

The marketing strategy of a project-based firm: The Four Portfolios Framework

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Abstract

The purpose of this paper is to address the simultaneous management of multiple business relationships and multiple projects in the marketing strategy of the project-based firm. The research question is: How can the essence and interdependencies between the portfolios of relationships and projects be conceptualized as the marketing strategy of a project-based firm? We address this question by constructing a framework including two portfolios of relationships and two portfolios of projects, and by discussing how these portfolios may be interrelated. Combining the approaches of relationship management in project marketing on the one hand and the management of project portfolios on the other contributes a novel viewpoint to project marketing.

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1. Introduction

As many companies adopt project-oriented working methods in their businesses, a new paradigm concerning a project-based firm and project business has developed. A project-based firm uses external delivery projects for its business purposes (Artto & Wikström, 2005; Söderlund, 2004; Turner & Keegan, 2001). The central features of project business have been identified in the uniqueness of individual projects, the complexity of the project offering and business network, the discontinuity of demand and business relationships between projects, and the considerable extent of financial commitment of the parties (Cova, Ghauri, & Salle, 2002; Mandjak & Veres, 1998; Tikkanen, 1998).

In the strategic management of project business, relationships with customers and other partners are important (Owusu,

2003; Skaates, Tikkanen, & Lindblom, 2002). Relationships with customers provide the supplier with an opportunity for future business: customers use their relationships and knowledge on potential suppliers when inviting suppliers to tender a project. A supplier wants to reach a status of being a potential candidate for future projects and puts resources in marketing and relationship building. The strategic objective of the supplier is to create, maintain and manage multiple relationships that enable or support the construction of future demand for projects (Cova & Hoskins, 1997; Cova, Mazet, & Salle, 1993). In a similar manner, the supplier creates and maintains multiple non-project-specific relationships with potential sub-suppliers in order to guarantee the effective sales and delivery of projects. From a strategic perspective, the marketing of a project-based firm thus focuses on the management of a firm's multiple relationships in a network of business and non-business actors (Skaates & Tikkanen, 2003; Cova, Mazet, & Salle, 1996). In other words, the project-based firm develops a complex portfolio of relationships to customers, suppliers, financiers and other relevant network partners. In extant literature on relationships and networks, the business network of the firm is

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often divided into distinct sub-portfolios such as the customer or supplier relationship portfolios.

Research on the management of multiple relationships in project marketing literature introduces a wide array of issues to help achieve success in the business of project-based firms. Relationship management is considered as a foremost strategic issue that contributes to individual projects and their management. However, extant project marketing literature does not specifically address how the management of multiple relationships at the level of the firm relates to the simultaneous management of multiple projects – or project portfolios. Combining the approaches of relationship management in project marketing on the one hand and the management of project portfolios on the other contributes a novel viewpoint to project marketing.

The strategic management of multiple projects is addressed by the recent project portfolio management literature. It puts a practical-oriented managerial emphasis on the theme of strategy implementation with multiple projects. The studies by Cooper, Edgett, and Kleinschmidt (1997a,b, 1998a,b), Archer and Ghasemzadeh (1999), McDonough and Spital (2003), and Aalto, Martinsuo, and Arto (2003) all provide a good overview of the current status of the project portfolio management research. According to this research, the strategic alignment of project entities occurs through decisions made on the basis of focusing on the whole portfolio of projects rather than on decisions made separately for individual projects. Introducing strategy to portfolio decision-making is one important objective in these suggested applications. Allocating scarce resources to projects is a central issue.

Project management research has thus attempted to address the area of strategic management through multiple projects. However, project management research has not yet succeeded in identifying and addressing all issues that would be important in strategy implementation with multiple projects in a real-life business context. Instead, extant project management research often addresses rather practical and concrete decision support and other tools that relate to strategy implementation. As far as the marketing strategy of a project-based firm is concerned, such tools are not always at the core of marketing strategy implementation from a relationship management viewpoint. There is a clear need for combining the relationship and project management approaches since both units of analysis are central and interconnected from a practical project business viewpoint.

The purpose of this paper is to address the simultaneous management of multiple business relationships and multiple projects in the marketing strategy of the project-based firm. We argue that the main managerial challenge is how to manage interdependencies between relationship portfolios on the one hand and project portfolios on the other. Optimizing individual portfolios does not automatically lead to the optimization of the overall business performance. The research question of this study is: How can the essence and interdependencies between the portfolios of relationships and projects be conceptualized as the marketing strategy of a project-based firm?

We address this question by constructing a framework including two portfolios of relationships and two portfolios of projects, and by discussing how these portfolios may be inter-

related in practice. This is a conceptual paper with an explorative aim. The framework includes what we identify as the most central elements of the marketing strategy of a project-based firm. The research lines focusing on relationships and networks in project marketing on the one hand and project portfolio management on the other are capitalized upon as the theoretical background of the paper. Essentially, our framework is a content framework that highlights the most central managerial issues and challenges related to the marketing strategy of the project-based firm. In this way, it complements process frameworks designed to model the marketing process of individual projects (e.g. Cova et al., 1993; Holstius, 1989).

2. Theoretical background

By a managerial portfolio, we refer to a set of entities (such as relationships and projects), the development of which should be managed systematically in order to meet the company's strategic objectives. Since any marketing strategy includes future-oriented activities related to many interlinked issues, as well as complexity and uncertainty, we follow the studies positing that portfolio thinking in general provides the marketing strategy with a useful approach. It should be noted that we are using the term portfolio in a more metaphorical way than in much of existing business portfolio research for instance in the area of finance; our aim is not to construct a strict framework that would allow, for instance, the more explicit (often numerical) modeling of the portfolios in question.

The theoretical background of our study is mainly constituted by two broad discourses. The first one can be identified in the IMP (Industrial Marketing and Purchasing) research group-related studies on relationships and networks in project marketing (Cova et al., 1996; Owusu, 2003; Skaates & Tikkanen, 2003; Skaates, 2000) and relationship portfolios (Campbell & Cunningham, 1983; Fiocca, 1982; Zolkiewski & Turnbull, 2002). The second one focuses on project portfolio management research. Recent project portfolio management research mainly comes from a product development context (for review, see for example Archer & Ghasemzadeh, 1999; Cooper et al., 1998a,b; McDonough & Spital, 2003), with its theoretical background in the fields of capital budgeting and corporate finance. Portfolio theory was first developed in the area of financial investments as a mechanism for reducing risk (Markowitz, 1952).

2.1. Relationships and networks

An extensive and heterogeneous global literature has emerged on the relationship and network point of view to marketing. The relational approaches in marketing research can be categorized into at least three, partly overlapping conceptual perspectives: Anglo-American Relationship Marketing (e.g. Dwyer, Schurr, & Oh, 1987; Webster, 1992), the Nordic School of Services and Relationship Marketing (e.g. Grönroos, 1994; Gummesson, 1999) and the work of the Industrial Marketing and Purchasing (IMP) Group (e.g. Axelsson & Easton, 1992; Håkansson, 1982; Håkansson & Snehota, 1995). Despite differences in conceptual language and methodological

orientation, central viewpoints in all of the three perspectives focus on the creation of cooperative and trust-based relationships with customers and other stakeholders (e.g. Hunt & Morgan, 1995), on a broad conceptualization of the notion of (both 'external' and 'internal') marketing backed by inter-unit collaboration within the company (Grönroos, 1994), and on building and leveraging firms' and networks' key resources and capabilities through inter-organizational cooperation and joint technological development (Håkansson & Snehota, 1995).

In project marketing, there is a research community called the International Network for Project Marketing and Systems Selling (INPM); it is loosely affiliated to the IMP group (Owusu, 2003; Skaates, 2000; Tikkanen, 1998). Thus, the relationship management viewpoint of the IMP Group strongly dominates recent project marketing research.

The INPM argument for studying project marketing is based on the assertion that it is not enough to regard a project delivered by one firm/a group of firms to another organization/group of organizations as a set of managerial actions taken by the supplier (s), i.e. as mere 'project management'. Instead the delivery encompasses individual project supply processes within a multi-firm project network, and the management of business relationships between actors in the buying and selling firms is important before, during, and after individual marketing and delivery processes (Hadjikhani, 1996; Tikkanen, 1998). As units of analysis, relationships and projects are seen as complementary, since individual projects have often been identified as central temporal constituents of business relationships in project business (Owusu, 2003; Skaates et al., 2002). It has been argued that there are two nested levels of relationship management in project marketing. The first level includes the management of relationships and networks related to individual projects from the beginning of a project until to its completion. The second level is the company level above single projects; it encompasses relationships between firms and other organizations during a longer period of their multiple project activity in a broader economic, social and political business network (Tikkanen, 1998).

In project marketing literature, it is acknowledged that the different types of relationships mandate variations in managerial attention. Relationships characterised by short-term or transactional market exchanges related to minor contracting issues during the implementation phase of an individual project probably do not often require long-term attention on the part of the project marketer. On the other hand, long-term relationships with central customers, suppliers or financiers, need different, long-term oriented attention, which continues during the sleeping phase of the relationship between individual projects when future demand is anticipated and constructed (Hadjikhani, 1996; Skaates & Tikkanen, 2003). This need for attention is often overlooked by project marketers who are reported to focus only upon the marketing of and bidding for individual projects during the delivery process and thus, inadvertently, on sporadic, last moment 'pell-mell' running after promising potential projects (Cova, Mazet, & Salle, 1994).

An important objective is for the project marketer to produce an understanding of the processes or dynamic aspects of the network related to project business, including its discontinuous

relationships. However, this is a difficult task, due to the complexity of the network of actors and their activities and resources, as well as the discontinuities in exchange between individual projects. Thus, the deepening of a firm's understanding of relationship (portfolio) management within its business network may prove to be a challenging task for many managers mainly schooled in engineering or project management with an innate focus on project (portfolio) management. Our framework aims at providing both researchers and practitioners a holistic conceptual lens in order to tackle the mentioned complexity challenge.

The majority of relationship portfolio models are based on customer or supplier relationship portfolio modeling. Moreover, indirect relationships to competitors are often analyzed and managed. The best-known models include both two- and three-dimensional axes along with single-, two- and three-phase analyses (Zolkiewski & Turnbull, 2003). The most-often cited relationship portfolio models include the ones by Fiocca (1982), Campbell and Cunningham (1983), Shapiro et al. (1987), Krapfel, Salmond and Spekman (1991), Olsen and Ellram (1997) and Turnbull and Zolkiewski (1997). For instance, Campbell and Cunningham (1983) propose a three-step portfolio management approach of customer relationship life cycle assessment, customer/competitor analysis by market segment, and portfolio analysis of key customer relationships in terms of the growth rate of customer's market and the relative share of customers purchases.

In a recent paper, Zolkiewski and Turnbull (2003) elaborate the concept of relationship portfolios by considering the relationship between networks and portfolios. In our study, we centrally follow their line or argument stating that business networks can be visualized by viewing them in terms of their constituent portfolios. Zolkiewski and Turnbull (2003) suggest that in addition to customer and supplier portfolios, indirect relationships portfolio should also be analyzed and managed. In our framework, we subdivide relationship management into the management of the customer relationship portfolio of the project-based firm on the one hand and into the network relationship portfolio (including e.g. supplier relationship portfolio and the mentioned indirect portfolio) on the other. This subdivision is not merely a presentational device; it also focuses the readers' attention on the fact that relationship management is inherently different in these two sub-portfolios. In developing customer relationships, the key decision-maker is most often the customer, whereas in building supply architectures, for instance, the project-based firm can make the essential decisions itself.

2.2. *Project management and project portfolios*

A project portfolio is a collection of projects that are carried out in the same business unit sharing the same strategic objectives and the same resource pool. Project portfolio management deals with the idea that companies should not only concentrate on managing independent projects and their specific objectives but also on managing the projects as a tight entity with shared objectives (Archer & Ghasemzadeh, 1999). Cooper et al. (1997a) describe portfolio management as a dynamic decision making process whereby a list of active

projects in the business is constantly updated and revised. New projects are evaluated, selected and prioritized, existing projects might be accelerated, killed or de-prioritized and resources are allocated and reallocated to the active projects. The decision process is characterized by uncertain and changing information, dynamic opportunities, multiple goals and strategic considerations, interdependencies among the projects and multiple decision makers and locations (Ringuest & Graves, 1999).

Many important considerations of future development of projects relate to the wider organizational context, and more specifically to the following questions (Artto, Martinsuo, & Aalto, 2001):

- What are a project's interrelations with other organizational structures such as other projects and the line organization, and
- What is a project's role in fulfilling the strategic objectives set in the corporate management, and what are the appropriate procedures to manage projects towards profit?

Applications of project portfolio management address these questions, by simultaneously highlighting the centrality of project portfolio management in the strategic management of a project-based firm. Examining the projects of a project-based firm as a portfolio emphasizes the fact that projects share same strategic objectives and the same scarce resources (Dye & Pennypacker, 1999; Johnson & Scholes, 1989).

Balancing capability and need generally results in defining the best that can be achieved with the limited resources available, rather than attempting to find the perfect solution (Dye & Pennypacker, 1999; Spradlin & Kutoloski, 1999). In managing a project-based firm, project portfolio management focuses on the potential and risks that project initiatives and projects carry for the success of the business in the future. Thus, project portfolio management belongs as a natural part to the wide perspective of the marketing strategy of a project-based firm.

Project portfolio management includes decision-making, prioritization, review, realignment, and reprioritization (Dye & Pennypacker, 1999; Luehrman, 1998). Emphasis is on managing the company's strategic portfolio of projects at an aggregate level. For the decision-making activity in project portfolio management, the terms selection and prioritization are often used as synonyms. To support decision making, project selection and prioritization criteria are defined. Ultimate strategic portfolio decisions are made in board meetings with strong cross-functional view. This occurs, for example, by assigning portfolio decisions for a managerial board that consists of the directors of the business units of a project-based firm. Companies make such portfolio decisions periodically (e.g. annually, quarterly) in separate portfolio review meetings on all projects together (Cooper et al., 1997b).

Project portfolio management has three generic objectives. Decision making on *maximizing the value* of the portfolio can be supported by investment calculations, other financially based methods, and scoring models that build the desired objectives into a criteria list with different weights of criteria of different importance. *Balance in the portfolio* can be built in many dimensions such as risk versus reward, ease versus attractive-

ness, or breakdown by project type, market and product line. Risk versus reward (or opportunity) considerations represent one important aspect to consider for evaluating the success in future business and the probability that relates to commercial or technological success in the future. Furthermore, as the resources are scarce, another important aspect is the balance in the portfolio in terms of resource allocation across projects. *Link to strategy* reflects alignment between projects, and the strategic content and resource allocation intended in the strategy of the business. This link can be achieved by applying strategic reviews/checks, by building the strategic criteria into scoring models, project selection tools, go/kill models, prioritization models, or by applying top-down strategy models that are based on setting aside funds (envelopes or buckets of money) destined for different types of projects (Cooper et al., 1997b).

The extant project portfolio research emphasizes the managerial challenge of managing R&D and offering development projects as a whole. The research on managing delivery project portfolios is scarce. In our framework, we see that both offering development projects and delivery projects have a significant role in the marketing strategy of a project-based firm. Thus, our framework distinguishes between two different project portfolios. The two portfolios are: offering development project portfolio, and sales and delivery project portfolio.

3. The marketing strategy of a project-based firm

Generally, we define the marketing strategy of the firm as the systematic effort through which the company aims at optimal value creation for its customers, shareholders and other network partners in accordance with the set strategic and operational objectives. Our definition of the marketing strategy is related to the level of business units responsible for operating project business in a larger corporation or to the level of entire smaller project-based firms.

The marketing strategy of the firm realizes the tasks defined for marketing in the business strategy of the firm through the holistic and systematic management of the complex and intertwined processes of exchange, coordination, adaptations, and customer and market intelligence within the relevant business network of the firm. These tasks typically relate to customer relationship management, supply chain management, product development management and the management of other network relationships relevant for the business model of the firm (Srivastava, Shervani, & Fahey, 1999; Tikkanen, Lamberg, Parvinen, & Kallunki, 2005). This subdivision of marketing tasks in a firm is a conceptual starting point for our paper.

From project marketing, relationship portfolio management and project portfolio management literature, we derive four different portfolios that are of significance for the marketing strategy of the project-based firm. We thus sub-divide relationship portfolio management into the management of the company's customer relationship portfolio on the one hand and its network relationship portfolio on the other.

As mentioned, the rationale for this sub-division can be identified in the fact that that relationship management is essentially different in these two portfolios. In the customer portfolio, it is

essentially the customer that makes the purchasing decisions based on the project-based firm's marketing and sales efforts. On the other hand, in the network relationship portfolio, for instance in supplier relationship portfolio management, the firm can itself make the central decisions on e.g. supply architectures.

Moreover, we differentiate between sales and delivery project portfolio management and offering development portfolio management based on the same 'external vs. internal' decision-making rationale. The customer makes decisions on purchasing individual projects, whereas offering development project portfolio management is conducted mostly by the firm itself.

Fig. 1 conceptualizes the essential content of the marketing strategy of a project-based firm. The framework takes the form of four managerial portfolios. Each portfolio is characterized by its content and the most central portfolio management activities. The four portfolios are the firm's (1) customer relationship portfolio, (2) network relationship portfolio, (3) sales and delivery project portfolio, and (4) offering development project portfolio. Managerial tasks in Portfolios (1) and (2) consist of relationship management, whereas Portfolios (3) and (4) consist of project management tasks. Thus, the two tasks of relationship portfolio management and project portfolio management are essentially interlinked in our approach. This also constitutes the key theoretical contribution of our framework.

Our framework essentially adds the management of the project-based firm's sales and delivery projects to recent generic strategic marketing frameworks highlighting the importance of the concerted management of customer relationships, supplier/other relevant network relationships, and product development

(e.g. Srivastava et al., 1999; Tikkanen et al., 2005). Thus, in our framework, Portfolios (1), (2) and (4) can be considered as more general (i.e. found in any firm also outside the area of project business), whereas Portfolio (3) brings in the viewpoint of the project-based firm.

The four portfolios and key issues in their management are elaborated upon in Table 1 in terms of the content of each portfolio, the value creation logic and central portfolio-specific objectives for the project-based firm, key portfolio management activities and, finally, synergies within each portfolio. These issues are discussed in more detail in the following section.

The central properties of the four managerial portfolios and their interrelationships can be conceptualized as the sum of *tangible*, objectively existing structures and processes and *intangible*, *cognitive* meaning structures at the level of a business organization (cf. Tikkanen et al., 2005). Issues related to the tangible dimension are essentially codified (e.g. materially existent, written, built, coded or scripted) and are thus visible and accessible for the members of the organization or the network. On the other hand, the cognitive dimension refers to the meanings and meaning structures ('mental models') which the actors maintain about the four portfolios. The cognitive aspects also centrally relate to the way in which the actors perceive the functioning of the project-based company's marketing strategy. For instance, if key managers lack an understanding of how the management of the company's customer relationship portfolio is linked to the management of its sales and delivery project portfolio, the entire marketing strategy of the company may be defunct in practice.

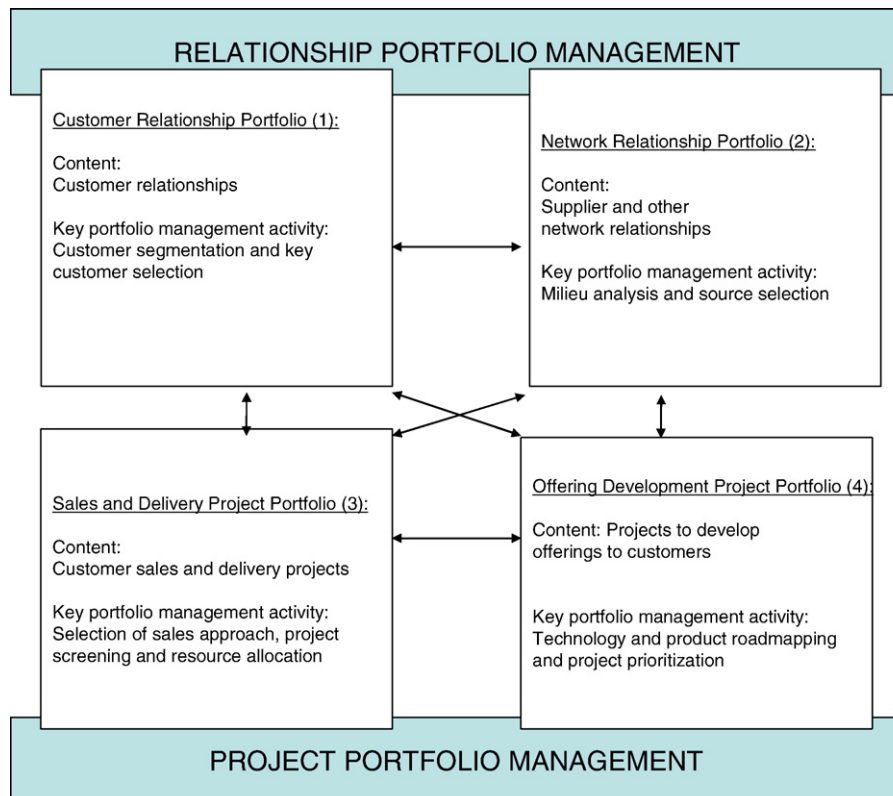


Fig. 1. The marketing strategy of a project-based firm: The Four Portfolios Framework.

Table 1
Key aspects related to the management of the four portfolios

	Customer relationship portfolio	Network relationship portfolio	Sales and delivery project portfolio	Offering development project portfolio
Content	Customer relationships	Supplier and other network relationships	Customer sales and delivery projects	Projects to develop offerings to customers
Value creation logic for the project-based firm	Access to customers for sales and market information	Access to resources and competences	Sales revenue of projects and related services	Development of products and delivery processes
Portfolio-specific objective	Creating and maintaining relationships with attractive customers	Securing availability of preferred resources through relationships	Initiating and executing profitable projects	Ensuring technically and functionally advanced offerings
Key portfolio management activities	Customer segmentation and key customer selection	Milieu analysis and source selection	Selection of sales approach, project screening and resource allocation	Technology and product roadmapping and project prioritization
Central synergies within the portfolio	Customer segments and common behavioral patterns	Complementary and substitutive resources and competences of actors	Repetitive solutions and processes across projects	Technology content and timely dependencies across development projects

The specific objectives of portfolio management with the Four Portfolios Framework presented in the following are: (1) to maximize the value of the four portfolios as a whole, (2) to balance the portfolios and the opportunities and risks in each, and (3) to link and integrate them into the overall business strategy of the firm to achieve growth and/or to boost profitability. Portfolio management thus includes ongoing decision-making, prioritization, review and realignment of relationships and projects. Scarce resources have to be allocated to the portfolios and issues that most centrally contribute to the meeting of these objectives. On the other hand, we do not see the marketing strategy of the project-based firm merely as a zero-sum game between the management of the four portfolios. We argue that most managerial challenges project marketers face may actually arise from central interdependencies between the portfolios. Based on these challenges, they have to make decisions of how to allocate resources such as money or managerial talent to any of the individual portfolios and the related tasks.

4. The four portfolios

4.1. Portfolio 1: Customer relationship portfolio

4.1.1. Value creation logic and portfolio-specific objectives

The management of the customer relationship portfolio is often identified as one of the most crucial aspects in the management of any company's business model, naturally also outside the area of project business. The customer relationship portfolio of the company is the major source of revenues and knowledge that facilitates an understanding of customer value creation and thus developing the company's offerings. Customer value creation is inherently connected to the resources, capabilities and competencies of the company and its business network (Anderson, Håkansson, & Johanson, 1994). This task of managing the customer relationship portfolio is executed through a customer relationship management (CRM) process, addressing all aspects of identifying customers, creating customer knowledge, building customer relationships and shaping their perceptions of the organization and its offerings (Srivastava et al., 1999). The key portfolio-specific objective for the

project-based firm is thus to create and maintain relationships with attractive, profitable customers to which it is able to potentially sell both projects and services.

4.1.2. Key portfolio management activities

Segmentation and key customer identification are presented as the central portfolio management activities in many relationship portfolio models. Consequently, customer value creation is contemporarily seen as the key determinant of segmentation in business markets (Anderson & Narus, 2003). In other words, companies orient their core competencies and business processes towards optimal value creation for their key customers. Key customers are defined as those customers to whom the company's competencies and offerings create most value vis-à-vis competition (Hamel & Prahalad, 1990).

Research has shown that project-based companies have developed sophisticated ways of co-constructing demand in their portfolio of project initiatives (Cova et al., 1993). Recently, it has also been stated that many industrial project-based companies are aiming at more efficient project replication strategies through the use of modular architectures in their projects, often supported by the creation of industrial brands for their project archetypes (Cova et al., 2002). All these activities call for a more systematic approach to the management of customer value.

The identification of key customer relationships and relevant customer segments should be based on value creation logic, including the value capture (net earnings) the project-based company is able to derive from the relationships. Customer value, however, is not always easy to conceptualize. This problem has been often identified as the 'subjectivity problem' in many relationship portfolio models (Zolkiewski & Turnbull, 2003, p. 290). Customer value can relate to techno-economic efficiency and effectiveness (e.g. a timely and streamlined order-to-delivery processes) or to more subjective, cognitive values of a company's offerings from a customer's viewpoint (e.g. value leverages due to interorganizational trust, or the existence of a strong brand name). On the other hand, it can be argued that from an economic viewpoint, the most concrete customer value emerges from exchange activities that can help customers grow their own business and/or to leverage their profitability.

Existing customer relationship portfolio models can be capitalized upon in conducting the customer relationship management process. However, it is probably advisable to develop more refined, context-specific frameworks in order to understand the state, nature, outcomes and developmental phases of the project marketer's customer relationships more deeply. This is primarily because project marketing and selling processes, project deliveries, sleeping phases in-between individual projects, and, for example, different kind of add-on service agreements often characterize these customer relationships (Skaates & Tikkanen, 2003). Existing customer relationship portfolio models may give a somewhat simplified picture of the here and now of these complex and long-term relationships. It should also be born in mind that in project business, the concept of the customer is elusive. In contrast to many marketing situations, separate actors often buy, use, pay and finance the delivery. This constitutes an essential link between customer relationship portfolio and the network relationship portfolio.

4.1.3. Synergies within the portfolio

In the Four Portfolios Framework, the customer relationship portfolio of a project-based company is identified as the foremost portfolio the management of which is fundamental to the management of all of the remaining three Portfolios (2)–(4). It is an essential task to see the other portfolios from the viewpoint of the long-term development of customer relationships. This is sometimes neglected by project marketers, who tend to put most of their emphasis on Portfolio (3), i.e. selling and delivering individual projects. It is also essential that based on customer relationship analysis, consistent customer segments consisting of individual customer relationships with similar features and common behavioral patterns are formed. For these segments, common marketing and sales processes and procedures for co-construction of project demand can be designed.

4.2. Portfolio 2: Network relationship portfolio

4.2.1. Value creation logic and portfolio-specific objectives

Network relationship portfolio consists of an organization's relationships to all business and non-business parties that are relevant in managing the project-based company's business. The objective of managing the network relationship portfolio is to create a strong position in the network in order to initiate and maintain profitable business relationships and to gain access to external resources and competencies that are required for delivering value to the customer. Thus, the most central objective is to secure the availability of needed resources and competencies through external relationships.

4.2.2. Key portfolio management activities

Key portfolio management activities in the network relationship portfolio are essentially related to the identification and prioritization of network relationships. The network relationship portfolio centrally includes suppliers, sub-suppliers and other stakeholders that can essentially influence the marketing strategy of a project-based company. In addition to relationships between business actors in the project networks,

relationships with institutional non-business actors of such state organizations, professional groups and spontaneous pressure groups, can influence business operations (Skaates & Tikkanen, 2003; Tikkanen, 1998). Most importantly, the literature identifies relationships to competitors, financiers, permanent and spontaneous pressure groups, public institutions, regulatory agencies and governments as important to a project-based company's operations (Cova et al., 2002; Winch, 2004). The function of these often 'extra-business', often indirect relationships is to provide the firm with, for example, institutional structures, reference points and resources that are necessary for the company's operations.

Key activities in network relationship management include the identification, prioritization and management of network relationships based on expected value and relationship outcomes, the identification of new relationships that could improve an organization's technological capabilities and offering development, and the management of non-business relationships that enable, for instance, the firm to gain market access.

Project sales and delivery processes entail the management of the individual project supply process within a multi-firm project network. Consequently, the business relationships between the buying and selling firms are the central unit of analysis before, during, and after the delivery process of any individual project (Hadjikhani, 1996). These relationships essentially constitute what has been termed as milieu (Cova et al., 1996) or project marketing horizon (Tikkanen, 1998). In general, milieu analysis and source selection is a central task in identifying and prioritizing network relationships. The supplier relationship portfolio is the most central sub-portfolio of the network relationship portfolio of the project-based firm. Supplier relationship portfolio guarantees access to the external activities and resources a project-based company requires in order to fulfill its commitments to the customers.

The supplier relationship portfolio management is essential for (1) the establishment of a secure basis for operational excellence and thereby lowering operational risk and (2) aligning the inputs for maximized value creation through procurement. The latter aspect deals with a much larger set of inputs than is traditionally understood in industrial supply chain management as e.g. add-on and after sales services present a major possibility to value leverage from the viewpoint of the marketing strategy of the project-based company as a whole.

Consequently, it is essential to understand the company's supplier relationship portfolio in terms of the state, nature, outcomes and developmental phases of the relevant supplier relationships. The management of supplier relationships is implemented through a supply chain management (SCM) process that incorporates the acquisition of all tangible and intangible inputs as well as the efficiency and effectiveness with which they are transformed into customer solutions, be they delivery projects or service commitments. Thus, the SCM process connects the suppliers' business processes to company-internal processes such as material management, manufacturing and project management.

The SCM process essentially comprises the management of various processes of exchanges, coordination, adaptation, and input market and supplier intelligence in order to secure an

effective and efficient flow of input to the company's internal processes aiming at optimal customer value creation in the entire customer relationship portfolio. Based on this understanding, an optimal SCM process can be developed to manage the company's supplier base in a systematic manner. Again, existing models for supplier relationship portfolio analysis and management can be capitalized upon or more detailed, context-specific models can be developed. For the project-based company operating perhaps dozens or hundreds of individual projects in several locations and countries, the supplier/subcontractor relationship management becomes a crucial issue for quality, cost management and timely delivery. As project-based companies have increasingly outsourced many project activities and even larger sub-projects, this issue has become more and more important.

4.2.3. Synergies within the portfolio

The most central synergies in the network relationship portfolio arise from the possibility of identifying complementary and substitutive resources, capabilities and competencies possessed by different actors in the business network of the project-based firm. For instance, more and more activities or entire sub-projects have been outsourced by main project contractors to external partners. This is a visible trend in most project industries such as shipbuilding and construction.

4.3. Portfolio 3: Sales and delivery project portfolio

4.3.1. Value creation logic and portfolio-specific objectives

The business operations of a project-based firm are realized through external customer delivery projects (Söderlund, 2004; Turner & Keegan, 2001). The delivery project portfolio of a project-based firm consists of two sub-portfolios: sales projects (prospects and bids) and delivery projects that are currently underway (orders booked). In addition, project-based firms complement project deliveries with service operations that are designed to provide their customers with continuous support, maintenance, refurbishment and other services during the operation phase (Morris, 1994; Oliva & Kallenberg, 2003). The main business objective for the sales and delivery project portfolio is to initiate profitable projects and to ensure that they are executed successfully. Moreover, these projects may open opportunities to sell profitable add-on services.

4.3.2. Key portfolio management activities

Selection of the sales approach determines whether a supplier uses resources to become actively involved with shaping the project and rules of the game before invitation to tender. The two main alternatives for the supplier to choose are the constructivist and the deterministic approaches (Cova & Hoskins, 1997). In the constructivist approach, the supplier aims at an active co-construction of project demand with the customer and other relevant network partners (Cova et al., 1993). In the deterministic approach, the supplier is less active and primarily responds to calls for tenders.

Project screening is used to focus intense sales activities on those sales projects that are most attractive and the supplier has a good competitive position to win the project (Cova et al.,

2002). In the case of pure profit generation, the delivery must be in line with the business strategy of the firm. Project selection and prioritization in the portfolio are conducted based on profit expectations, and constrained by the resources and capabilities that are available. Selection and prioritization must be made by analyzing how the portfolio of sales and delivery projects and related service commitments as a whole contributes to the strategic objectives of the firm.

The most important portfolio-level strategic decisions related to delivery projects are made during the sales phase of an individual project (for the phases of the project marketing process, see e.g. Holstius, 1989). During the latter phases of a project, it is impossible or difficult to make go/no-go decisions or considerable changes in the resource allocation because of the contractual obligations that bind the project supplier. Thus, in the project execution phase, the portfolio-level decision making is mostly concerned with the effective use of resources in order to be able to deliver the project profitably on time.

4.3.3. Synergies within the portfolio

Synergies in the project sales and delivery project portfolio are achieved by implementing projects that apply similar technological solutions or delivery processes, which allow the effective use of resources. In addition, the project supplier often tries to increase the profitability of project deliveries by introducing standard and modular products or processes for increased effectiveness, efficiency and cost savings (Arto, 1999). Well-structured products, delivery processes and project management functions have become essential sources of competitive advantage for many project-based companies (Hellström & Wikström, 2005).

4.4. Portfolio 4: Offering development project portfolio

4.4.1. Value creation logic and portfolio-specific objectives

The offering development project portfolio includes projects that aim at developing and maintaining a viable strategic, technological and organizational competence that can be translated to competitive offerings for customers. Extensive technological know-how and expertise often form a central core competence for any project-based firm.

The core value creating process in the management of R&D projects is capability exploration. It includes the overall R&D activity with a specific emphasis on the development of new customer solutions, the reinvigoration of existing solutions, and development of capabilities that enable internal and external value creation. The ultimate objective is to develop offerings that ascertain optimal customer value creation. This is accomplished through offering development that often takes the form of a project.

4.4.2. Key portfolio management activities

Roadmapping means a process that contributes to the integration of markets, products, technologies, and business by displaying their forecasts and interaction over time. Roadmaps establish the relative priorities for setting targets, justifying R&D investments and coordinating the efforts of responsible

teams (Groenveld, 1997). Technology roadmaps specify the features and technologies available for and used in the future products, and link them with business strategy (Albright & Kappel, 2003). Product roadmaps characterize the product launch path between product versions and modifications, platform use and added functionality.

The project prioritization process for the offering development project portfolio is based on managerial applications that include decision-oriented generic process models, strategic buckets approaches, strategy table schemes, stage-gate or phase-review decision-making, portfolio decision-making, portfolio reviews, group decision-making techniques, decision support tools, and visualization techniques, among others (Archer & Ghasemzadeh, 1999; Cooper et al., 1997a,b, 1998a,b; McDonough & Spital, 2003). Although prioritization occurs during all phases of the offering development projects, the earlier the right go/no-go decisions are made on new initiatives, the better (Wheelwright & Clark, 1992).

4.4.3. Synergies within the portfolio

For an integrated developmental strategy, technology content in development projects of different time span must be carefully integrated across all projects. Product development decisions are often implemented through several projects and product roadmaps that are used to link individual development projects as an integrated whole. The interrelatedness of different simultaneous projects with different time spans and purposes introduces challenges to successful R&D management in terms of how projects and project portfolios are managed (Groenveld, 1997; Kostoff & Schaller, 2001).

5. Managing interdependencies between portfolios

The main managerial challenge for creating and implementing the marketing strategy of a project-based firm is to identify and effectively manage interdependencies between each of the portfolios. Thus, the four portfolios and their interdependencies have to be seen ‘globally’, as a whole. As stated above, the major managerial challenge is resource allocation between the four portfolios and the related portfolio management tasks. For instance, in a project-based firm, managerial resources can be used to recruit key account managers to put more effort in managing key customer relationships in the customer relationship portfolio, or purchasing managers can be hired to make the company’s sourcing more systematic within strategic supplier relationships in the network relationship portfolio. Alternatively, project managers can be recruited to focus on the sales and delivery project portfolio or engineers can be hired to manage the offering development project portfolio. Obviously, these portfolio management decisions are always very context- and situation-specific.

In Table 2, the main interdependencies between the four portfolios are identified. The idea is to reflect the influence of each of the other three portfolios when making portfolio management decisions in an individual portfolio. From the viewpoint of the most important portfolio management decisions related to each portfolio, Table 2 identifies the most important influences coming from the other portfolios.

Interdependencies between all four portfolios must be taken into account while implementing marketing strategy of a project-based firm. The simultaneous and dynamic nature of all multiple interdependencies introduce significant challenges for

Table 2
The key interdependencies between the four portfolios

	Customer relationship portfolio	Network relationship portfolio	Sales and delivery project portfolio	Offering development project portfolio
Influences to:				
Influences from:				
	<p>↓</p> <p>Key portfolio management activity: Customer segmentation and key customer selection</p>	<p>↓</p> <p>Key portfolio management activity: Milieu analysis and source selection</p>	<p>↓</p> <p>Key portfolio management activity: Selection of sales approach, project screening and resource allocation</p>	<p>↓</p> <p>Key portfolio management activity: Technology and product road mapping and project prioritization</p>
Customer relationship portfolio		Roles of the most Influential stakeholders related to key customers	State, nature, outcomes and developmental phases of key customer relationships vis-à-vis project selling and deliveries	New/enhanced solutions needed for selected customer segments and individual customers
Network relationship portfolio	Relative positioning in the milieu and the level of influence among key stakeholders; the ‘elusiveness’ of customers in project marketing		Milieu management: the roles of relevant actors in business networks	External resources and competencies available through network relationships
Sales and delivery project portfolio	References and status of current sales and delivery projects in each customer/market segment	Roles of strategic suppliers and other stakeholders for current sales and delivery projects		Solutions required to win deals for projects or to successfully Implement delivery projects
Offering development project portfolio	Status of offering development projects to provide value for customers	External resources, capabilities and Competencies required in offering development projects	Availability of new or improved solutions; need for pilot projects to test new solutions	

strategy implementation. Furthermore, due to the different nature of businesses and their environments, interdependencies between portfolios are situation-specific. Interdependencies can be either positive or negative. In the following, we provide a couple of illustrative examples of the potential influences and interdependencies.

Examples of positive interdependencies are:

- Successful delivery projects in Portfolio (3) create references that enhance trust and commitment in existing customer relationships and facilitate new customer acquisition in Portfolio (1).
- Strong relationships with customers in Portfolio (1) create possibilities to more easily sell and deliver additional projects in Portfolio (3).
- Offering development in Portfolio (4) often occurs in delivery projects in Portfolio (3) as new solutions are tested and piloted in practice.
- Strong relationships in Portfolio (2) with strategic suppliers responsible for ever larger sub-projects make it easier to sell and deliver projects in Portfolio (3), enhancing the efficiency and effectiveness of the marketing strategy.
- Learning in sales and delivery projects in Portfolio (3) helps create an optimal supply architecture in Portfolio (2) for future projects.

Interdependencies can also be negative:

- Short-term profit maximization in delivery projects in Portfolio (3) leads to decreasing quality and customer satisfaction, affecting customer relationship development in Portfolio (1) negatively.
- Neglecting offering development in Portfolio (4) decreases the ability to deliver profitable projects in Portfolio (3).
- Failure to create relationships to actors in local networks in Portfolio (2) decreases the possibility of selling projects in Portfolio (1) to new customers in new target areas.

Although interdependencies between portfolios are often rather simple, they may be difficult to identify and manage in practice due to the fact that decision making is often dispersed in relatively independent organizational units or departments responsible for e.g. sales, project implementation or R&D. A central managerial implication of the Four Portfolios Framework is that it provides a holistic view to the relevant portfolios and their interdependencies from a strategic marketing perspective.

6. Conclusion

We argue that the management of the four managerial portfolios and interrelationships between them constitute the foremost conceptual and managerial challenge for researchers and managers. In essence, managers need to understand the essence of the four portfolios and their interrelationships. Moreover, they need to manage them systematically as a coherent marketing strategy that is in line with the higher-level corporate strategy.

Obviously, the management of the four portfolios in the framework may be more or less systematic depending on the level of sophistication of the company's management. On the other hand, actions and outcomes may also emerge autonomously as a result of the systemic consequences of different organizational configurations, in this case the four managerial portfolios and their interrelationships. The actualization of any outcomes (e.g. success in the sale of a project, good financial performance or organizational growth) is thus dependent on the systemic properties of the marketing strategy, i.e. the Four Portfolios as a whole and how well it fits with the business environment for project-based company. The marketing strategy of a project-based firm is developed through a dialectical process, in which all of the 'components' are in interplay with each other (cf. Lewin & Volberda, 1999). In other words, lessons of the past and expectations for the future influence the firm's marketing strategy and its evolution.

The primary contribution of this paper is the conceptual definition of the scope of the marketing strategy of a project-based firm. The explicit definition of the marketing strategy is also of utmost importance when an organization faces significant changes in its business environment and/or business logic. On the other hand, our framework may also help understand the essence and challenges of project-based business on a general level. This may be relevant, for instance, for investors who traditionally consider the business of project-based firms as fuzzy and risky. Our conceptual framework can simultaneously be considered as a managerial tool for practitioners in project-based companies which in a novel way highlights central managerial issues in implementing marketing strategy.

The empirical application of the Four Portfolios Framework in project-based firms in different industries and target countries would provide the most relevant avenue for future research. Our framework may be useful in providing explanations why some project-based firms are successful and others fail in different situations and contexts.

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