

## **New Partnering Models and their Success Factors in the Swiss Construction Market**

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### **Abstract**

Given the conventional project delivery forms currently in use, and the ensuing fragmented interests of the individuals involved in the projects, cost optimizations are primarily driven by price competition. This produces a high degree of potential conflict and an attitude of confrontation among the various individuals involved in the project. This paper focuses on identifying a solution to achieve cost optimizations in the future through the synergies of a partnership or cooperation agreement by using the synergy potential to focus increasingly on generating innovations and continuous improvement processes.

Two approaches to differentiation that are based on each other are examined for an in-depth verification of this working hypothesis. The first differentiation approach examines whether there are success factors in projects that substantially support and promote the partnering approach to project delivery. The second approach to differentiation is based on this and develops the main features of a possible total service contracting portfolio that is both life cycle-oriented and specifically promotes the partnering approach to project delivery.

### **Keywords**

Partnering Models, Success Factors, Life-Cycle Orientation, New Project Delivery

### **1. Introduction**

The Swiss construction industry is still undergoing a process of structural change, which has been ongoing for years and can be characterized as creeping. On the one hand, planners, construction companies, and their trade associations describe the symptoms of the structural changes as follows (UBS Outlook, 1999): nearly perfect competition in the principal market segments of the construction industry (numerous equivalent suppliers and numerous potential customers), and price competition as the criterion for differentiation for designer and companies. On the other hand, investors and property developers describe the symptoms as follows (UBS Outlook, 1999):

- fragmentation into various partial responsibilities with particular interests on the part of the individuals involved, without any project-specific overall optimization is the case with all traditional project delivery forms

- uncertainty in the process in terms of achieving the goals specified by the owner or property developers
- inadequate life cycle orientation in the case of today's conventional project delivery forms

The currently globally widespread project delivery models often result in a confrontation and conflicts of the parties involved and are generally characterized by: frequently a lack of a common goal; little faith among the contract partners; no sharing of risks but tendency to assign risks (Girmscheid, 2004). This causes the fragmented individuals involved in the project to adopt a defensive attitude rather than a pro-active project attitude. One of the primary reasons for the high level of confrontation orientation in the Swiss construction industry is that the current, traditional project delivery models strive to optimize investment costs predominantly through price competition; both in negotiations between the property developer and the GS/TS contractor, and in negotiations between the GS/TS contractor and the subcontractor.

In order to escape this situation, ICEM is pursuing a working hypothesis as a future approach to achieving cost optimizations through the synergies of a partnership agreement by using them to increasingly generate innovations and achieve a continuous improvement process from one project to the next by adopting new project delivery and business models.

## **2. Partnering as a solution**

The first question to be asked in relation to this working hypothesis is: "Are there concepts and examples that enable synergetic, pro-active cooperation leading to a win-win situation for all project partners, which generate innovations and a continuous improvement process and, as such, value for money?" Other sectors of industry that are characterized by intense competitiveness, such as automobile manufacturing, the aerospace industry, etc., have shifted away from cost optimization through pure price competition towards innovative, cooperative teamwork in order to achieve cost optimization through partner synergies in development and production.

The second question arising from this is: "Can such positive examples from other sectors of industry with their specific product development times and – to a large extent – repetitive production methods be transferred to the construction industry?" In England (Latham Report, 1994) and other EU countries initiatives at government and ministerial levels (UK, Ministry of Defence, 1997) have been working to promote or even "force" partnering in project delivery. This indicates that the paradigm shift is transferable to the construction industry in a form specially adapted to the specific industry.

## **3. Methodology**

Empirical interpretivism and constructivism research paradigm are used to assimilate the scientific findings in this construction management issue. The constructivist research paradigm is extremely prolific since it construes social systems based on goal-means relationships (input-output) in order to achieve an intended effect. The interpretivistic research paradigm enables the recognition of social phenomena revealed by empirical research. In a first phase, the differentiation approach "Promoting partnering with specific use of supporting success factors" is examined using the interpretivistic research approach. This differentiation approach represents a hypothesis that is empirically examined using a multiple-case study (Yin, 1994). The objective of the empirical examination is to determine whether there are success factors in projects that have already been delivered which played a substantial role in the partnering approach to project delivery.

Based on these results, a second phase will focus on the differentiation approach "Life cycle orientation and partnering" using the constructivist research approach. This involves the constructive development of a network partnership model with the main features of a possible total service contracting portfolio that is

both life cycle-oriented and conducive to partnering. In order to ensure the validity and reliability of the model, it will be given a theory-driven structure using transactional theory and structuration theory. The triangulation of the quality testing process will be concluded using a realizability test.

#### **4. Differentiation approach – Promoting partnering with specific use of supporting success factors**

In order to specifically promote a partnering approach to project delivery, as a company, the first fundamental approach would be to identify the success factors arising from partnership-delivered "best practice" projects, which would then - upon acquiring and delivering new projects - need to be examined in terms of their applicability and re-activated accordingly. Using multiple case studies of partnership-delivered projects the relevant "best practice" success factors were determined (Girmscheid, 2004), with the following two practical cases being explained as examples:

- *Case Study 1: Project delivery with total services competition*  
The developer of the project described below is a property profit center that forms part of an international conglomerate. The forecast predicted that the developer was going to need 1000 new desks within about two and a half years. Given the time pressure facing the project, the developer decided to run the project as a total services contractor model with total services competition. For this case study the success factors illustrated as examples in Figure 1 were identified during the individual project phases.
- *Case Study 2: Construction of a new football stadium – Total service contractor responsible for project development*  
The old football stadium in Bern, Switzerland, was opened in 1954. The project development is based on the fundamental concept of being able to attract private investors to finance the project by designing a multi-purpose complex offering a range of various uses, such as shopping center, school, football stadium, etc. In doing so the investors would split the investment volume of 350 million Swiss Franks between themselves, thus ensuring that the public sector would not have to provide any substantial financial support itself. Following the development of the project, consultations regarding alterations to the zone plan and an architectural competition, the total service contractor started approaching potential investors whilst the planning phase was running, and was able to attract a group of investors comprising three companies. This investor group then acted as the property owner for the construction of the new football stadium from this point in time onwards. For this case study the success factors illustrated as examples in Figure 1 were identified during the individual project phases.

Case study 1			Case study 2		
Phases	Milestones	Success factors	Phases	Milestones	Success factors
Project development	Strategic planning	<ul style="list-style-type: none"> <li>Aim: Need for 1000 desks within a short space of time</li> </ul>	Project development	<ul style="list-style-type: none"> <li>Total service contractor initiates project development</li> <li>Basic concept with regard to financing and usage is developed</li> </ul>	<ul style="list-style-type: none"> <li>High levels of commitment and willingness to take on risk on the part of the total service contractor</li> <li>Basic idea for multi-purpose usage and financing from private investors</li> </ul>
	Preliminary survey	<ul style="list-style-type: none"> <li>Commissioning architect for plausibility study</li> <li>Commissioning developer's consultants</li> <li>Choice of delivery model</li> <li>Definition of evaluation criteria for bids</li> </ul>		<ul style="list-style-type: none"> <li>International architectural competition put out to tender to identify a design concept</li> </ul>	<ul style="list-style-type: none"> <li>International involvement of teams of architects</li> </ul>
Total services competition	<ul style="list-style-type: none"> <li>Selection of 5 TSC</li> <li>List of suitable planners and architects</li> <li>Selection from list of team members by total service contractors</li> <li>Assessment of bids</li> </ul>	<ul style="list-style-type: none"> <li>Developer selects 5 suitable total service contractors in advance</li> <li>The 5 TSC had to put their team together from the list – quicker starting speeds by some</li> </ul>	Construction project	<ul style="list-style-type: none"> <li>Development of the project at the construction project levels</li> <li>Negotiations with potential investors</li> </ul>	<ul style="list-style-type: none"> <li>Considerations relating to the refinancing</li> <li>Use as an investment property: Security of return</li> </ul>
	Execution planning	<ul style="list-style-type: none"> <li>Organization of a workshop</li> <li>Subcontractors' submissions</li> </ul>		<ul style="list-style-type: none"> <li>Approval planning and first approval application</li> <li>Active search for tenants for the various rental premises</li> </ul>	<ul style="list-style-type: none"> <li>Total service contractor's handling of the project's complexity</li> <li>Total service contractor's active PR work</li> </ul>
Execution	<ul style="list-style-type: none"> <li>Completion of the building</li> </ul>	<ul style="list-style-type: none"> <li>Organization of a workshop over several days involving everyone (including users and operators)</li> </ul>	Approval planning	<ul style="list-style-type: none"> <li>Contracts signed with the investors</li> <li>Execution planning</li> <li>Rental contracts signed for 2/3 of the rental space</li> </ul>	<ul style="list-style-type: none"> <li>Experience and knowledge gained from the total service contractor building another football stadium: positive reference and trustworthiness</li> </ul>
	Start-up	<ul style="list-style-type: none"> <li>Approval of the building</li> <li>Correction of deficiencies</li> <li>Relocation and start-up</li> </ul>		<ul style="list-style-type: none"> <li>Search for and negotiations with investors</li> <li>Search for and negotiations with tenants, phase 1</li> <li>Search for tenants (2)</li> <li>Rental contracts signed</li> <li>Start-up and opening</li> </ul>	<ul style="list-style-type: none"> <li>Excellent PR work by the total service contractor</li> <li>2/3 of the tenants have signed contracts: guaranteed passers-by</li> </ul>
		<ul style="list-style-type: none"> <li>Simultaneous engineering</li> </ul>	Execution planning		

**Figure 1: Milestones and success factors in case studies 1 and 2**

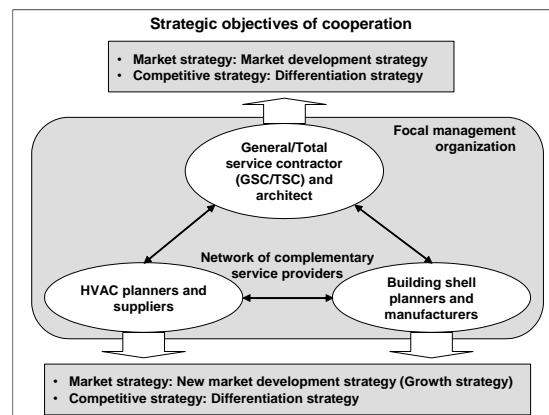
As result of this empirical qualitative research, transferable success factors have been identified (app. 67%) whereas only one third was project specific. Therefore the first working hypothesis was confirmed. A detailed illustration of the success factors and measures in conjunction with their partnering and cooperative context can be found in the empirical examination conducted by Borner (2003).

## 5. Differentiation approach – Life cycle orientation and partnering

Some general and total service contractors (GSC/TSC) are already setting themselves apart from the extremely fragmented single service contractors in the construction industry by offering customers turnkey projects from a single source as a total service and, in doing so, assuming all schedule fulfillment and cost guarantees to a large extent. Nevertheless the situation is still frequently characterized by competition for total service contracting being conducted primarily through the investment costs and not the life cycle costs. In order to be able to offer customers an improved return, total service contractors should not only minimize and guarantee the investment costs, whilst taking specific customer requirements into consideration, but also above and beyond this they should include the primary cost elements of maintenance and operation in their planning. This requires the introduction to the market of new life cycle-oriented service portfolios on the part of competent total service contractors.

In a first phase, such life cycle-oriented service portfolio models can be realized by symbiotically integrating the successful implementation of already known contracting strategies in the field of energy supply into the total services portfolio. This integration goes above and beyond simply adding the service element of contracting to the existing other total services in terms of building construction by utilizing the

potential to optimize the life cycle orientation of the building in terms of its energy consumption during the operation phase, since energy costs are a major factor in the overall operating costs. This requires in such a network partnership model among the GSC/TSC, the HVAC planner and supplier, and the planner and builder of the façade or building shell to exploit synergies to ensure that an integrated approach, in terms of investment and operating costs, can result in the interactive optimization of both the building shell, and the energy generation and distribution.



**Figure 2: Strategic contractor network partnership model with focal management organization**

The objective of such a strategic network partnership model, which should be managed focally (Girmscheid, 2003) by the GSC/TSC, is to generate the performance innovation of a life cycle-optimized building, which should focus on the overall energy optimization in a first phase, taking the architectural and functional requirements of the property developer into account (Figure 2).

## 6. Conclusions and Outlook

The route to achieving partnering with property developers necessitates an improvement over today's interaction in order to better integrate the property developer's requirements. The challenge for successful total service contractors or system providers lies in institutionalizing a "requirement management system" during the various phases of a project. This interactive and integrative requirement management is based on the concept of "design to cost". Starting with the user-oriented requirements, the impacts of the same on the architecture, functionality and technical equipment of the building need to be determined, tracked on an ongoing basis and adapted. This concept breaks with the often static idea that all requirements can be captured conclusively during the design phase. Practice has shown that this is generally not the case and that most conflicts arising in partnerships during traditional project delivery models are caused by this static attitude on the part of the stakeholders (property developer, planner, contractor).

The current situation in the construction industry, which has been ongoing for years now, necessitates the implementation of changes, which requires courage and a willingness to experiment on the part of everyone involved. Studies demonstrate that new forms of cooperation are virtually unavoidable. They must aim to achieve cost optimization, not just through pure price competition, but by using the synergies arising from partnership, in order to exploit the potentials of the continuous improvement process (CIP) and the generation of innovations.

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