek's precast concrete business between 1987 and 1990 is assessed to be medium.** While the earliest objectives related to EP had been achieved, the main objective of growing big enough in the main markets, Germany and/or France, had not been met, partly because of the Nordic recession and the disappearance of the Soviet market, which had both taken most business managers and "experts" by surprise. The base objectives were achieved, yes, but the opportunities were not grasped, to put it briefly. The respective top management of Partek and PC converted uncertainty to risks and set the business objectives on the planned measures, the foreign investments, in order to implement the international growth strategy (only as a tiny part of the corporate strategy during the start-up years). **The strategy of 1987 called for international growth** because economies of scale brought along with them many advantages within an industrial business such as the one based on precast concrete. Therefore, the only alternative (to stay in Finland only) was considered too risky. **The ways used to manage the cross-cultural and contractual issues varied** depending on the business environment, the market segment, and even the moment in time. The project RM technique was applied to reach growth via many projects, i.e. the objectives were set and the emerging major risks were identified at the business level and responded to at the project level, sometimes on a fairly broad scale.

**PC's business objectives for international growth were attained during 1984-1990.** Additionally, the objectives of the development of the hollow core slab technology were attained soon thereafter. As the result of the growth attainment, PC's position within the international markets strengthened and its technology base was considerably enlarged. On the contrary, **some major negative outcomes occurred**, too, such as losing the post-acquisition opportunities to penetrate the French and particularly German precast concrete markets after 1990. This was due to the shortcomings in the competencies of PC's management to run a multi-cross-cultural operation, although the contractual (and technology) issues were viably managed.

**Overall, Case 2 conforms well to Hypothesis 1**, i.e. the project RM approach could be applied at the business level. Case 2 also **conforms well to Hypothesis 2**, i.e. the key managers' competencies to manage the cross-cultural issues were the key prerequisites for success. In addition, it is concluded that **PC's Finnish managers proved to be capable of learning** about multi-cultural issues sufficiently well, albeit slowly, in 1987-1990. In comparison, the contractual role or arrangements were important but were not quite as significant issues as the cross-cultural ones were. In Case 5, VBI assumed no new business role, while in Cases 3-4 the required competencies were relatively rapidly acquired.

The two ex post observations are as follows.

**Ex post observation 1:** Imbau rapidly implemented its plan successfully without PC in the early 1990s. For PC, the missed opportunity in the huge unified German market was at least one of the events that very probably caused PC to lose its leading position within Partek. Later, the owners of Partek decided to disinvest the entire concrete business in the mid-1990s.

**Ex post observation 2:** On the basis of this Case 2, it would certainly be worthwhile to study the management of PC, and its followers (after restructurings) Addtek Oy and Consolis Oy, during the subsequent years 1993-2008 as part of the future research efforts.

**The key confidential documents and the issues of Rakennuslehti Magazine** related to Case 2 are as follows (in English, if not stated otherwise):

/C2-1/ Meltti, M. (1987) Strategic guidelines of PC (“Sector P”) for 1988-1990. Internal memorandum. Helsinki. (in Finnish). Contains the business objectives for early international growth, and EP and CBR in particular.

/C2-2/ Partek Board’s documents on CBR-Partek. Executive summary. 30 April 1987. Parainen. Contains the business objectives and identified main risks of CBR option.

/C2-3/ Summary of PC’s strategies for 1988-1990. Internal memorandum. 23 November 1987. Helsinki. Contains (strategic) business objectives of PC , including CBR takeover, and respective key measures.

/C2-4/ Palojärvi, L. (1987) CBR/Partek. Organization and management. Internal memorandum. 26 November 1987. Contains the analysis of the major risks and planned response alternatives.

/C2-5/ Summary of PC’s strategy for 1988-1990. Internal memorandum. 6 January 1988. Helsinki. (in Finnish). Contains the revised business objectives, upon the rapid development, and main response to identified major risks, primarily by organizational action.

/C2-6/ PC Strategy 1990. 20 December 1990. Helsinki. Contains analysis of the past performance, and the new structure (including VBI as well), main business objective “Partek Concrete International”, major threats and opportunities (i.e. risks) and response to them .A hint of organizing VBI under PCI is given here,. but not in VBI’s own strategy document although it identified VBI’s main risks..

/C2-7/ PC Management Conference. Oslo 1991. Conference documents. Contains the business objectives for the new structure, including the Norwegian division as well. No further growth targets but internal efficiency to be improved – the recession is well recognized. No formal risk identification appears in this document.

/C2-8/ Rakennuslehti (1981-1990) Weekly issues of the magazine (in Finnish). Contains general information to verify some of the issues left open within the internal communication of PC, and data for ex-post observations.

### 5.3 Establishment and turnaround of Eastern Partek in the precast concrete business in Singapore during the years 1984-1986 (Case 3)



Map 5.3. Map of focal areas in Case 3.

#### 5.3.1 Introduction to Case 3 (Figure 5.3-1)

Case 3 encompasses the RM of the establishment and turnaround of Eastern Partek (EP) between 1984 and 1986. The focal actor, **Partek Corporation (Partek)**, established its hollow core slab business in the Singaporean building market via the joint venture EP, acting as its minority shareholder. The purpose is to analyze retrospectively Partek's market entry as a localization project. During the establishment of EP, **this insider action researcher** was assigned to be Regional Manager of Partek in ASEAN countries (1984-1986).

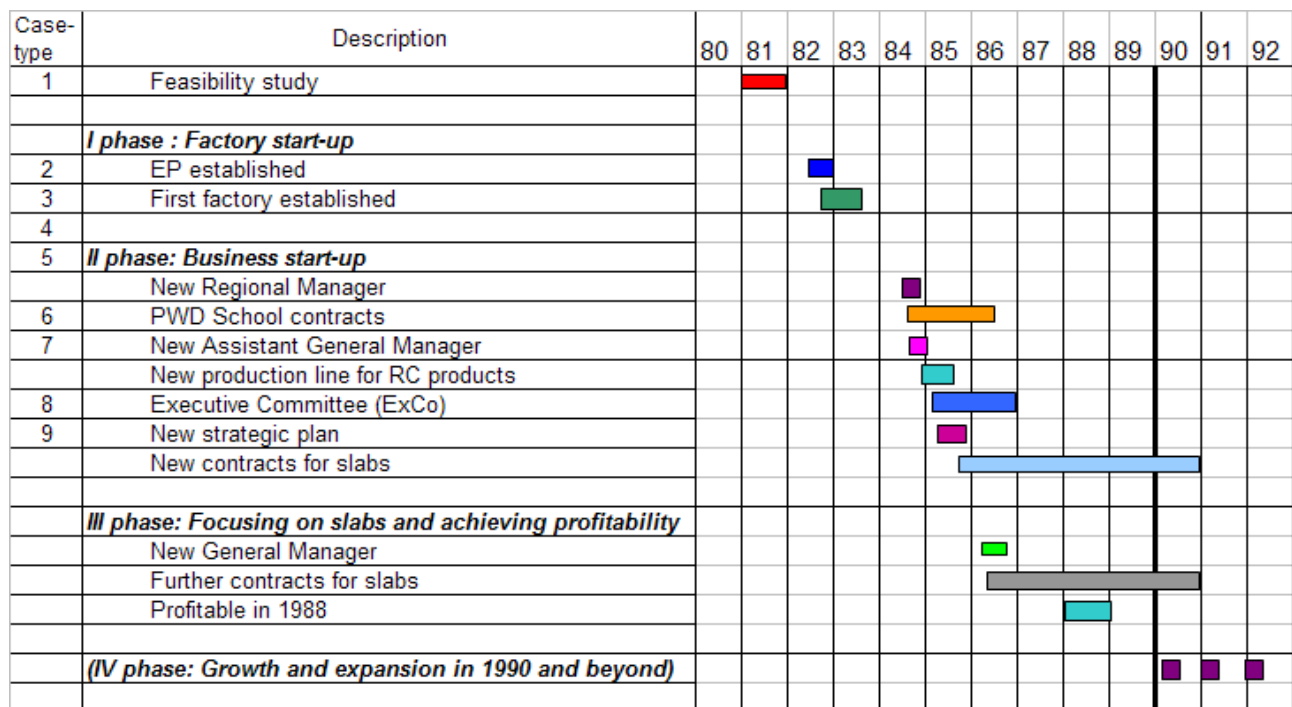


Figure 5.3-1. General time plan for Eastern Partek's establishment in the precast concrete business in Singapore for the years 1981-1992.

### 5.3.2 Business and project brief of Case 3

Partek's precast concrete business and its related technology were developed most actively in comparison with the other business groups of construction materials, building products, and projects. The assumed new contractual role for PC and the local supply of precast concrete parts in the overseas environment involved significant risks for Partek. The Mabco case resulted in the humiliating pull-out of Partek from Saudi Arabia in the early '80s.

**Partek's business objective "of entering the growing Singaporean building market"** /2/ was set in the early 1980s. EP was established in 1982 and Partek took up a share of 45% /1 p. 149/. Its first General Manager was a local Singaporean whose subordinates included the three Finnish managers running the technical, design, and marketing departments (Figure 5.3-2). The Finns had relatively limited experience of cross-cultural operations and the precast concrete business abroad. Partek's Regional Manager also resided in Singapore. He, too, had limited experience of contracting. NatSteel provided all the local support that EP's managers requested.

**In 1983**, Partek decided to co-invest USD 10 million in a state-of-the-art hollow core slab factory / 1/. During the feasibility study, a governmental agency (CIDB) had welcomed the new idea of prestressed hollow core slabs /2/. **By the autumn of 1984**, EP had not, however, received any orders. High-rise residential buildings, with their short spans, were not suitable for the Finnish slab technology, which was geared for much longer spans. The symptoms of the crisis were visible. EP turned its attention to low-rise school buildings for the Public Works Department (PWD). EP's marketing department submitted several tenders to various contractors. It turned out that 17 schools were to be built by such local contractors which had based their tenders on EP's proposals to design, manufacture, and erect the precast concrete parts, i.e. the structural columns and beams. Thus, the extra money and months were used to build the necessary supply capacity for the columns and beams. Partek appointed a new Regional Manager at the same time. He scrutinized the tenders, which totaled up to about USD 15 million. The new estimate indicated **an expected loss** of about USD 12 million (including the investments). The CEO of Partek decided that the contracts would be signed and that Partek would aim at staying in the ASEAN region. Had Partek refused, it would have lost at least USD 10 million in share capital and cash expenses incurred, while NatSteel would also have suffered an enormous loss of face. The board of EP felt inclined to sign the highly unprofitable contracts.

Partek was committed to staying in Singapore for a minimum of two years before any radical change of course would even be considered. It was highly uncertain when and whether at all the EP business would become profitable for Partek. This resulted in the re-setting of **the objectives in the autumn of 1984** as follows: (a) to fulfill the first contracts in some effective ways; (b) to invest USD 4 million in the additional precast concrete capacity for the supply of the structural elements as part of the first contracts; (c) to reinforce the organization, respectively, including EP's Finnish key staff, and (d) to prepare an effective strategy and an action plan for EP to achieve more profitable business in the future. Accordingly, the preparations were launched. The 4-million-dollar investment was started. The extra financing was obtained. A new technical manager had to be recruited at once (the first one had already left). Nobody among EP's key managers had ever cast prestressed hollow core slabs, except the test runs in 1983 (Figure 5.3-2).

**The cumulative loss** amounted to about USD 7 million in 1983-1984. The fulfillment of the school contracts was challenging. Luckily, the slab production went on smoothly. The partners adopted a hands-on supervision style and even appointed an operative "Executive Committee". EP's Board

met rarely. In 1985, the loss was as predicted, about USD 7 million, with a turnover of about USD 14 million. Because the loss was as predicted, the partners decided to prepare a new strategy for EP.

**By the autumn of 1985**, the new plan was completed /4/. Singapore's building market was anticipated to remain depressed for a few years. EP's organization was evaluated as being technically capable of producing the slabs. On the other hand, it was less capable of producing the structural elements (Figure 5.3-3). All the staff functions had many shortcomings. Additional strengths would be required for the contracting, the controllership, and the marketing, while the factory engineering staff was to be trimmed down. The troublesome site operations were to be subcontracted. The financial plan aimed at cutting the heavy losses and becoming profitable in 1987. An additional USD 6.5 million in cash would be needed. The organizational plan emphasized "customer service, control functions, and rationalization". In EP's history, the cross-cultural differences were formally noted for the first time in the form of the diplomatic expression that "the staff should be managed so that corporate efforts are beneficially channeled into various aspects of the operation through improved teamwork" /4/.

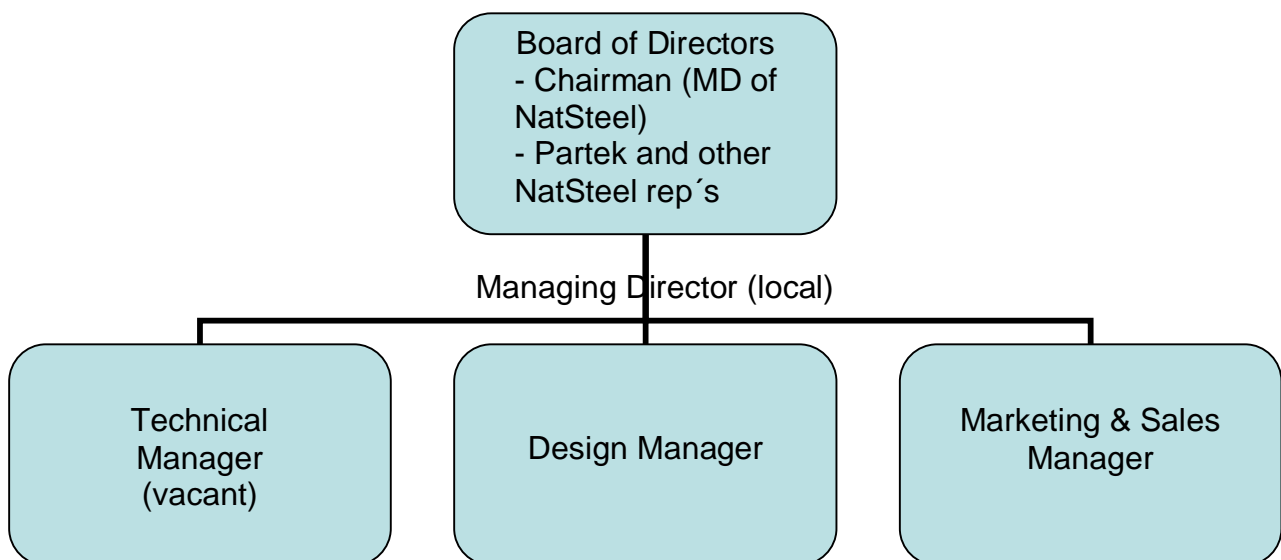


Figure 5.3-2. EP's organizational structure in September 1984.

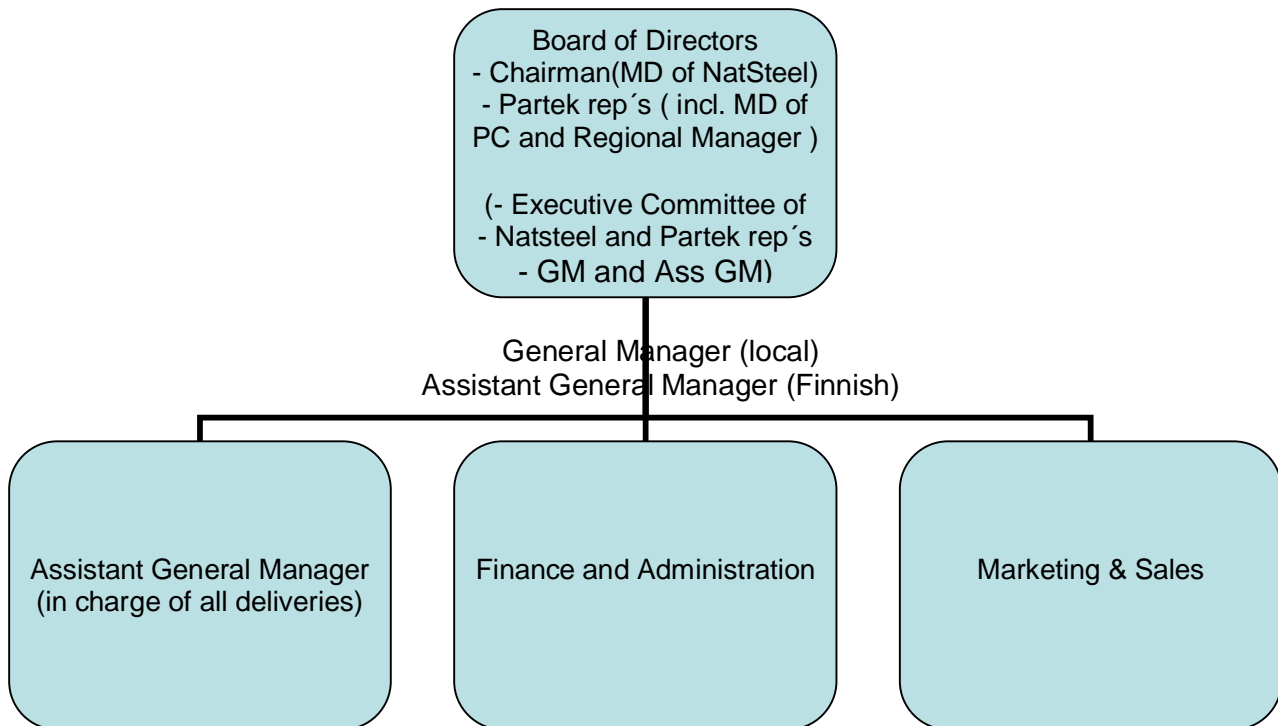


Figure 5.3-3. EP's organizational structure in February 1985.

### 5.3.3 Conversion of uncertainty to risk during Case 3

Initially, Partek offered its old, proven prestressed hollow core products to the new Singaporean market. After the unsuccessful tendering of the slabs only, EP also offered the new beams and columns with the related design and erection services. The competencies of EP's key staff were not sufficient, which resulted in e.g. many mistakes in the cost estimation and the technical performance. For Partek, an unidentified competency risk materialized and its direct consequence was a 10-million-USD loss. Thus, EP's new strategy was prepared. Ex post, **the major risk breakdown structure** prevailing in this fairly complex business environment **in the summer of 1985** could be extracted from within this strategy /4/ as follows (Table 5.3-1).

- (1) EP's performance in the PWD school contracts: the experience with structural parts and erection works was limited. After a few months only, there was no certainty as to how well the Finns and the Singaporeans would work together. The key managers' competencies were improving, along with progress being made with the contracts.
- (2) EP's cash needs: the losses would require cash injections in 1986 as well.
- (3) The most important medium- and long-term risk: EP would need local, formal acceptance for the use of hollow core slabs in high-rise buildings /2/. Without this acceptance, the future business of EP would be on a limited scale only.
- (4) The partners' mutual trust: if this trust broke apart, Partek could do nothing in Singapore any more.

**At the JV level, (1) the general uncertainty regarding EP's future was converted to RM** by setting challenging, attainable objectives for EP. The school building contracts had the budgets and schedules. The bank lending was synchronized with them. Neither the support of some state officials nor EP's offer to lend a high-caliber Finnish expert on structural engineering for six months could remove the uncertainty inherent in the acceptance of the slabs. However, the

experience gained from the PWD schools did clear away this uncertainty. Next, the operative plans and budgets were built up on a set of expectations about slab prices that turned out to be realistic **for and beyond 1987**.

Table 5.3-1. Major risk breakdown structure of Eastern Partek in the year 1985.

Causative events	Source => identified main risks	Business objectives and/or consequences	Management of identified risks
New investment stood idle for one year in 1983-1984. Inexperience among all EP's local actors	Weak contracting of structural products and bad pricing => (1) EP's performance in the PWD school building contracts	The contracts must be fulfilled and the customers be kept satisfied. Otherwise, they will not serve as good references, which were mandatory for Partek.	1 Reinforcing the organization 2 Providing the contractual advice and maintaining EP's liquidity by the partners' active support 3 Thinking about "Customers first!"
Inexperience of EP's local actors. NatSteel expected Finnish experts to know the business fundamentals.	Too-low contract prices and poor conditions =>(2) Loss of EP's liquidity	EP's performance must not suffer from a lack of cash. In the long term, any losses will be recovered in future contracts only.	1 Exploiting the partners' unofficial support 2 Arranging competition between local banks (Finnish branches) 3 Communicating and reporting openly to banks
Local culture avoids risk-taking, but yet it aims for sustainable competitiveness.	Local contractors are hesitant to take the risk as "guinea pigs" => (3) Local acceptance of hollow core slabs in residential (high-rise) buildings	<b>The key objective: hollow core slabs must penetrate the residential market.</b> The non-residential market is too small to sustain EP's capacity.	1 Confirming that the residential sector is much bigger than the non-residential one 2 Fulfilling the school contracts 3 Replacing GM with a Finn for better credibility 4 Persuading the best foreign (Japanese) contractor to buy EP's slabs
Partners' national cultures new to each other. Industrial cultures fairly similar.	Partners are new to each other and "going gets tough" => (4) Partners' mutual trust	Without a good partner, Partek can do nothing in Singapore (and Malaysia). Vice versa, without Partek, NatSteel cannot operate the very modern and sophisticated precast concrete factory.	1 Working (office, meetings), spending time together (lunch hours, celebrations, visits, even diving weekends) 2 Communicating openly and honestly 3 Being practical – no pride issues

**At the business level, Partek turned the uncertainty about the acceptance of the slabs (3) to a risk connected to the slab pricing in EP's new strategy during 1985.** The manufacturing of the slabs ran smoothly and the product quality was kept high /4/. The strengthening of EP's organization and the other measures were parts of managing this price risk. Besides, the risk on **(4) whether the Singaporean-Finnish cross-cultural co-operation would work or not**, if managed well, was already being monitored continuously, resulting in several managers being replaced. The dedicated fighting through of the school programs had proven that this co-operation functioned at all the organizational levels, including those of both partners.

#### **5.3.4 Business-level versus project-level RM measures during Case 3**

**At the business level**, the joint preparation of EP's new strategy indicated that both partners shared the same basic views about EP's future, including the good long-term growth prospects of Singapore and neighboring areas. **During 1986**, the responsibility on EP was transferred from Partek's corporate level to the business line management. EP's performance needed to be managed to an acceptable level before any further international growth steps of PC were allowed (see Case 2). **At the project level**, EP faced two tasks, i.e. how to penetrate the market with the slabs and to turn the company around. EP had lost all its initial capital while standing idle the first full year.

Complexity was reduced by focusing on one single market and inside on the first school contracts rather than marketing heavily for new jobs. With its new more competent organization, EP was capable of pulling itself through, despite the recession in Singapore in the late 1980s.

#### **5.3.5 Managing major risks inherent in cross-cultural and contractual competencies in Case 3**

Among the identified major risks, **(1) EP's performance in the school building contracts** was directly related to the key managers' competencies regarding cross-cultural and contractual issues. The organizational reinforcement was the main tool to increase the competency levels. The big project-focused efforts resulted in reasonably satisfied clients and the avoidance of major contractual disputes, by local standards. After the handing-over, the school building contracts served as a vital reference on EP's performance, even in future difficult conditions. Besides, the key Finns acquired a reputation as men worthy of trust. **(2) Cash liquidity** was secured through a local branch of Finnish major bank without the counter guarantee of the owners. **(3) The acceptance of hollow core slabs in residential (high-rise) buildings** was the main risk for the future profitability of EP and directly inherent in its cross-cultural competencies, in addition to the general managerial competencies. Contractually, the competencies on the design and erection services had to be covered as well. Local contractors were wary of being "guinea pigs" for the new slabs and rather waited for someone else to take that risk. Finally, EP secured a visible reference for the high-rise housing sector: a major Japanese contractor was persuaded to buy the slabs. Other local and foreign contractors followed suit. **(4) The trust between the partners** was an issue **directly inherent in cross-cultural competencies** at several levels of EP. Clear evidence of the trust gained was obtained when it became clear in 1986 that EP's local General Manager (GM) or "Mr. Partek", appointed in 1983, could not create the required confidence among potential clients. The same applies to the key local and Finnish managers, because they had no prior competencies in this type of business. In addition, the first GM was not competent to fight through the necessary changes. He had to be replaced in 1986 with a Finnish Assistant General Manager with the relevant experience in the Middle East and, by now, 18 months' experience of working in Singapore. He paid a lot of attention to the local clients' perceptions of good service ideas and cross-cultural differences /1/.



Thus, all the mandatory competencies needed for EP's survival were finally in place. The earlier business-level decision to rely on the local GM had to be corrected with the JV-level decision. All this required solid cross-cultural and general managerial competencies.

**In the managerial competency assessment, the group of EP's six key managers** received a total competency score of 3.66 on average (see Tables 6-5a, b, p. 145) regarding cross-cultural issues and a score of 3.56 on average regarding contractual issues as a cross-sectional measure during the year 1985. The same group had a considerably lower score in 1984 and a slightly better one in 1987. The scores for 1985 were relevant to the task ahead, i.e. to turn around the crisis company EP under the conditions of the contracting economy in Singapore.

### 5.3.6 Conclusions on Case 3

**The overall success rate** of the RM regarding the outcomes of the establishment and turnaround of EP between 1984 and 1986 is assessed to be **medium**. The early business objective "of entering the growing Singaporean building market", set in the early 1980s, was met. The new objectives of 1984, i.e. to fulfill the first contracts in some effective ways, to reinforce the organization, including the Finnish key staff, and to prepare an effective strategy and an action plan for more profitable business in the future had been met, but with the pain of a big loss on the first contracts.

**Case 3 conforms well to Hypothesis 1**, i.e. it certainly would have been more efficient to launch the RM on the major risks already at Partek's business level than to wait until they emerged and handle them primarily at the JV or project level. **At the JV level**, EP assumed the contractual role of providing the design and erection services, which was new to Partek. The first school building contracts were obtained on the basis of severe errors in calculations. This is evidence of a lack of the required competencies on the part of the key managers. Partek had to sign those contracts. The risk of a big loss could not be eliminated – only mitigated to some extent. NatSteel could not back off either. **At the business level**, the early uncertainties inherent in Singapore's growth potential, liquidity, political stability, and corruption index were removed. Nevertheless, Partek's original objective of entering Singapore's residential hollow core slab market was not attained in any viable ways. Instead, the deliveries and the works of the school contracts might have been messed up so badly that Partek's presence in the region would have to be aborted (threat). The CEO of Partek decided to struggle through and **to look for better business in the future (opportunity)**. To grasp this opportunity and to try to mitigate the threat, the first mandatory measure was (1) to find the capacity and the competence to deliver those contracts. Only then would it be viable (2) to improve EP's entire process of supplying hollow core slabs. Thus, the RM began upon the establishment of the relevant business objectives in these two (standard) fields of operation, respectively. Finally, the school building contracts were fulfilled with the requested quality and acceptable delays, but with the predicted huge loss.

**Case 3 also supports Hypotheses 2a-b. This case supports the hypotheses** that the competencies on managing both the business fundamentals and the local conditions, particularly the cross-cultural issues, are a prerequisite for success. **The main competency-related risks were identified and managed reasonably well.** Mutual trust between the partners was created and this remained true. According to the new strategic plan, EP's organization was reinforced and the local GM was replaced by a Finn. Several other Finns were recruited on either short- or long-term contracts. The consequent appreciation of each other's cultures and competencies allowed EP's cross-cultural organization to work well and to develop Partek's knowledge of the precast concrete business even further towards Asian quality and customer service concepts /1/.

The ex post observations are as follows:

**Ex post observation 1:** The partners adopted a hands-on supervision style and even appointed an operative “Executive Committee” in early- 1985, which can be perceived as a typical crisis management measure.

**Ex post observation 2:** The assessed RM (1984-1986) later allowed EP to pay back the initial investment and even more to each of the two partners. The well-managed risk-taking paid off in positive financial and competitive terms after the critical penetration phase. After 1987, the further development of EP’s business was quite good. EP grew and broadened its operations into Malaysia and even other areas. Finally, EP was entirely taken over by NatSteel in the mid-1990s, slightly before Partek decided to give up its construction-related business altogether.

**The key references and the confidential documents** on Case 3 are as follows (in English):

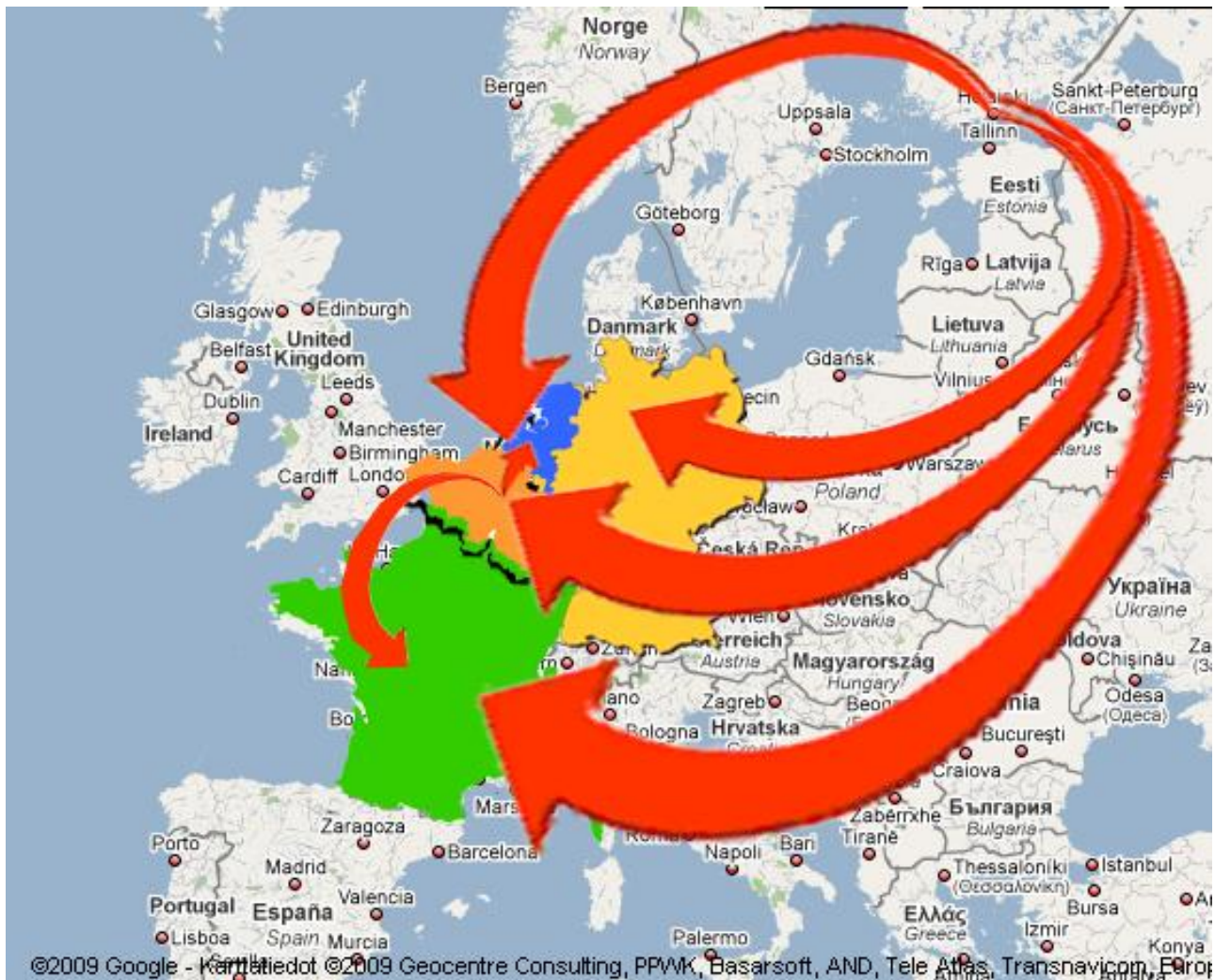
/C3-1/ Karvinen, K. (2002) Developing and implementing a process of integrating internal and external customers and technology. Doctoral thesis. University of South Australia, Adelaide. Contains data for the start-up of EP and its first factory.

/C3-2/ Hämäläinen, J. and Koivunen, K. (1981) Feasibility study. Contains the recommendation to proceed with project, business objectives, a detailed investment plan and some notes on risks, plus a financial sensitivity analysis.

/C3-3/ RT Confederation of the Finnish Construction Industries (2004-2007) Statistics.

/C3-4/ EP (1985-6) Strategic plans for 1987 and beyond. Internal memo of the Executive Committee. Contains business objectives, major risks and some planned response to them.

#### 5.4 Acquisition of CBR's firms in Belgium, the Netherlands, and France and their integration into Partek's precast concrete business between the years 1987 and 1990 (Case 4)



Map 5.4. Map of focal areas in Case 4.

##### 5.4.1 Introduction to Case 4 (Figure 5.4-1)

Case 4 encompasses the RM of the multicultural acquisition of CBR's firms in Belgium, the Netherlands, and France between 1987 and 1990. The focal actor, Partek Concrete (PC), one of the Partek Corporation's (Partek) business groups, entered the precast concrete product markets in the three countries via this acquisition. The purpose is to analyze PC's market entry retrospectively as an acquisition project. This insider action researcher was assigned to the expert group in the spring of 1987 to prepare the feasibility study, to seek the Board of Directors' approval for an option to buy, and later to carry out the extended due diligence and integration measures. The researcher worked as Executive Vice-President of the new Partek Concrete International (PCI) Division to ensure the integration between February 1988 and early 1989.

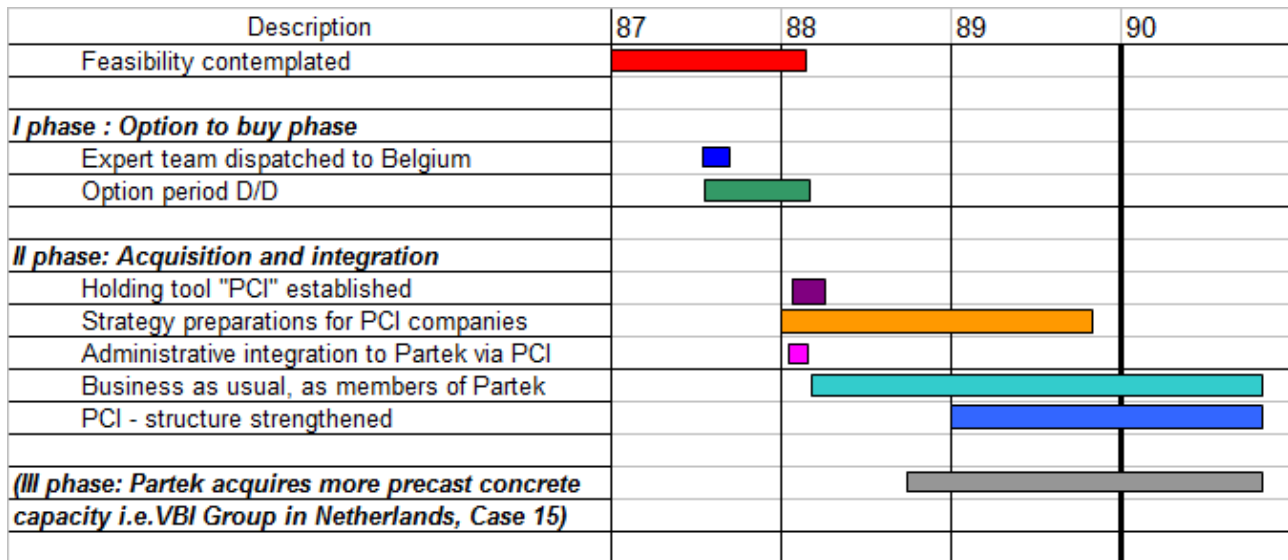


Figure 5.4-1. Partek's general time plan for the acquisition and integration of CBR firms between the years 1987 and 1990.

#### 5.4.2 Brief and Partek's business objectives in Case 4

In 1986, CBR (owned by the stock-listed Société Générale), the Belgian cement giant, decided to divest its precast concrete firms, which were chronic money losers. The six plants were managed under three subsidiaries, i.e. CBR Beton N.V. ("CBRB") in Belgium, Schokbeton N.V (SB) in the Netherlands, and IB Morin S.A. (IB) in France. The total turnover was about EUR 60 million. CBRB had good results, SB was at the break-even level, and IB had poor results. **At the turn of 1986/1987**, CBR invited the likeliest potential candidates, e.g. Partek and Lohja (of Finland) and Strängbetong (of Sweden), to buy its precast concrete business. **Partek** had organized its businesses into three fairly independent business groups. In Finland, Western European integration was already being monitored. PC decided to participate in this market and responded to CBR's offer to discuss the deal. PC's business objectives were: (i) volume growth; (ii) a strong position within the European Community (EC), and (iii) the enlargement of its existing (Finnish) technology base. These could now be approached via the eventual acquisition /1/.

**By 1987**, PC had managed the turnaround of its first foreign establishment in Singapore successfully and it was "permitted" to consider further international growth. The turnover of PC was about EUR 160 million, mainly in Finland. PC was reasonably profitable. PC was also involved in a JV in Singapore and had a minority share in a large precast concrete operation in Saudi Arabia. The precast concrete technology sales, including the large project deliveries in Saudi Arabia, Iraq, Germany, and Singapore, added to PC's foreign experience. PC's management had international experience in contracting and a strong desire to grow fast internationally. The Lohja Corporation, its archrival, had a concrete business with an almost identical but smaller profile.

**The major issues in the business environment** involved the future integration of Finland with the EC. Although it was "not allowed" to discuss Finland's membership, the firms considered its future impacts. It was anticipated that: (i) the integration would accelerate economic growth. The industrialization of the construction processes was expected to continue slowly but steadily; (ii) the advanced Finnish precast concrete technology could be quite competitive and even further reinforced with the emerging Nokia-driven applications of IT technology. Clients were building

firms which considered that (iii) precast concrete building parts are more competitive than cast in situ solutions. The rapid economic growth led to a demand for very sophisticated and expensive concrete façades in wealthy urban areas, e.g. London, Frankfurt, Brussels, and Paris. It was anticipated that their viability would require a highly automated manufacturing processes.

**As early as in 1986**, the acquisition of the three subsidiaries was agreed upon confidentially between CRB and Partek. It seems that this was so, although no formal document was available. **In May 1987, the formal option to buy** was agreed upon within Partek /1/. Because of the due diligence process (D/D), an option period of six months was set aside. The end result of the D/D was more or less preset for the eventual discussion of “big negative surprises” only. A small expert team of PC was assigned to study the business outlooks and the three firms. The team had expertise in general management, international business, strategic planning, financial administration, and precast concrete technology. The General Manager (GM) of CBRB – a Flemish Belgian national – was assigned to act as the coordinator and the local link. He saw this as a personal platform to become the local leader of Partek’s entire business in Western Europe, despite the fact that he had gained his prior experience in consumer sales only. He loudly advocated the new “vision” of highly automated architectural and other concrete “system deliveries”. During the option period, the market outlooks and the performance of target firms were confirmed as meeting the expectations. The local key managers were assessed person by person. The opportunities arising from well-planned technology investments were confirmed. In turn, the risks of the ambitious domestic and export projects that had been launched were also identified /2/.

**In the spring of 1988**, PC decided to acquire the three firms “as going concerns” (Figure 5.4-2). The integration began swiftly. A holding company, **Partek Concrete International (PCI)**, was established and the boards of the acquired firms were changed accordingly. PC’s small expert group was assigned to PCI as “Group Staff”. The acquired firms were supported in their business and investment planning but their daily operations were left to the three firms themselves. **By 1989**, the administrative routines, including the financial reporting, had been established. The market outlooks, the investment opportunities, and the local management competencies were assessed. Within PC, the only disagreement was about the local management’s competencies. PC took a risk and deemed the competencies satisfactory, despite the shortcomings that had been discovered (see the scores in 6.5). PC was “eager” to execute the acquisition with its major risk. **By early 1989**, the post-merger integration was finalized and the acquisition was considered a “fait accompli” /2/. PCI went for “business as usual”.

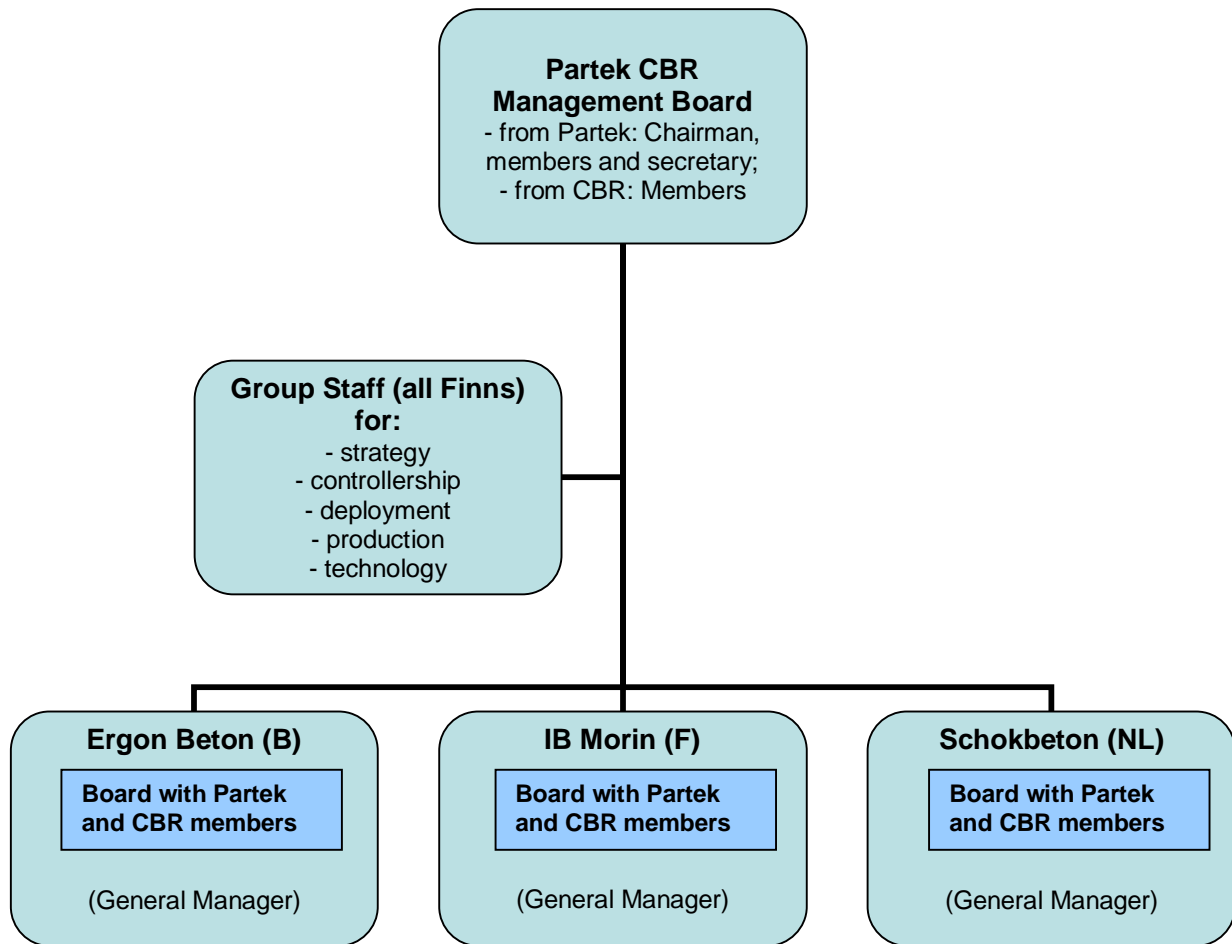


Figure 5.4-2. PCI group –Organizational Scheme for the integration (2). January, 1988

#### 5.4.3 Conversion of uncertainty to risk during Case 4

In May 1987, **Partek expected a considerable improvement in results and return on capital** in the target firms when the “option to buy” was approved. At the business level, more detailed targets were set and planned, e.g. for consolidating and meeting the financial targets first, and doubling the capacity later. The restructuring and the HRD, as well as the slab and facade technology investments, were to be the chief means to reach those targets. **The initial “risk summary”** included: (i) management continuity in Belgium and France; (ii) the Dutch results, and (iii) the demand for and applicability of hollow core slabs in France as potential risks, but not with disastrous consequences /1/. Thereafter, **the key managers’ competencies and the viability of the sophisticated façade business** were identified. The risks related to the individual technology investments or the demanding export projects were not considered to be major, although they had a notable impact on the firms’ future results. Some visible examples of the new “solution supplier’s” role, strongly envisioned by the management of CBR Beton and PC, already existed. The risks linked to the balance sheet or the currency were not considered major either. The uncertainty about European integration was turned into an opportunity for additional growth if the integration materialized, as it did. The uncertainty about the applicability of the Finnish technology was first reduced by site and plant visits during the option period and then confirmed by the investment planning during the integration. The key managers’ competencies were now correctly understood, person by person. The uncertainty was turned into risk-taking, for example, by not making the Dutch manager report to the Belgian-Flemish manager (Figure 5.4-2), which was not recommended

by any expert. Ultimately, Partek's management felt that it was fairly easy to decide upon the acquisition and the consequent integration.

**The complexity of the acquisition and integration phases** was reduced by carrying out the acquisition in the form of buying the shares of the three separate going concerns, which all did reasonable business in their own market areas. They had their own management and only some overlapping operations. Partek was very experienced in this "cleaning". It was now much more complex to position PC in the competition in Western Europe. The taking of an active role meant definitely taking risks but also becoming the front runner in the European precast concrete industry, which was expected to be restructured (see also Case 5). **During the integration phase**, the market development, the adaptability of the Finnish technology, and the local management quality were identified as the major risks, as before (Table 5.4-1).

#### **5.4.4 Business-level versus project-level RM measures during Case 4**

**At the business level**, PC's expert team was sent out to re-identify the major risks of the acquisition proposal at the beginning of the option period. All the careful decisions on the key appointments and the major investment were also carried at the business level during the integration period. The only serious difference of opinion on the new structure's management was settled when PC's management took a high risk. With PC's active presence, the careful treatment of the national key managers and careful, sound investments in technology, the target firms only maintained their previous satisfactory performance level. Overall, PC had achieved the position of the major global player in its industry. That was more important than the early financial results. Besides, the firms were to adopt some new business approaches: "system deliveries" and the supply of architectural concrete façades were brave concepts to add value to the traditional products and were in line with the basic philosophy. However, big losses occurred particularly in certain export projects (e.g. London), the main reason for which was the new contractual role as a "subcontractor", including the erection and the extremely difficult mould-working to match the design.

**At the acquisition project level**, no major risks with particularly negative consequences occurred during the integration phase. The sufficient investment planning and control were executed by PC's expert team as part of the RM. The losses of some export projects, however, were due to a lack of the appropriate respective competencies on the part of the local managers of those businesses.



Table 5.4-1. Major risk breakdown structure of the acquisition and integration of PCI.

Causative events	Source of main risk	Identified main risks	Project objectives and/or consequences
Economic stagnation in Western Europe	European integration	<b>Market development</b> Management: 1) To monitor 2) Timing of capacity investments 3) Market restructuring 4) French, Belgian, and Dutch markets balance each other	Restructuring >>investments >>>good result
Market structure - no clear leader	Technology level behind Finnish conditions	<b>Adaptability of Finnish technology</b> Management: 1) To monitor 2) Joint R&D 3) Timing of investments 4) Investments on local request	Investing in Finnish technology improves competitiveness
Local culture; CBR's culture	Local industry culture versus Partek's culture	<b>Local management quality and set-up</b> Management: 1) Monitor carefully 2) Provide sufficient Partek management capacity to back up "top performers" 3) Disconnect "personal" competitors 4) For local managers, attractive remuneration policy	Financial result
<b>Not formally identified as acquisition risk:</b>			
Lack of experience in international construction industry	Limited top management experience of cross-cultural operations	<b>PC's ability to exploit multicultural organization</b>  Management: 1) Leaning on locals 2) Active PC presence	Synergy and scale effect >>>>> Financial result

#### 5.4.5 Managing major risks inherent in cross-cultural and contractual competencies in Case 4

Each of the three CBR firms had its own national- and market-specific cultures. They were now to be managed as one group instead of their earlier setup as fairly independent subsidiaries of a huge cement group. **This re-organization of four crossing ethnic and industrial cultures was identified as a major risk** that had to be managed in some effective ways. When the integration was closed at the end of 1989, the GM of CBR Beton was appointed to be the leader of the PCI Group, thanks to his loyalty and visible strengths as an extremely skilled salesman, despite his obvious shortcomings (he died in 1995) /2/. In addition, his Belgian-Flemish nationality made it impossible for the Dutch managers to approve his management style. Indeed, the financial success rate of the CBR acquisition might have remained at a medium level as a result of the risks inherent in the multi-cross-cultural issues in managing the three national firms. Moreover, those risks were amplified by **the British contractual peculiarities** in the big architectural façade supply deals in London.



These events gave, in part, a reason to change the tune a little within the business-level strategies vs. the management of the multi-cultural business group: to fortify the buyer's (PC's) presence on the spot. Appropriately competent managers (also cross-culturally) were assigned to this task.

In the managerial competency assessment, **the group of PCI's initial six key managers** received a total competency score of 3.81 on average (see Tables 6-5a, b, p. 145) regarding cross-cultural issues and a score of 3.54 on average regarding contractual issues as a cross-sectional measure during the year 1988. These scores were relevant to the task ahead, i.e. to perform the multi-cross-cultural acquisition and post-merger integration of CBR's firms in the conditions of the growing economy during the years 1989-1992.

#### **5.4.6 Conclusions on Case 4**

**The overall success rate** of the outcomes of the RM of the acquisition and integration of CBR's firms in Belgium, the Netherlands, and France between the years 1987 and 1990 is assessed to be **medium**. PC's business objectives, i.e. volume growth and a strong position within the European Community (EC), were met. However, the third main objective, i.e. the enlargement of the existing (Finnish) technology base, was not met because the CBR Group had only a minor position in the slabs and the façade business was only in an embryonic phase. Besides, the financial results did not improve as expected.

**Case 4 conforms fairly well to Hypothesis 1**, i.e. the project RM approach was applied at the business level. The objectives were set and most of the major risks identified and responded to, albeit often by dealing with the consequences only. The experts had already identified some significant risks at the business level. The same risks were re-identified at the project level, but they were ignored to such an extent that the financial results of the acquired firms did not improve. **Case 4 conforms to a high degree to Hypothesis 2a**, i.e. PC's initial competencies regarding multi-cross-cultural issues were somewhat limited but they improved along with the process. However, the cross-cultural risk was taken by appointing key managers whose competencies crossed too many industrial and several ethnic cultures. **Case 4 conforms to a medium degree to Hypothesis 2b as well**. Contractually, the acquired firms adopted the role of a specialized subcontractor, which resulted in some loss projects. No rivalling major risk occurred.

The three ex post observations are as follows:

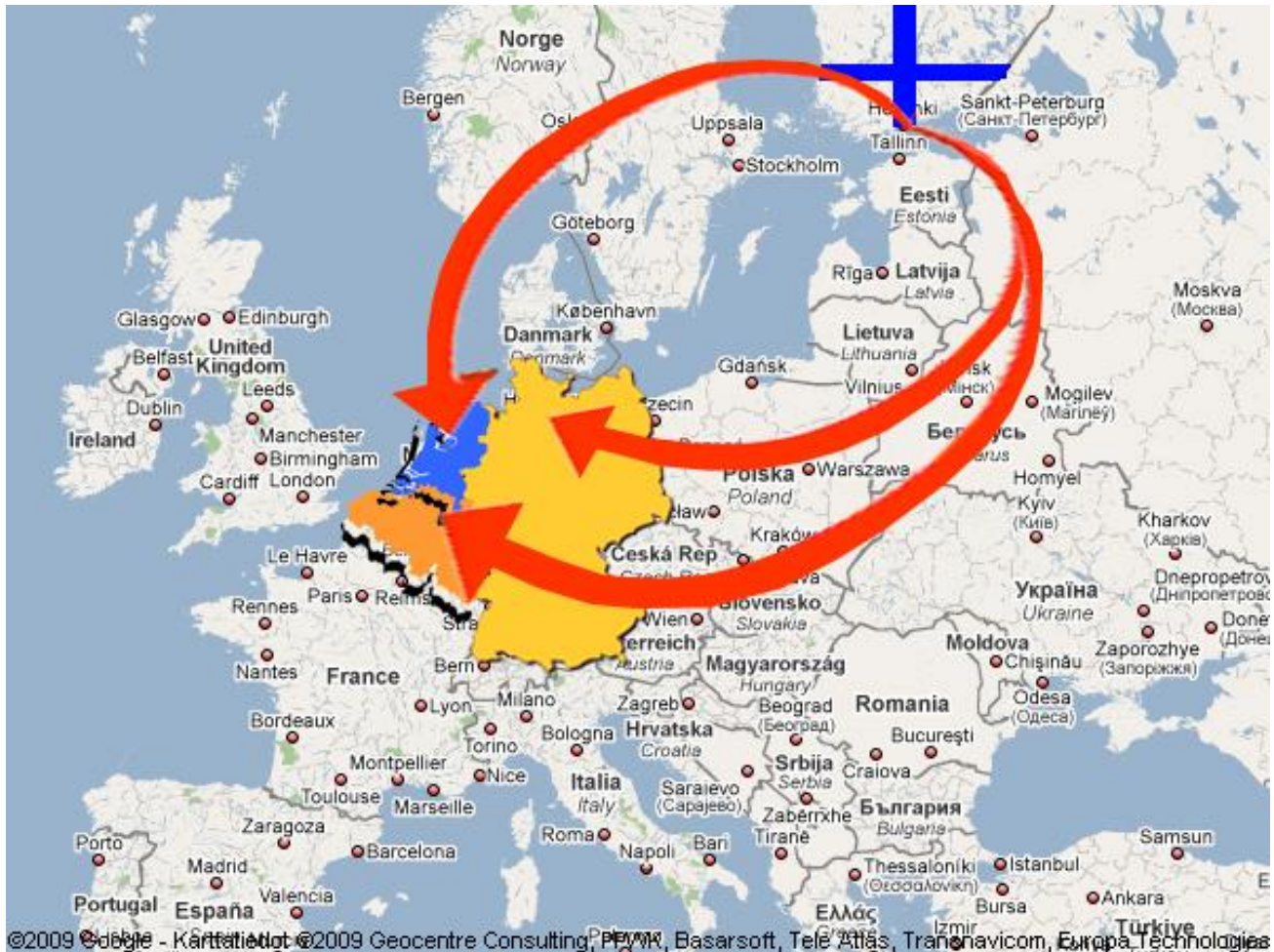
**Ex post observation 1:** There is valid evidence to state that the divided structure, i.e. keeping the Dutch business separate from the French-Belgian one, was better off. In reality, the cross-cultural competence of PC to run a multi-cross-cultural operation, also including new contractual procedures as part of the business, was obviously not sufficient. **Ex post observation 2:** During the integration period of the three CBR firms, a new opportunity, Case 5 (VBI), emerged. If the risk had not been taken and the CBR firms bought, this second opportunity would never have materialized. PC's competitiveness improved to allow for significant expansion within the EU very much when PC was able to manage Case 4 "well enough". Later, Case 5 turned out to be the real success. **Ex post observation 3:** A different RM approach at the business level could have enabled PC to grasp later business opportunities in France and, in particular, in Germany.

**The key confidential documents** on Case 4 are as follows (in English, if not stated otherwise):

/C4-1/ Executive summary of the proposal to Partek's Board of Directors. 30 April 1987. (as C2-2)

/C4-2/ Summary of PC's strategy 1988-1990. 6 January 1988 (in Finnish). (as C2 – 5)

## 5.5 Acquisition of VBI Group (of the Netherlands) and its integration into Partek's precast concrete business between the years 1988 and 1990 (Case 5)



Map 5.5. Map of focal areas in Case 5.

### 5.5.1 Introduction to Case 5 (Figure 5.5-1)

Case 5 encompasses the RM of the cross-cultural acquisition and integration of the leading Dutch building product supplier, the VBI Group, between 1988 and 1990. VBI operated in the Dutch (and German) markets. The focal actor was **Partek Concrete (PC)**. The purpose is to analyze retrospectively its market penetration project. **This insider action researcher** was assigned to be Executive Vice-President of PC and to manage the VBI acquisition, e.g. to prepare the formal proposal in late 1988 and the subsequent negotiations. The focal parties met in December 1988 and entered formal negotiations. After the deal was closed in September 1989, the researcher was assigned to VBI's office to co-ordinate its formal integration into PC, due to be completed in May 1990.

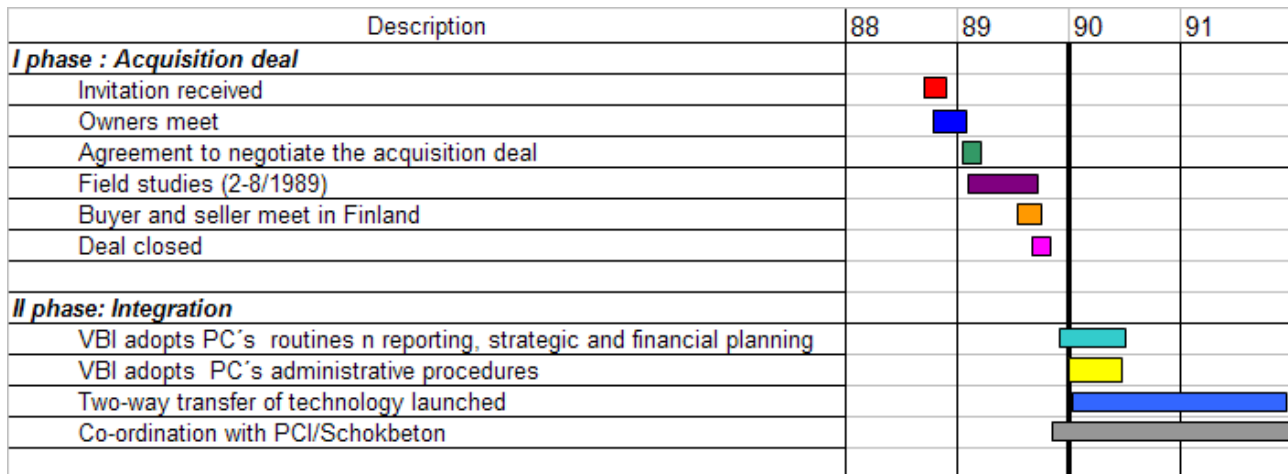


Figure 5.5-1. General time plan of Partek for the acquisition of the VBI Group between the years 1988 and 1991.

### 5.5.2 Brief and Partek's business objectives in Case 5

**For 1989**, PC's forecast turnover was about EUR 300 million, with reasonable financial results /1/. **The newly incorporated PCI Division** of PC was ready to expand in Western Europe /2/, although the performance was not improving as planned (see Case 4). PC's flagship product, the hollow core floor slab, was a minor product in PCI's mix. In turn, the Lohja Corporation, the firm's Finnish archrival, was struggling with its concrete business operations in North America. PC assured its owners, the **Partek Corporation (Partek)**, that it was viable to continue the internationalization process. Eastern Partek (EP) was already expanding (see Cases 2 and 3), and the floor slab business was bearing fruit after a few years' struggle. **In November 1988**, the GM of Partek Ergon received a confidential letter from a Dutch consultant trying to find a buyer for VBI, the leading European floor slab producer. Ergon's GM expressed only minimal interest, while this researcher, realizing the strategic value of such a floor capacity to PC, formally proposed to PC's management that the opportunity should be grasped. PC's management decided to proceed accordingly. The consultant was asked to organize a meeting with the owners of VBI. The meeting was fruitful. The consultant and the researcher were assigned to prepare for further steps. **In August 1989**, PC acquired 90% of VBI's shares. PC's march towards the leading position in Europe continued. The big, profitable VBI was about to be integrated into PC, adding to the core competence of PC, i.e. the prestressed hollow core slab business. At the same time, the cultural mix of PC in Western Europe changed. For PC, the Dutch business was now more important than the one in Belgium.

**PC** did not change the early business-level goals (of 1987): volume growth, a strong position in Europe, and the enlargement of the technology base remained **the chief objectives**. However, the operational plan of the PCI firms (Case 4) was revised. The pace of expansion was slowed down because of the new opportunity, i.e. PC acquiring VBI. This was a major expansion challenge. **The objectives of the acquisition of VBI** were as follows: (a) to secure a strong position in the "well-developed precast concrete market"; (b) to enlarge PC's own hollow core technology base; (c) to expand ("double the volume") in the business environment "which in the forms of culture, market behavior, and language is the easiest one to master in comparison with other Western European countries", and (d) to secure "a first foothold in the German market", where VBI already had one factory.

**The seller, Theo Clerkx**, a self-made Dutchman, had built the floor slab group over a period of nearly 30 years. It was supplying about 5 million sq m of floor slabs per year, which were almost entirely used in the Dutch market. VBI was No. 1 in Europe and exploited the slipform technology. It had taken over Leenstra, a supplier of VBI slipformers, to guard the secrets of the machine technology. Clerkx wanted to cash in and see his lifetime's creation continue in professional hands. **In November 1988**, he made it publicly known /3/ that he expected that the restructuring of the hollow core industry would soon begin.

The negotiations went relatively smoothly. The many similar characteristics of the Dutch and Finnish cultures helped. Besides, both parties had core competencies within the hollow core business and the technical experts respected each other. The financing of the investment plan "promised" by PC helped as well. **In September 1989**, the signing of the deal took place and the integration begun swiftly. The administrative and other management routines were installed and the investment planning for the "world's largest hollow core plant" was immediately started. **In May 1990**, the formal integration was completed as planned, which VBI's management was very proud of. In 1990, VBI's results were already about the best within PC, and that was to continue.

### 5.5.3 RM measures during Case 5

Serious uncertainty remained concerning Dutch housing developments. An eventual German position and the benefits of the slipform technology were seen as the opportunities present in the acquisition. The high level of complexity of the multi-cross-cultural situation was simplified by keeping VBI, to start with, separate from PCI. Similarly, no change in VBI's supplier role was planned. During the evaluation of VBI at the business level, **the main risks** were considered to be: (i) PC's ability to manage the group; (ii) the development of the residential sector in the Netherlands /5 p. 6/; (iii) too high a price, the reliability of due diligence, and the consecutive investment requirements /6/, and (iv) the integration of VBI and the management of the local people /7/ (Table 5.5-1).

The planned main RM measures were integration by concentrating on the "people issues" and respecting VBI's Dutch management culture, tying the price to performance (in the short term), holding the seller in a minority position, and launching the strong joint technology development of the "rivaling" slab technologies, which also enabled relatively large capacity investments to be made. **The most difficult step, however, was the coordination with PCI.** For example, the exploiting of the German opportunity via VBI was blocked by PCI's management. The (authentic) official scheme of the Boards of VBI and PCI at the beginning of the integration illustrates its complexity (Figure 5.5-2).

### 5.5.4 Business-level versus project-level RM during Case 5

PC's business management asked an expert team already based in Belgium to evaluate the intended acquisition after both parties had decided in February 1989 to enter serious discussions on the eventual deal. The fresh experience of the acquisition of the CBR firms made it possible to complete this task relatively quickly and accurately, including the identification of the risks and the opportunities. The major risk-taking on the market development and the local management was carefully decided on the basis of the expert's advice at the business level. The independence of VBI was maintained until the end of the integration by a business-level decision, too. **After February 1989**, no new major risks emerged. The measures were launched, carried out, and monitored carefully.

Table 5.5-1. Major risk breakdown structure at the beginning of the evaluation of the acquisition of VBI /7/.

Causative events	Source => identified main risks	Acquisition objectives and/or consequences	Management of identified risks
European integration: Western European economies	Dutch economy => (1) Market development	Market demand => VBI's profitability => ROI of the acquisition	1 To study and monitor 2 Timing of capacity investments 3 Market restructuring 4 German and Dutch markets balance each other 5 To develop alternative non-residential markets
PC's wrong take-over procedures as "the new owner"	Strong VBI identity <=> PC had "Belgian looks" => (2) Integration of VBI via the leading of people	Good integration => Technology base is enlarged => Radical synergy effect within PC	1 To study cultures 2 Dutch management 3 Open and honest communication 4 To ensure loyalty 5 Clear targets
Strong VBI identity versus PC culture	Clerkx wants to prove that selling is right => (3) Level of PC's investment	Investing too much => Increase in acquisition costs => Attainment of acceptable ROI	1 Linkage to acquisition price 2 Careful analysis 3 Timing 4 Joint R&D
Founder/owner sells his VBI, profitable company	PC is too eager to buy ("ego" issue) <=> (4) Level of acquisition price	Too high an acquisition price => Lower ROI of the acquisition	1 To establish a viable rationale for the deal 2 To link the price and future profits 3 To ensure the best experience in the analysis and due diligence 4 To treat the seller and the key staff well
PC's lack of experience of international construction industry	PC's limited expertise of cross-cultural operations => (5) Management's ability to exploit a multi-cultural organization	Achievement of synergy and scale effects => Achievement of financial results	1 Reliance on locals 2 PC's active presence

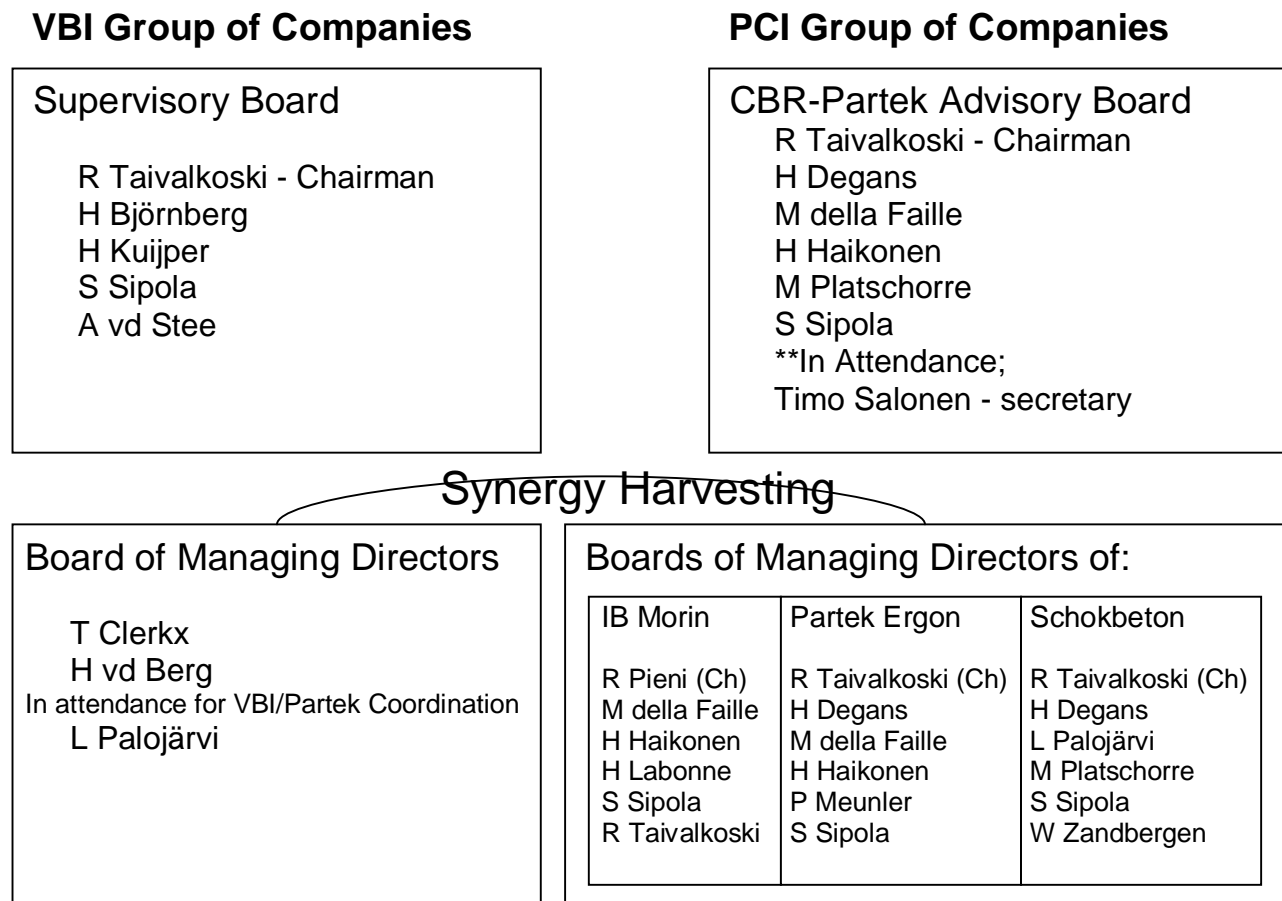


Figure 5.5-2. Boards of VBI and PCI in December 1989. Redone from the original one.

### 5.5.5 Managing major risks inherent in cross-cultural and contractual competencies in Case 5

The evaluation of VBI, the conduct of the negotiations, the eventual closing of the deal, and the integration of VBI into PC may sound like a complex deal. However, many dealings were simpler: only one culture (the Dutch VBI), one core technology, and one real decision maker (Clerkx). Nevertheless, the degree of complexity was increased by **the tension** over who would be the overall leader in continental Europe, PCI or VBI. The Dutch Clerkx clearly opposed any interference from Belgium with VBI's operations. **The integration of VBI via the "people issues" was considered to be the major risk**, particularly because of the strong Dutch character in general and added to VBI's strong identity in particular. This risk was more complex because of the ambitions of the nearby multi-cross-cultural PCI. Fortunately, PC's fresh experience of how to manage multi-cross-cultural operations did help (Table 5.5-1). PCI's Belgian-Flemish management style was not appreciated by VBI's Dutch managers. As an RM measure, **no organizational connection between VBI and PCI was established**, at least not until the integration of VBI was completed. The integration was to be based on PC's high level of respect for the Dutch VBI culture. This made possible the further "positive internal competition" between the technologies of PC and VBI, which added an enormous bonus to the acquisition /8/.

**Contractually, VBI kept the same role as before**, i.e. designing, manufacturing, storing, transporting, and erecting slabs if and when needed. After the investments, VBI's financial results improved from a good level to an excellent one.

**In the managerial competency assessment**, the key management organization of the VBI Group, in its 1989 form, received an average competency score of (see Tables 6-5a, b p. 145 ) 4.15 regarding cross-cultural issues and 3.81 regarding contractual issues. These scores were relevant to the task ahead, i.e. to execute the cross-cultural acquisition and post-merger integration of VBI under the conditions of an uncertain economy and a complex multi-cross-cultural management task.

#### **5.5.6 Conclusions on Case 5**

**The overall success rate** of the outcomes of the RM of the acquisition and integration of the VBI Group between the years 1988 and 1990 is assessed to be **high**. The objectives were met. These objectives were to secure a strong position in the “well-developed precast concrete market”, to enlarge PC’s own hollow core technology base, to expand (“double the volume”) in the business environment “which in the forms of the culture, the market behavior, and the language is the easiest one to master in comparison with the other Western European countries”, and to secure “a first foothold in the German market”. Unfortunately, no additional opportunity, e.g. market expansion in Germany, was grasped. The forthcoming reorganization of VBI into PCI was prevented for the time being and the financial outcome of the deal was excellent.

**Case 5 conforms well to Hypothesis 1, i.e.** that the project RM approach could be applied at the business level. The project RM technique was applied **at the business level**, i.e. the objectives were set and all the major risks were identified. The major risks were reasonably managed and PC’s short-term objectives for the acquisition project were attained during 1988-1990. As a result of the acquisition, PC’s position within the market increased and its technology base was considerably enlarged. **At the acquisition project level**, PC’s management converted the uncertainties to risks. The project RM technique was applied during the integration, i.e. the risks were responded to as planned for. After the careful evaluation of VBI, including the identification of the major risks, the financial transaction became a straightforward operation. VBI’s results turned out to be the best within PC.

**Case 5 conforms well to Hypothesis 2a, i.e.** the key managers’ competences, apart from managing business fundamentals and the local conditions, were a prerequisite for success, in particular in managing the cross-cultural issues. The initial integration of VBI was fairly simple and based on mutual respect. VBI’s managers were very experienced and seasoned in the context of the Dutch markets.

However, **Case 5 supports Hypothesis 2b only indirectly**, i.e. the contractual role of VBI never became a risky issue because it was not subject to any change. No change in the contractual role was necessary, because VBI already provided the complete services that clients required.



The three ex post observations are as follows:

**Ex post observation 1:** The business-level management initially ignored the identified major risks, which could have resulted in the abortion of the deal as a result of e.g. local management or coordination problems or Belgian-Dutch cross-cultural issues at the acquisition project level.

**Ex post observation 2:** The very complex, long-term risk that was identified was **PC's ability to run such a multicultural, multi-market operation**. In reality, the acquisition and integration went quite well. Thereafter, VBI was made a part of PCI's organization, which involved high, causally related risk. The consequent tension slowed down the positive development of both PCI and VBI. There were "lost opportunities" in the French and German hollow core markets, including the lost case for a lucrative joint precast concrete business with the Philip Holzmann Group in Germany (see Case 2). The business-level management problems and the shortcomings in the related competencies aborted this opportunity.

**Ex post observation 3:** PC's long-term business objectives regarding hollow core slab technology development were attained during 1995 and onwards.

**The key confidential documents** and one reference in Case 5 (in English, if not otherwise stated):

/C5-1/ Partek Concrete Strategy 1990. 20 December 1990 (in Finnish). Same as C2-5. For this case, it contains the analysis of the past performance, and the new structure (including VBI as well), main business objectives, major threats and opportunities (i.e. risks) and response to them, within the main units of PC, including PCI and VBI. Ao, a hint of organizing VBI under PCI is given here, but not in VBI's own division strategy document.

/C5-2/ Palojarvi, L. Memorandum on VBI integration. 2 October 1989. Contains integration targets and describes the organizational structure, including Finnish staff reinforcements.

/C5-3/ Translation of a press interview with Theo Clerkx. 29 November 1988. Contains the foresight towards the restructuring of the precast industry.

/C5-4/ PCI strategy proposal. 11 September 1989. Contains PCI's objectives for consolidation and profit improvement.

/C5-5/ Palojarvi, L. Memorandum on VBI opportunity. 16 January 1989. Contains foresight, detailed opportunity analysis and acquisition price considerations.

/C5-6/ Palojarvi, L. Memorandum on Essence of VBI acquisition. 2 May 1989. Contains the starting position, benefits and major risks.

/C5-7/ Partek Board's documents. 9 May 1989. Contains ao. business objectives, benefits and risks including proposals on response.

/C5-8/ Cannice, M., Chen, R., and Daniels, J. (2003) Managing international technology transfer risk. *Journal of High Technology Management Research*. Vol. 14, pp. 171-187. A detailed note on managing international technology transfer risk..



## 5.6 Partek Concrete Engineering – Merger and restructuring of Partek’s Elematic Engineering and Metra’s Lohja Parma Engineering between the years 1992 and 1995 (Case 6)



Map 5.6. Map of focal areas in Case 6.

### 5.6.1 Introduction to Case 6 (Figure 5.6-1)

Case 6 encompasses the **RM of the merger and restructuring of Partek’s Elematic Engineering (EE) and Metra’s Lohja Parma Engineering (LPE)** between 1992 and 1995. The focal actor is a new subsidiary of the Partek Corporation, **Partek Concrete Engineering (PCE)**. The purpose is to analyze retrospectively the business-level RM of this merger and restructuring project and to introduce the frame for Case 7 and its longitudinal project level analysis. **This insider action researcher** acted as Executive Vice-President and Director of Engineering Units at PC when he was assigned in early 1992 to manage the restructuring of Partek’s and Metra’s concrete engineering businesses under PCE (Figure 5.6-2). He had no prior knowledge of the intentions to combine these units. Later, the researcher acted as Managing Director and Member of the Board of PCE (1992-1995).

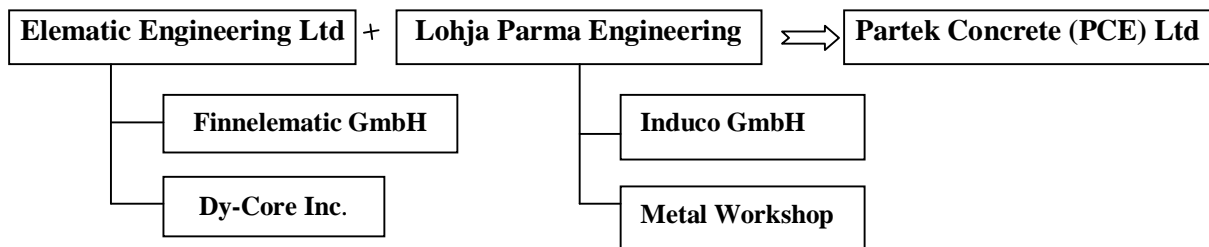


Figure 5.6-1. Complex structure of the merger into Partek Concrete Engineering.



clients were the industrial producers of hollow core slabs, structural elements, facades, roofs, railway sleepers, piles, etc. in more than 90 countries. Besides the external clients, there was a large in-house market very close by inside Partek. **In 1992**, Partek had 37 of its own or associated plants in 9 countries, i.e. Finland, Norway, Russia, Singapore, Malaysia, Belgium, the Netherlands, France, and Germany. Those factories did not wish to have additional competitors with the world's top technology on "their" territory. Direct competitors – apart from alternative concrete technologies such as cast-in-situ and reinforced concrete technologies – were usually small and independent suppliers and engineering firms. The competitors were not delivering entire plants but parts or individual production lines only. Maintenance, i.e. a continuous supply of spare parts, was the most profitable business. It seemed that turnkey factory deliveries would be the most attractive business in the future. This, however, required appropriate competences, e.g. PM skills, besides the ordinary machine- and equipment-supplying skills.

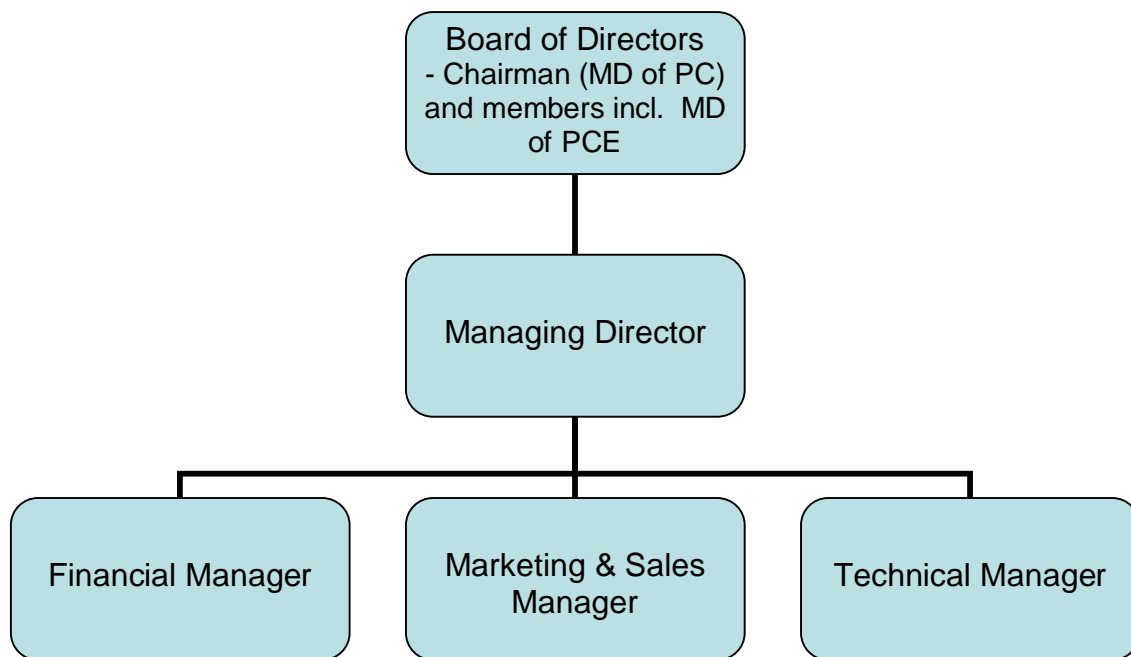


Figure 5.6-3. PCE's organization in the year 1992.

**In 1992**, Partek as a whole struggled to stay liquid. PCE's cash flow and short-term profitability were emphasized as the only primary goals. That was not a favorable situation to really develop the firm. Instead, **PCE's management had to find new cash flows and profits quickly** or else. This situation can be described as **the crisis phase of PCE**. **By the end of 1993**, PCE's profitability had been restored to an acceptable level /4/. Most of the announced layoffs were canceled /5/ when the well-priced Sertolovo mega-contract (Case 7) was signed for about DEM 75 million. It led to the rapid and profitable tripling of the turnover. Besides, other fairly sizeable turnkey factory contracts were secured in South Korea. The key staff did not leave the firm. On the contrary, PCE had taken the first step successfully and got out of its crisis. **In mid-1994**, the business' first objectives were met and new ones were set /6/ by Partek: (i) to achieve a high cash flow and (ii) to postpone all investments. PCE's net result of 10% was proportionally one of the best of Partek, with the turnover doubling to about FIM 250 million **in 1995**. PCE was expected to continue to earn a good profit and a strong cash flow, with no new acquisitions.

### 5.6.3 RM measures during Case 6

**As a result of the crisis upon the start-up in 1992**, (1) the eventual resignations of key personnel or the loss of their competencies was the immediate major risk. It was dealt with by open communication and trust. Extensive layoffs (about 40% of the staff) seemed to be necessary /2/. (2) The Sertolovo project that was being monitored might bring relief, but it was quite uncertain /2/. The project itself was considered as a very risky one in which one half of PCE's marketing and design capacity would be tied up with no certain positive result. The remaining half was directed (3) to Asia. The rest of the Russian market was abandoned /3/. Additionally, (4) PC's local subsidiaries did not want PCE to sell its high technology to their competitors /2/. A strong and competent Sertolovo project organization was established (see Case 7) and PCE's organization was streamlined accordingly. All the competencies required to attain these goals were in place. **An initial list of the major risks** in December 1992 is shown in Table 5.6-1. **An updated list of the major risks** is shown in Table 5.6-2. **In 1995**, (1) the Sertolovo project proceeded very well. (2) PCE's internal efficiency improved. Even the sizable contribution to Partek was paid for /7/. (4) None of the planned growth options by means of acquisitions could proceed because some owners of Partek were already planning to divest the entire precast concrete business, including PCE. All major growth steps were abandoned efficiently.

### 5.6.4 Business-level versus project-level RM during Case 6

No RM plans were pre-prepared. **After the merger of EE and LPE was decided at the business level, PCE was soon at the post-merger level in the crisis phase** as a result of the drop in the volume of business. The new PCE management handled this crisis in the ways at hand. The uncertain development of the Sertolovo project was a positive but vague opportunity. General uncertainty diminished and was turned into PCE's realistic objectives at the end of 1992. The key to meeting those objectives was PCE's management team and Board, whose competencies were much stronger than those of EE and LPE. **The merger-level measures** to manage the start-up crisis included the creation of trust among the experts by open communication.

Table 5.6-1. Major risk breakdown structure of PCE merger and restructuring in December 1992.

Causative events	Source of major risk	Identified major risks	Project objectives and/or consequences
Shrinking market	Merger	<b>Key personnel leave (1)</b> Management: 1) open communication and trust create loyalty; 2) Sertolovo as "good future"; 3) disconnect "personal competitors"; 4) for managers, an active bonus policy.	Technology base deteriorates, which may lead to a disaster.
Limited resources caused by acute cash problems	Market selection	<b>Losing customers (2)</b> Management: 1) to definitely win the Sertolovo order; 2) to lay off too early rather than too late; 3) open communication; 4) careful market analysis.	PCE result does not improve >>layoffs >>closing PCE as a company.
Limited resources; no sales deals >>no jobs	Salesmen defend their "own" areas	<b>Wrong market selection (3)</b> Management: 1) careful analysis and determined selection of role towards "solution supplier"; 2) open communication; 3) conflict of interest with Partek's factories is to be avoided.	Marketing will not be intensified – quite the contrary.
Company management and its decision-making culture	Limited conflict-solving capacity at PC	<b>PC's local management abort PCE sales to external customers (4)</b> Management: 1) open communication; 2) to respect own factories' interest and save efforts; 3) to find "free" markets – in Russia, most of Asia and USA.	De-motivation and waste of scarce marketing resources.

Also vital was **PCE's new contractual role, i.e. a solution supplier** rather than a hardware and equipment supplier. PCE's experts felt good about this role statement, which allowed the building of the new organizational competencies to supply projects instead of machines and equipment that had to be competed hard for. The traditional cash cow, the prestressed slab technology, was also further reinforced with the acquired Dutch slipform technology and the consequent joint R&D with PCE's experts, already decided at Partek's level. After the successful restructuring, PCE was in a new crisis, on the "way up"! PCE's Board was not willing, or able, to manage that opportunity or to gain a more independent role for PCE inside Partek.

Table 5.6-2. Major risk breakdown structure of PCE merger and restructuring in the year 1994.

Causative events	Source of main risk	Identified main risks	Project objectives and/or consequences
German aid policy	Client's lack of experience in Russia and turnkey projects	<b>Sertovolo project (1)</b> Management: 1) to manage the project well; 2) to maintain the right structure of the consortium; 3) to watch early signals	PCE result
Market demand	"Solutions" culture versus hardware	<b>Internal efficiency (2)</b> Management: 1) clear strategy incl. role definition; 2) open communication; 3) continuous improvement.	PCE result
Group needs all PCE profits	Marketing & R&D input level	<b>Finding sizeable new orders (3)</b> Management: 1) careful analysis and determined market selection; 2) open communication; 3) conflict of interest with Partek's factories to be avoided	Growth rate
Uncertainty over Partek's future	PCE board's interest	<b>Growth (4) through acquisitions</b> Management : no control over Board or owner.	Rapid growth
Group management and its decision-making culture	Limited conflict-solving capacity at Partek	<b>PC's local companies abort sales (5) to external customers in their territory</b> Management: 1) open communication; 2) to respect PC factories' interests and save efforts; 3) Find "free" markets in Russia, most of Asia, and USA	Motivation level

#### 5.6.5 Managing major risks inherent in cross-cultural and contractual competencies in Case 6

**At the start-up**, PCE's management group was selected from the managers of EE and LPE. The somewhat similar company cultures were sufficiently merged. The emerging crisis was managed by open and honest communication and trust. What was most important for the survival was **the securing of the Sertolovo contract** on the basis of the competencies in precast concrete technology on one hand and the competencies regarding cross-cultural (i.e. across the Finnish, German, and Russian cultures) and contractual issues on the other. Without those competencies, already acquired at Partek's level, it would not have been possible to efficiently manage Sertolovo's emerging major risks (see Case 7) at the project level any more. As a supportive argument, on a minor scale, PCE's further sizable contracts e.g. in Asia displayed a similar combination of competencies regarding both cross-cultural and contractual issues, in addition to general management issues and product issues.

**In the managerial competency assessment**, the key management organization of PCE, in the form it was in at the end of 1992, received a total competency score of 4.26 (463) (the maximum was 4.26 (463) in Case 6) regarding cross-cultural issues and a score of 3.69 (302) (the maximum was 4.02 (390) in Case 7) regarding contractual issues. These scores were relevant to the task ahead, i.e. to manage the merger and start-up crisis of PCE under the conditions of an uncertain economy in general and the mega-project opportunity in the struggling “new” Russia in particular. It is notable that the **additional cross-cultural and contractual competencies were acquired** by relying on the in-house experts from Partek.

#### **5.6.6 Conclusions on Case 6**

**The overall success rate** of the outcomes of the RM of the merger and restructuring of the engineering and technology businesses into PCE between the years 1992 and 1995 is assessed to be **high**. All the formal main objectives were met. These objectives were to restore profitability, to intensify marketing, to reinforce the technology base, and to clarify the objective “not to sell technology to the competitors of Partek’s own precast concrete plants”. Additionally, the new objectives, i.e. to achieve a high cash flow and to postpone all investments, were met as well. No additional opportunities, however, were grasped and exploited.

**Case 6 conforms well in part to Hypothesis 1. At Partek’s or the business level**, there was not sufficient time for the well-prepared RM of the merger project as part of the bigger struggle for survival. **At the merger project level**, the outcome of the risk and even that of the crisis was positive by the end. The creation of trust and confidence among the managers and the experts was a vital crisis management tool. **PCE’s management**, supported by the Board, **was competent** in managing the crisis, the cross-cultural merger, and the complex turnkey projects, as well as the basic concrete technology business issues. **A failure in any of those areas could have led to a disaster for PCE**. The uncertainty about PCE’s future was converted to a risk by retaining a large group of experts and betting heavily on one single project. The RM in the merger and restructuring project was applied at this level only, i.e. the objectives were set, the major risks were identified, and they were also responded to.

**Case 6 conforms well to Hypothesis 2a**, i.e. the “all-on-one-card” policy in the Sertolovo project required wide competencies regarding cross-cultural and contractual issues to improve the odds of winning the project. **Case 6 conforms well to Hypothesis 2b**, too, i.e. the selection of the contractual role, in turn, was crucial for PCE in general and for the RM of the Sertolovo project in particular.

The three ex post observations are as follows:

**Ex post observation 1.** The start-up phase could have gone wrong as well. The appropriate competencies had already been secured at Partek’s level. In turn, these competencies made it possible to manage the prevailing crisis and, consequently, to win the Sertolovo project. If this project had been lost, this would probably have led to the closing of PCE. In addition, Haka’s bankruptcy caused a crisis for the Sertolovo project as a whole. This could have led to the cancellation of the contract with Suba (and GWU) as well if another Finnish contractor had not been quickly assigned. The other external risk, political turmoil, could have occurred in Russia, too. That might have aborted the Sertolovo project and PCE’s fate would again have been quite uncertain.

**Ex post observation 2:** For reasons beyond PCE's own control, it could not exploit the opportunity for further rapid growth in its business during the period of this analysis. The decision of Partek's owners to divest the entire construction-related business might have been the main reason for their passive attitude, i.e. PCE was allowed to continue only with modest, well-managed growth. In 1997, the benefits of this development were harvested by external parties.

**Ex-post observation 3:** It can be noted that the new owners of Partek's precast concrete business, from 1997 onwards, allowed PCE to grow by acquisitions as well. In 2005, institutional venture capital firms acquired the double-sized PCE and changed its name to Elematic.

**The key confidential documents** on Case 6 (in Finnish, if not stated otherwise):

/C6-1/ Palojärvi, L., PCE strategy. 25 September 1992. Contains the business goals and key measures to attain them. Competences, to handle very large and complex projects, emphasized.

/C6-2/ Minutes of PCE Board meeting. 9 December 1992. Monitors the strategy implementation. Reduction on employees discussed.

/C6-3/ Minutes of PCE Board meeting. 12 January 1993. Identifies the tender opportunity "Sertolovo" and sets a high profit target on it. Staff incentives discussed.

/C6-4/ Minutes of PCE Board meeting. 13 December 1993. Notes the Sertolovo –position, profit goal and some identified major risks. Staff incentives confirmed.

/C6-5/ PCE Management's "Letter of Response" to PCE employees. 12 March 1993. Reflects the positive implications of an eventual Sertolovo-order.

/C6-6/ PCE strategy, as presented in Brussels. 16 June 1994. (in English). Foresight, business goals, key measures and risks (in form of threats and opportunities) discussed for 1995-1997.

/C6-7/ Minutes of PCE Board meeting. 20 December 1994. Strategic issues discussed, including the risk of Sertolovo general time schedule. Contribution to parent Partek decided. Incentives to employees discussed.



## 5.7 Sertolovo project of Partek Concrete Engineering between the years 1990 and 1997 (Case 7)



Map 5.7. Map of focal areas in Case 7.

### 5.7.1 Introduction to Case 7 (Figure 5.7-1)

Case 7 encompasses the RM of the huge Sertolovo project delivery of Partek Concrete Engineering (PCE) between 1990 and 1997. The purpose is to analyze retrospectively this project that PCE as the concrete technology supplier carried out under post-Soviet conditions in Sertolovo, near St. Petersburg in Russia. **This insider action researcher** worked as Executive Vice-President of **Partek Concrete (PC)** when he was assigned to monitor the identified Sertolovo project in late 1990. Later, he acted as Managing Director of PCE (1992-1995).

### 5.7.2 Brief and PCE's objectives in Case 7 (Figure 5.7-2)

The two competing clients were Wayss & Freytag (of Germany) and the GWU Consortium of German small and medium-sized contractors led by Suba. Besides PCE, its co-suppliers involved Haka (of Finland) for the building works and Hebel (of Germany) for the gas concrete plant. After Haka's bankruptcy, YIT (of Finland) assumed the remaining tasks of the builder. **PCE's business objectives for the Sertolovo project** were set at the turn of 1992/1993 as follows (Table 5.7-1).

- The early (strategic) objective was to raise PCE to the position of No.1 precast concrete technology supplier in Europe.
- To avoid the emerging crisis of the entire company PCE (see Case.6), to make a considerable profit on the large single Sertolovo project. Its size was DEM 75 million or 2 x PCE's turnover, while the domestic market was in recession in Finland.
- Concurrently, the aim was neither to commit all PCE's resources to the Sertolovo mega-project, nor to abandon PCE's other activities.

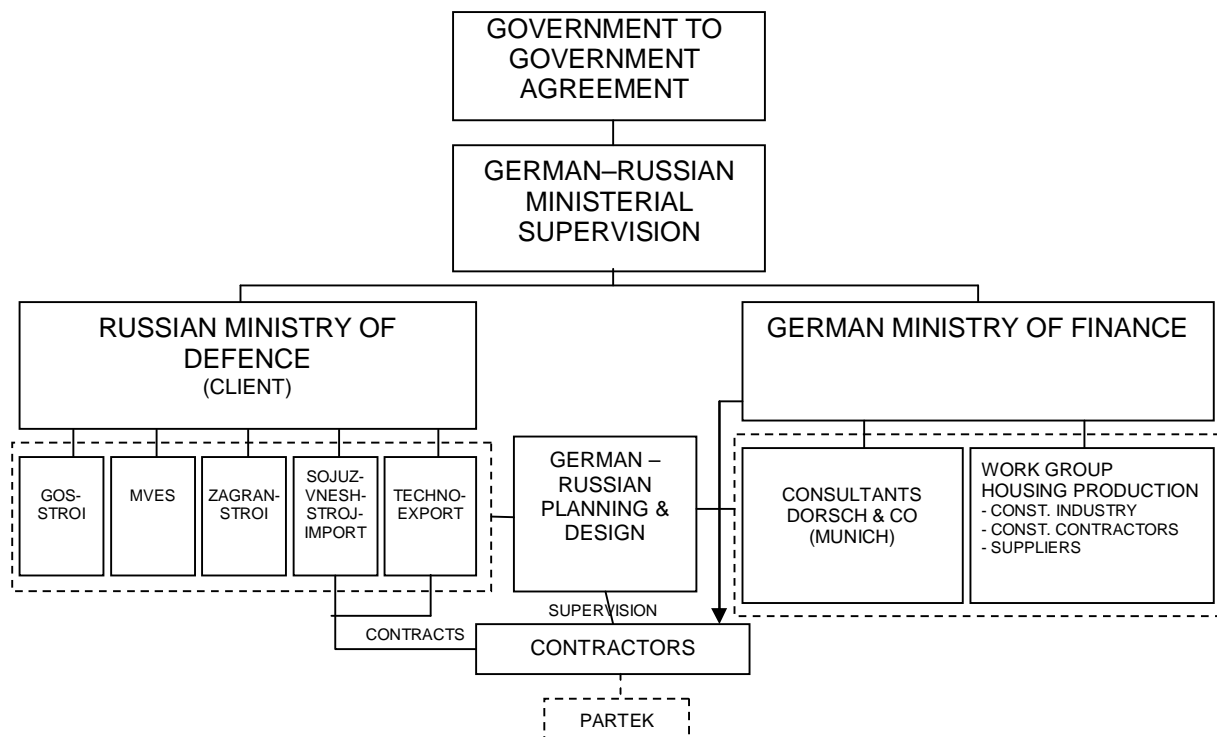


Figure 5.7-1. Stakeholders in the Russian Military Village Program and its Sertolovo project in the years 1990-1997 (the original version in Finnish, translated into English).

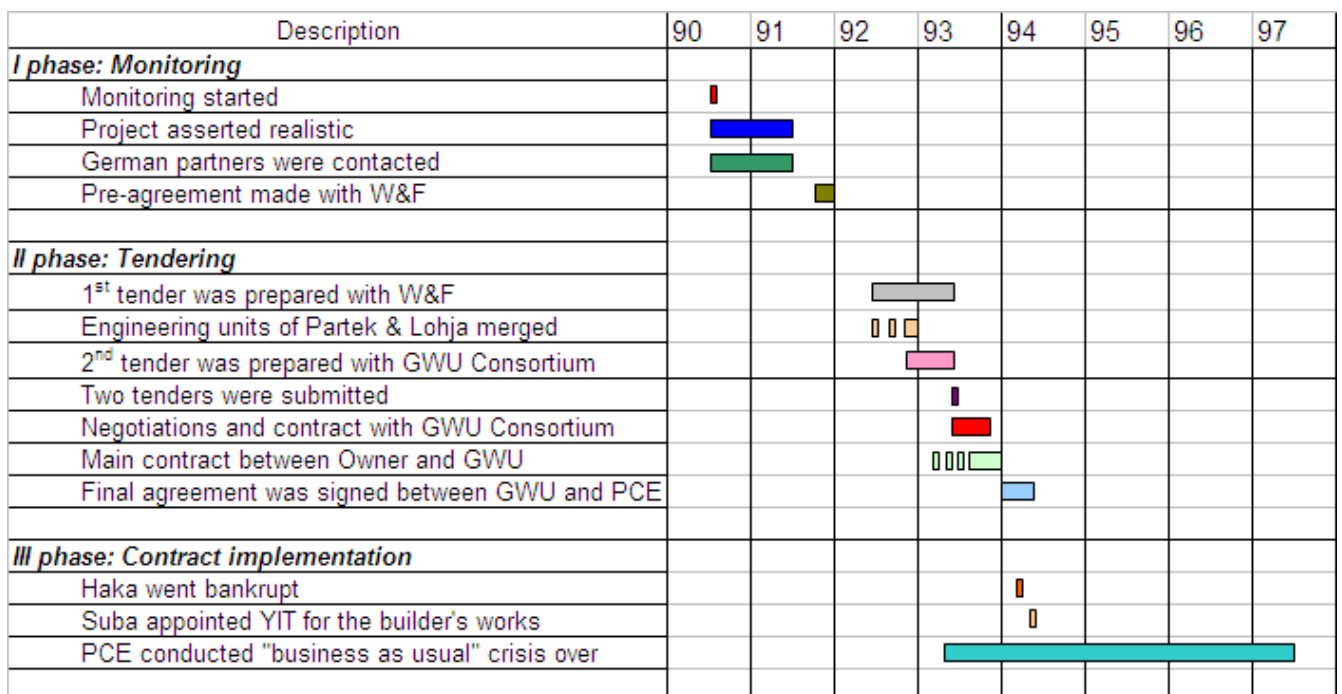


Figure 5.7-2. General timeline schedule of PCE Sertolovo Project in St. Petersburg, Russia, between the years 1990 and 1997.

Table 5.7-1. Brief of PCE Sertolovo Project during the tendering phase in the years 1992-1994.

Client	Two competing clients: (1) Wayss & Freytag (Germany) and (2) GWU Consortium of German SME contractors led by Suba GmbH
Key co-suppliers	Haka Oy (Finland) for the building works (after their bankruptcy, YIT) and Hebel (Germany) for the gas concrete plant
Ultimate owner	Russian Army/Ministry of Defense
German financier	Kreditanstalt für Wiederaufbau (KfW), Germany
Project location	Sertolovo. It is located about 12 km from St. Petersburg, Russia
Strategic background	For the newly (in June 1992) established PCE, this was by far the fastest way to increase its business volume and profit to a level acceptable to the owner Partek .
PCE's scope and means to campaign	To deliver a fully working, big plant to produce precast concrete products as a turnkey project. Only the building works were excluded.
Tender object as a whole (from client's view)	To design, manufacture, purchase, erect, and commission a "combine" of precast concrete and dry mix concrete plants including the necessary reinforcement steel and insulation sheet factories. PCE worked in close co-operation with the builder, the other main direct contract party with the client. The process contract price was about DEM 75 million. The builder's contract price was about DEM 100 million. The contract period was 22 months
PCE's project schedule	PCE started to monitor a possible project in 1990, when Germany and Russia agreed upon the implementation of the 8-billion DEM Military Village Program, including the Sertolovo project, during 1991-1994. PCE submitted its tender in 1993. The site works commenced in June 1994. The plant was commissioned for use at the turn of 1996/1997.

### 5.7.3 Conversion of uncertainty to risks, RM, and crisis management during Case 7

**In 1990**, the **Partek Corporation (Partek)** monitored the project and perceived its high level of uncertainty, i.e. 'What on earth will happen in post-Soviet Russia'? /1/, /2/. **By December 1991**, the first construction projects of the program had been awarded to Finnish contractors but political pressure in Germany forced the remaining projects to be awarded to German firms. This resulted in a pre-agreement between Partek and Wayss & Freitag. **In early 1992**, the 200-million DEM turnkey tender was obtained. **In June 1992**, the engineering units of Partek and Lohja were merged into PCE as a result of the deep recession in Finland. (1) The selection of the right German firm involved the first major risk. PCE suddenly had one pre-agreement with Wayss & Freitag and a second one through LPE with the German-led GWU Consortium (including the ailing Haka as their building partner) /3/. PCE decided to honor both pre-agreements. It declared its intention of submitting two commercially neutral tenders, one for each client. This contractual arrangement was accepted by the two German client candidates. Half of PCE's design capacity was assigned to preparing this single huge tendering task. **In May 1993**, PCE submitted the two tenders. **The identified risks** in the tender phase /4/ were as follows (Table 5.7-2):

- (1) losing the tender competition primarily as a result of the wrong German partner;
- (2-3) winning the tender and the consequent abortion of the project;
- (4) PCE's own performance as a result of the exceptional scope and size of the project;
- (5) the scope of the project as a result of the turnkey contract form, and
- (6) currency depreciation in which the ailing Finnish Mark, the strong German Mark, and the highly unstable Russian Rouble were involved /6/.

Table 5.7-2. Major risk breakdown structure in the tendering phase of the PCE Sertolovo Project in May 1993.

Causative events	Source => Identified main risks	Business objectives and/or consequences	Management of identified risks
Lack of knowledge of Russian/German politics	Wrong partner => (1) <b>Losing the tender</b>	PCE's profit does not improve. This implies layoffs.	1 To find a potential German partner 2 To eliminate the competitor 3 To serve two or more competing German clients in a neutral way
Ignorance of Russian politics	Serious political turmoil => (2a) <b>Project is aborted</b>	Fighting over claims	1 Claims management 2 Big advance payment 3 No involvement in politics
	Moderate political turmoil => (2b) <b>Project is delayed</b>	Overheads increase	1 Claims management 2 Big advance payment
Consortium structure	Weak building partner => Internal disputes => (3) <b>Project is delayed or even aborted</b>	Overheads increase Fighting over claims	1 Claims management 2 Big advance payment 3 Personnel monitoring
Elementary Engineering's managers' experience of large projects	Managers' competencies => (4) <b>Own performance does not comply with German/Russian requirements</b>	Huge losses	1 To reinforce management 2 To combine own resources and LPE's 3 To stick to technology through a direct contract with the client
Client's knowledge	Tender => (5) <b>Process scope is ill-defined, the plant will not function</b>	Plant non-performance and design delays	1 To prepare the detailed tender 2 To pre-visit the client and Owner
Recession in Finland	Finnish economy's continuing recession => (6) <b>Currency, FIM is depreciated</b>	Lower profit for PCE	1 To terminate the contract currency, i.e. to fix the DEM/FIM rate

**The lower bidder** was Suba with Haka and PCE, with a tender price of DEM 252 million /5/. **In December 2003**, the owner signed the main contract with Suba. The implementation was able to begin and PCE's Sertolovo project was organized (Figure 5.7-3). PCE kept the Russian owner's representatives at close range to gain their support, if needed, vis-à-vis the German Suba.

**The identified risks in the implementation phase** are compiled in Table 5.7-3. (1a) The ignorance of Russian politics was still identified as the main source of risk. In a worst case scenario, the abortion of the project was possible but not very probable. In addition, (1b) many limited delays

were considered probable, resulting in the likelihood of claims being submitted. Intelligence on the future of politics in St. Petersburg was maintained and the taking of any political side was avoided. (2) Suba itself had no prior experience in Russia or the Soviet Union. PCE's management identified this set-up as the major performance risk, e.g. /6/, /8/. **In the autumn of 1993**, Haka was heading towards insolvency and it could not sign the contract with Suba for the building works. **In March 1994**, Haka went formally bankrupt. The main contractor, Suba, was now without a building partner. The entire project was in a crisis until PCE's management diplomatically suggested two other Finnish options. Soon Suba assigned YIT and the site works were finally able to start **in June 1994**. (3) The construction works were delayed by conflicts between Suba and YIT which postponed the master schedule. The key managers of Suba and those of YIT had visible cross-cultural clashes when trying to cope with the consequences /10/. However, PCE was able to proceed without particular problems, except design delays. (4) The final scope of the process technology and the plant was the only remaining big risk that PCE's management had to manage. Many quality deviations occurred, PCE invoiced, and Suba paid for them. (5) The termination of the currency risk /7/ resulted in extra profit, because the DEM in fact gained against the FIM during the project. The imperative of not speculating in currencies was strictly adhered to during the project stages.

#### **5.7.4 Business-level versus project-level RM during Case 7**

**At the business level**, PC started the monitoring and made a pre-agreement with Wayss & Freitag. Thus, PC took a major risk on the likely winner at the business level. **At the project level**, the complexity of the Sertolovo project became obvious at the same time. Fortified with the required new competencies, PCE bet to "succeed or perish" on Sertolovo.

#### **5.7.5 Managing major risks inherent in cross-cultural and contractual competencies in Case 7**

**During the tender phase**, PC's management understood well that the Sertolovo project – which was deemed to be the only way to avoid the emerging crisis of PCE – required far more competencies than Elematic Engineering (see Case 6) had in terms of the business, the technology, and the conditions between and inside Germany and Russia (Figure 5.7-1). Those competencies were partly secured with the takeover of the rival LPE's business and experts (e.g. the German culture), partly by internal assignments within Partek (e.g. the Russian culture, contractual issues). PCE realized early on that only the German main contractor could be the winner and this resulted inevitably in **a complex consortium structure**. Nevertheless, it was mandatory to keep many options open as long as possible and (3) **not to take a risk by selecting the wrong partner** (pushed forward by the Germans or Russian stakeholders or both) **too early**. Naturally, this line of thinking required a lot of intelligence and **cross-cultural knowledge**. It is known from situations where technology and/or process are the prime object, rather than building works. **The contractual role** as the subcontractor, resulting in the decision to submit the two bids, to stick to the technology only, to make direct, fair and viable contract with the German main contractor, and to prepare extremely carefully for the technical specification and claim preparation, all in German, turned out to be viable.

**During the implementation**, the main risk was the structure of the Suba Consortium /9/. The handling of the multi-cross-cultural issues, e.g. obtaining reliable intelligence on Haka's severe trouble, as well as negotiating and maneuvering between the Germans and Russians, different and conflicting demands etc. required high competencies on the part of the key managers. In part these competencies had to be built for the project (Figure 5.7-3), in part they were already secured when PCE was established.

Table 5.7-3. Major risk breakdown structure during the implementation phase of PCE Sertolovo Project during the years 1993-1997.

Causative events	Source => Identified main risks	Business objectives and/or consequences	Management of identified risks
Ignorance of Russian politics	Serious political turmoil => <b>(1a) Project aborted</b>	Fighting over claims	1 Claims management 2 Big advance payment 3 No involvement in politics
	Moderate political turmoil=> <b>(1b) Project delayed</b>	Overheads increase	1 Claims management 2 Big advance payment
Non-fit consortium structure (PCE + Haka/ YIT)	Disputes and crisis => <b>(2a) Project aborted</b>	PCE's profit drops. This implies layoffs.	1 To manage claims well 2 Big advance payment 3 To use PCE's expertise for monitoring and interference 4 To make a contingency plan for building works
	=> <b>(2b) Project delayed</b>	Overheads increase	1 To manage claims well 2 Big advance payment 3 To use PCE's expertise for monitoring and interference 4 To make a contingency plan for building works
Local Russian builders	YIT's local subcontractors => <b>(3) Performance is poor</b> and delayed	Project is delayed.	1 To make a direct contract with the client 2 To manage claims well 3 To intermediate between Suba and YIT
Client's knowledge	Inadequate tender scope => <b>(4) Process scope is not fit for the specified performance</b>	Plant non-performance and design delays	1 To prepare the detailed tender 2 To pre-visit the client and owner 3 To make a direct contract with the client
Recession in Finland	Continuing recession => <b>(5) DEM is depreciated against FIM</b>	Lower profit for PCE	1 To terminate the part of the contract sum which was not in DEM

**Identified and realized risk concerning the consortium's structure, not taken by PCE:**

Haka's owner ruined Haka's liquidity	Haka went bankrupt => <b>(6) Suba had no contingency plan</b> [=> PCE only gave its helpful advice to Suba]	Project delay/abortion and a huge loss in the building works if no competent builder is available for Suba	1 To make two separate contracts for the process and the building works 2 To monitor Haka's status 3 To contact other Finnish contractors for rescue plan
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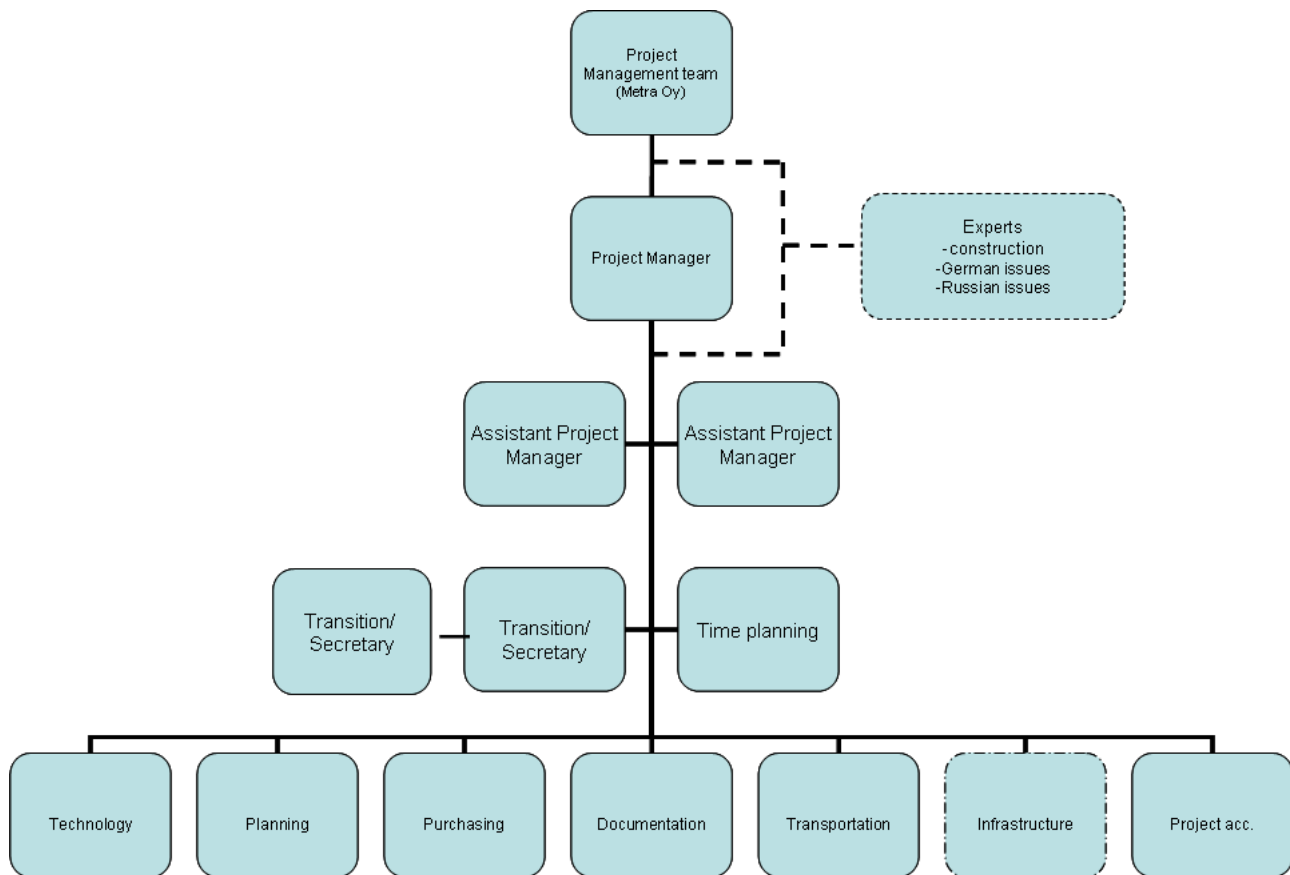


Figure 5.7-3. Organizational chart of PCE Sertolovo Project in January 1994, translated from German to English. (Experts were added to the authentic chart in 2009.)

**By the end of 1994**, the remaining list of the major implementation risks had been considerably shortened (Table 5.7-3) /9/. **Then Haka, the builder, went bankrupt and caused a crisis** because Suba had no contingency plan. Suba's proposals to PCE to assume responsibility for the building works were determinedly turned down because of its lack of the required competencies. The correct contractual role of PCE – separate from the builder – was crucial to success. It allowed PCE – knowing the Finnish contractors well – also to diplomatically suggest some alternative firms to Suba. YIT eagerly took Haka's share and the crisis was over. **The second main risk was the scope of the process in the turnkey project.** Many changes and improvements were requested by the Russian side, which did not have to worry about financing. PCE's cross-cultural and contractual competencies were necessary to manage this issue with very detailed tender specifications, the spending of ample negotiating time, even at the highest level, and its own process design resources. The researcher considers that the consortium structure and other contractual arrangements were correctly built because all PCE's invoices, including large additional claim invoices, were fully paid for, although some claims only after app. two years of negotiations for settlement.

**In the managerial competency assessment**, the key management organization of the Sertolovo project, in the form it was in at the end of 1993, received an average competency score of 3.94 (see the Tables 6-5a, b, p. 145) regarding cross-cultural issues and a score of 4.02 regarding contractual issues. These scores were relevant to the task ahead, i.e. to execute a multi-cross-cultural mega-project as a turnkey contract in the conditions of the struggling "new" Russia in particular. It is notable that the additional cross-cultural and contractual expert competencies were acquired by relying on in-house experts from Partek, who strengthened the respective competencies. Secondly,



the relatively high score on the contractual issues probably compensates for the lower score on the cross-cultural issues.

### 5.7.6 Conclusions on Case 7

**The overall success rate** of the outcomes of the RM of PCE Sertolovo Project between the years 1990 and 1997 is assessed to be **very high**. The main objectives were all met. These objectives were to raise PCE to the position of the No.1 precast concrete technology supplier in Europe, to avoid the emerging crisis, to make a considerable profit on the large single Sertolovo project, and, yet, not to abandon PCE's other activities. Additionally, the two additional crises of the project were both managed with PCE coming out of them stronger than it was before them.

**The overall success rate** of the outcomes of the RM of the PCE Sertolovo Project between the years 1990 and 1997 is assessed to be **very high**. **In 1997**, the end result of the Sertolovo project was good, after all the payments were settled and received. This allowed PCE to continue as the No.1 concrete technology supplier in Europe, with a seasoned staff for the future needs of the industry.

**Case 7 conforms well to Hypothesis 1.** After it became relatively certain that the project would be implemented, PCE applied the RM approach well both at the business level (the tendering phase) and the project level (the implementation phase), i.e. the business objectives were set, the major risks were identified, and a response was launched. The expertise on Russian culture of Partek's internal expert staff helped out. The Sertolovo project was the only way to attain the objective of increasing PCE's profits substantially (/11 p. 5/ and Case 6) and fast enough to avoid the emerging crisis within PCE. If this growth objective of PCE had not been met, this failure would have caused the laying-off of at least half of its 600 employees. A crisis would certainly have followed. This also explains the keen involvement of PCE's entire management team. The risk of betting on the right winner was taken at the business level, i.e. the issue of "two potential clients" was determinedly managed so that PCE would at any price be in the winning team. The business-level decision to focus solely on the Sertolovo project was highly risky. It was correct in the given circumstances. Besides, the early identification of the other risks, i.e. the currency or the abortion or delay of the project, contributed to the efficient project-level management of their eventual consequences. None of these risks could have been dealt with any more during the tendering or implementation phases – the only option left was to deal with the consequences.

**Case 7 conforms well to Hypothesis 2a**, i.e. the key managers' competencies to manage the cross-cultural issues. The uncertainty and complexity of the project were both reduced. Dealing with many of the most severe risks called for the solid cross-cultural or contractual competences, or both, of the key managers. Those competencies had to be secured well at the business level – PCE's management did not wait until the implementation phase. The potential crisis – an angry German loser threatening the result of the tender – did not materialize. **Case 7 also conforms well to Hypothesis 2b**, i.e. the key managers' competencies to manage the contractual issues may cause severe risks if these competencies are not at the required level. It is often believed that a turnkey structure is complex and it adds risk. In Case 7, the major risk regarding the builder's performance was dealt with contractually at the project level – PCE assumed no responsibility whatsoever. The risk on the scope was managed at the project level as well. PCE's management team showed excellent performance in defining the technical performance of the plant and PCE had no reason to compromise with the process quality. This attitude paid off well.



The two ex post observations are as follows:

**Ex post observation 1:** The additional causes of the very successful outcome could not be found. Even the distant possibility of secret cooperation between Russian military officers in St. Petersburg and leading European precast concrete firms can be excluded because far too many human beings had to be involved to pull that plot through – a leakage of information would have been noticed and made public either in Germany or Finland, or in both of them. Instead, the cooperation of the Russian stakeholders and the Finnish construction firms was known and carefully monitored by Partek through the entire program.

**Ex post observation 2:** PCE's key management (and Board) turned out to be competent to handle the risky tasks ahead beyond the year 1997.

**The key confidential documents** on Case 7 (in Finnish, if not stated otherwise):

/C7-1/ Taivalkoski, R., Partek's letter to Sokolov. Meeting of Directors. 2 April 1991 (in Russian also). Early "marketing of Partek Corp." to perceived Russian key characters.)

/C7-2/ Auvinen, E., PM to Partek's CEO on the key organizations and persons of the Military Village Program. 20 May 1991. Early "marketing of Partek Corp." to perceived Russian key characters.)

/C7-3/ Palojärvi, L., PM on the tender situation. PCE's Board of Management. 30 December 1992. Outlines the Sertolovo tender position, with two potential customer candidates, should either of the win their bid..

/C7-4/ Palojärvi, L., PM on the Sertolovo tender and risks. PCE's Board of Management. 8 April 1993. Self-explanatory.

/C7-5/ Palojärvi, L., PM on the opened bids for PCE's Board of Management and Partek's CEO. 15 May 1993. (Extremely confidential). Contains the tender results, and "game strategy" of PCE to secure the contract.

/C7-6/ Åström, A-C., Decision proposal to Partek's Board. 1 June 1993. (in Swedish) Self-explanatory. Gives the permission to obtain the required guarantees and bonds.

/C7-7/ Virtanen, E., PM on the currency risk. 21 April 1993. Self-explanatory.

/C7-8/ Generalkonsulat von Finnland, Berlin, Pressemitteilung. 6 July 1993. (in German). Press-information to confirm the likely winner of the main contract.

/C7-9/ Palojärvi, L., PM on the Sertolovo - position, invoicing, and risks. 24 October 1994. Outlines PCE's entire RM process for Sertolovo, at the beginning of the physical implementation on site.

/C7-10/ Palojärvi, L., PM on the cross-cultural conflicts between Suba and YIT. 1 December 1994. Explains an important detail of managing the cross-cultural risk in the project, having the main consequences on the GWU-YIT axis.

/C7-11/ Partek's corporate budget 1995. 9 December 1994. (in Swedish). Confirms the good result expectation, which was achieved, of PCE for 1995.

## 5.8 Wood product-based growth business of Finnforest in the international building markets during the years 2002-2006 (Case 8)



Map 5.8. Map of focal areas in Case 8.

### 5.8.1 Introduction to Case 8 (Figure 5.8-1)

Case 8 encompasses **the RM of the wood product-based growth business of Finnforest (FF) in the international building markets** between 2002 and 2006. FF was a subsidiary of Metsäliitto. The purpose is to analyze retrospectively the business-level RM of the implementation of FF's adding value to wood products strategy project in Western European conditions and to introduce the frame for Case 9 and its longitudinal project-level analysis. **This insider action researcher** worked as Senior Vice-President of Building & Construction in charge of FF's statement projects between 2000 and 2006 (Phase 1). The key parts of FF's organization for the implementation of the strategy that was contemplated were the Engineered Wood (EW) Division (2000-2004) and thereafter the new Strategic Business Area of Building & Construction (2004-2006).

### 5.8.2 Background and brief of Case 8 (Figure 5.8-2)

**In the 1990s, the national campaign to promote “building with wood” inside and outside Finland** did not change the industry's culture (big bulk product suppliers), despite a large number of programmes and pilots /1/. The firms did not invest. Only small government-funded programs were carried out. The share of wood even decreased in the structures, the main campaign area, but it increased in the façades /2/, /7/. The campaign focused on the production technology (“upstream”) rather than the market (“downstream”) /3 p. 41/, because most goods were delivered to clients via independent distributors. The most vital driver – client needs – was thus missing from the industry's business process. The pilot status of the campaign projects allowed for the exclusion of other competing materials. The solutions with wood did not have to compete against any solutions using other materials /4/. Nevertheless, the need to add value to the process was already envisioned /5/.

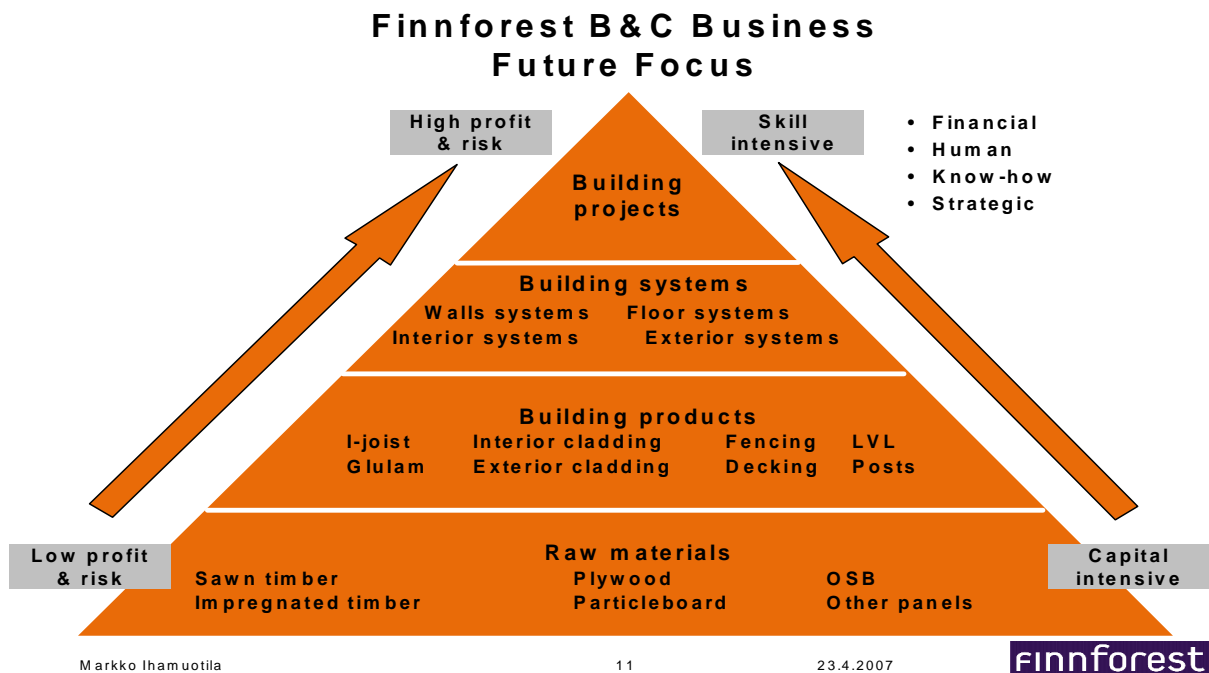


Figure 5.8-1. Finnforest's value-adding strategy in building with wood /14/.

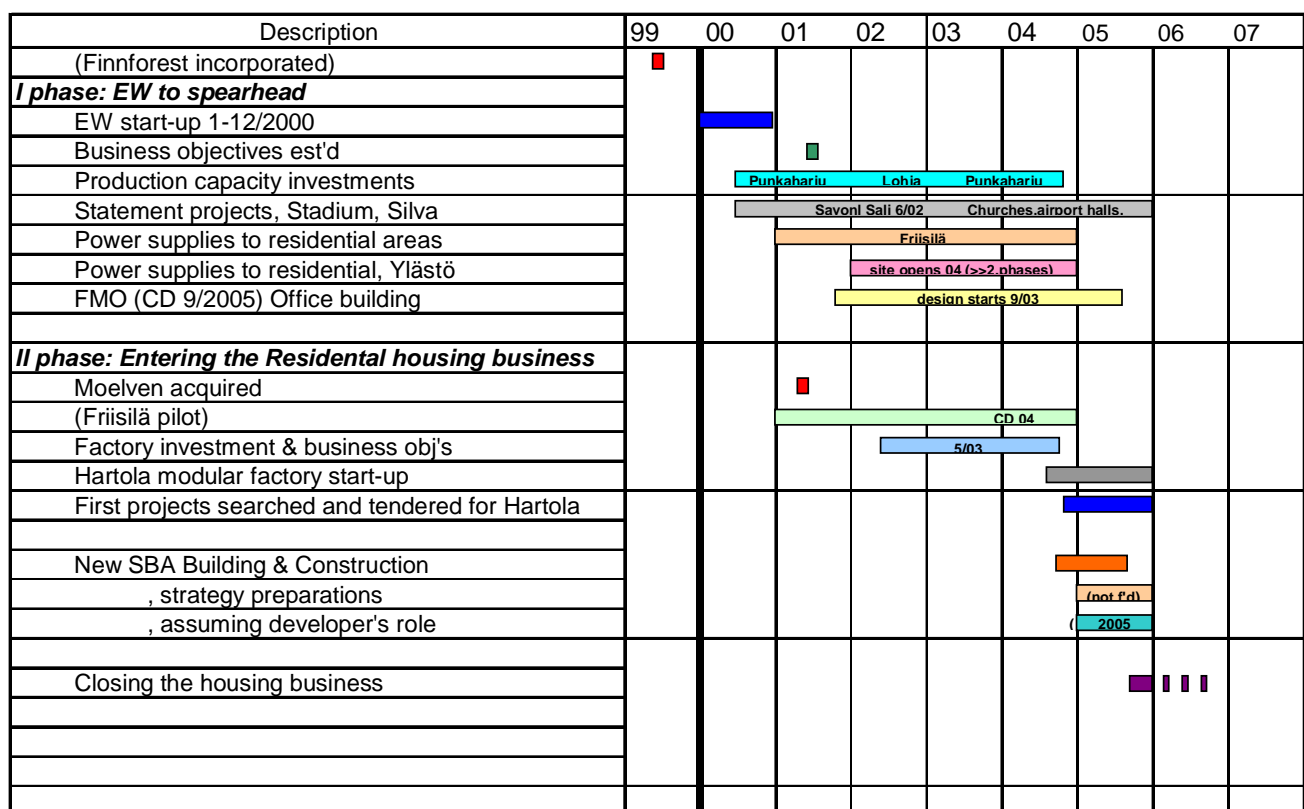


Figure 5.8-2. General timeline plan for the implementation of Finnforest's added value strategy between the years 2000 and 2006.

**By 2000, Metsäliitto (ML) had incorporated FF** to improve the performance of its mechanical wood business, which was the core for the owners. All of them were forest owners who received

most of their income by selling logs, which is the only raw material from wood products used for construction. Further, FF, with UPM and StoraEnso, had incorporated Woodfocus (WF) for the joint development work.

**In 2001, WF noted that wood products should be “competitive” for construction** /6/. This called for moves “downstream” as the main strategy when supplying the construction industry with building parts. The campaign produced good results in low-storey residential housing /7/. FF’s position was suddenly strengthened by the acquisition of Moelven (of Norway), the leading prefabricated housing module supplier in Scandinavia. FF was now aiming at by far the most important market for wooden building parts, i.e. low-storey housing. The key question was whether Moelven’s technology could be used in Finland and other markets, e.g. the UK and Russia.

**In Phase 1**, FF’s corporate strategy called for a “change of paradigm” in the area of “moving from a raw material supplier’s role towards “integrated system solutions” /8/. This meant building parts, i.e. products with added services /9/. Some competitors, e.g. the precast concrete firms, had already made the respective change in the 1980s. FF’s strategic growth task was vested in EW. It was the only division with any experience of “project deliveries”, i.e. services added onto products for the construction of buildings. EW focused on the development of services /9/. **From 2000 onwards**, many visible projects were implemented without any major problems. No significant investments in new competences were made. Thus, the business, although quite profitable, grew slowly because of the scarcity of development funds. Nevertheless, FF’s brand strengthened well because of the statement projects.

**In Phase 2**, encouraged by the Finnish pilots, the success of Moelven and the market forecast, FF decided **in the spring of 2003** to enter the prefab business in Finland and invest in high value-added spatial modules (similar to those of Moelven). The planned annual plant capacity was relatively big, i.e. modules for 100,000 sq m of buildings in comparison with their competitors. However, this capacity corresponded to only 3% of all the new housing and 6% of the low-storey housing in Finland. Unfortunately, the key business managers had experience in the consumer business only and all the first projects of the new unit were financially disastrous. **In the autumn of 2004**, a radical formal change in FF’s organization took place and **Building Systems (BS)** of EW was replaced with **Building and Construction (B&C)** as the Strategic Business Area (SBA) was launched as the permanent business unit instead of ad hoc projects. Its business idea was to supply the residential and non-residential market segments directly /11/. The CEO of FF decided to manage the new business by himself, in addition to his main duty. A Management Board for B&C was established. The first task of this Board was to prepare an SBA strategy. However, the weakening position of the CEO prevented FF from taking any steps towards real growth in this business. The objectives of the new strategy were not established. **In the autumn of 2005**, the CEO of FF left the firm.

### **5.8.3 Finnforest’s objectives of profitable international growth business in Case 8**

**In Phase 1**, the business objective was to grow rapidly. The turnover of EUR 20 million was to be increased to the level of EUR 50 million within one year with a decent ROC. FF vested the task in EW /9/ and its BS. The main markets were the UK and Germany. **In Phase 2**, (i) the low-storey housing business looked attractive for wood. (ii) FF acquired the large Scandinavian leader Moelven and (iii) FF successfully executed residential pilot projects (Friisilä, Ylästö) and non-residential ones (e.g. the Savonlinna Hall and the Finnforest Modular Office (FMO) in Tapiola). FF set a new business objective for residential housing and invested in low-storey housing modules **in**

**2003.** The objective was to “grow fast”, i.e. to reach a sales volume of modules for housing with a floor area of 50,000 sq m during the three years /15/. **The main risks identified** were the market potential, the competitors, urban planning, the start-up from scratch, and the demand around St. Petersburg /15/.

#### 5.8.4 RM measures during Case 8

**The new business role as a building parts supplier** was considered to be rather complex /14/. The attitude of FF's management reflected the prevailing uncertainty of the benefits of the new business that aimed to add value to the old bulk products. Therefore, only small, extremely careful investments were made in the new competencies regarding project management, marketing, and the sales forces. The new modest resources included some client support staff and software /9/. **The threats to FF's competitiveness** were stated by EW to be the limited knowledge of services, project skills, the limited contacts with contractors, a lack of competent people, conflicts of interest inside FF, and an insufficient service attitude /10/. The delivery projects were managed by outsourcing some of the services to secure the necessary competencies required by the professional customers, e.g. the contractors.

**In Phase 1**, these threats were taken as **the identified sources of the major risks** inherent in the implementation of the new strategy. The perceived consequences included e.g. slow growth and no responses at FF's level (Table 5.8-1). Only limited staff recruitment was allowed (2). Instead, external consultants were assigned to the expert tasks. Ad hoc task forces were established for each of the more demanding projects. Thus, “the keys to change project success”/12/ were not there.

Table 5.8-1. Major risk management of Finnforest during Phase 1.

Causative events	Sources of risks	Identified main risks and management	Business obj's/con's
Limited past experience	Lack of knowledge	<b>(1) Project performance</b> Mgt: 1) consultants 2) partnerships	Financial losses; Tarnished brand; Slow growth
Project business new for corporate culture	Lack of project skills	<b>Project performance or</b> <b>(2) costly recruitments</b> Mgt:1) limited number of projects 2) avoid recruitments	Financial losses; internal conflicts; Slow growth
Project business new for corporate culture	Limited contacts with contractors	<b>(3) Partner choice</b> Mgt: Look for lasting partnerships	Financial losses; Tarnished brand; Slow growth
Strong efforts to manage project from "outside"	Lack of competent people	<b>(4) Poor management culture</b> <b>(5) Ind'l motivation &amp; perf.</b> Mgt: No real response on B/L; (on P/L to be absolutely avoided) till 2005	Contractual defaults; Crisis and end of business
Corporate culture	Lack of service attitude	<b>Project performance</b> Mgt: Limited number of projects	Tarnished brand Financial loss Slow growth
Corporate culture	Conflict in FF	<b>Poor general management culture</b> <b>(6) Scarce development resources</b> Mgt: Continuous reorganizing	Slow growth

FF's role as a material and product supplier continued, except for a few projects. This attitude jeopardized the business-level objective, rapid growth, but the attitude did not cause much risk at the project level. It was not possible to manage the risk of FF's poor general management culture (4) at the lower level (EW); no formal notes were available. All this weakened individual motivation and the performance (5). No direct risk was taken on (6) R&D either. In order to save cash, the R&D was outsourced to Woodfocus, understandably with no major results.

**In Phase 2**, FF decided in 2003 to invest in its first modular element factory for the housing business, due for start-up in 2004. The factory building was leased from the local municipality. The initial investment and the need for cash were that much lower while, in turn, many risks, including those inherent in the complex contractual role selection /14/ and the start-up, were either ignored or not identified (Table 5.8-2). The market (1) and the low-storey urban planning schemes (3) developed better than the "traditional" experts expected. Nevertheless, a lack of the competency needed to handle business-to-business contracts led to bad big deals and finally to a crisis in the business (7, 8).

At last, the efforts of FF's management to extend **FF's role to that of a residential developer were stopped by FF's Board** (7). It stopped this business entirely less than one year after its start-up.

**The primary sources of the fatal risks** were as follows. (i) A lack of industrially cross-cultural competency on the urban housing business with its industrial-scale builders and developers, i.e. steps sufficient to fit FF contractually for that market were not taken. Instead, the modular business management had experience of individual house buyers only (7). The first orders of the large developers turned out to be financial losses (8). (ii) The inability to exploit Moelven's thorough experience in that field because of FF's lack of competency in building a cross-cultural bridge with Moelven (5, 7) and FF's ignorance of the importance of this competency in the culturally different urban residential housing business. Further problems emerged when no large distributor took on FF modules for their individual – not professional – customers. Business line management, understandably feeling quite insecure in trying to serve big professional urban residential house builders, decided to **supply individual customers in the role of a developer**. Risks that were arising with regard to competences, contractual roles, financing etc., risks which the FF line management intended to take. The desperate effort to serve individual customers on a turnkey basis and or as a developer contributed finally to the consequent resignation of the CEO of FF and the abortion of the entire FF modular business.

Table 5.8-2. Major risk management of Finnforest during Phase 2.

Causative events	Sources of identified main risks	Main risks	Business obj's an/or con's
Human needs; industrial lobbying; global economy	Economic growth; share of low storey housing	(1) <b>Market potential in Finland</b> Mgt: 1) Limited investment 2) Monitoring demand 3) Alternative market segments	Demand level
Industry culture	Lack of knowledge on end-customers	(2) <b>Customers behaviour acts</b> Mgt: 1) Interviews 2) Figure analysis	Restrictions threats on other FF sales; low pricing
Human needs; industrial lobbying	Urban politics; government politics	(3) <b>Development of urban planning of low-storey housing</b> Mgt: 1) Industry campaigns 2) Monitoring 3) Lobbying	Demand level; industrially vs. manually on site
Global growt; Growth of Russian economy; industrial lobbying	Local demand; urban policies	(4) <b>Market potential and partnerships in ST P'burg</b>	Acceptance of wood in St P'burg
		<b>UNIDENTIFIED MAJOR RISKS:</b>	
Ignoring Moelven's competence	Lack of knowledge about urban low-storey housing	(5) <b>Customer selection</b>	If wrong, then no viable deals;
Lack of competence on urban lo-storey housing	Slow urban planning	(6) <b>Marketing skills</b>	If weak, then no viable deals
Ignoring Moelven's competence	Lack of competence concerning low-storey housing	(7) <b>Assuming business role correctly</b>	If wrong then no deals or big losses
Ditto	Ditto	(8) <b>Managing the start-up and first projects</b>	Slow start >> bad forced deals >> huge losses > crisis

### 5.8.5 Business-level versus project-level RM during Case 8

**In Phase 1**, the sources of the major risks were identified well and avoided by EW **at the business level**. EW's profitability was guarded very effectively, within FF's culture as bulk product suppliers, and the strategic growth objective was sacrificed, partly because of the risk-taking attitude at the business level, partly because FF's top management was not able to mobilize the necessary funding for the targeted growth pace. The RM strategy of EW was thus risk avoidance

and no permanent organization with new competencies was established. **At the project level**, the most demanding projects had varying results because of the extremely limited number of competent project managers. They dealt with the emerging risks, which were mainly inherent in the design, erection, and contractual issues, in the ways they were used to. However, the very few loss projects did not change the overall profitability.

**In Phase 2**, the contractual business roles of FF were determined **at the business level** with the support of FF's top management. Officially, the targeted clients were professional house builders and their large projects. However, the competencies of the key business managers were limited only to the household market. The experts had readily identified the major competency-related risks, but the respective managers ignored them and the consequences of the missing competencies could no longer be sufficiently managed **at the project level**. This development resulted in big losses. Ultimately, the Board of FF had to intervene and to stop the non-viable business.

#### **5.8.6 Managing major risks inherent in cross-cultural and contractual competencies in Case 8**

**In Phase 1**, the major risk that occurred, **slow business-level growth**, was inherent in the risk-avoiding corporate culture, geared to bulk production as its prime source. This culture abandoned any business-level investments in cross-culturally and contractually competent staff to enable the planned faster growth to happen. The reaching of the critical volumes in the business of value-added building with wood was necessary to fulfill the strategic business objective financially, i.e. the leading brand of FF. The limited number of competent managers forced FF to stick to projects with a low business volume in order to avoid the project-level risks. In this way, the complex contractual roles could be handled by the competent managers. **In Phase 2, the business-level management** was not competent to recognize the major risks inherent in the new contractual role. No solutions were planned for the foreseeable problems, possibly with Moelven's expertise. The emerging risks and their mounting (negative) consequences could no longer be viably managed **at the project level**.

**In the managerial competency assessment**, the assessed levels of the combined managerial competencies and the actual project organization in the spring of 2004 received an average competency score of 3.42 (see Tables 6-5a, b, p. 145) regarding cross-cultural issues and a score of 3.36 regarding contractual issues. These scores were relevant to the task ahead, i.e. to implement the multi-cross-cultural, complex growth strategy for at least some of the Western European markets. It is notable that some additional cross-cultural and contractual expert competencies were acquired for Phase 1 (too little for the rapid growth) and almost none for Phase 2. A few experts on project and construction management could not sufficiently strengthen FF's respective competencies.

#### **5.8.7 Conclusions on Case 8**

**The overall success rate** of the outcomes of the RM of the wood product-based international growth business of FF between the years 2002 and 2006 is assessed to be **low**.

**Case 8 conforms fairly well to Hypothesis 1. In Phase 1**, the major risks were identified **at the business level**. For ML as a whole, major investments and high levels of risk-taking were not possible because of the net corporate losses. Thus, the risks were avoided, but this prevented FF from achieving business growth. However, the success rate at the project level was medium or even high. EW's profit was spent to cover FF's other losses. The visible and successful statement projects could not mobilize the fast growth despite the loud "official orders" of FF's top



management, with the exception that the increasing market demand was satisfied with well-timed capacity investments. The growth of EW was not fast enough to save the rest of FF's wood product business. Referring to Bowman's paradox, Andersen /13/ has empirical evidence of a negative risk-return connection. **"FF's low risk-taking led to a good result"** i.e. FF's brand was strengthened, which offered a future opportunity, but a chance to demonstrate the environmental edge of wood was not quite reached. **In Phase 2**, a well-applied project RM approach at the business level could have enabled the risk of the lack of competencies of the key managers to be identified, provided that the respective business management had been competent to identify this. **At the project level**, it was no longer possible to deal with the consequences of such major risks and the performance was very low. The last effort to assume the housing developer's role led to a disaster. The change from the originally declared role – accumulated with the heavy losses of the first large projects for developers – was too much. FF's Board decided to stop and divest its modular business. The Board also accepted the resignation of the CEO of FF. The events of Phase 2 also confirm that it is better to build new competences proactively at the business level – to act then at the project level only is far too late.

**Case 8 also conforms well to Hypotheses 2a-b**, i.e. the cross-cultural and contractual issues were managed well in Phase 1, but ignored in Phase 2. Indeed, **the RM was like the mirror image of Phase 1**. Unidentified risks in the form of the lack of competencies on the culturally and contractually new business occurred, i.e. they led to a crisis which escalated into a disaster for the entire module business. (i) In the urban housing business, the culture was very different from the one of delivering individual houses to mostly non-professional buyers. (ii) The contractual arrangement was quite different as well. (iii) Additionally, the business management failed to build cross-cultural bridges to exploit Moelven's competencies, which were mainly built for the serving of industrial clients. When the start-up risks begun to materialize (e.g. in the form of a lack of orders), the business management turned its attention to individual house buyers while assuming (iv) the contractual role of a developer. Such a role was even more complex than to supply the modules only. The consequent business-level crisis was mismanaged and worsened rapidly. The two ex post observations are as follows:

**Ex post observation 1:** One can state that more risk should have been taken in Phase 1, e.g. to invest considerably more in competent staff to attain the growth that was aimed at. This point is proven e.g. by the earlier precast concrete business of Partek and the rapid development of Rautaruukki (of Finland) based on construction solutions and investments in the development of competence for faster growth. In Phase 2, the key failure factor was the lack of the competencies for the new contractual role, i.e. to serve professional urban residential housing customers. For some reason, Moelven's competence was ignored and/or contractually not available for exploitation. Whether the individual pride of the module business managers (and/or their superiors) created any mental blocks – which would have prevented them from using quite obvious solutions – has not been analyzed here.

**Ex post observation 2:** FF's module business was sold to Finndomo, a very experienced Finnish low-storey house supplier. The Hartola module factory has continued in its hands.

**Ex post observation 3:** After the merger of FF into ML, the non-residential business of the building systems, "solutions" have continued as before, with good results and moderate growth.

**Ex post observation 4:** Moelven had very good results in 2006. It was sold in 2007 for the cash needed to cover the continuously huge losses of MReal, the paper arm of ML.

**The key confidential documents and the published references** on Case 8 are as follows (in English, if not stated otherwise):

- /C8-1/ Ijäs, T. et al. (2005) *Promoting wood in construction*. Working Group Report. ARA. Helsinki. (in Finnish). Explains the strategic opportunity for Finnish wood product business. Suggests a large selection of nation-wide key measures, including the need of cultural change, which is considered mandatory to exploit the opportunity primarily towards building sector.
- /C8-2/ VTT Statistics (2007) Building material shares in Finland 1985-2006. Espoo. Monitoring the market position of wooden structures and facades in Finland.
- /C8-3/ Ollonqvist, P. (2007) Chapter 4 of METLA's Report No. 49 on the wood product industry's future and opportunities for building with wood. Joensuu. (in Finnish). Self-explanatory. Contains an important note on the "towards production technology - orientation" of the campaigns, which the reference considers as a mistake.
- /C8-4/ Sarlin, E. (1928) Quote. Reference of Partek's concrete strategy in 1988. (in Swedish). Explains the key role of the competition when a company aims to improve its competitiveness, as stated already in 1928 by the that-time CEO of Partek Corp.
- /C8-5/ Peura, P. (1999) Article in TEKES' Magazine "Technology Views" No. 4. (in Finnish). Important notes on the strategic opportunity for Finnish wood product business, and some measures to exploit that, including the need to add value. No major risk identification.
- /C8-6/ Woodfocus (2001) Action plan towards construction. Helsinki. (in Finnish). Contains measures to exploit the opportunity as industry's joint effort. The need for competitiveness is recognized. Market orientation is proposed as the main strategy. Very ambitious business goal is expressed but no major risks are identified.
- /C8-7/ VTT Statistics (2003) Building materials' market shares in residential segments in 2002. Espoo. (in Finnish). Self-explanatory. Supports the idea of focusing on the low-storey residential buildings.
- /C8-8/ FF Management Board documents (2000) "Pyramid" illustration. Espoo. Describes FF's vision towards the new role, and some measures to cope with the cultural change are presented
- /C8-9/ FF Management Board documents (2001). EW division strategy documentation. Building systems. 11-12 July 2001. Espoo. See below.
- /C8-10/ FF Management Board documents (2001) EW division: Competitive assessment. 11-12 July 2001. Espoo.
- /C9,10) explain that, in the Phase 1, a new system supplier role is to be assumed by EW as a strategic goal. Major threats to competitiveness within that role, i.e. risks, are identified, and respective measures launched.
- /C8-11/ FF Building and Construction Management Board documents (2005) Minutes of Meeting. 31 May 2005. Explains the business idea and Management Board of the new strategic unit, to exploit the built new competitiveness abroad. Residential and non-residential segments are identified. No opportunity or risk analysis.
- /C8-12/ Salminen, A. (2000) Implementing organizational and operational change. Doctoral thesis. Acta Polytechnica Scandinavica. TKK Helsinki University of Technology. Espoo. Explains the importance of permanent and competent managerial staff, instead of ad hoc task forces, as "keys to change project success".

- /C8-13/ Andersen, T. J., Denrell, J., and Bettis, R. A. (2007) Strategic responsiveness and Bowman's risk-return paradox. *Strategic Management Journal*. Vol. 28, pp. 407-429. Explains the negative risk-return -connection, with empirical evidence, applicable to Phase 1, where the business volumes were (relatively) low.
- /C8-14/ Ihamuotila, M. (2005) Finnforest B&C business future focus. Espoo. Illustrates the very complex contractual role, which could not be assumed by FF with the culture of a large bulk producer, within the Phase 2.
- /C8-15/ Hämäläinen, M. (2003) Objectives for proposed modular production. Internal Memorandum. 16 April 2003. Espoo. Business objectives and identified main risks, for the Phase 2.

**5.9 FMO Tapiola Project (Figure 5.9-1) of Finnforest between the years 2001 and 2005 (Case 9)**



Map 5.9. Map of focal areas in Case 9.



Figure 5.9-1. Wood-structured Finnforest Modular Office (FMO) in Tapiola, Finland.

### 5.9.1 Introduction to Case 9

Case 9 encompasses **the RM of the development of the Finnforest Modular Office (FMO) project** between 2002 and 2005. The purpose is to analyze retrospectively this large and very complex development project that **Finnforest (FF)** carried out in Tapiola, in the City of Espoo in Finland. This was FF's first full-scale non-residential project to implement the newly created growth strategy (see Case 8) for the international system delivery business, based on wood products. To reduce the complexity and to better manage the involved risks, the project was conducted in the Finnish business environment while the main market of FF was UK. **This insider action researcher** worked as Senior VP of **FF** and a member of FF's Management Board when he was assigned to run the project from the idea until the implementation during 2001-2003. The first task involved the arrangements for an international architectural design competition /4/ with a jury chaired by a Representative of the City of Espoo. Thereafter, he acted as Chairman of the Board of the real estate company until the completion and the handing-over (2004-2006). Additionally, the researcher acted as the direct superior of the Project Manager.

### 5.9.2 Brief of Case 9

**Since 1990**, FF had – along with the other wood product suppliers – campaigned for wood in construction /1/. **In the early 2000s**, FF supplied the modules for many 1- to 2-storey wood-structured buildings, e.g. the Sibelius Hall, Savonlinna Hall, Friisilä residential development, and Silva Football Stadium. FF has also acted as the developer of some of those projects. FF's technical competencies definitely improved. However, the Sibelius Hall resulted in a big loss for the building contractor. In turn, the self-developed Silva Stadium with its attached football teams ("Atlantis" and further "Allianssi") caused FF a heavy financial burden until 2007.

FF's old main office was located in Tapiola, in the City of Espoo. It was a 5-storey concrete block from the 1960s ("GDR type").

**In 2002**, FF perceived that this office should be replaced with a new one in order to truly support the marketing of its wood products. The new office would become FF's visible statement project and "the tallest office made of wood in Europe" with wooden structures and facades, i.e. a 4- or 5-storey and 8000-sq-m office building with a 5000-sq-m underground garage, costing about EUR 20 million. **In September 2002**, FF launched an international design competition because uncertainty about the viability of the idea was prevailing /3/, /4/. The construction works were initially to be commenced in early 2004 (Figure 5.9-2). The completion date was set for mid-2005. No fixed capital was committed. The business objectives were built into the competition program in a timely manner. In this phase, it was already apparent that FF's management cadres, with a mechanical wood industry culture, did not have all the required competencies to manage the complex development project, and external resources were assigned to the project (Figure 5.9-3).

**In September 2003**, the architect Pekka Helin (of Finland) was declared the winner of the design competition /4/. Highly positive publicity for the competition was secured by announcing the results on the 50<sup>th</sup> Anniversary of Tapiola, a well-known place to most architects around the world. The design work was commenced swiftly and used to lash the building cost to be within the acceptable range. This was mandatory for the preliminary agreement with the major Finnish insurance group which had committed to buy the FMO building upon its completion. **The total budget was to remain within the frame of "EUR 23-25 million".**

The competitive milestones of the timeline schedule (Figure 5.9-2) called for completion by the autumn of 2005. The targeted master schedule caused many practical problems throughout the

construction phase. The CEO's hasty announcement of the completion date at the design competition ceremony even caused additional "regret" risk /9/. An early 6-week delay in the foundation works – resulting from the contractor's poor performance – was never really caught up with. The delay was prolonged still further during the concreting of the intermediate floors. However, increased control meetings, an official push vis-à-vis the contractor, and the allowed time reserve enabled the **FMO Tapiola Building to be inaugurated on the targeted date of Tapiola's 52<sup>nd</sup> Anniversary, i.e. 4 September 2005**. The handing-over to the final owner took place at the turn of 2006/2007.

FINNFOREST MODULAR OFFICE (FMO)  
PRELIMINARY SCHEDULE

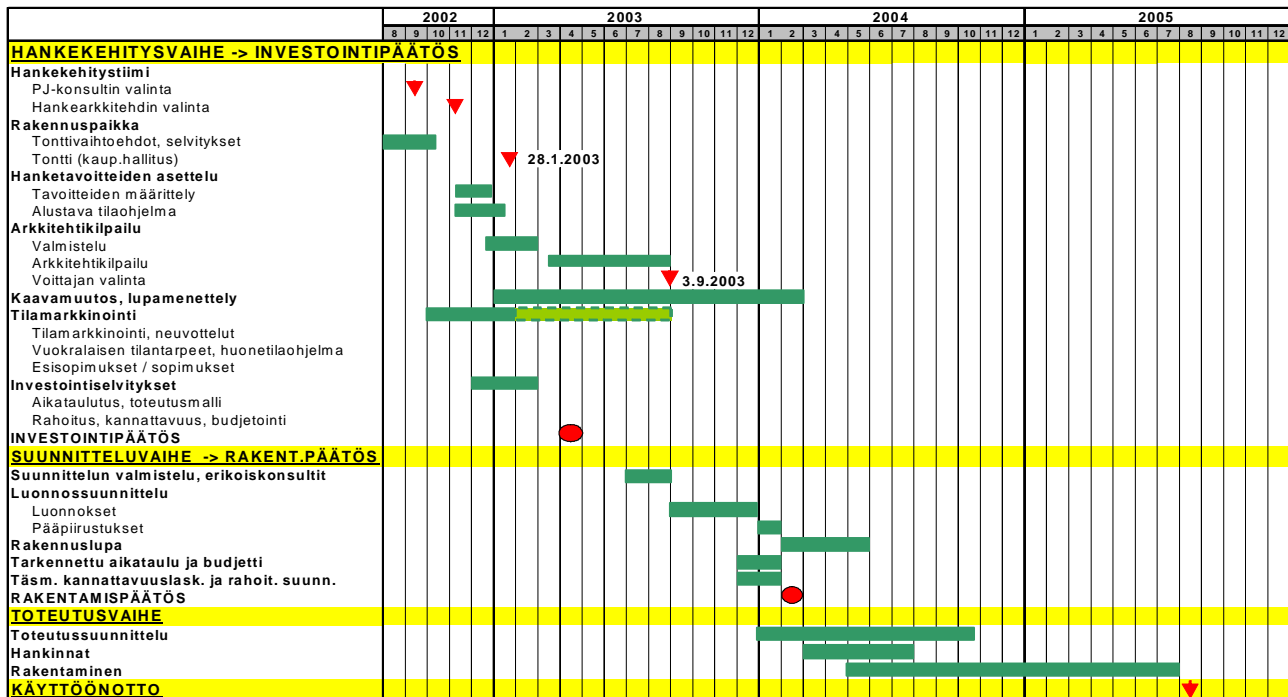


Figure 5.9-2. Preliminary timeline schedule of FMO Tapiola Project for the years 2002-2005. (The title is translated from the original Finnish language)

### 5.9.3 Finnforest's business objectives converted to FMO Tapiola Project objectives in Case 9

In 2002, FF's early business objective was "to strengthen FF's reputation as an overall pioneer of building with wood" and also "to enhance the internal cohesion of FF's business units" /3/, /4/. The architectural competition was launched /3/. The multiplication of this building concept in Scandinavia was envisioned /2/. In December 2003, FF's Board approved the scheme with the objectives on the cost budget, the financing (based on the future sale of the building), and the time schedule /5/. In addition, a real estate company was to be incorporated to carry out the entire project. The final project objective was that the FMO Building should be competitive in terms of its quality, cost, and construction schedule (of 15 months).

### 5.9.4 From uncertainty awareness to RM during Case 9

In the appraisal phase, some uncertainties were converted to risks. By December 2003, the list of identified major risks /5/ also included the possible non-performance of the wood structures (Table



5.9-1). (1) **The risk of too-high construction costs was identified in relation to FF's limited experience of managing building designs.** In particular, excess costs of any significance would imply that the pre-committed insurance company would reject the acquisition and ownership of the building. In fact, FF's negative outcomes from some earlier projects, e.g. the small Silva Stadium, indicated a lack of the required competencies regarding general and project management. There were cost and time overruns. In addition, the stadium remained unsold for a long period of time. On the other hand, the Friisilä Low-Storey Residential Project was carried out successfully with competent contractual partners. The finished houses were also sold early. For the FMO, a strong CM consultant was hired early enough. The special jury was established for the design competition, chaired by the Deputy Mayor of the City of Espoo. FF's specialists were working actively on the wooden building part solutions to be incorporated within the competition program.

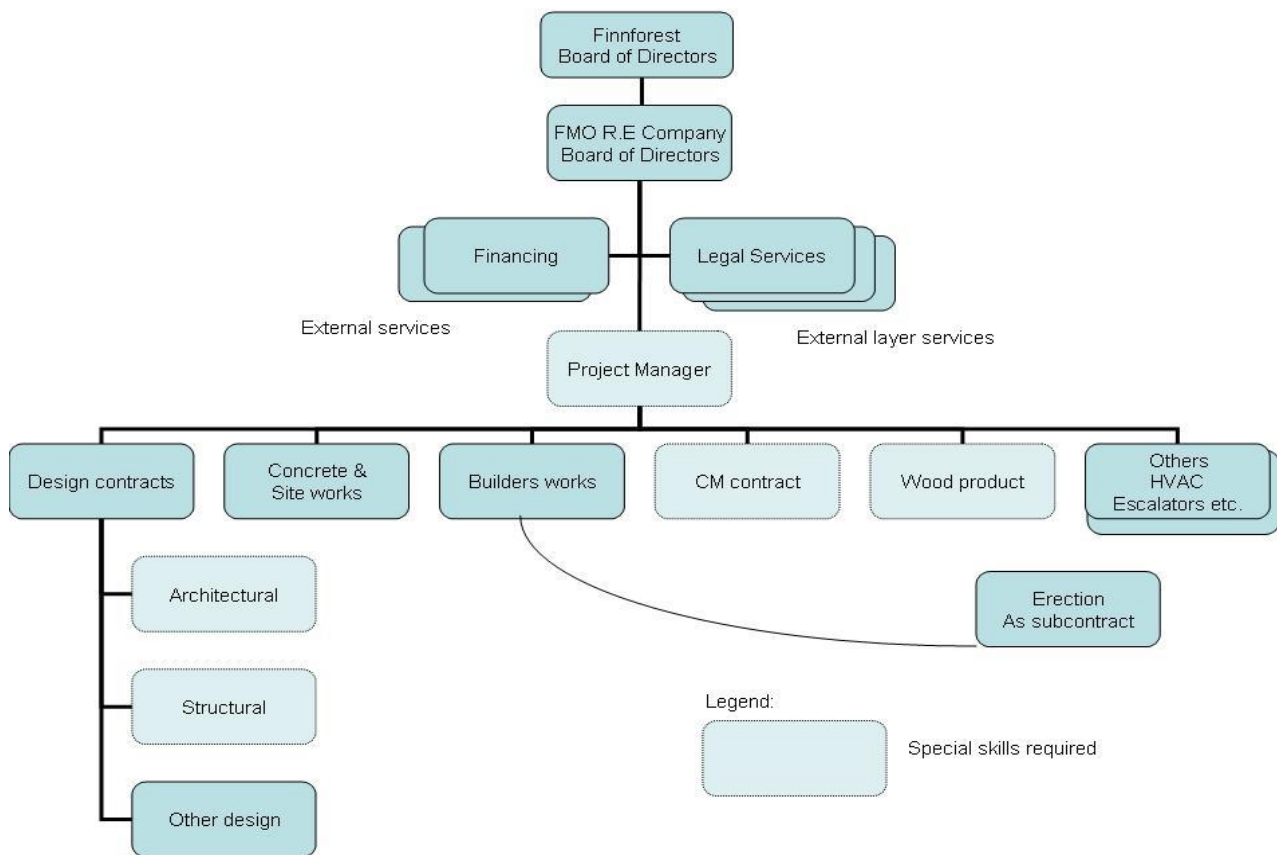


Figure 5.9-3. Project organization in the FMO Tapiola Project.

(2) **The risk of the process consisting of the land acquisition and the urban planning being prolonged or stopped** was managed by FF's early co-operation with the key officials of the City of Espoo. (3) **The risk of a project crisis with severe control defaults, caused by one or many intervening outsiders,** was discovered during the architectural design competition. Namely, the highly visible project might become a "target" of interventions by strong outsiders. How can such a risk of similar interventions be managed in the future? FF's business management understood that the FMO Tapiola Project must be made immune against any inappropriate interventions taking place during the implementation phase.

Table 5.9-1. Major risk breakdown structure of the FMO Tapiola Project from the developer's point of view in the year 2002.

Causative events	Source => Identified risks	Business objectives and/or consequences	Management of identified risks
FF's limited past experience of building design	Inadequate skills to select and manage the building design => <b>(1) Too high construction costs resulting from the ineffective building design rendering too much office and other space to be built</b>	The targeted project costs are exceeded and, thus, the insurance company rejects the acquisition and ownership of FMO Tapiola.	1 To manage the international architectural design competition 2 To hire a competent CM consultant for true control 3 To manage the cost-effective building design
New project business versus FF's corporate culture	Attitudes of local city-dwellers in Tapiola => <b>(2) Prolonged or stopped land acquisition and urban planning process</b>	The pre-selected site is not available on time and, thus, the FMO Tapiola project is canceled as a whole.	1 To enter into open co-operation with the officials of the City of Espoo 2 To start discussion and the mutual exchange of ideas about the FMO Tapiola with city-dwellers
Outsiders' strong efforts to intervene in the management of the FMO Tapiola project	Inappropriate interventions of outsiders => <b>(3) Project crisis with contract defaults</b>	Disaster or 'business as usual'	1 To avoid the intervention by the establishment of a separate real estate company for the FMO Tapiola building 2 To co-operate openly and directly with the future owner(s) of the FMO Tapiola building
New project business versus FF's corporate culture	Pioneering, maximal use of wood-based structures and products with design quality, the product specialist and erectors' skills, and control concerns => <b>(4) Weak performance of wood structures and products</b>	(a) Too high a building design quality, which causes too-high costs (b) Too low a building design quality, which prevents the launch of FF's highly advanced image throughout Europe	1 To retain the key tasks within FF's own units 2 To manage true cooperation between designers and wood product specialists 3 To rely on a CM consultant and to ensure highly competent, real-time project control procedures
Increasing work load of the building contractor versus its capacity (not pre-identified)	<b>NOT IDENTIFIED:</b> Lack of skilled site managers and agents within the building contractor's organization => <b>(5) Weak work performance of the building contractor</b>	Work stage mile-stones are not met and the completion of the building as a whole is delayed.	1 To increase the direct supervision on the real estate company's side 2 To retain more of the total scope of the work to be performed by FF's own units



The resultant risk of a crisis could not be taken, however, because a gut feeling had warned of possible serious consequences, i.e. a crisis that might even lead to a catastrophe. The only response was to avert such a risk in some absolute terms. Consequently, the FMO Tapiola Project was planned to be incorporated entirely, with the consent of the pre-committed future owner, while the architectural design competition was still going on. **(4) The risk of the weak performance of the pioneering wooden structures and products** was identified because of their high level of technical complexity – i.e. the tallest wood-structured office building in Europe. FF assumed unusual multiple roles as the developer, as well as the supplier and the erector of the building frame and the facades. The product development tasks also included the fire safety issues.

**During the early implementation in the autumn of 2003**, cost uncertainty was turned into a risk /7/. The budget frame was not to be exceeded. The real estate company was established in 2003 as the main tool to manage the project. That step created a strong “buffer” between the project management, the designers, and the contractors vis-à-vis any dangerous future intervention. The project proceeded as the competent key managers saw fit, without having to wait for the approvals of FF’s Board or additional demands from various stakeholders such as the future acquirer (the insurance company), FF, and/or ML. **In February 2004**, the FMO Board finally decided to start the actual construction work on the basis of a more reliable budget and secured project financing. Soon after, a budget overrun of nearly 15% was envisaged **in the spring of 2004**. Determined steering involved a change of the room layout and a minor reduction in the standard to get the budget back within the frame. The contractual form of the divided contracts allowed for this.

The CM approach selected, with tens of divided contract packages, also added to the complexity. Thus, it was ensured that **the multi-competent Board of the real estate company** had skills in general and project management, cross-cultural (i.e. product supplier vs. specialist contractor) and contractual issues, and wooden products. In turn, **the organization of the FMO Project** was strengthened by hiring many external experts. The remaining mandatory competences were secured through trade contracts (Figure 5.9-3). The evident risk of the non-performance of the wooden products, including their erection, was managed by retaining it contractually within FF’s own units that were in the best position to control such a risk. The further the design team proceeded, the better **the complexity** of the FMO Project came to the surface. There were many components, including FF’s multiple roles as the developer, the supplier, and the erector, the lack of experience of complex projects within FF’s corporate culture, the impulsive CEO, the building contractor’s inexperience with large wooden buildings, etc. The CM contract form selected enabled these interdependent components to be managed successfully. The solid general and project managers kept the sometimes conflicting wishes of the stakeholders at bay. Several requests – which might have resulted in a crisis if complied with – were put forth during the implementation phase, such as “to change the CM consultant”, “to accelerate the completion by 11 weeks”, or “to officially condemn the building contractor’s work”. All these requests were able to be averted, thanks to the buffer.

### **5.9.5 Business-level versus project-level RM measures during Case 9**

Prior to the FMO, **the need to acquire higher PM competencies** had become evident when FF faced problems when designing and supplying the wooden structures for challenging statement projects, e.g. the Silva Stadium and Sibelius Hall projects. In the minds of FF’s corporate management, the implementation of the FMO was uncertain as long as the buyer was not identified. FF’s marketing unit, nevertheless, worked very hard to make use of the “virtual, not-a-real” project as a new effective marketing tool. They prepared for “enhancing FF’s brand”.

**No business-level decision** to acquire the required competencies was made until FF turned uncertainty about cost into a risk by setting a budget of EUR 25 million. At the same time, the most crucial RM action was launched and the incorporation of the FMO Project allowed the competent project management to act with sufficient powers. The significant opportunity to promote the environmental performance of wood was missed. No commitment resulted in a lack of specialists and funding. This was in part caused by FF's production-oriented corporate culture, which was not geared to such new client-focused business innovations. **At the project level**, the time spent on the design was sufficient to secure the additional external competencies in **the project-level trade contracts**, along with the internal competencies organized as usual. The neglected environmental opportunity could not be corrected at the project level.

#### **5.9.6 Managing major risks inherent in cross-cultural and contractual competencies in Case 9**

**In December 2003**, the original objective of strengthening FF's brand was dominant. The FMO Tapiola Project had to become a success, i.e. a "competitive" office building. The most important proactive steps were presented to FF's Board for approval /5/. With the financing settled, the most vital issue was to engage competent key persons inside and outside FF and to provide them with sufficient decision-making powers. The FMO Board, which signed all the contracts, and the project organization had to possess sufficient combined competences regarding general and building project management, the particularities of wood in high structures and interiors, and competing in complex building projects within the region. This contractual arrangement with the real estate company resulted in e.g. the subcontracting of the supply and erection of the wooden structures to FF's Engineered Wood Division, which had the best knowledge to manage the risk arising from the performance of the new wooden structures and products erected. Moreover, the FMO Board was able to manage the crossing business cultures of the specialist subcontractor and the ordinary big product supplier of the wood products, as these were far away from each other.

**The selection of the CM contract form** was right vis-à-vis the project management with a tight master schedule and the many anticipated design changes (in order to meet the budget). A leading Finnish CM firm was assigned for the appraisal phase as early as in 2002 and it continued as the CM consultant. The Project Manager and some individual consultants for the special assignments (the environmental issues and the land acquisition) were hired from outside. The Project Manager had recent experience of a successful wood-structured special building (the Savonlinna Hall).

**In the managerial competency assessment**, the assessed levels of **the combined managerial competencies** within the Board of the FMO Tapiola real estate company and the actual project organization in Spring 2004 received an average competency score of 3.81 (see tables 6-5a, b, p. 145) regarding cross-cultural issues and a score of 3.80 regarding contractual issues. These scores were relevant to the task ahead, i.e. to execute a multi-cross-cultural, very complex development project under the conditions of the impulsive FF management struggling for the replacement of their old, already ailing business strategy with a new one.

#### **5.9.7 Conclusions on Case 9**

**The overall success rate** of the outcomes of the RM of the development of the FMO Tapiola Project between the years 2001 and 2009 is assessed to be **medium**. The project-level objectives were attained to a high degree. However, the most important business-level objectives were attained only to a medium degree.

**Case 9 conforms well to Hypothesis 1**, i.e. the RM measures were taken successfully at the business and project levels. The competencies and the contractual form were determined **at the business level**. Although FF's brand was strengthened, the other great opportunities, e.g. to demonstrate the environmental edge of wood, were not reached because the business-level management did not commit itself to this. FF's/ML's management (or Boards) could not have pre-identified the project-level risk of the building contractor's incompetence by any available standard means. **At the project level**, the RM measures that were adopted were about the maximum effort possible to secure the attainment of the FMO project objectives. The four identified risks were managed well. Effective RM was mandatory in order to ensure the required quality, the completion date, and the acceptable costs to meet FF's business objective, i.e. to enhance FF's brand. The risk of inappropriate interventions which might have caused a crisis or even a catastrophe was also identified and deliberately avoided. Nevertheless, an unidentified major risk – the building contractor's performance – occurred, causing some delays. However, the remedial action, i.e. "close" supervision on site prevented any knock-on consequences. **The quality achieved**, by internal and external assessments (e.g. the RIL Award /6/), places the FMO Tapiola Building well **"above the average level"**.

**Case 9 also conforms well to Hypothesis 2**, i.e. that the key managers' competencies to manage the contractual and cross-cultural issues in particular were a prerequisite for success. It is notable that the additional cross-cultural and contractual expert competencies were acquired by partly relying on external experts, such as project and construction management, to strengthen the respective competencies of the internal Board of the FMO project. With these reinforcements and their high motivation, a difficult task was accomplished with a high/medium degree of success. However, the resultant levels of required managerial competencies varied to some extent. The existing competencies met the required levels, in particular in the sub-areas of PM under the CM contract form, the building design management, and the novelties and the innovations. On the other hand, the available competencies were less in some areas, such as the other trades (contractor's site management) and parts of the general management (e.g. in the sub-areas such as challenging and investing in R&D and exploiting the environmental opportunity where wood could have a great opportunity).

The four ex post observations are as follows:

**Ex post observation 1:** It seems that other and stronger measures were already needed in the early phases in order better to exploit FF's strategic business objectives. The opportunities such as the value-adding strategy and the environmental performance of wood as a brand could have been better harvested for future benefits, if only the realized business strategy (see Case 8) had been better geared toward this end.

**Ex post observation 2:** The incorporation of the FMO Project allowed the competent project management to act with sufficient powers. To acquire those powers at the project level only, eventually during a crisis, would have been impossible. Such powers to run the project effectively would not have been available e.g. if FMO had been buried inside any of FF's business divisions or if this project had been carried out by staff functioning under the CEO's direct command.

**Ex post observation 3:** Without the buffer in the timeline schedule, at least a change of the CM consultant or one of the building contractors might have occurred. In turn, such a change could have resulted in a crisis and probably catastrophic results, because of the

high number of interdependencies (e. g. between the buyer, the real estate company owned by FF owned by ML, the contractors, and the City of Espoo as the land owner, etc).

**Ex post observation 4:** FF's production-oriented corporate culture was not sufficiently geared towards new client-focused business innovations. It seems that the same still applies today to the Finnish forest-based business as a whole.

**The key confidential documents and the public references** on Case 9 are as follows (in Finnish, if not stated otherwise):

/C9-1/ Country strategies 2000 as presented at FF Management Board Meetings in 2000-2001.

Explains the strategic opportunity for FF, the main actor of the European wood product business .

/C9-2/ Strategy for FF's Engineered Wood Division. 11-12 July 2001. Lahti. As in Case 8 (/C8-9,10/), this explains that, in the Phase 1, a new system supplier role is to be assumed by EW as a strategic goal. Major threats to competitiveness within that role, i.e. risks, are identified, and respective measures launched.

/C9-3/ FF Board presentation. 10 September 2002. Espoo. Contains the business objectives within a very broad time and financial frame , and the main measures to reduce the uncertainty.

/C9-4/ FF Management Board presentation. 9 September 2003. Espoo.

/C9-5/ FF Board presentation. 16 December 2003. Espoo.

/4,5/ Contain a list of business objectives (both quantitative and qualitative), major risk identification and respective response plan to all identified risks.

/C9-6/ RIL's National Award as presented in September 2006. Helsinki. Serves as a public evidence of the exceptional quality of the project.

/C9-7/ Flanagan, R. and Norman, G. (1993) *Risk management and construction*. Blackwell. Oxford. Explains the theoretical and practical background of turning uncertainty into risk (which was the method to seek the final Board approval for the project).

/C9-8/ Lofthus, M. (1997) Lecture. EPPW. UMIST. Manchester. Explains the "regret" risk, i.e. when the perceived completion date was hastily announced in the winning ceremony of the architectural competition, this "regret" risk occurred. The cause was FF CEO who anticipated his own birthday party, much less than two years ahead, yet to be held at completed FMO.

## 6. CROSS-CASE EVIDENCE AND ITS CONFORMITY TO THE TWO HYPOTHESES

### 6.1 Use of the same relevant grouping of the nine cases

**Case 1** is the compact summary (Group 0) of Lemminkäinen's five sub-projects overseas between the years 1973 and 1984. In turn, **Cases 2-9** extend over the periods of 1984-1995 and 2000-2006. Cases 2-9 have been further grouped under the two multi-business corporations and one single-business firm to explore their longitudinal causalities (Table 6-1). Each group includes one case to explain the respective actor's strategic change for international growth and at least one operative, project-level case to implement the desired strategy. This setting makes it possible to clarify the novel idea of extending project-level RM to business-level RM. **In Group 1**, Case 2 contains Partek's strategy for international growth in the precast concrete business. Case 3 is a green field operation as a JV partner with a local firm. Case 4 is the acquisition and post-merger integration of three local firms, each in different national markets. Case 5 is the expansion of capacity and market by acquisition and post-merger integration. **In Group 2**, Case 6 contains a merger as a measure taken to save the firm and promote its international growth. Case 7 deals with the delivery of a very complex and large project. **In Group 3**, Case 8 contains a business strategy case to add value and grow in the international market. Case 9 is the development of a very complex large project.

Table 6-1. Four corporate groups (0-3) and their nine cases (1-9).

Group 0 (The Finnish pioneer contractors in Nigeria, Iraq, Liberia and Kenya...):	
1	Case is the abstract of the findings of the author's licentiate thesis (Palojarvi, 1986) on RM in the international construction projects of Lemminkäinen in 1974-1984:
	- Satellite Town in Lagos, Nigeria 1976-1978
	- Dorah Civil Infrastructure and Foundations in Baghdad, Iraq 1976-1980
	- Matadi Civil and Electrical in Monrovia, Liberia 1977-1980
	- Mau-Kisumu Road Works in Kenya, 1980-1984
	- Underwater foundations for Mano River Railway Bridge in Liberia, 1982-1984
Group 1 (Building product supplier Partek Concrete grows to the position of the European leader...)	
2	Partek Concrete grows internationally (1984-1995) (B/L)
3	Eastern Partek in Singapore (1984-1987)(P/L)
4	Partek Concrete acquires CBR precast concrete business in Benelux (1987-1990) )(P/L)
5	Partek Concrete acquires VBI in Netherlands and Germany (1989-1992) )(P/L)
Group 2 (Technology contractor Partek Concrete Engineering (PCE) is established and needs growth to survive at all...):	
6	Partek Concrete Engineering (PCE) is restructured for the global market (1992-1995) (B/L)
7	Partek Concrete Engineering (PCE) Sertolovo delivers a mega-project in Russia with German financing (1991-1995) )(P/L)
Group 3 (Metsäliitto/Finnforest adds value to wood products...):	
8	Finnforest/ Metsäliitto's value adding strategy for wood products (2000-2005) (B/L)
9	Finnforest's FMOTapiola delivery project (2002-2005) (P/L)

## 6.2 Questions for the examination of the cross-case evidence

**Hypothesis 1** is that proven project RM methods can also be applied reliably at the business level and, thus, the effectiveness of managing major international business risks can be improved within the focal context. It was examined with the 4-view evidence on the actual applications of the proven project RM methods to the risky growth situations at the business level across all the nine cases, i.e. those of one building contractor, two building product suppliers, and one engineering contractor. The four questions for this examination are as follows. (i) **“Was the proven RM process applied?”** This is examined in terms of the three phases, i.e. whether objectives were set, major risks identified, and appropriate response measures planned and launched. (ii) **“If yes, at what level(s) was the RM conducted?”** This is an attempt to separate business-level decisions and project-level decisions. The logic behind this 3-element decision-making chain of the project RM is as follows. If objectives are not set, no relevant risks can be identified and, consequently, no appropriate response measures can be planned or launched, other than mere reactions to the consequences of a risk that has occurred.

(iii) **“Did it work?”** refers to the assessment of whether most, if not all, of the potential major risks and those that occurred were identified and how efficient the response measures were, if any of them was selected. (iv) **“What else was interesting?”** reveals possible findings for the discussion “Was it, or could it have been, more efficient to identify and, further, already to manage major risks at the business level instead of facing the risks that occurred at the project level” (in alignment with Alvesson 2003). This cross-case evidence is summarized in Tables 6-2a, b, c.

**Hypothesis 2** is that major risks related to the attainment of the targeted business objectives are inherent within key managers’ competencies and their insufficiency in particular to manage (2a) cross-cultural issues and (2b) contractual arrangements within the focal context. It was examined simply by inquiring (i) **“Was this particular risk identified?”**, (ii) **“Did it occur?”**, and (iii) **How was this risk managed?”** If cross-cultural or contractual risks did not occur, any potential ones were still looked for. Thus, it is assumed that there is a likely causal relation between the identified major risk types, the respective RM approach, and the overall success (or failure), provided that no rivaling risk to explain this overall end result can be identified, even ex post. In turn, (iv) **“What else”** reveals possible findings for the discussion “Could some other rivaling risk explain ...” (again in alignment with Alvesson 2003). The cross-case evidence is compiled in Tables 6-3a, b (p. 139) and 6-4a, b (p. 142), respectively.

**The results of the hypothesis-specific examination are summarized, together with the overall success rates, in Table 6-5 (p. 145).** The choice and use of the qualitative scales has already been clarified in sub-chapter 4.6.

## 6.3 Cross-case evidence and its conformity to Hypothesis 1

**It seems that the cross-case evidence conforms well to Hypothesis 1** (Table 6-2). In all the cases, the business-level and project-level objectives were set as quite habitual in Finnish companies. In most cases, the major risks were identified, at least by experts. In many – but not all – cases, the major risks were responded to at least reasonably well. Nevertheless, the risks were not always efficiently responded to, either because of a failure to identify them, the ignoring of expert advice, the retaining of a sometimes underestimated risk, or for some other reasons. (The eventually inadequate measure e.g. in **Case 4** on the identified major risk was not the fault of the RM method itself, but rather one that happened despite the RM method.)

Table 6-2a. Examination of the case-specific evidence conforming to Hypothesis 1, Cases 1-4.

Case No.	Was the RM process applied, i.e. were (a) objectives set? (b) major risks identified? (c) responses launched?	If yes, how did the RM take place at the business level (B/L) and project level (P/L)?	Did it work, i.e. were any major risks identified and were any response measures launched? What was the outcome?	What else was interesting?
1	(a) Yes (b) Yes (c) Yes	In 1 <sup>st</sup> and 2 <sup>nd</sup> sub-projects at P/L, later also at B/L.	Yes, this varied. Major cross-cultural risks were identified at P/L only, and they were difficult or impossible to deal with.	Learning took place by doing, rather than by e.g. formal training. <b>RM at P/L was of primary interest</b> and thus emerging human-embedded risks with long-term impacts were not identified early.
2	(a) Yes (b) Yes, at general economic and demand level (c) Slowing down the investment was common.	(a) Volume, profitability at both (b) At both (c) Not at B/L except cash outflow, at P/L as PM saw fit.	Yes, when dealing with consequences – but not proactively, to avoid or fight major risks.	<b>RM applications seemed to be more efficient at B/L</b> because the longer time span for various measures gives more options to maneuver. Product suppliers plan investments at least 5 years ahead, while contractors, when planning an entry, use shorter planning spans.
3	(a) Yes (b) Yes (c) Yes	(a) At both (Long-term business plan to recover any losses of the 1 <sup>st</sup> project had not been made yet.) (b) At both (c) At both	It did work at B/L to attain the medium-term objectives. The long-term objective of recovering the losses was not set in this phase.	Determined risk-taking at P/L led to anticipated losses, while the market position (in SE Asia) as an opportunity paid off later. Cross-cultural competencies on creating trust btw. Partners and selecting a viable contractual role were vital for success. <b>More efficient RM at B/L would probably have cut the first project's losses significantly.</b>
4	(a) Yes (b) No at B/L, yes at P/L yes (c) Yes, mainly by slowing outcome flow and dealing with consequences.	(a) At both (b) At P/L (c) At B/L which policy was then enforced at P/L	Yes, at both levels. But cross-cultural and product and export project risks, identified by experts at B/L and taken, were dealt with at P/L. Response only ensured the main goal – a strong position in Western Europe.	B/L: The downside was well managed but some upside opportunities were missed because of the problems in managing a multi-cross-cultural venture. <b>RM at B/L could have been more efficient with better competence regarding cross-cultural (and perhaps also contractual) issues.</b>

Table 6-2b. Examination of the case-specific evidence conforming to Hypothesis 1, Cases 5-7.

Case No.	Was the RM process applied, i.e. were (a) objectives set? (b) major risks identified? (c) responses launched?	If yes, how did the RM take place at the business level (B/L) and project level (P/L)?	Did it work, i.e. were any major risks identified and were any response measures launched? What was the outcome?	What else was interesting?
5	(a) Yes (b) Yes (c) Yes	At B/L and P/L	Yes, until the end of the formal acquisition/integration project. (Ex post: <b>Thereafter</b> , the identified cross-cultural risk was ignored (or taken by ignorance) >> VBI's result was hampered for a while.)	<b>Risks identified at B/L were managed well</b> , important <b>opportunities</b> were grasped (technology), and some <b>missed</b> (French and German markets) <b>because of multi-cross-cultural problems at B/L</b> . (Ex post: Particularly the German opportunity, if taken, could have kept PC intact (and the whole of Partek) in a different shape, to continue in the building product business.)
6	(a) Yes (b) Yes (c) Yes	(a), (b), and (c) at BL and P/L	Yes, in all phases including the prepared response to fight the initial crisis of the merger and later the new crisis of the Sertolovo project. The third crisis – on the way up – could not have been fought by PCE any more.	<b>Phase 1: Well-managed risk-taking at both levels paid off because the best managers could be selected from the two merging firms</b> . Competencies on general management and contractual issues were more important than the cross-cultural ones as there were no ethnic or industrial cultural differences between the merging parts. <b>Phase 2:</b> Volume target was achieved with tight RM at P/L with the frame already given at B/L.
7	(a) Yes (b) Yes (c) Yes	(a) At both levels (b) At P/L yes, at B/L in part (c) At P/L yes, at B/L in part	Yes, in all phases including the events of the crisis and the potential disaster.	It would have been hard to advocate for the mobilization of so many new competencies for one single project unless the need had been identified early enough, i.e. at B/L. <b>Quite surprising, one unidentified risk was Haka's relatively fast collapse. The reasons became fully clear only years later.</b>



Table 6-2c. Examination of the case-specific evidence conforming to Hypothesis 1, Cases 8-9.

Case No.	Was the RM process applied, i.e. were (a) objectives set? (b) major risks identified? (c) responses launched?	If yes, how did the RM take place at the business level (B/L) and project level (P/L)?	Did it work, i.e. were any major risks identified and were any response measures launched? What was the outcome?	What else was interesting?
8	(a) Yes (b) Phase 1: Yes. Phase 2: Major risks were not identified, only the consequences (c) Phase 1: Yes. Phase 2: Measures to deal with the worst consequences were not viable	a) Yes, at both levels (b) Phase 1: Yes, at both levels, Phase 2: No (c) Phase 1: Yes, at both levels, Phase 2: respective managers dealt with consequences only	Brand and visibility goals were attained, but in Phase 2 all projects were very unprofitable. More important, yet, was that a great growth opportunity was missed because of the lack of the required investment in service capacity.	Disorganized corporate management scared the business management in Phase 1 into taking “risk avoidance only” types of measures. <b>The growth opportunity based on adding value was missed</b> because only a tiny investment in competent personnel was made in Phase 1. The emerging big rush to grow in Phase 2 spoiled the entire venture. (Ex post: in 2009, it is quite late for Metsäliitto to recourse, although the structural business itself continues.)
9	(a) Yes (b) Yes (c) Yes	(a) Yes, at both levels (b) Yes, at both levels (c) Yes, at both levels	Yes. All the identified risks were managed, and the consequence of the unidentified major risk that occurred was dealt with satisfactorily.	<b>Solid and rigorous RM already at B/L was crucial for success and to avoid the crisis in the project.</b> Cross-cultural competencies regarding industrial vs. construction and the contractual ones were both the sources of the major risk and managed well at both levels. The business growth opportunity was missed because of the business-level/corporate mismanagement.

In the light of the cross-case evidence, it seems that particularly in order to manage the hypothetical major risks (or their sources), it is **more beneficial to take measures proactively**, i.e. already at B/L **rather** than to wait until major risks occur. There is a logic behind this. (i) **Early risk identification** provides the option of assessing whether it is better to deal with the sources or consequences of a major risk (all cases). Simply waiting until a potential risk occurs leaves no such option and one has to deal with the consequences, whatever they may be. Further, (ii) **there are more long-term options available** when acting at the business level rather than at the project level (this was evident in Cases 1, 3, 4, 6, 7, and 9). Additionally, it is (iii) **viable to have ample**

**calendar time available**, e.g. when analyzing and comparing various contractual role alternatives or when pondering and implementing the most feasible organizational structure or its key appointments, rather than rushing into them (Cases 1, 2, 3, 9). Moreover, (iv) **many long-term commitments**, e.g. choosing a foreign market area and segment, an entry mode, JV policies, and partner selections may involve many stakeholders and these **are difficult to change at the project level** ( Cases 1, 2, 3, 4, 7, and 9).

**The other interesting cross-case observations** are as follows. It seems that **uncertainty management** – before turning to formal risk RM – of both the upside and downside possibilities, as based on the observations in e.g. Cases 6 and 9 and supported by e.g. Langlo et al.(2007), may be well suited to e.g. long-term business development efforts with fuzzy objectives. **Traditional RM, focused on goal attainment as “positive outcomes”, needed clear objectives** for any operative business. Without the clear objectives, shared at least with the key managers, it was not possible to even clearly identify and analyze the major risks, let alone launch the most viable response, including tapping into the opportunities as well.

**Formal risk identification** was conducted in all the cases, although in business jargon, the word “risk” usually meant “**what can go wrong?**” only. The building product suppliers, when considering their investments in their targeted growth, recognized the opportunities as well, but usually at the verbal level as an additional argument for the proposed investment, while the line management did not want to give any specific value to that kind of opportunity. “The synergy effect” was a typical “opportunity” of that nature.

#### **6.4 Cross-case evidence and its conformity to Hypothesis 2a**

**It seems that the case-specific evidence conforms well to Hypothesis 2a** (Table 6-3). The sufficiency of cross-cultural competencies was the mandatory prerequisite for the high or very high success rate in Cases 1, 5, 6, 7, and 9. To build up such new competencies took time. Therefore, it was vital to make the appropriate decisions at the business level. The evidence arising from the cases is as follows. **In all the cases**, whether specifically identified or not at the time, **the major risks that occurred were inherent in the cross-cultural competencies and often also in the contractual competencies at the same time**. The “ranking” between these two hypothetical risk types, however, differed. It seems that the levels of the key managers’ competencies regarding cross-cultural issues were a more common major risk (or its source) than their competencies regarding the selected contractual role and other arrangements.

In Cases 1, 4, 5, and 7 **some other major risk types, or risk source types**, were also identified, and some also occurred. However, their appearance was rather sporadic. **The much-feared political risks**, such as the uncertainty of European integration and military coups, occurred several times, but their consequences were not significant at the project level since the respective actor had remained politically neutral. **Some technical risks** also occurred in Cases 1, 3, 4, 7, and 8. According to the traditional risk classification, they could be traced back to the differences between the local and Finnish ways of doing construction business as their sources. Such risks were managed by careful homework and the detailed tender specifications in the successful Case 1 (5<sup>th</sup> sub-project) and Case 7, but only with very hard project work in the less successful Cases 1 (4<sup>th</sup> sub-project), 3, and 8. Similarly, **many country-specific and local construction culture-specific clauses** were new to the Finnish actors, at least to the “generalists”, despite the fact that they were part of the common Western – British, German, Dutch, or French – contractual frames. The risks that arose were managed – upon learning the lessons from the first contracts – by assigning local legal and contractual experts, often supported by in-house experts in the respective fields.

Table 6-3a. Examination of the case-specific evidence confirming to Hypothesis 2a.  
Cases 1-4.

Case	Was this risk identified?	Did this risk occur?	How was this risk managed?	What else?
1	Mostly yes.	Yes	In the 1 <sup>st</sup> and 2 <sup>nd</sup> sub-projects, by adding the language skills to the recruitment criteria. Later, by hiring outside consultants to evaluate candidates. Some manager replacements were necessary.	<b>Major risks were first anticipated to be inherent in a host country's political and economic development, and in contracts and local legislation.</b> Since these risks never caused big losses, the attention was turned towards Finnish managers and other staff. The competencies to deal with leadership and cross-cultural issues were watched mainly at P/L .
2	Yes	Yes	By relying on locals, as the main strategy.	<b>Multi-cross-cultural issues proved to be more difficult to manage than anticipated</b> , as a result of the overall complexity of the fragmented precast concrete business in Europe.
3	Yes	Yes	First by leaning on the local GM (the successor of the earlier Finnish external recruitment) who was watched and supported by Chinese/Finnish Board members and key managers. After the local GM was fired, he was replaced by a Finnish GM.	The initial Finnish key staff had little experience of the product, and none of local issues, where the partner was of very high caliber. <b>The key to success was to gain local acceptance for the slab product and company - the first big client was the Japanese contractor.</b> The big loss of the 1 <sup>st</sup> project was recovered because long-term growth was secured thanks to the solid cooperation with the partner and the local key managers.
4	Yes	Yes	By taking a major cross-cultural risk on the local manager, who had probably initiated the deal, and by dealing with the consequences. Internal politics at Partek prevented a Finnish nomination – which would have been a more expectable step.	<b>Partek had already learned to manage dyadic cross-cultural relations</b> (e.g. Sino-Finnish). In this case, where the initiative came from the seller's side, the situation contained three foreign cultures – Dutch, Belgian, and French. A "multi-cross-cultural" set-up was far more complex.

Table 6-3b. Examination of the case-specific evidence conforming to Hypothesis 2a, Cases 5-9.

Case	Was this risk identified?	Did this risk occur?	How was this risk managed?	What else?
5	Yes	Yes	By carefully analyzing local managers before the actual deal (which was not carried out in 5.2.4) and then trusting and relying on them.	The dyadic cross-cultural situation (i.e. Finnish- Dutch) worked well. Later, to put the acquired Dutch group under Belgian command led to a multi-cross-cultural operation that was difficult to manage. The business result suffered.
6	Yes, the big, complex international project was the only way to grow fast and profitably.	Yes, with a better outcome than expected.	Integrating two firms into one and by selecting the best key managers out of the merging parties gave a considerable advantage.	Selected managers' good competencies regarding product and cross-cultural issues improved the business result even in new and remote markets, e.g. South Korea, the USA, and Taiwan.
7	Yes, no major risk was found at the outset. The Russian economy was considered the most important risk. Later on, it was.	Yes	By selecting key managers with top-class skills in multi-cross-cultural, contractual, and product issues.	Sound intelligence, based on close contacts to Russia and Germany, to stay ahead of events and to react early was mandatory in Phase 1 of the project. Thereafter, the viable contractual arrangement was an important RM tool to deal with the eventual big changes.
8	Yes, but the ethnic and industrial cultures were both crossed.	Yes	By a few managerial assignments, which were too few to make a real cross-cultural difference within the mechanical wood business.	The filling of the cross-cultural gap required a much larger investment in service capacity, i.e. people. The actual one was far too low to <b>change the culture to serve contractors &amp; developers, instead of retailers.</b>
9	Yes	Yes	It was eliminated with tough measures such as selecting a competent management team, incl. external recruitments, and implementing the project as a legally and culturally separate business structure.	<b>The cross-cultural competencies were guaranteed for this project</b> in order not to make any strategic losses (brand, visibility).

**The multi-cross-cultural situations**, e.g. the Dutch-Belgian-Finnish and German-Russian-Finnish situations, were significantly more complex than the dyadic situations in Cases 4, 5, 6, 7, and 8. This was probably the most demanding task for the RM at those times. The learning of the lessons, the respective risk-taking, and the reliance on the locals were not enough. Whether the competencies finally reached the required levels cannot be verified in the old case data from between the years 1974 and 1992. Ex post, it seems that the creation of the precast concrete technology edge gave the Finnish managers the unquestioned status of being the “real managers” of this business. By organizing the business into mainly dyadic cultural zones, the complexity was reduced a lot.

**In the tough conditions, the trust between the partners was also at stake** in Cases 1, 3, 5, 7, and 9. The contractual arrangements were the consequence of the high degree of trust between the partners, and not the other way around. Trust could not be “enforced” by the contracts – it had to be built, which again was a complex task. Obviously, the cross-cultural sensitivity of the respective managers was a great advantage in achieving that.

**The identification of the major risks at the business level often led further to proactive responses**, instead of the consequences only being dealt with at the project level. This did not automatically also result in an improved response in Cases 4 and 8. The comparison of the international growth strategy cases with the consequent “operative” cases confirms that **it did take time to build the key managers’ new competencies regarding cross-cultural issues** in Cases 1, 4, 5, 7, and 9). The external recruitments, in turn, with the necessary competencies to fill the eventual gaps in the project of the focal company, may have had problems in adapting rapidly to the new employers’ existing internal cultures, which naturally took time in Cases 1, 3, and 8.

## **6.5 Cross-case evidence and its conformity to Hypothesis 2b**

**It seems that the case-specific evidence conforms well to Hypothesis 2b** (Table 6-4). **In all the cases**, whether specifically identified or not at the time, **the major risks that occurred were inherent in the cross-cultural competencies and often also in the contractual competencies at the same time**. In some cases, there were some other major risks, or risk sources, as well but their appearance was rather sporadic. The “ranking” between the two hypothetical risk types, however, differed. It seems that the levels of the key managers’ competencies regarding contractual arrangements were a less common major risk (or its source) than their competencies regarding cross-cultural issues.

**The most important decisions of the focal actors on the contractual arrangements** were the structure, the role, and the partner selections. In most of the cases, the adoption of the new contractual structure and role turned out to be crucial. On the one hand, this led to the subsequent other contractual arrangements and the respective competency requirements, which, at least at first, were not sufficiently matched because of a lack of the respective competencies at the business level and/or the project level in Cases 3, 4, and 8. On the other hand, the selection of the right partner required the mastering of the social and industrial cultures of the scene in Cases 1 (2<sup>nd</sup> sub-project), 3, 5, 6, 7, and 9. Eventually, the selection of the wrong partner could not be helped with the other arrangements in Case 1a, while the selection of the right partner withstood even the very tough conditions in Cases 1 (2<sup>nd</sup> sub-project), 3, 6, and 7. It goes without saying that trust must be created and this went hand-in-hand with loyalty. The most striking example was a part of Case 7, i.e. the selection technique which the focal contractor applied when it had to be loyal to the two competing partners and it could not know who would be the winner.

Table 6-4a. Examination of the case-specific evidence confirming to Hypothesis 2b. Cases 1-4.

Case	Was this identified?	Did this occur?	How was this managed?	What else?
1	Yes	Yes	In the 1 <sup>st</sup> and 2 <sup>nd</sup> sub-projects, extended homework. Later, learning by doing.	<b>The contractual risk was identified as being of a major type, right from the beginning.</b> All experience only strengthened that opinion of the professionals. However, it did not appear as a strategic tool in B/L management until the 1980s.
2	No, in the first implementation case.  Yes, in the last two implementation cases.	Varied	Varied	<b>“System delivery” was defined as the strategy “to add services to products”.</b> However, investing in the necessary expertise varied from “one man only” (CBR project export to London) to entire departments (e.g. VBI). In acquisitions, the contracted price was tied to performance as the standard method.
3	Yes but at P/L only.	Yes	Investing in design and erection.	<b>The offering of “system delivery” instead of “products only” was vital in the local business culture, which was prone to risk avoidance.</b> Clients were hesitant to accept new products to be designed and erected without “someone else” to take the “responsibility” for the consequences.
4	Varied – as a rule, the experts identified it.	Yes	Price/performance on the acquisition; by investing (too little, though) in design and erection services.	<b>New contractual role &amp; old products proved difficult to manage for the acquired firms in the multi-cross-cultural conditions.</b> The most difficult combination was the delivery of the Belgian-managed and very complex (architectural) system from the Dutch plant to top London real estate projects, with the contract manager of Bovis of USA and owned by N.Y. Jews, all this supported and coordinated by Finnish experts. The inevitable claim fight was overwhelmingly won by Partek; thanks to the efforts of the top Finnish contractual (claim) expert, in the British lower court, Bovis got no permission to appeal.

Table 6-4b. Examination of the case-specific evidence conforming to Hypothesis 2b, Cases 5-9.

Case	Was this identified?	Did this occur?	How was this managed?	What else?
5	No	No	Price/performance as the general cover for the acquisition price; no change in the contractual role of the acquired company.	<b>Contractual role was not changed &gt;&gt; no major risk.</b> Instead, more efforts were made to develop the product technology and the geographical market coverage jointly with Partek's other units.
6	Yes	Yes	The B/L decision to invest in the PM capacity for the wider contractual role was made to add value.	<b>PCE's contractual role was already well clarified and readily established for Sertolovo at B/L.</b> This allowed a management team with sufficient competencies to be selected.
7	Yes	Yes	By sticking to the selected strategic contractual role and e.g. by turning down the offered building works.	<b>The selection of the wrong role selection would very probably have resulted in severe contractual problems.</b> To solve them, in the German ("pacta sum servantas") contractual culture, would have been extremely painful, if not impossible.
8	In general, yes, but when considering the necessary investments, no.	Yes	By few expert appointments. This was too tiny an effort vs. the big change of the contractual role.	<b>The too-small investment in the role change kept the business volume low. This led finally to radical consequences at the corporate level.</b>
9	Yes	Yes	By reducing complexity, by dividing the project into reasonably manageable parts.	<b>RM at P/L was more efficient than RM at B/L, particularly in the new contractual role – adding services to products – throughout FF's entire mechanical wood business.</b>

**The identification of the major risks at the business level often led further to proactive responses,** instead of the consequences being dealt with at the project level only. This did not always automatically also result in an improved response in Cases 4 and 8. The comparison of the international growth strategy cases with the consequent "operative" cases confirms that **it did take time to build the key managers' new competencies regarding the contractual arrangements.** The obvious advantage of the increased time was the fact that it was more viable to plan and prepare for the preferred contractual roles and arrangements well before the actual signing of the contract or deal. However, the external or internal contractual experts were able to provide significant support to the key managers in Cases 4 and 5, and to some extent in Cases 7 and 9. This is understandable because this is the common modus operandi among those experts.

## **6.6 Total scoring of the key managers' cross-cultural and contractual competencies in the nine cases**

### **6.6.1 Introduction**

To study further the causal connection between the key managers' competencies and overall success rates, the individual key managers were evaluated by the action researcher. As explained in Chapter 4, the results of the evaluation, i.e. the scorings, have to be taken more as "other interesting observation" and as leads for further research, due to several limitations of the evaluation. To protect the intimacy of the selected key managers, the only indicative scorings has been reported for the management team of each case as a group only. The individual scorings are available for confidential research purposes only.

### **6.6.2 Total group- and case-specific scoring of the key managers' competencies**

The results of the managerial competency assessment among the nine case-specific, 6-manager management groups are compiled in Tables 6-5a and 6-5b. The theoretical maximum **group score** here is 5.00 which **is the average of the six key managers' individual scores** regarding the respective management issue. The **individual score of each manager is the multiplication** (to better reflect the differences of individual key managers) **of his (or her) three evaluated components of the respective competency** i.e. education, relevant experience and motivation. As explained in Ch. 4, the components have been evaluated on a Likert-scale from 1 to 5. A manager may receive different scoring on his individual component depending on whether the evaluation is conducted on cross-cultural or contractual issues, respectively.

**On managing the cross-cultural issues**, the two highest scores are 4.26 in Case 6 and 4.15 in Case 5. In turn, the two lowest scores are 3.42 in Case 8 and 3.66 in Case 3. These scores imply that these competencies were assessed as clearly above a "Likert 3" in all the nine cases, but above a "Likert 4" only in two cases. **On managing the contractual arrangements**, it is assessed that the highest score is 4.02 in Case 7 and the lowest one is 3.36 in Case 8. This implies that in all the nine cases, these competencies were assessed as clearly above a "Likert 3" in terms of education, relevant experience, and motivation. Only in one case was it assessed as above a "Likert 4". The average scoring level in this area is clearly lower than in the case of cross-cultural competencies. It suggests that, instead of acquiring high individual competency on contractual issues, many key business managers have usually preferred to "leave it to the legal experts" i.e. lawyers. In all the nine cases, it was the standard habit of the key managers to use additional contractual expertise, i.e. both internal and external professionals to support the line management .

### **6.6.3 Comparison of the managers' scores and the overall success rates**

This reporting makes it possible to take a standpoint on whether the risks occurring of a lack (or unavailability) of competencies in relation to the task ahead, i.e. perceived, required competencies, caused in part or primarily the failures or the successes within Cases 1-9. This comparison is arranged in Table 6-5b. If the respective task ahead was particularly challenging, then a low score in that competency component could have caused at least some alarm, leading to organizational changes, reinforcements, and/or replacements for necessary additional competencies.



Table 6-5a. Average scores of the individual competencies of each member of the 6-manager teams to manage cross-cultural and contractual issues, in each case. Key: The scale is 5 (very high) and 1 (very low).

Case	Average score (within the team of 6 key managers) on competencies		
	to manage cross-cultural issues	to manage contractual issues	
1	3.79	3.80	
2	3.98	3.55	
3	3.66	3.56	
4	3.81	3.54	
5	4.15	3.81	
6	4.26	3.69	(High success)
7	3.94	4.02	(Very high success)
8	3.42	3.36	(Very low success)
9	3.81	3.80	

Table 6-5b. Average combined scores compared with the overall success rate, in each case.

Case	Overall success rate	Average individual score on managing	
		cross-cultural issues	contractual issues
1	Various	3.79	3.80
2	Medium/High	3.98	3.55
3	Medium	3.66	3.56
4	Medium	3.81	3.54
5	High	4.15	3.81
6	<b>High</b>	<b>4.26</b>	3.69
7	<b>Very high</b>	3.94	<b>4.02</b>
8	<b>Low</b>	<b>3.42</b>	<b>3.36</b>
9	High	3.81	3.80

**The result** indicates that the cross-cultural and contractual scoring of the respective 6-manager groups was highest at the same time when the overall outcome also turned out to be best. This indirectly supports the relative importance of the key managers' respective competencies to manage cross-cultural and contractual issues, where major risks are presumed to be inherent. However, in some cases the legal expertise, which is certainly a part of contractual competency, was outsourced efficiently or the firm's in-house expert was not within the key managers' group. In such cases, the score was less relevant to predicting the outcome.

Presumably, **further research** is required to clarify e.g. group dynamics in general. What other dimensions of competence should be considered simultaneously? Should the crucial competency actually be in the hands of 1 or 3 or all 6 members in order to be really put to use? And so forth. In the future, it may become possible to connect **success rates with key managers' competencies**, a point of view which did not emerge within the reviewed literature.

## **6.7 Summary of the cross-case examination of the two hypotheses**

**The cross-case evidence conforms well to both Hypotheses 1 and 2** (Table 6-6). The management of the two hypothetical major risk types took time in practice. Therefore, it was vital already to launch the respective RM measures at the business level and to gain precious time. It seems that the proven project RM methods and techniques, i.e. setting the objectives, the identification of the risks, and the launching of the response measures, were highly applicable at the business level as well. Further, many severe major risks were found to be inherent in the key managers' cross-cultural and contractual competencies and this is why it was highly efficient to identify and manage them proactively and efficiently in all the contextual situations.

Table 6-6. Summary of the examination of the hypotheses (i.e. Tables 6-2, 6-3, and 6-4).

Case No.	Type of growth operation	Overall success rate (on a scale of very high, high, medium, low, and very low)	Conformity to Hypothesis 1	Conformity to Hypotheses 2a and 2b
1	Construction export projects 1974-1984 in Africa and Middle East	N/A; the individual sub-projects varied from very high to low	Indirect support for a suggestion to manage major risks at B/L	(a) High (b) High
2	Strategy for international growth 1984-1994	Medium	High	(a) High (b) Medium
3	Market entry & turn around 1984-1987 in Singapore and Malaysia	Medium	Medium	(a) High (b) Medium
4	Acquisition and integration in Western Europe 1987-1990	Medium	High	(a) High (b) High
5	Acquisitions and integration 1988-1991 in the Netherlands	High	High	(a) High . (b) Low (no change of role)
6	Restructuring for international business 1992-1994	High	High	(a) Medium (b) High
7	Engineering mega-project in Russo-German conditions in Russia 1991-1995	Very high	High	(a) High (b) High
8	International (for Europe ) growth strategy for wood element supply 2000-2005	Low	Medium	(a) High (b) High
9	Building project as the developer 2002-2005	At P/L high At B/L medium	High	(a) High (b) High

## **7. CONTEXTUAL LITERATURE FINDINGS, THE CASE-BASED EVIDENCE, AND THEIR COMFORMITY TO THE TWO HYPOTHESES**

The notions on the emerging applied theory on risk and enlarged RM are here put down, first in sub-chapter 7.1 to lay the ground for the comparative investigation of the relations between the contextual literature and the two hypotheses, and those between the case-based evidence and the two hypotheses in sub-chapters 7.2-7.4. The results of this comparison are summarized in sub-chapter 7.5.

### **7.1 Contextual literature-based findings and case-based findings**

**The brief outcome of the literature review**, in terms of its purpose (3.1) is as follows: The reviewed literature (i) remained silent on first hypothesis, and indirectly (2a) or directly (2b) supported the relevance and significance of the second one, for choosing them for the examination in this study; (ii) competing hypotheses were not found and the success or failure factors were connected to management issues only vaguely or not at all; (iii) the main new trends, within the context and since the licentiate thesis (Palojarvi 1986), are the emerging two-way approach (i.e. recognizing the opportunities as well), the general call for more proactiveness and the emerging importance of culture-related issues and various concepts of relational contracting; (iv) relevant insights into traditional and enlarged RM were gained (as explained in Ch. 3), and, finally, (v) readily available key concepts of targeted “better” RM methods were not found, although many feasible elements of such concept were widely discussed in the reviewed literature, yet primarily on the project level.

**From within the contextual literature findings**, it seems that **a fairly advanced and also applicable theory on risk** is emerging, as follows. Uncertainty is considered to be a source of risk. Risk is the possibility that set expectations will not be met (e.g. Palojarvi 1986). For RM, uncertainty is converted to risk by applying a probability to a risky event (e.g. Flanagan and Norman 1993). The consequences of the risk depend both on its probability and its impact. From the point of view of stakeholders, consequences can be favorable or unfavorable, i.e. “positive” or “negative” (e.g. Lifson and Scheifer 1982). An RM process contains the identification of risks, the assessment of consequences, and the launching of a response, at a minimum (e.g. Flanagan and Norman 1993). The relevant contextual authors are in unanimous agreement, i.e. that risk identification is the cornerstone of any subsequent RM measures. In turn, there are many situation-specific risk typologies (e.g. Walewski and Gibson 2003). Crises and disasters are the consequences of mismanaged risks (Loosemore 2000). Project complexity is a characteristic of a system. It depends on a number and variety of elements, as well as the interconnections among them (Shenhar and Dvir 2004).

Moreover, **the starting point of this study** involved the enlargement of traditional RM to encompass uncertainty, complexity, risk, crisis, and disaster. Complexity is perceived as having a linear impact on risk. In the focal context of international construction, RM has traditionally focused on avoiding losses, setbacks, and disasters as “negative surprises” rather than grasping opportunities. In other words, it is not linked to opportunity-seeking, although **enlarged RM** is neutral. The recent articles, however, indicate a transformation of RM into uncertainty management or opportunity management and a (less obviously tracked) need for more proactive RM (Tables 3-6 and 3-7). In many other contexts, uncertainty and risk are considered almost synonymous, e.g. in the literature on financing and venture capitalism (Ahonen 2007).

**The case-based findings** (Chapters 4-6) have already revealed that the case firms were relying on a “mainstream” RM process, similar to the contextual RM methods (reviewed in Chapter 3). Therefore no novelties in the fundamentals of risk were found per se.

## **7.2 Relations between the findings and Hypothesis 1**

Hypothesis 1 is that proven project RM methods can also be applied reliably at the business level and, thus, the effectiveness of managing major international business risks can be improved within the focal context. The effectiveness of the RM method is here considered (4.1) as the ability to (i) clarify the set goals, (ii) identify at least most of the major risks, and (iii) launch viable response.

### **7.2.1 Contextual literature findings and their conformity to Hypothesis 1**

**The “traditional” RM literature deals only with the project level.** Besides, the international aspects are covered thinly or country-specifically (e.g. the country of origin versus the host country of a project). The literature does not contain any analysis of project RM conducted early on at the business level. Likewise, there are no references on the tools and methods developed to manage project risk at the business level. However, some references suggest questionnaire-based lists for risk identification, e.g. South Korean (Kim et al. 2008) and Indian (Jha and Devaya 2008) contractors in a specific foreign (national) environment). Some other questionnaire-based surveys have exposed a still widely used method to deal with the eventual consequences of identified risks, i.e. to allow for an increase in costs when tendering (obviously, this method would be inaccurate at the business level). Recently, positive outcomes have also been considered (e.g. Ward and Chapman 2003), besides the negative ones.

One reason for **a lack of references on RM at the level of international construction business** may be that the main actors in construction processes deliver building objects within relatively short time frames. Thus, the focus is on meeting contractual objectives rather than on developing RM processes. Risk is dealt with as and when it occurs, while less focus is put on how to mitigate it well in advance. Moreover, it seems to be unusual to systematically prepare for and grasp opportunities, in particular in international projects. In the context of the international oil and gas offshore industry, Langlo et al. (2007) consider that opportunity management is actually the owners’ terrain, while RM is the area of project management. Indeed, Ofori (2003) states that there is **no suitable framework for international construction**, although he points to “managerial expertise” as the most important success factor in overseas construction, with its many “problems and peculiarities”. Concerning the business level, Huovinen (2003) found that no research tradition existed concerning construction-related business management, on the basis of his extensive literature review. In addition, some calls for better foresight and more proactive measures at the business level and within an actor’s control have been made in the literature (e.g. Palojarvi et al. 2008b, Hamel and Prahalad 1994).

**To summarize, the emerging applied theory on risk and the proven RM methods indirectly supports Hypothesis 1**, e.g. early risk identification is considered to be the cornerstone of an RM process in general. When frameworks to analyze international construction (business) are lacking, any advancements and structured discussions on traditional and enlarged RM processes will meet with difficulties. Admittedly, the literature on the RM of the international construction business is scarce. Therefore, its weight to validate Hypothesis 1 is limited. However, there are no strong statements against Hypothesis 1 either in the reviewed literature, e.g. suggestions that business-level dealings and project-level operations should be kept as separate processes or that RM at the

business level should be limited to financial risk types only. Instead, the relevant books deal with entire project-level RM processes, i.e. risk identification, analysis, and response. Many articles focus on identifying, measuring, and rating various success and failure factors that are often found by questionnaires sent to engineers and other experts of varying ranks, capacities, and experience. Overall, it seems that the idea of the application of project RM techniques and tools to the business level is missing within the reviewed literature.

### **7.2.2 Case-based evidence and its conformity to Hypothesis 1**

The operative case descriptions dealt with various business transactions in international markets, including delivery contracts and other types of business growth projects, such as the market entries, the turnaround, the acquisitions, and the merger. Besides, the respective background strategy cases (2, 6, and 8) of each of Groups 1-3 further clarified some important RM measures that had already been introduced at the business level. In many cases, **the novel idea of applying the project RM tools and techniques early on at the business level proved to be feasible**, i.e. defining the objectives, identifying the major risks, and launching a response.

**The early Cases 1 and 3 support Hypothesis 1 only indirectly** (see Table 6-2). In **Case 1**, there was no well-considered business strategy for the international growth. In the 1970s, the projects were organized at the corporate level. The major risks were assessed and the response was launched by the staff managers assigned to the sub-projects. In **Case 3**, no international growth strategy existed either, for several internal reasons. On the basis of the risks that occurred and their consequences in both cases, it is here assessed that the hypothetical major risks were identified incorrectly, vaguely, or not at all at the business level. The early identification and management of the actual major risks at the business level would most probably have (or at least it could have) improved the financial results. **In turn, Cases 4-7 and 9 support Hypothesis 1.** The risk identification and the consecutive RM were carried out at the business level with high or at least medium success rates. The launching of the RM only at the project level would probably have reduced (and did reduce in Case 4) the impact of an efficient response considerably. **Case 8 also conforms to Hypothesis 1.** In Case 8 (as in Case 4), the hypothetical major risks were identified by the experts, but no RM at the business level was carried out or it was carried out inadequately. The inevitable consequences were dealt with only at the project level. The two hypothetical major risk types were identified, these risks occurred, and hence the success rates were very low or medium. A more efficient response at the business level could have at least improved the outcome.

**To summarize, the case evidence clearly conforms to Hypothesis 1.** In many cases the RM was launched at the business level, at least to the extent of formal risk identification. When the response measures to the identified hypothetical major risks were launched at the business level, the success rates were at least medium, and often high or even very high. When the hypothetical major risk was not identified, or when the responses were launched only at the project level (e.g. Cases 3, 4, and 8), the success rates were medium at best and even very low in one case.

### **7.2.3 Comparison of the literature-based and case-based conformities to Hypothesis 1**

**The case findings conform well to Hypothesis 1, while the literature findings conform only indirectly or remain silent.** Why do the degrees of conformity differ? The recent literature does not really address the hypothetical method, i.e. also to apply the proven project RM tools and techniques at the business level. In turn, the case evidence conforms well to Hypothesis 1. However, this evidence has not yet been subjected to a severe critique, i.e. “Could some other

factor, other than already launching the RM at the business level, have caused the fairly positive outcomes?” and “Could some other factor, other than launching the RM at the project level only, have caused the medium rate of the outcome?” Let us come back to this critique in Chapter 8.

**The applied theory on risk as derived from uncertainty**, i.e. to convert uncertain events to risk events by giving them probabilities, **worked well**. To fully exploit e.g. Flanagan and Norman’s (1993) RM method, clear business objectives have to be set before the implementation of projects in order to be able to assess the probability (“risk”) of any deviation. In all of Cases 1-9, at least the financial business objectives were always set because in the case firms and other Finnish major companies, this has been the standard procedure both in business-level and project-level management since the 1970s. Additional objectives, e.g. on market positions, quite apart from “soft” objectives such as reputations, brands, etc., became the standard in the Finnish construction business only in the 1980s, along with “Porterian” attitudes to competitiveness (Porter, 1980).

**Complexity management was not part of the core RM chain** (objectives – risk identification – response) in any of Cases 1-9. In this study, complexity is defined rather as a characteristic or a condition of a project, a business, or its environment. A high rate of complexity increases the potential severity of the consequences because of the possibility of a rapid escalation of a risk and/or a consequent crisis within a complex system (e.g. Shenhar and Dvir 2004). It may render response measures themselves more complicated because of (i) the high number of connected elements and (ii) the intensity of those connections. **Reducing complexity**, by reducing the number of elements and/or interconnections in a system, **should therefore always be a goal when fighting risks with potentially negative consequences** (e.g. Case 1/Nigeria, Case 6, and Case 9). Moreover, increased complexity renders a system, i.e. a construction project or a business, particularly vulnerable to the rapid development of a mismanaged risk into a crisis. One event may lead rapidly to many others via many interconnections, and further even into a disaster (Loosemore 2000). On the other hand, **positive development may be rapid as well** (e.g. Cases 5 and 6).

**The development of practical RM over the years was also reflected in the cases**. In the 1970s, the contractors added a “15% or so” as a “risk allowance” on their bid estimates against the “something may go wrong” factor (Case 1). Along with Porter’s (1980) school on creating a competitive edge, the more positive attitude of “something may go better than...” was emerging. This led to (i) a better understanding of the development of competencies and, consequently, (ii) where and (iii) when the conditions were right to exploit those competencies (Cases 4, 5, 7, and 9). The predicting of the future conditions of external factors became the art behind strategy planning. In Cases 4 and 5, Partek’s predictions were labeled as the “basic beliefs” of the background strategy. At the same time, the question “What if...?” became a standard tool when pondering large and important investments with a minimum return time of several years, which was typical for e.g. large manufacturing companies. Lifson and Scheifer (1982) had already defined a two-way approach, i.e. opportunities were brought into the picture as well. In the same decade, the formal identification of risk and its response became standard for every investor in the construction business as well. So far the building product business has not yet tried to grasp opportunities as eagerly as e.g. their colleagues in the financing business.

### **7.3 Relations between the findings on the cross-cultural issues and Hypothesis 2a**

Hypothesis 2a is that major risks related to the attainment of the targeted business objectives are inherent within key managers’ competencies and their insufficiency in particular to manage cross-cultural issues within the focal context.

### 7.3.1 Literature findings on the cross-cultural issues and their conformity to Hypothesis 2a

**Concerning a firm's competences in general**, Huovinen (2003) defines systemic, organizational competences consisting of all the technology, embedded knowledge, capabilities, and resources needed for the attainment of business goals. In turn, Sanchez and Heene (1996) consider managerial competences to be the pivotal components of a firm's organizational competences to help it attain its goals. In addition, the recent generic references on international business failures or successes put forward two main themes, expatriate failures and the inability of headquarters managers to appreciate the cultural challenges of doing business overseas (Johnson et al. 2006). Olson and Olson (2000) state that cultural differences form the single biggest factor that affects global projects. Mäkilouko (2003) concentrates on multicultural project leadership to mitigate multicultural problems. Gratton and Erickson (2007) state that "for success ... four general categories – executive support, HR practices, the strength of a team leader, and the structure of a team itself." Out of the eight practices for success, one is "... leaders to be both task- and relationship-oriented". Others stress role clarity and task ambiguity. These authors seem to place a good deal of trust in collaboration as a success factor. According to Fisher and Ranasinghe (2000), people do not have competences independent of context. Jubb and Robertham (1997) have stated that certain competencies could be regarded as being situation-specific.

**In the contextual literature, there is no framework to analyze success in international construction** (Ofori 2003). Instead, there are many lists of success and failure factors – "risks" – in various, very specific situations, e.g. related to construction projects in specific business environments. In plain English, such factors are not firmly connected to business objectives to allow for the accurate stipulation of their connections to risk. Sometimes the number of success/failure-related variables (e.g. Ahadzie et al. 2008) is even too high for any organized RM at the project level, let alone at the business level. **In international construction**, the Construction Industry Institute (1993) stresses future needs and points to **leadership**, efficient resource allocation, innovation, and organizational effectiveness as success factors. Flanagan (1994) brought up seven issues, including "**joint ventures, alliances and partnering**", without prioritizing them. Langford (2000) stressed **the importance of cultures** in a direct context. Fisher and Ranasinghe (2000) studied **JVs as a cultural factor** playing a role in uncertainty avoidance. In turn, success (and failure) factors have been investigated with questionnaires on e.g. Korean or Turkish contractors. For example, Han et al. (2007) and Kim et al. (2008) emphasize a contractor's own ability, i.e. the management of various functions, as crucial. Mawhinney (2001) and Oz (2001) even put forward government actions as an important source of a firm's competitiveness when reconsidering Porter's diamond framework. In particular, Ofori (2003) posits that an internationalizing contractor must possess certain prerequisites and that **managerial expertise is considered the most important factor** (for competitiveness) because of the peculiarities and problems of overseas projects.

**To summarize, the contextual literature findings conform to Hypothesis 2a**, although the referred expressions are often admittedly indirect. The somewhat scarce findings emphasize the importance of managerial competence. However, no direct competence-related expressions for key managers' competencies are used. Instead, e.g. "managerial expertise", "leadership", and "a contractor's own ability to manage", etc. are named as success factors, without them being connected to business objectives. The issue of cultures is also widely referred to as a key factor in success.



### **7.3.2 Case-based evidence on the cross-cultural issues and its conformity to Hypothesis 2a**

**The case evidence conforms well to Hypothesis 2a.** More or less major risks were identified and these risks were almost always inherent in the key managers' cross-cultural competencies (see Table 6-3). The level of the key managers' cross-cultural competencies was more common as a major risk (or the source of one) than the second hypothetical major risk, i.e. the contractual role and arrangement selected. Many other major risks were – or they should have been – identified in the cases as well, but rather sporadically. The significant and efficient measures taken to respond to the identified risks were not launched without prior identification. Over the years, the contextual techniques and tools have improved and in some cases have already become routine steps. This has made early risk identification possible well before implementation (e.g. Case 7, Sertolovo). In the light of these cases, at least the major risks (and/or their sources) inherent in key managers' cross-cultural competencies should always be carefully managed, because this was the most commonly appearing major risk type in the cases.

### **7.3.3 Comparison of the literature-based and case-based conformities to Hypothesis 2a**

**The case-based evidence conforms well to Hypothesis 2a, while the literature findings conform less directly.** Why do these degrees of conformity differ? The research tradition on construction-based business management was non-existent, at least until recently (Huovinen 2003) and, consequently, there are no suitable frameworks to analyze international construction (Ofori 2003). Therefore, it is difficult to explain clearly and to stipulate connections between e.g. management competencies (and their components) and success or failure factors. The current trend in RM research is to replace the “management by rear-window view “of industrial giants, based e.g. on the cost control and profit and loss analysis of the past, etc., with the management of more multi-cross-cultural, complex, fragile, and global networks which look carefully into the future (further in Chapter 9).

## **7.4 Relations between the findings on the contractual issues and Hypothesis 2b**

Hypothesis 2b is that major risks related to the attainment of the targeted business objectives are inherent within key managers' competencies and their insufficiency in particular to manage contractual issues within the focal context.

### **7.4.1 Literature findings on the contractual issues and their conformity to Hypothesis 2b**

In the generic and contextual literature, **contractual issues often appear as the second highest in importance ranking among success and failure factors.** Palojarvi (1986) stated that RM must be based on; (i) the equilibrium of the parties' benefits; (ii) incentives to other parties, and (iii) the specification and adjustment of contract documents. Shumway (2004) puts it more bluntly: “....biggest risks ...today ...are the terms and clauses in the prime contract”. Turner (2002) notes that in the more common approach, “the construction client ... negotiates hard to achieve the lowest possible price from the vendor... as a win-lose game”. Turner himself prefers “the correct way”, where “the owner assembles resources and motivates them ... to achieve their objectives”. To find ways to tackle situations as described e.g. by Turner (2002), several other authors recommend a **“best-for-project” approach**, e.g. Sakal (2005) in the context of heavy civil engineering. Parties should look for win-win situations. Rahman and Kumaraswamy (2002), in the contexts of Hong Kong and China, propose co-operative relationships and even “joint risk management”. Sakal (2005), in the Australian context, proposes “project alliancing”, particularly for services that are

difficult to define or which have a scope that is likely to change, and cost under-/overruns to be shared by participants. Rowlinson (2006) connects the advantages of **project alliances to RM**, i.e. by proactive RM, participants sharing risks and outcomes and placing risks on the table so as also to expose the hidden ones. The vital prerequisites of such alliances are e.g. trust, common goals, and understanding of each other's expectations and values (Humphreys 2003). Several authors mention **incentives** to streamline the objectives of parties. ICE's (2005) RAMP manual reads that "**interests of various parties to be defined by contractual arrangements**" and that "... to ensure that these **arrangements take full account of residual risks.**" For example, e.g. FIDIC (2005: 17.3 and 17.4) defines only a list of "Employer's risks" and their consequences, and usually the measures required.

Onishi (2002) connects **uncertainty to contractual risk**. Referring to Kobayashi (2001), he states that incomplete contracts provide rules to cope with contingencies and one of the most important ones is a risk-sharing rule. Further, he defines **contractual risk (as an internal risk)**, i.e. "its peril or hazard is parties' behaviors". Parties may identify the risk that some party will not behave as (the observer) expected. Referring to Posner and Rosenfield (1977), Onishi posits that risk-sharing in contract law boils down to "which party would bear a loss if they could have foreseen that contingency". This gives support to Turner's (2002) view that contracts need to be able to respond to unforeseen circumstances.

Most of **the reviewed 20 recent articles** discuss managing changes and contingencies, risk-sharing, contract forms, avoiding and solving claims and disputes, how to improve public procurement, etc. as the main topics (see Table 3-6). **Four semi-common themes** on managing contractual risk can be identified, i.e. managing project risks by (i) relational contracting and (ii) by an owner's alternative contract/procurement strategies, (iii) managing risks by partnering (or alliancing), and (iv) managing international contractors' risks in evolving country contexts, e.g. China.

**To summarize, the abundant findings on generic construction and the scarce ones with an international focus both clearly support Hypothesis 2b.** From the view of construction contractors, contractual arrangements and consequent contractual risks are considered as being of the highest importance. Many approaches to contractual RM have been proposed concerning e.g. risk-sharing in unforeseeable events. No ways to attack causes of risk are addressed proactively. The reviewed articles advocate two aims, as follows. (i) How to mobilize the contractual parties' combined expertise earlier for better performance, rather than to lean on the expertise of one party only to fight risks outside the control of the parties, especially in public works, where cost overruns are quite common. (ii) Parties should be able to trust that unforeseeable events should contractually be dealt with in a fair and reasonable manner. This saves bids from unnecessary covers. Contractors and suppliers might even share their eventual special expertise to their mutual benefit. How to build this feature into contractual arrangements in the international construction industry, without disturbing competition rules, has not been discussed within the reviewed literature.

#### **7.4.2 Case-based evidence on the contractual issues and their conformity to Hypothesis 2b**

**Overall, the case-based evidence conforms well to Hypothesis 2b** (see Table 6-4). The level of the key managers' contractual competencies was less common as a major risk (or the source of one) than the second hypothetical major risk inherent in cross-cultural competencies. The degrees of conformity are high in seven of the cases, but not in Case 1 and Case 5. Case 1 resulted in many varying degrees of conformity, but the high degree can be linked to the typical "**sheer ignorance**" **factor at the very beginning**. For example, the acceptance of the turnkey responsibility in the

construction of the low-cost housing area was evidence of this state of affairs, apart from also being a sign of great courage as well. In Case 5 the reason for not identifying a major contractual risk was simple. In the acquisition itself, the very straightforward deal, carried out under the conditions of the quite similar crossing Dutch and Finnish cultures, did not include any challenging contractual set-up. Moreover, the company that was acquired (VBI) was not made to change its proven contractual roles.

**Several cases contained a challenging selection and/or change of contractual role.** The outcome itself varied, depending on the competencies available for managing the situation. When the key managers' competencies on the contractual issues were rated as not quite sufficient (e.g. Cases 4 and 8), the overall success rates were clearly lower (medium and very low) than in the cases where the respective competencies were rated as sufficient and/or there was no challenging contractual situation regarding the project implementation.

#### **7.4.3 Comparison of the literature-based and case-based conformities to Hypothesis 2b**

**The literature findings and the case evidence both conform well to Hypothesis 2b.** When no major differences are revealed, it is instead asked: "Did the case evidence also recognize the same new approaches that were found within the reviewed literature, e.g. project alliancing?" In fact, the evidence speaks for this. For example, (i) the market entrant's and its partners' interests were vested in the joint venture firm in Case 3, (ii) the interests of the buyers and those of the sellers were combined (e.g. through the acquisition price condition) in the acquisition Cases 4 and 5, and (iii) the contractor's and its client's interests towards the ultimate client (the Russian Army) were streamlined in Case 7. However, the earliest case, Case 1, reflects the fact that in the western culture of public clients, it was, and it may still be, difficult to introduce the idea of joint RM without compromising the competitive bidding rules, let alone the transparent implementation of the contract.

#### **7.5 Summary of the respective degrees of conformity to Hypotheses 1, 2a, and 2b**

Besides the emerging theory on risk and its proven RM methods, no novelties were found from within the reviewed literature or the case evidence. **Concerning Hypothesis 1**, the application of the proven project RM tools and techniques at the business level too is, however, considered to be **a theoretical novelty of the RM process** within the context of international construction. Understandably, these RM fundamentals could not be traced within the reviewed contextual literature.

**Concerning Hypothesis 2a**, the reviewed literature is somewhat unclear in its expressions, although "culture(s)" as such is ranked high as a factor to be considered within international contexts. Even Ofori (2003) speaks about problems and peculiarities without going into detail. Consequently, no clear recognition of the need for appropriate RM is provided within the literature. In all of Cases 1-9, the risks inherent in the cross-cultural competencies occurred, which thus confirms their relative importance. The applications of the proven RM process also proved to be efficient, because of the time requirements, to manage the respective risks. **Concerning Hypothesis 2b**, contractual arrangements are widely discussed in the literature. Cases 1-9 also clearly proved the relative importance of key managers' contractual competencies. The application of the proven RM methods (Hypothesis 1) would naturally be a much more efficient way to manage the respective contractual risks at the business level too, because of their highly irreversible nature.

A possible interdependency between the two hypothetical risk types is discussed in Chs. 8 and 9.

## 8. DISCUSSION AND CRITIQUE

### 8.1 Results and the research methodology

The two main results of this study are as follows.

- (1) The proven project RM methods can be applied efficiently at the business level, which thus enables major risks to be identified proactively and an early response to be made to them in the focal context of international construction.
- (2) Major risks are inherent in key managers' competencies regarding cross-cultural and contractual issues and such risks can be managed more efficiently early on at the business level, rather than at the project level only in the focal context of international construction.

**The selected research method** is longitudinal, self-ethnographic, and qualitative insider action research combined with case study research. Overall, this insider action researcher followed up and remained involved with the nine cases during a period of 32 years (1974-2006). The study includes the acquisition of a fairly extensive pre-understanding, the longitudinal gathering of the case data, the setting of the two hypotheses in the year 2007, and the conduct of the comprehensive literature review on the enlarged risk view, i.e. uncertainty management, RM, and crisis management in complex conditions, as well as the two limited literature reviews on the areas of the two hypothetical major risk types and the examination of the hypotheses with combined insider action and case study research. The backbone, i.e. the combined insider action and case study research, was conducted in four parts: (i) the rationale of the case study and the RM process (in essence the setting of objectives, risk identification, and response) are clarified in Chapters 1, 2, and 4, (ii) the 5-page case descriptions, boiled down from their 15-page versions, are presented in chronological order in Chapter 5, (iii) the cross-case analysis and the respective evidence are reported upon in Chapter 6, and (iv) the cross-case evidence is briefly compared with the contextual literature findings in Chapter 7.

The main results are **primarily based on the case-specific evidence** and other findings drawn from the nine case studies. The reviewed literature either remains silent about the application of project RM methods at the business level or it directly or indirectly supports the embeddedness of hypothetical major risks within key managers' competencies regarding cross-cultural and/or contractual issues. Over the years, the case study research turned out to be the only viable method (see the rationale in Ch. 2). The selection of the nine cases covers the most common business and project situations of the international growth among the major Finnish construction contractors and building product suppliers over the three decades. The main results lay the ground to suggest many solutions for rather severe problems when managing contextual major risks. Thus, **the above rationale gives reason to believe that these results are justified and in balance with the applied research methodology.**

### 8.2 Connections between this study and the reviewed literature

#### 8.2.1 Basic definitions

In this study, **uncertainty** is understood traditionally, i.e. it prevails when a decision-maker has no historical data (e.g. "a group of instances") relating to a situation for an event, conditions, etc. to occur (Knight 1921). Uncertainty is an origin of risk. Risks are understood to be derived from the

everlasting uncertainty of all events, including risky events. Risk is here defined as follows. **Risk is the possibility that set expectations will not be met** (Palojarvi 1986). In turn, Flanagan and Norman (1993) define a risk as the occurrence of an event. A probability is given to an occurrence, subjectively or objectively. Rowe (1977) defined a risk as a potential negative consequence of an event in a chain of events, i.e. “causative event(s) - outcome(s) - exposure - consequence(s) - consequence value(s)”. Lifson and Scheifer (1982) defined risk thus: “risk is an uncertainty related to estimated consequences and risk means that results may be worse or better than expected”. A consequence of a risk is here either positive or negative, depending on expectations, i.e. **a two-way approach** has been adopted. This two-way approach was already emerging in the early 1980s (Lifson and Scheifer 1982). At that time, it was an innovation in the construction-related RM research. From **the point of view of crisis management**, crisis is here understood according to Loosemore’s (2000) definition, i.e. a crisis is a consequence of a mismanaged risk. In turn, **system complexity** has been taken into account as a condition of a business or a project, in alignment with Shenhar and Dvir’s (2004) definition, i.e. it depends on a number of elements and their connections. **Enlarged risk management (ERM)** is defined as a causal **chain of managing uncertainty >> risk >> crisis, in conditions of high complexity**. **Proven (traditional) RM** is defined as RM measures generally recognized and applied by the practicans. Such measures include at least the goal setting, risk identification and the response thereto.

### 8.2.2 Focal context

The focal context of this study is **RM in the international growth business of Finnish construction contractors and building product suppliers**. In the reviewed literature, this context is not applied at all. On the other hand, the project RM literature on domestic construction projects is abundant. Traditionally, business-level RM is treated as the corporate-level management of financial risks, e.g. “enterprise RM” (Lam, 2003) or “corporate RM” (DeLoach 2000), which is excluded from this study. In turn, the contextual denominator “**international**” stands for the sake of the cross-cultural issues, although other e.g. cross-industry cultural contexts exist. The denominator “**Finnish**” is directly coupled with the four Finnish corporations or employers the insider action researcher was involved in over the three decades. Within the reviewed literature, **no international construction-related RM references** were found (see Table 3-3), which is in line with Ofori’s (2003) statement that “there is no suitable framework to analyze success in international construction”. However, several references were found to address the success and failure factors of focal contractors based in their host countries and having ventures overseas, with the help of questionnaire surveys (Ofori 2003). Those factors had no connections to management functions. Many of these references also deal with the management of cross-cultural aspects, e.g. Langford (2000) and Fisher and Ranasinghe (2000). This readily available contextual knowledge has been taken into account in this study. In turn, **the contextual “growth” situations** have not been referred to within the contextual literature, which is mainly focused on project-level issues. It is understandable, because **growth is one of the objectives at the business level**. In this study, the growth objective was present in all the nine cases. Business-level growth objectives serve as vital triggers of change. In turn, **changes are the fundamental reasons of risk – if no change, then no risk**.

### 8.2.3 Research methodology

Primarily, this study is **longitudinal and qualitative, self-ethnographic, combined insider action and case study research**. This combination was the only available method for trying to solve the rather severe management problems in the focal construction business. In general, the insider action

research approach is the only way to obtain deep and yet vital data and information on risks and their causes and consequences. The rare long period of collecting the case study documents between the years 1986-2006 made it possible to examine both the business-level and project-level cases of the same corporation, apart from the simultaneous tackling of the most common international growth situations. As an insider, this researcher was able to acquire even highly confidential documents and to be aware of the internal politics, at all times. This opportunity is not allowed to an ordinary action researcher as an outside observer. No similar studies with long observation periods of this kind were found within the reviewed literature.

**Within the outcomes of the extensive literature review, no innovations of transferring project RM methods to business-level management** were found. The empirical findings of the RM literature in the international construction context were mostly based on questionnaires, possibly answered by the younger cadres of staff within the contracting firms that were approached, i.e. they are not based on insider action research. When there are no structural frameworks either, those empirical findings do not provide data for deeper analyses. A lack of suitable frameworks also prevents researchers from connecting success and failure findings with management functions or measures (Ofori 2003). **The two complementary limited article reviews** were also conducted in the areas of the two hypothetical major risk types. These findings support indirectly and directly the case evidence on the importance of managing key managers' cross-cultural and contractual competencies well. This applies particularly to the avoidance of contractual risks, the importance of which is stressed in the literature.

#### 8.2.4 Results

**The cross-case evidence clearly conforms to Hypothesis 1**, i.e. that proven project RM methods can also be applied reliably at the business level and, thus, the effectiveness of managing major international business risks can be improved within the focal context. In the literature, more proactive RM processes are called for. The setting of objectives is not specified as a step of RM. Risk identification is unanimously considered to be a cornerstone of any further RM. **In this study, the setting of objectives is a founding step for an RM process, when the two other steps**, i.e. risk identification and response launching, are structurally similar (e.g. Flanagan and Norman 1993).

In the literature, no wider RM views are considered or even challenged. Some references (e.g. Langlo et al. 2007) suggest that uncertainty should be left with owners and RM with contractors. From among the large number of co-contributing references of this study, a few are worthy of being picked out, as follows. **In relation to the view of enlarged RM**, as applied to the focal context, this study relies in particular on the following references (see Chapter 3).

- (i) Flanagan and Norman (1993) for managing risk in construction
- (ii) DeLoach (2000) for managing risk in international non-construction businesses
- (iii) Loosemore (2000) for managing crises in construction projects
- (iv) Lichtenberg (2000) for uncertainty in firms, businesses, and projects
- (v) Shenhar and Dvir (2004) for complexity in non-construction projects.

From among many edited **significant manuals and guide books**, one reference is here considered to be perhaps the most applicable one:

- (vi) Institute of Civil Engineers (2005) Risk analysis and management for projects (RAMP) manual.

**The cross-case evidence clearly conforms to Hypothesis 2, i.e. major risks related to the attainment of the targeted business objectives are inherent within key managers' competencies and their insufficiency in particular to manage (2a) cross-cultural issues and (2b) contractual arrangements within the focal context. In this study, risk identification is defined as being a profound step for any further RM. This is in line with the mainstream RM frameworks. The identification of major risks, at a minimum, is here considered as being carried out by experts, particularly when dealing with cross-cultural and contractual issues, rather than by computerized simulation methods. This statement finds both support (e.g. Forbes et al. 2008) and challenges within the literature (e.g. Kähkönen 2006).**

**In the literature, the major risks inherent in key managers' competencies to manage cross-cultural issues are not discussed in the focal context,** although the relative importance of managing cross-cultural issues receives indirect or even direct support within the contextual and generic research (e.g. Ofori 2003, Langford 2000, Johnson et al. 2006, Olson and Olson 2000, Fisher and Ranasinghe 2000).

On the other hand, contractual arrangements are widely considered quite important within the contextual literature (e.g. Onishi et al. 2002). However, the literature is silent on the case-based evidence of this study, i.e. it is likely that **major risks are inherent in contractual arrangements and the proactive launching of an appropriate response at the business level may be highly effective.** Instead, various tools, e.g. relational contracts, joint RM, and alliancing, have been suggested to mobilize the contractual parties' combined expertise and to ensure they are able to trust that unforeseeable events will be dealt with fairly and reasonably.

**This study connects the management of both the hypothetical major risk types with the competencies of key managers.** This connection has not been proposed in the literature. One underlying reason may be that there is no research tradition on construction-related business management (Huovinen 2003, 2006). Competencies to manage both cross-cultural and contractual issues can be connected to the attainment of goals and the competences of focal firms, as stated by Sanchez and Heene (1996).

### **8.3 Innovations and impacts of the study**

Clearly, **the two-way RM approach** has gained more "popularity" over the decades. In the 1980s, the two-way approach was a rare idea. The recent literature, in turn, contains significant support for both ways of thinking. The two-way approach is visible in the more recent cases as well. Indeed, the novel features of this study are here posited to be related to the RM process (i.e. identification, analysis, and response), visible in the cases that are not traceable within the reviewed literature. **The three innovations contain research objects and innovations for the RM process** as follows.

**(i) The primary innovation is the result that the proven project RM methods and tools can already be efficiently applied at the business level.** The literature remains silent about this. The listings of risk types have no connection to the emerging theory on risk.

**(ii) The second innovation is the result that major risks are inherent in key managers' competencies regarding cross-cultural issues. Moreover, "cultures" should also include e.g. industries, businesses, and organizations.** This receives indirect support within the non-construction-related, internationally focused literature, where ethnic and national cultures are considered an important success (and failure) factor. However, it is possible that some other,

entirely different major risk could have prevented an identified major risk (cross-cultural, that is) from occurring, and that risk just has not been written about. A similar result concerning competencies on contractual arrangements is not considered an innovation here.

**(iii) The third suggestion involves the proactive management of major risks early on as part of business-level management.** The literature is also silent about this. The major advancement of RM processes is thus possible. This was strongly hinted at by the case evidence, when proven RM methods were applied to “projectable” business transactions. Measures to mitigate and avoid risks, with their consequences, early on at the business level could be based on contractual arrangements as a whole or on distinct parts of them, such as partner and/or stakeholder selection, contractual structures, contracts, conditions, CM, disputes, and conflicts.

As for **the overall impacts of advanced contextual RM**, it can be expected that the number, size, and complexity of construction projects with cross-cultural issues involved will grow, along with the globalization trend of businesses. When the proven project RM tools are applied early on at the business level, business goals can be better attained. When the huge volume of global construction business is taken into account the significance of such advances will tens to be very big, too.

## 8.4 Validity and reliability of this study

### 8.4.1 Validity and reliability in qualitative research

**In general**, validity refers to the applicability (Figure 8.4-1) of a study to measure what it is supposed to measure (Hirsjärvi et al. 1997). Reliability refers to the repeatability of a study, i.e. whether the same result could be achieved when repeating the study (Yin 2003a). **In qualitative research as a whole**, there is no firm selection of established research methods (Silverman 2004). Therefore, each study has to be validated as a case of its own (Silverman 2004). This boils down to the issue of the validity of a study process (Eskola et al. 1998 p. 210). Therefore, the validity of the research data and the validity of the conclusions have to be separated (Eskola et al. 1998 p. 212).

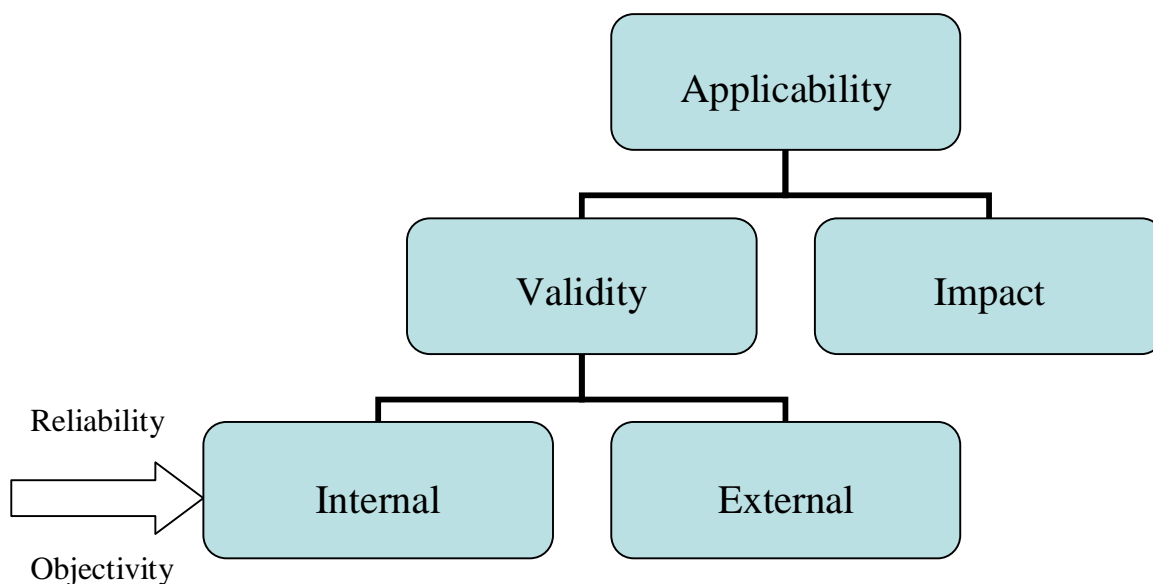


Figure 8.4-1. Discussion and critics.



**The main validity criterion is the researcher himself.** Usunier (1998) posits that researchers are afraid of challenging dominant assumptions and they believe that the whole research system rests on these assumptions. Alvesson (2003) supports that and refers to the common danger that a researcher tends to remain in “frozen positions”. Eskola and Suoranta (1998) point out another obvious problem, i.e. the transferring of a researcher’s feelings and intuitions cannot be repeated by other researchers, even if a reader’s pre-understanding were at the same level. Therefore, **this research process has been reported upon** in detail and the case descriptions, based on the authentic documentation, have been written in order to make the cases themselves and in particular the researcher’s conclusive analysis “explainable to others”. In addition, **the dynamics of a phenomenon should be understood in the respective case setting** (Yin 2003a-b, 2004). The goal is to expand and generalize theories, not to enumerate frequencies (Yin 2003a p. 10). A case study, which is the backbone of this study, should cover the contextual (i.e. international and growth) conditions (Yin 2003a p. 11) to explain presumed causal links in real-life interventions, which are too complex for survey or experimental (research) strategies. Thus, **the choice of relying on insider action research** (advocated in sub-chapter 2.2.3) further increases the relative weight of the researcher as the main criterion and, consequently, a danger of falling into traps exists, as pointed out by e.g. Usunier (1998) and Alvesson (2003).

Traditionally, the validity issues include: (i) internal validity; (ii) external validity; (iii) reliability, and (iv) objectivity (Creswell 1998). Accordingly, this study has been protected against the previous biases and the study as a whole is here evaluated and self-criticized as qualitative insider action research according to each of the four main components, as follows.

#### **8.4.2 Internal validity**

**Internal validity** here means the findings and how justifiable they are, i.e. whether the conclusions are justified by and in balance with the method, data, and results. “Can readers believe the researcher’s interpretations?” (Silverman 2004 p. 289).

**A qualitative approach** was selected because the ultimate aim of the entire study was to develop effective ways of managing major risks, i.e. the results and findings should, if at all possible, be useful for practical business management within the focal context. For reasons explained in sub-chapter 2.2.2., the only research method available was case study research. **Together with the case studies, insider action research** was adopted because it was not possible to collect relevant new case data on contextual risks from “outside” cases, particularly on the failures of competitors. The study was initiated to solve in part typical severe management problems within their contexts. Some authors even consider that the alternative of research-oriented action research to the last detail “is not an achievable challenge” (Eden and Huxham 2006). A solid pre-understanding of the targeted situation (or business context) is required (e.g. Gummesson 1991, Eden and Huxham 2006), because without that the repeatability of the study is jeopardized, i.e. readers without sufficient pre-understanding may not be able to achieve the same result (Yin 2003a). In this study, both the review of the relevant literature and the rather long period of time between the first and the last case contributed to this deep pre-understanding. Moreover, the cases covered several different situations, in fact all the most typical ones of contextual growth, and thus the cases were able to improve the applicability of the results in other connections (see Chapter 9).

**The main result** of this study is that proven project RM tools and techniques can be applied to the business level, thus enabling major risks to be managed early and in a proactive manner. Many of them turned out to be inherent in the key managers’ competencies regarding cross-cultural and contractual issues. **This result was based on the balance** between the method, the empirical case

data, and the literature, which also justifies the conclusions (to be presented in Chapter 9).

#### **8.4.3 External validity**

**External validity** here means whether the findings could be applied in other settings of any relevance, e.g. within project business in general or in other ethnic cross-cultural settings (in alignment with Gill 2002 p. 162). In Järvenpää and Kosonen (2000) and Järvenpää (2005), it is posited that external validity can be assessed by studying a connection of empirical data and conclusions. In this study, the literature review contributed to the pre-understanding of the situation. Many key references were published later than most of the cases took place. This accommodated the benchmarking with the results of the examination of the hypotheses.

**The external validity of this study** is here mainly assessed on the basis of the connection of the case data and evidence vis-à-vis the conclusions. The assessment focuses on (i) the RM framework; (ii) issues covered by the empirical data; (iii) logical use of the authentic documentation; (iv) rationale for the actual selection of the case grouping, and (v) the applicability of the contextual results, as follows:

**(1) The RM framework (Chapter 4)**, i.e. the RM process of setting objectives and identifying and responding to major risks is experiential in all its steps, instead of some probabilistic or decomposition techniques being applied. This choice was made in order to capture the profoundly important risk identification. It seems that experiential techniques have the widest coverage across a range of risk types from political to environmental, and from fuzziness to randomness (e.g. Forbes et al. 2008). Moreover, recently the use of experts has been further supported, e.g. by Radujkovic (1997) and PMP (2005).

**(2) The empirical case data covered the relevant issues widely.** (i) The cases extended over a long period of time. The three decades covered both the up- and downtrends in the Finnish economy, the birth, rise, and stabilizing of the international construction business of the major Finnish firms, and also the moments of the great, unpredictable discontinuities such as the collapse of the Soviet Union and the Finnish membership of the European Community. (ii) The cases covered various contextual projects of both Finland-based construction contractors and building product suppliers. The annual total value of their international business today is on the same level as the entire annual value of the new construction business in Finland. (iii) As to the context, several typical international growth situations, i.e. market penetration and/or expansion by the contractor's initial "first" or very complex contract, a green field investment, and an acquisition and integration project were covered. (iv) The novel way of describing the implementation cases, together with the background internationalization strategy, as an independent case produced more evidence than the individual cases alone would have made possible. This also allowed the display of the significance of the accumulating knowledge, i.e. this improved the outcome within Groups 1, 2, and 3. (v) Several cross-cultural situations were included, mainly in crossing ethnic contexts (more than 10) and also in some contexts of many crossing industry cultures. (vi) The roles of the researcher covered a multiple set as well, ranging from the local Resident Manager (two cases) and Expert (two cases) to Executive Vice-President (three cases) and Managing Director (two cases) of the respective businesses, adding to both the pre-understanding and the true possibility of really knowing the intimate details of certain decisions and their rationale, besides the politics inside the firms in general. Yet, in the most important decisions, the researcher was not the ultimate decision maker. At times the Board of Directors and its Chairman was the final decision maker. In most cases, the other line manager of the respective business made the key decision.

**(3) The empirical case data, i.e. the authentic documentation, has been used logically to reach**

**the conclusions.** With a rich variety of situations and the multiple role set of the insider action researcher, it is considered that the empirical case data and the conclusions (i.e. on Hypotheses 1, 2a, and 2b, which all stood up to examination, see Chapter 9) are in balance with each other.

**(4) For the case data analysis,** some other groupings could have been arranged as well, alternatively or as complementary. For example, there were Cases 3, 4, 5, and 9 on the market entries and Cases 7 and 9 on the complex delivery projects. The overall success rates could also have been the basis of the grouping, i.e. there was one case with a very low success rate, four cases with medium success rates, and four cases with high or very high success rates. Such groupings were not selected because the fundamental longitudinal issue, i.e. business- and project-level observations within the same firm, would have been covered in one firm only, instead of the three (or even four if Case 1 is included) firms within this selected grouping.

**(5) The contextual results are also applicable in the case of delivery projects of investment objects** as long as their characteristics are similar to those of unique end products. These characteristics include shattered supply networks and big transaction sizes (values) in relation to the turnover of the business as a whole. Often clients, financiers, and various actors should deliver such end products together. In many respects, the deliveries of large physical products, e.g. ships and power plants, involve such characteristics. Usually – but not always – the design of end products is tailored. Consequently, the external validity of the results of this study can be considered fairly high in any investment project business in change situations. The main result of introducing project RM tools and techniques to the business level can be further applied to any complex cross-cultural situations and contractual arrangements.

In addition, **the findings of the reviewed literature were supportive, neutral, or silent** as to the examination of the two hypotheses.

#### **8.4.4 Reliability and the issue of rivaling risks**

**Reliability** is here understood as meaning whether the method renders results which are not random (Kirk and Miller 1986). Yin (2003a) points to the repeatability of the study – could the same result be obtained if the process were repeated? Mäkelä (1990) posits that readers must be able to follow the conclusive analysis in order to either agree or disagree with this. It goes without saying that in such an exercise a (reader's) sufficient pre-understanding of the issue is a precondition of the repeatability.

**Overall, the empirical case data, the results, and their analysis are here considered reliable. This is justified as follows.** The main results of this study – i.e. Hypotheses 1, 2a, and 2b – stood up to examination and were based more on the empirical case data. However, the reviewed literature does not yield any contradictory findings either. The case descriptions were based on the authentic documentation of the nine cases, primarily on the minutes of the meetings and the memoranda of the respective decision-making bodies, supported by some background material, e.g. statistics, books, reports, and magazines, in order to describe the scenes better. The descriptions were limited to 6-9 pages each, for obvious reasons. The descriptions provided were extracted from longer, 15-page case descriptions. The latter are also available (in electronic form) on request. For better understanding, the same patterns and formats have been used throughout the processing and reporting of the case data. This method provides readers with a clear path to follow the researcher's analysis until the case-specific conclusions (in Chapter 5), followed by the syntheses (in Chs. 6-7).

**The degree of the case-based conformity to Hypothesis 1 was quite high.** It is very hard to

believe that, with these data, the repeated process would yield a different degree of conformity. However, the lower degrees of conformity related to **Hypothesis 2a and 2b** are here subjected to some further counterarguments, e.g. **“Could any other risk, inherent in another, at least primarily independent source, emerge as “a rivaling major risk”?** The response is as follows. First, the researcher has described the cases in a way so “explainable to others” that readers can follow the analysis of the researcher and either agree or disagree with them (Mäkelä 1990). Second, a third type, rivaling major risk, emerged and caused the same outcome, sometimes in one case only. Third, it is hard to believe that such a major potential major risk could have repeatedly been overlooked in the case descriptions. For example, a major technical risk should either have been identified, or occurred, or both, in several cases in order to qualify as “a major contextual” risk. The same applies to a political risk, which, in fact, was identified in several cases, and which was responded to to such an extent that, when it did occur, there was no major negative consequence of such a risk.

There is one – albeit remote – **possibility, that an unmanaged risk of a third type**, e.g. a market risk or a financial risk, or a risk inherent in technical competencies or in administrative registration status, **could have occurred** and forced the contractor or the supplier to abandon the order or the project **before the hypothetical major risk had had time to occur**. The response is as follows. (a) A market risk did occur in several cases but it was well managed, at least partly thanks to the competencies regarding cross-cultural and contractual issues. (b) Corporate-level financial risk, however, was excluded from within this study. (c) In the international construction business, the prequalification methods have for a very long time been at such a level that this kind of internal risk could no longer have repeatedly had any major significance.

An additional threat to the reliability, which has been suggested in the literature, is the common risk in insider action research that **the researcher would be afraid to challenge the dominant school of thinking**. However, this danger was not acute in this study. The mature age and stable financial status of the researcher, in fact, brought along with them a certain degree of immunity to such fears. There was rather a desire to shake, rattle, and roll the prevailing beliefs and doctrines, than to stay scared and hide out.

One more threat to the reliability could be **the method used to assess the competencies of the key managers** in each case. **This critique** can be directed, of course, **to the researcher’s choice of which six persons** should be included within each case or whether “six” is the right number at all. Some other managers might also feel that they should “belong” to this group. The researcher can here only respond that the selected managers **were, in each case, the six most influential ones of all the managers employed** at the time of the case and phase being described. For instance, the important staff managers in e.g. the finance, personnel, or R&D areas were not included, simply because they were not within the operative decision-making line but rather the respected experts. **A further critique** concerns the issue of whether education, experience, and motivation should be given equal weight. On the basis of the previous experiences with the respective experts, the researcher considers this to be appropriate in the case of Finnish-owned firms with a Finnish management culture.

Finally, one more (theoretical) issue arises from **the selection of the cases**. Why would it not be very reliable to depend on cases which had (objectively) turned out to be “total failures”? Why were almost all the cases included in fact (relatively) successful cases? In other words, it seems that it is not possible to learn efficient RM from repeated failure cases via insider action research. The answer is simple. In such failed cases, the heavily involved researcher would probably have defended himself and blamed others involved. Therefore, it is here aligned with the well-known advice for learning, i.e. it is more efficient to learn (here efficient RM) from success stories rather

than from failure cases.

#### **8.4.5 Objectivity and the researcher's bias**

**Objectivity** is related to the fact that, within qualitative research, the researcher is an important research tool (Eskola 1998 p. 210). His attitude should be clarified (Strauss et al. 1998 pp. 268-273). To overcome **the subjectivity** of a researcher, the result should withstand a thorough examination before it can be confirmed instead of sheer "objective correctness" (Creswell 1998 p. 198).

**This study is considered reliable. Besides, the researcher's biases have been avoided to a satisfactory extent.** Whether this study was able to reach an acceptable degree of objectivity, instead of biased subjectivity, is briefly addressed as follows. In this insider action research, the researcher himself was indeed the key research tool. **The researcher's attitude** towards the object stemmed from (i) natural interest in his lifetime work around the subject, but also from (ii) the humble recognition of the complexity of the international construction business, resulting in threats and opportunities. This interest led to – apart from the daily work – the early study in the form of (iii) the licentiate thesis probing the subject, i.e. RM in the international construction business, yet with a narrow scope, as well as thin literature and empirical data. It encouraged the basic interest of the researcher in obtaining additional data for this more profound thesis that would create (iv) a better understanding of the phenomenon and maybe (v) some better tools to manage it. To carry out the research at this stage of the researcher's life, after nearly 40 years in the business, was also a preplanned action. It gave, besides ample time to collect sufficient empirical case data and to gain an ample pre-understanding of the subject, (vi) freedom of thought. The results and conclusions could be presented free from any considerations of the next employment or academic assignment, which, at a younger age, would be a natural prerequisite relating to research.

**This researcher has tried to overcome his subjectivity**, first, by establishing neutral hypotheses. The researcher would not have gained or lost anything from a particular result or a diverging or converging conclusion on the objectively relevant evidence conforming to the hypotheses. Any result was good. Second, the thorough examination of the hypotheses should reduce the subjectivity as well. Admittedly, **some subjectivity can be identified in the choice of the research context, i.e. the international construction business.** This is due to the fact that – when the international business of the major Finnish contractors and building product suppliers commenced in the 1970s – the early exports was considered as a marginal business and a potential source of big losses among the Finnish construction community. In the year 2009, the annual value of the international construction operations will be app. 17Bn€ of which nearly 80% is building product-related (Rakennuslehti 2009). Thus this **international value will exceed the value of the domestic new construction.** The relevance is thus proved beyond any doubt but it has nothing to do with the results or conclusions of this research.

Secondly, **financial RM as a whole has been left outside this study** except for some references (e.g. Busch 2005, DeLoach 2000), because the empirical case data did not include any documents for this area. However, it would be theoretically interesting to study whether the corporate-level RM tools that have been developed, mostly designed to manage financial risks such as debt ratio, insolvency, etc. could be applied to the project level as well. Such an approach may lead us to a different scene of reactive management of risks, while the general approach of this study was the opposite: to find more proactive RM methods and tools for an early response.

## 8.5 Applicability of the results

Within qualitative research, the statistical significance of the results is not focused upon, for obvious reasons. Instead, generalization is considered as **the applicability of theoretical constructs**. This leads to a requirement for an adequate description of the phenomenon under research (Eskola and Suoranta 1998). **In this study, the essence of the contextual phenomenon was change under complex international conditions**. Changes created uncertainty, resulting in risks. This theoretical starting point can naturally be applied to anything where a change, with its uncertain outcome, takes place. **No change – no risk!**

To generalize, **the growth situations of a firm are moments of change**. A change should be large in comparison with the past efforts of the same firm, to make any difference. Transactions for relatively large changes – be it of environment, production capacity, living conditions, technology level, etc. – in short periods of time are considered to be investments instead of being treated as expenses, as is often the case even with large R&D expenses (which, in fact, are also investments).

From the dual views of risk and opportunity, there are no major differences between project management or business management approaches or between the methods of construction, production, power plant, shipbuilding, or gas pipeline projects – to name a few. Therefore, **the main novel results of this study on the construction project business could be applicable to any investment project business within various international contexts**.

Because of the empirical case data, the study was limited to Finnish contractors and building product suppliers. **The Finnish vis-à-vis other ethnic cross-cultural context** can, however, be applied to any other cross-cultural context as long as the element of cultural difference is present. Moreover, the 50-year experience of British investors and contractors in Hong Kong may have already eliminated the factor of cultural difference and the contextual word “international” would no longer be valid in that context.

## 9. CONCLUSIONS AND SUGGESTIONS

### 9.1 Research object of managing risks in the international growth business of Finnish construction contractors and building product suppliers

The core research object is **risk** in the focal context of the international growth business of the major Finnish construction contractors and building product suppliers. The other denominators of the title of this study are the limitations or the references to the empirical case data, as follows.

- “**International**” refers to potentially crossing national cultures, i.e. at least two or several crossing national cultures. The most common crossing cultures are national, which is evident both within the reviewed literature and the empirical case data.
- “**Growth**” refers to an important source of change within the empirical case data. Growth is a profound cause of (uncertainty and) risks, as if there is no change, then there is no risk.
- “**Finnish**” refers to the empirical case data as a specific yet most common attribute of one of the crossing cultures in each case. Provided that such data are available, focal cultures could be any among various ethnic, industrial, company, etc. cultures, as long as there are at least two potentially crossing cultures for an empirical investigation. It should be noted that “Finnish” encompasses fully and partially foreign-owned major contractors or suppliers based in Finland.
- “**International business of (Finnish) construction contractors and building product suppliers**” refers to the empirical case data and the same approach can be extended to any other contexts of international, industrial-scale project business.

### 9.2 Conclusions on the key concepts within the reviewed literature

**The relevant recent books on enlarged RM** deal with uncertainty and risk as a framework, complexity as an amplifier, and crisis management as a derivative of RM, all within primary contexts inside and outside construction. The observations could be made on the steps taken at the firm, business, and project levels, on international and/or foreign issues (see sub-chapter 3.2). The **construction-related RM literature** mainly deals with the project level. The international or foreign aspects are covered thinly or country-specifically. From among the 64 books, the **Top 10 RM concepts** were selected on the basis of their perceived high degrees of being both theoretically advanced and practically applicable. A timeline schedule of these RM concepts was compiled to reveal the progress versus the timelines of the nine cases (see Figure 2-1).

**The 52 articles on the enlarged view of RM** were also reviewed (see Table 3-7). Among them, **some emerging trends** could be identified, as follows: (i) RM is increasingly being transformed into uncertainty management or opportunity management; (ii) RM is becoming more and more important in international projects and acquisitions; (iii) RM is becoming more proactive; (iv) early warnings are being used more regularly, and (v) new tools and models for enlarged RM are being developed and used more frequently.

**Managerial competencies and contractual arrangements are considered to be key sources of success** (“success factors”), although their verification is based on questionnaire surveys and

limited case descriptions. It seems that **the trend in the related RM research** is to replace “management by rear-window view” with the dynamic management of multi-cross-cultural, complex, fragile, and global networks and the taking looking carefully into the future.

### 9.3 Conclusions on the contributions of the examination of the hypotheses

**The two hypotheses are highly relevant in the focal context.**

- **The internationalization rate of the Finnish construction business will continue its growth as a result of globalization and other global trends** (see Chapter 1).
- Since Hypothesis 1 stood up to examination, it is here assumed that **an increasing share of international major business transactions will be treated as projects**, thus encouraging stakeholders to apply the proven project RM methods at the business level for early risk response. Consequently, the need to identify both major risks and opportunities early will increase, too.

The two hypotheses stood up to examination as follows. **The case-based evidence conforms well to Hypothesis 1, but the reviewed literature remains silent.** Within the international construction context, this is **a novel research object** which has further applications, i.e. (i) to convert more business transactions to projects, and (ii) to use project RM methods and tools to attain the objectives of such ‘business’ projects through the following steps:

- to define objectives;
- to identify the respective situation-specific major risks, i.e. at least the cross-cultural and contractual risks inherent in key managers’ competencies in the international construction context;
- to launch an early response at the business level, and
- to monitor and repeat this RM process continuously, which may turn out to be the most difficult task to achieve in practice.

**The case-based evidence conforms well to Hypothesis 2a, but the reviewed literature does this only indirectly.** Within the international construction context, cross-cultural risks and the competencies to manage them are, together, **a novel research object**. This also has applicability in other ‘projectable’ business transactions, for example:

- to bring competency assessments and the respective steps into business transactions converted to projects;
- to apply the issue of “culture” to wider perspectives, e.g. industry types;
- to take into account all relevant cultures, such as organizational and company cultures, instead of traditional ethnic and/or national cultures only, and
- to adopt better ways of managing cross-cultural uncertainty, risk, and opportunity early at the business level.

**The case-based evidence and the reviewed literature both conform well to Hypothesis 2b.** This is not a novel research object, but an advance in understanding when contractual risks and the competencies needed to manage them are coupled through selected contractual roles and other arrangements. This also has applicability in other ‘projectable’ business transactions, e.g. to adopt better ways of managing contractual uncertainty, risk, and opportunity early on at the business



level. However, a contractual risk may be dependent on a cross-cultural risk, which certainly invites future research.

Overall, it is here concluded that the high and medium degrees of conformity to the respective hypotheses and the complementary findings have together contributed to **the suggested innovations to advance the emerging theory of risk and, in particular, the proven RM process.** Besides, **several novel research objects have been found and justified.**

#### **9.4 Conclusions on the other interesting findings**

The potential, rivaling risks have been discussed (in Chapter 8), as well as the success and failure factors being exposed within the nine cases, i.e. reasons why the objectives were met – or not, or they could have been met – or not (see Table 6-3). The five other interesting findings are as follows.

**(a) The emerging theory on risk as derived from uncertainty worked well.** Clear business objectives have to be set before the implementation of the respective projects in order to be able to assess the probability (“risk”) of any deviation. In all the cases, at least the financial objectives were set as a standard routine as part of the management both at the business level and the project level from the 1970s on. Additional objectives concerning e.g. market positions, reputations, brands, etc. became standard in the construction business later in the 1980s.

**(b) The formal risk identification meant “What can go wrong?”** In turn, the building product suppliers, when considering an investment for growth, recognized the opportunities as well. The synergy effects were typical opportunities. The early identification of the risks at the business level often led to proactive RM, instead of the consequences being dealt with at the project level only. However, this did not automatically result in an improved response. For instance, there were Cases where the experts identified a major risk but, for different reasons, the decision makers either underestimated or ignored the risk. This should be addressed to when developing the novel method further ( see 9.5).

**(c) Traditional RM was facilitated by the setting of clear objectives.** Otherwise, it would not have been possible to clearly identify the major risks, let alone to launch the most appropriate response in all the cases. Consequently, **uncertainty management** – before turning to “traditional” RM – with upside and downside possibilities may be relied upon as part of efforts (e.g. projects) with fuzzy or otherwise somewhat unclear objectives.

**(d) The high rate of complexity increased the (potential) magnitude of the consequences.** This rendered the response measures more complicated because of the high number of connected elements and the intensity of those connections. Moreover, the increased complexity rendered a construction project or business system particularly vulnerable to the fast development of a mismanaged risk into a crisis and further into a disaster. **Reducing complexity**, by reducing the number of elements and/or interconnections of a system, should, therefore, be the key means for fighting risks with potentially negative consequences. However, positive developments may be fast as well.

**(e) The development of practical RM over time was reflected in the cases.** In the 1970s, the contractors added 15% or so as a risk allowance on their bid estimates against the “something may go wrong” factor. Along with Porter’s (1985) competitive advantage, the more positive attitude of “something may go better than...” was emerging. This led to a better understanding of the

development of competences and, consequently, of where and when the conditions were right to exploit those competences. The prediction of the future conditions of the external factors became the art behind strategic planning. Early on, Lifson and Scheifer (1982) defined a **two-way approach**, i.e. opportunities were brought into the picture. However, it seems that efforts to convert RM to more dynamic uncertainty management will continue more within non-construction-related research.

## **9.5 Main features of the suggested novel early response-oriented risk and opportunity management method (EROM), and the contribution to practice**

The relations between the two hypotheses, the reviewed literature, and the case-based evidence were revealed earlier (in Chapter 7) in order to prepare the ground for suggesting some main features for a novel risk and opportunity management method to be developed. The current challenge for RM research is to replace “management by rear-window view” with the management of more multi-cross-cultural, complex, fragile, and global networks. Highly applicable concepts and applications will be put forward by consultancy firms and industrial companies. One option to meet this challenge is **better management of uncertainty, which leads to proactive and foresighted RM at both the business level and project level.**

It is herein argued that **novel early response-oriented risk and opportunity management (EROM) method** need to be invented, too, for the focal context and the effective management of future growth and changing business transactions into fully-fledged projects with given goals. The proactive focus of such novel EROM methods should be on the periods preceding any main commitments, e.g. contracts, and on major risk types. A potential gain may be highly significant because practitioners assume that current average success rates in international transactions do not exceed a ratio of 1:3 (see Chapter 1). In turn, **the main features** of EROM are here outlined as below.

- (i) **The attainment of international business objectives** is to be ensured by applying EROM principles for the early, continuous monitoring of focal operations or projects and, when necessary, for re-setting the objectives to reflect major risk (and opportunity) identification, and an appropriate response.
- (ii) **The extension of project RM to the business level** is viable. Consequently, precious time is gained for managing major risks with the right response measures. Planning and acting take time.
- (iii) **The novel EROM is developed and attached to the standard management tool kit**, which is implied by the early reliance on such a method at the business level, along with the eventual financial RM tools. In international change projects, major cross-cultural and contractual risks are inherent in key managers’ competencies.
- (iv) **The response to such major risks takes alternative measures. The most important one is already to manage respective competencies at the business level**, e.g. by assigning additional expertise, outsourcing certain tasks, and building the required new competencies by educating and training the appropriate cadres of managers – or even by refraining from the entire task as an eventual ultimate solution. Of course, complexity should be reduced whenever this is feasible for risk mitigation and even risk avoidance.
- (v) **The capacity to identify and respond to – but definitely not to ignore – major**

**opportunities** is emphasized, particularly during the early phases of projects, i.e. at the business level. This may last up to decades, depending on the investment planning span applied. The outcomes of both events are uncertain, however. The risk that the expert advise will not be properly considered, particularly when they have identified a major risk with negative consequences, has to be avoided e.g. with an added transparency and controlling rounds of response measures.

- (vi) The method allows for a free selection of the viewpoint, e.g. those of an investor and a contractor. This viewpoint can be suggested by an expert, e.g. a construction manager. This allows for the full harvesting of modern contractual arrangements, including, on top of “standard” contracts, other important issues, e.g. the selection of a contractual structure and key contractual partners, and vital contract annexes (e.g. design, specifications, and the specific and general conditions of these contracts).

**The main contribution to the practice** boils down to the imperative: “The **hypotheses shall to be converted to practical actions** to benefit the business!” Those practical actions will include, ao, the **further development of EROM** (see above; the development of the respective RM- service product for the Finnish national market has already been commenced), and **managing key managers’ competencies related to the areas of major risks**, depending on the context. The **contextual major risk identification** itself, based on a solid, holistic foresight as a part of EROM **will improve the effect of further RM measures**, according to the results. Applying the better RM onto the international business gives a broad idea about the potential gains available. For example, according to the Engineering News Record (ENR), the **international turnover of the 225 world’s largest international contractors was 390 billion \$ in 2008** (ENR, 2009).

#### **9.6 Applicability of the findings to other cross-cultural contexts of investment project businesses outside construction**

It is here posited that the findings of this international construction project business-focused study are applicable to any other cross-cultural contexts of investment project businesses, as follows:

- (i) **Complex, cross-cultural investment projects are all one of a kind.** A project business company cannot rely on statistical methods to manage their risks successfully. **Instead, a dynamic and qualitative approach is necessary**, such as the suggested EROM that is to be developed in due course.
- (ii) **The wider applicability stems from the fact** that the construction business is conducted through individual projects for a great number of reasons. It is impossible to foresee any major change as long as the objects of such projects are considered as individual investments. On the contrary, newly adopted life-cycle thinking may further strengthen the individuality rates in projects. **From the risk and opportunity point of view, there are no major differences** between PM and business management approaches or between the methods used in construction, production, power plant, ship-building, or gas pipeline projects, to name a few primary project types.
- (iii) Empirically, this study was limited to Finnish construction contractors and building product suppliers. By analogy, dyadic Finnish versus other ethnic, **cross-cultural contexts can be complemented with any other cross-cultural contexts**, as long as the element of cultural difference is present.

## 9.7 Suggestions for future research

This study contributes in the form of a few novel aspects primarily to the advancement of the RM of growth and change projects in the international construction business. The undercurrent of the construction-related literature also calls for more proactiveness. The key contributions include the application of the proven RM methods early on at the business level and the suggested EROM. In the same vein, it is here suggested that future research efforts should be directed to advancing the following key issues.

- (i) **To assess more accurately situation-specific, required competencies and available managers' competencies** versus cross-cultural and contractual issues. Within the international construction business, these managerial competencies are stressed because respective commitments performed at the business level are difficult to reverse or even alter or modify during project implementation phases. Proactive methods to measure such competencies should be developed further.
- (ii) **To mobilize the capacity of modern contractual arrangements to its full extent.** The key elements of a viable holistic approach include a contractual structure, a contract and its conditions, and competent contract management. On the basis of ICT solutions, new contractual arrangements need to be developed, e.g. for complex supply networks.
- (iii) **To clarify how dependent the two major risk types are,** i.e. the key questions to be explored and solved are as follows. "Could a major risk inherent in contractual arrangements be dependent on one or several cross-cultural risks?" "What role do key managers play in those decisions?" "Are the respective decisions just left with corporate lawyers?"

Within the emerging view of enlarged risk management (ERM), the extreme ends should be studied in particular, with the focal contexts, i.e.

- (iv) **To explore and understand deeply the internal workings of uncertainty and that of disasters,** particularly in complex conditions.

In this study, reliance on experts is considered to be the only efficient way to identify the risks in one-of-its-kind projects and similar project-like contextual growth situations. Thus, the fast developments in ICT enable future studies to be suggested in order

- (v) **To find out whether modern ICT applications can be of more help to experts** – if the former are replacing the latter fully or in part – when identifying and further managing major risks during the earliest phases of construction projects and other construction business transactions, in analogy with e.g. the development of oil and gas fields.

After having succeeded in the solving of the fifth issue, collaborative researchers could continue with subsequent studies, i.e.

**To study global environments and alternative future scenarios** and to connect them to the view of ERM. The ultimate end is to enhance competencies and expertise to prepare better for alternative, yet possible, future events.

## 10. SUMMARY

### 10.1 Background and research problem of the study

**Major changes inside Finland catalyzed the internationalization of the Finnish construction industry** to its initial growth in the late 1960s and the early 1970s. Its further growth in the 1980s, the painful domestic recession, and the consequent restructuring, as well as the recent developments in the 2000s, have resulted in the international, profitable growth business of the Finnish construction industry. In the year 2008, the value of this international business was app. 16Bn€ i.e. at the same level as that of new building production in Finland. **In the case of Finnish construction contractors**, their export operations peaked in both absolute and relative terms from the end of the 1970s until the mid-1980s. Thereafter, the value and importance of their international business diminished when compared with their domestic business. The domestic recession and the overnight disappearance of the Soviet market accelerated this development. **The Finnish building product suppliers**, after starting slightly later than the contractors, internationalized themselves consistently and fairly fast, primarily in continental Europe in the 1980s. Since the recession of the early 1990s, their foreign turnover has grown significantly.

**The international business of the Finnish construction industry is forecast to grow** and to exceed its domestic business value by the year 2015. Among Finnish practitioners, the general understanding has been that **effective risk management (RM) can reduce the occurrence and significance of failures, as well as increasing the occurrence and significance of successes**. According to some US-focused references and the past performance of Finnish firms, internationalization provides valuable experience, more of failures and less of successes. Both the past outcomes of the internationalization of the Finnish construction industry and the relevant literature indicate that severe losses can be avoided and/or opportunities can be seized with sound RM.

Thus, **the two research questions** are posed as follows. “How can the internationalization process risks of the leading Finnish construction contractors and building product suppliers be managed?” and “What are the main risks of the internationally growing Finnish contractors and suppliers, respectively, and how can they be managed, in particular in the evolving EU, Russian, and Asian construction markets?”

### 10.2 Roots, purpose and two hypotheses of the study

The risks inherent in the international growth business of Finnish construction contractors and building product suppliers are approached in this study. **The roots** of the study, however, were laid down in the mid-1980s with the author’s licentiate thesis on the management of risks in Finnish construction project exports. On the basis of these early findings, it was posited that the most significant risks were related to key managers and the contractual balance between project stakeholders. Contrary to the general expectation in the literature, this thesis revealed that the much-feared political risks had not directly caused severe problems for the Finnish actors. Upon having applied RM methods in practice for more than two decades, the author discovered that project risks can already be efficiently responded to at the business level.

Accordingly, **the purpose** of this study is to find and develop better ways for construction contractors and building product suppliers to manage their major risks in both business-level and project-level situations on the basis of a literature review and combined case and insider action

research. Broadly, within the focal context, (i) the impact of the application of proven project RM methods at the upper business level (“transfer upwards”), and (ii) the impact of the combined use of business-level RM methods and project-level ones (“combined use”) will be studied, and (iii) the risks embedded within key managers and their competencies concerning managing, in particular, cross-cultural issues and contractual arrangements (“major risk identification”) will be identified.

As a main focus, two hypotheses are examined empirically. **Hypothesis 1** is that proven project RM methods can also be applied reliably at the business level and, thus, the effectiveness of managing major international business risks can be improved. **Hypothesis 2** (as divided into two parts a and b) is that major risks related to the attainment of the targeted business objectives are inherent within key managers’ competencies, in particular those concerning managing (2a) cross-cultural issues and (2b) contractual arrangements. **The crossing cultures** are here mainly ethnic and/or industrial cultures, because of the empirical case data. **The contractual arrangements** include, apart from contract documents, the entire contractual structure, the selection of the main partners, drawings, specifications, and the general and specific conditions.

### **10.3 Scope and primary research method of the study**

Overall, **the scope** of this study encompasses firms managing their international businesses and projects, including the related risks. The focus is on growth situations and the major risks involved in these, as well as proven project RM methods and their applications at the business level. The focal context involves the internationalization of Finnish construction contractors and building product suppliers, as well as the international operations of foreign-owned subsidiaries based in Finland.

**The main parts of the study are a literature review and action research with nine case studies.** To find data for the examination of the hypotheses, in the mid-1980s this (insider action) researcher commenced the systematic documentation of his own important international business growth projects because: (i) within the construction industry, test projects or other relevant business transactions cannot be built or delivered only for research purposes; (ii) statistical methods were not viable because of a lack of good-quality information in the available statistics; (iii) a recent literature review indicated that the literature on the focal area (i.e. the RM of growth projects of international construction business) is rather scarce; (iv) some other alternative methods were also dismissed, such as interviews, surveys, and Delphi methods, as being too unreliable. The researcher’s long experience implies that e.g. questionnaire recipients, unfortunately, in practice, are often randomly chosen within the younger cadres of firms’ employees, and (v) finally, studies for social practice should be concerned with a diagnosis of a specific situation.

Therefore, **the only remaining research method, apart from a literature review, was a case method**, which is highly applicable to explain presumed causal links in real-life interventions that are too complex for survey or experimental (research) strategies. **The principal choice was to rely on real-life cases where this researcher had an active and strong influence**, because: (i) it would not have been possible to collect relevant new case data on risks from “outside” the insider cases, particularly if they had turned out to be the failures of competitors; (ii) the cases presented in the reviewed recent literature are too thin and short for a deeper analysis, and (iii) the sample data within the literature seem to be based on questionnaires and/or semi-structured interviews.

**This rationale** led, at an early stage, to the conclusion that **the empirical approach of this study is qualitative insider action research (IAR)** trying to solve typical severe management problems and

looking for “a positive effect on management practices”, i.e. on RM practices within the focal context. Therefore, the **measure being investigated must be understood from an actor’s viewpoint**. Besides, **the goal is to expand and generalize theories, not to enumerate frequencies**. This criterion is fulfilled because the researcher has acted, through most of his nearly 40-year-long professional career, in relevant managerial positions within the case firms and/or projects or businesses.

#### 10.4 Literature and innovations of the study

**The purpose of the literature review** is to find support for the hypotheses and to find competing hypotheses, if any. The construction-related risk literature mainly deals with the project level. International or foreign aspects are covered thinly or country-specifically. Unanimous agreement between various RM authors exists only on the importance of proper risk identification. The two-way approach – risk is assumed to have both negative and positive consequences – seems to be one of the proven approaches to pre-managing uncertainty, rather than risky conditions. RM is a concern only after a decision to give uncertainty a probability. In some other industries, e.g. financing, risk and uncertainty are considered to be almost synonymous expressions. A crisis is a consequence of a mismanaged risk and, when mismanaged, it can further escalate into a disaster.

**The variety of risk typologies** turned out to be **rich**. In this study, the broadest classification was adopted, i.e. **external, internal, and unforeseen risks**. However, these main types are not analyzed in more detail because formal typologies are not relevant for the RM hypotheses within the focal context.

**Hypothesis 1 is an innovation**, i.e. it is not addressed in the reviewed literature. To examine Hypothesis 2, **the additional, limited reviews** enlightened the key managers’ competencies regarding cross-cultural issues and contractual arrangements as sources of success (and failure). In this literature, those factors surface frequently but in unstructured ways and on the basis of very narrow questionnaires or limited case descriptions. Therefore, **Hypothesis 2 cannot be considered to be an innovation**. No deeper international construction-related analysis or reference emerges to connect those factors and the actual outcomes of projects with each other. **The challenge** for RM research is to replace “management by rear-window view” with the management of more multi-cross-cultural, complex, fragile, and global networks and looking carefully into the future.

#### 10.5 Case-based findings and the examination of the hypotheses

**Case 1** consists of a summary of the findings of five construction sub-projects of Lemminkäinen between the years 1974-1984. Originally, Case 1 was already reported upon as part of the licentiate thesis in the year 1986. **Cases 2-9** are either business-level strategy and merger cases or project-level acquisitions and the delivery projects of the Partek Corporation (1984-1995) and the Finnforest Corporation (2000-2006). They are also causally coupled, being, respectively, two-level embedded cases, i.e. growth strategy cases or the implementation of growth strategy cases. These couplings deepen the longitudinal, explanatory analysis.

**The case-based evidence conforms well to Hypothesis 1**. In all cases, the business- and project-level objectives were set, as this was habitual in Finnish firms. They contained financial objectives but often other and more qualitative ones e.g. on growth, the market position, the technology base, and the synergy effect. In most cases, the major risks were identified, at least by the experts. In many – but not all – cases the major risks were responded to at least reasonably well. However, not

all of them were efficiently responded to because of a lack of identification, the ignoring of expert advice, the retaining of a sometimes underestimated risk, or for some other reasons. The ultimately inadequate measures taken in reaction to an identified major risk may not have been the fault of the RM method but rather despite it. It seems that **to manage the hypothetical major risk types (or their sources), it was more beneficial to take actions proactively, i.e. early on at the business level**, rather than to wait until e.g. the contracts were signed or other commitments had been made. There was a logical reason for this. (i) When the risks were identified early, this gave the option of assessing whether it was better to deal with the sources or the consequences of each major risk. In practice, risk identification at the business level often led further to a proactive response, instead of the consequences being dealt with at the project level only. Further, (ii) there were more long-term measures available when acting at the business level rather than at the project level. Additionally, it was (iii) useful to have ample calendar time available, e.g. when analyzing the contractual role alternatives or when pondering the most feasible organizational structure or key appointments, rather than rushing into them. Moreover, (iv) many long-term commitments, e.g. choosing the foreign market area and segment, the entry mode, the JV policies, and partner selections, may involve many stakeholders and they were difficult to change at the project level. Besides, it appeared that it did take time to build the key managers' new competencies regarding cross-cultural and contractual issues.

**The case-based evidence also conforms well to Hypothesis 2.** In all the cases, the major risks that occurred were inherent in at least one or often even both of the two hypothetical managerial competencies. In some cases, there were some other major risks, or risk sources, as well, but their appearance was rather sporadic. This leads to the conclusion that at least these two hypothetical major risks (and/or their sources) should be carefully identified and further managed in order to respond to the most commonly appearing major risks in each project.

**The key managers' competencies regarding cross-cultural issues were a more common major risk (or source of one)** than the selected contractual role and other arrangements. The significant efficient measures taken to respond to a given risk were not launched without its prior identification. Over the years, the contextual RM techniques and tools have improved and in some cases they were already routine. This has made early risk identification possible, well before the implementation. The research tradition in construction-based business management was non-existent, at least until recently, and, consequently, there was no suitable framework to analyze international construction.

**The major risks were also inherent in the contractual arrangements.** The exception of the 1<sup>st</sup> sub-project of Case 1 can be linked to the typical **"sheer ignorance" factor at the very beginning**, e.g. the acceptance of the turnkey responsibility in the construction of a low-cost housing area in Nigeria. Several cases contained a challenging selection and/or change of the contractual role. The outcome itself varied, depending on the competencies available for managing the issue. Several cases pointed to e.g. "project alliancing" and other proposals that appear in the reviewed recent literature on new contractual approaches. For example, the main actors' interests were: (i) vested in a joint venture; (ii) combined through the project (e.g. acquisition) conditions, and (iii) to be aligned. Nevertheless, Case 1 reflected that, in the western culture of public clients, it was, and it may still be, difficult to introduce the idea of joint RM without compromising the competitive bidding rules.

**Some other interesting observations** from within the cases included the following three issues. (i) **Uncertainty management** with both upside and downside possibilities may be well suited to



projects with fuzzy or otherwise unclear objectives. Traditional RM, focused on goal-attainment as a “positive outcome”, needed clear objectives. Without them, it was not possible to identify and analyze the major risks, let alone launch the most appropriate response. (ii) **The development of practical RM over time was also reflected in the cases.** In the 1970s, the contractors added a percentage as a risk allowance on their bid estimates against the “something may go wrong” factor. In the year 1982, **the two-way approach** with the inclusion of opportunities was defined in the literature. In the focal construction business, the formal identification of risks and their responses became the standard among the key actors relatively late on. (iii) In most cases, the high rates of complexity increased the potential magnitude of the consequences because of the possibility of the rapid escalation of the risk and/or a consequent crisis within the complex systems. It rendered the response measures themselves more complicated. Therefore, **complexity reduction** should be the goal when fighting risks with potentially negative consequences, which may fast develop into crises – and further even into disasters – if the risks are mismanaged. Positive development may be rapid as well (particularly in Cases 5 and 6).

## **10.6 Discussion and key critique of the study**

**The main results** were that **proven project RM methods could be applied at the business level (i.e. the main innovation)**, thus enabling the major risks to be managed early and proactively, which, in this context, turned out to be inherent in the key managers’ competencies regarding cross-cultural and contractual issues. The results of this construction project business-related study should be applicable to any other investment project businesses with international contexts. The contextual Finnish versus other ethnic cross-cultural context can also be applied to any other cross-cultural context.

The study is considered to be **internally valid**, i.e. the method, the empirical case data, and the results are in balance and justify the conclusions. **The external validity** is considered fairly high in any investment project business in contextual change situations. Attempts have been made to overcome **the subjectivity of the researcher** by the definition of the two neutral hypotheses, and the thorough examination of the two hypotheses should have reduced the subjectivity as well. Admittedly, some subjectivity can be identified in the choice of the research context – the international construction business – but it has nothing to do with the results or conclusions of this study. The combined insider action research and case-based study is based on authentic contemporary documentation. Thus, **the researcher’s bias has been avoided to a satisfactory extent** and, in that regard, the results are considered to be reliable.

## **10.7 Conclusions and key contributions of the study**

**In the reviewed literature**, international or foreign aspects are covered thinly or country-specifically. Managerial competencies regarding cross-cultural issues and contractual arrangements are considered to be sources of success. The trends in the enlarged RM of today include: (i) RM is increasingly being transformed into uncertainty management or opportunity management; (ii) RM is becoming more proactive; (iii) early warnings are being relied upon more frequently, (iv) RM is becoming ever more important in international projects and acquisitions, and (v) new ERM tools and models are being created. **Within the cases**, the formal risk identification meant “what can go wrong?” The building product suppliers recognized the opportunities as well, typically as the “synergy effect”. **The identification of the risks early on at the business level often led further to proactive RM and increasing reliance on a solid foresight**, instead of the consequences being dealt with at the project level only.

**The two hypotheses both stood up to examination.** The case-based evidence conforms well to **Hypothesis 1**, but the reviewed literature remains silent. Within the international construction context, **this applied two-level RM is a novel research object.** The case-based evidence also conforms to **Hypothesis 2** and the reviewed literature conforms to it indirectly. Within the international construction context, **cross-cultural risks are a novel research object when connected to key managers' competencies** to manage cross-cultural issues. It is here argued that these key contributions are also applicable to any investment project businesses with cross-cultural, e.g. international contexts.

It is here suggested that **the novel early (i.e. business-level) response-oriented risk and opportunity management method (EROM) should be further developed** for the contexts of growth and change business transactions which can be treated as fully-fledged projects with given goals. The focus of EROM should be on major risks, which, in international change projects, contain at least cross-cultural and contractual risks inherent in key managers' competencies. The potential gain resulting from better RM is significant. One of the main features of the EROM is **its capacity to identify and respond to – but definitely not to ignore – opportunities.**

**The main contribution to the practice** boils down to the imperative: “The **hypotheses shall to be converted to practical actions** to benefit the business !” Those practical actions will include, ao, (i) the **further development of EROM**, and (ii) **managing key managers' competencies related to the areas of major risks**, depending on the context. (iii) The **contextual major risk identification itself will improve the effect of further RM measures.** Applying the better RM onto the total value of the international construction business gives a broad idea about the potential gains available. For example, the **international turnover of the 225 world's largest international construction contractors was 390 billion \$ in 2008.**

Finally, it is suggested that **future research** be directed to investigate the following issues: (i) to assess the required competencies and each manager's competencies more accurately; (ii) to mobilize the capacity of modern contractual arrangements to its full extent; (iii) to clarify whether the major risks inherent in contractual arrangements are dependent on cross-cultural risks, and (iv) to investigate particularly the extreme ends of event chains as part of the development of contextual ERM, i.e. uncertainty and disasters in complex conditions in order to determine appropriate times, relying on a solid foresight, to launch risk identification and response early on at the business level.

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