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INTEGRATION AND DEVELOPMENT MODEL FOR SUPPLIER RELATIONSHIP MANAGEMENT IN CONSTRUCTION

Andreas Lepold[1], Marco Binninger[2], and Oliver Wolfbeiß[3]

ABSTRACT

The construction industry faces the challenge of selecting and developing partners for its projects. Although partner selection models and criteria have been extensively studied, the construction industry does not yet have optimized tools for selecting partners. Partner development is becoming increasingly important in the context of Lean Construction, which encompasses both Takt Planning and Takt Control (TPTC) and Last Planner System (LPS) approaches. To solve this challenge, a comprehensive literature review identified methods for partner selection in both the stationary and construction industries. The selection of the partners to be developed was presented using a best-practice example from the automotive industry. With the help of expert workshops, a model tailored to the selection of partners to be developed in the construction industry was developed and necessary criteria identified. The resulting conceptual model was tested through case studies and found to be effective. The selected criteria can be flexibly varied and adapted to the corporate strategy. The model was successfully applied to different partners of a general contractor with the help of case studies. The model is currently being tested in practice at a general contractor in an extended project scenario.

KEYWORDS

Supply chain management (SCM), Supplier relationship management, collaboration, trust, integration

INTRODUCTION

The application of lean management to construction was first introduced with the Egan Report Rethink Construction in 1998 (John Egan, 2014). The Lean approaches gained wider dissemination through the efforts of the International Group for Lean Construction and the successful implementation of the Last Planner System approach in 2000 (Ballard, 2000). However, the practical implementation of these approaches has been limited to project-based processing, which is characterized by a long start-up and run-down curve and no constant performing phase (Fagerlund et al., 2021). The focus has been on collaboration and cooperation both in practice and theory, and this project-based mindset is evident in approaches like the Last Planner System or Target Value Design, which are examples of lean construction implementation.

Newer approaches, such as Integrated Project Delivery (Bayazit et al., 2006) or Takt Planning based on the 3-level model (Dlouhy et al., 2016), take the concept a step further by viewing a project as a whole system. However, they are still primarily focused on single project execution, as this is the norm in the construction industry.

[1] Department Lean Construction weisenburger bau GmbH, Karlsruhe, Germany, a.lepold@weisenburger.de
[2] Department Lean Construction weisenburger bau GmbH, Karlsruhe, Germany, m.binninger@weisenburger.de
[3] CEO weisenburger bau GmbH, Karlsruhe, Germany, o.wolfbeiss@weisenburger.de

Continuous improvement is a crucial element of successful production systems, and cross-project learning is a key component of this process (J. M. Clark & K. E. Stecke, 1997). When projects are viewed as part of a larger system, they become interdependent and can be compared with one another. This approach can lead to advantages such as overlapping start-up and run-down phases, greater scaling effects, and a faster learning curve between projects. However, it can also lead to negative effects if approaches and problem-solving processes are not sustainable. The bullwhip effect, caused by a lack of stability, can have a significant impact on the overall system.

To address these challenges, new ways of thinking are necessary. In particular, the interaction between the implementation partners General Contractor (GC) and Subcontractor (SUB) must be considered more closely, as stability is largely generated by their collaboration. This interface between the micro and norm levels in the 3-level model (Dlouhy et al., 2016) is crucial to optimizing performance across projects. When both parties work together and share similar interests in the production system, the interface can be optimized to promote stability.

The construction industry can learn from other industries that have faced similar challenges in transitioning to production systems, and adopt the approach of systematic supplier relationship management (SRM) as part of supply chain management (SCM). This involves developing and integrating partners into the production system in a mutually beneficial manner, creating a win-win situation. While supplier selection methods are already applied in the construction industry (Cengiz et al., 2017), the SRM approach has yet to be widely adopted.

This paper applies the SRM approach, specifically the identification of developable partners, to the construction industry. The term "supplier" is used broadly in this context and includes subcontractors, craftsmen, planners, and all partners of a GC. Examples from the stationary industry are used as a basis for a model for the application of SRM in the construction industry. The research question addressed in this paper is: "How can the interaction between GC and other partners (Sub, craftsmen, planners, or suppliers) be developed sustainably on a micro level to positively influence stability?" By answering this question, the paper provides insights into how the construction industry can improve its production systems through the adoption of an SRM approach.

THEORY AND AS-IS SITUATION IN CONSTRUCTION

PRODUCTION SYSTEMS

The following chapter emphasizes the significance of partner management in a production system, drawing on the development of SRM in other industries and literature. Production systems refer to the comprehensive organization of production and comprise all the concepts, methods, and tools that contribute to the effectiveness and efficiency of the entire production process (Schuh & Stich, 2012). Contemporary production systems, such as the Toyota Production System, are founded on horizontal and vertical networking. Supply chain management, on the other hand, pertains to the management of the entire value chain (Wieland & Buchholz, 2011). The integration of external partners is particularly essential in the vertical value chain. For instance, Daimler and Bombardier have a vertical integration of up to 20% (Helmold & Terry, 2016). SCM can be segmented into customer relationship management, which defines the customer relationship from the GC's perspective, and supplier relationship management, which optimizes the relationship with the supplier (Wieland & Buchholz, 2011). Other industries have already recognized the following aspects related to SRM as they become a production system:

- Entering into and managing long-term relationships is becoming increasingly important in modern markets (Riemer, 2008)
- Relationship perspective instead of transaction-oriented views (Riemer, 2008)

- Traditionally the purchase range was regarded almost exclusively under cost aspects. The role of the procurement in the enterprise changes however and experiences increasing attention by the management (Stuart, 1997)
- A goal is thereby the structure of complex relationship networks with mutual information flows to a optimization of the entire creation of value chain (Riemer, 2008)

A key goal of SRM is to systematically evaluate and segment suppliers based on their current and future economic importance to the company (Dangelmaier et al., 2004). It is important to distinguish between partner relationships that primarily serve operational purposes and those that can help the company build strategic competitive advantages (Stuart, 1997). Figure 1 illustrates the evolution of SRM from a supplier as a procurer in the 1980s to a value creator in the present time. A clear example of this change can be seen in the automotive industry. In 2002, the car manufacturer, specifically the Original Equipment Manufacturer (OEM), produced 55% of the body of a car. Today, the industry average is 29% (Mercer Management Consulting & Fraunhofer-Institut, 2015). Similarly, BMW had a development depth of 70% in 1985, which decreased to 30% in 2007 (Richter & Hartig, 2007). At SMART in Hambach, suppliers contribute 75% of the product development and value creation (Wieland & Buchholz, 2011).

Figure 1: Evolution if the SRM (Helmold & Terry, 2016)

As a result, supplier management has become an integral function of transferring quality, cost, and delivery targets to the external value chain and synchronizing them with it (Helmold & Klumpp, 2011). The shift in value chain shares and consolidation has led to the concentration of competencies that were previously held by manufacturers with key suppliers, increasing the market power of these suppliers. Automotive manufacturers have responded to this trend with strategies such as "mega-supplier" or "key-supplier" approaches (Dölle, 2013). Additionally, early and systematic development of potential alternative suppliers is critical, as these suppliers can be integrated into cross-company processes through collaborative optimization (Helmold & Terry, 2016).

As-Is Situation in Construction

The construction industry is known for its project-specific execution and a highly fragmented and small-scale contractor market. In the German market, for instance, most contractors employ only a few individuals (Schul et al., 2007).

To secure subcontractors for a project, tendering and market comparison are usually the preferred methods, which can take up a considerable amount of time. While price is often the main criterion in the selection process, it is essential to consider other factors that may impact the total cost of ownership, such as rework, complaints, or failure (Helmold & Terry, 2016).

Project-specific processing has its own set of challenges. Companies collaborate for a limited time and then go their separate ways. During the initial stages of a project, friction can arise, which can either decrease or lead to a premature end of the partnership. Moreover, there is limited post-reflection or lessons learned, which does not promote the need for long-term and sustainable cooperation (Ferrada et al., 2016)

In practice, project-specific collaboration is governed by a contract that defines the technical and organizational framework conditions. The order is processed based on this contract, with the goal of achieving cost efficiency and minimizing interfaces. Most decisions are cost-driven, and there is a tendency to continue working together despite challenges due to time constraints.

As a result, large projects often experience budget overruns, delays, and a bad reputation, leading to legal proceedings and high insolvency figures (Ferrada et al., 2016; Narayanan et al., 2018).

METHOD

The procedure of the present article is based on two basic methods, namely literature research and expert workshops, which are discussed in more detail below.

In the first step of the literature research, the ideal process of partner development is presented based on the current standard literature. Based on this, the search for best practice examples will be conducted. The focus is on the automotive industry, which has been following the SRM approach for many years. The method of literature research was selected because it is a valuable tool for developing theoretical frameworks. The literature review was following the steps of selecting relevant sources, analysing, and synthesizing the information, and presenting the findings (Tranfield et al., 2003). Based on the partner development process and the preparation of the expert workshops, a comprehensive literature research identifies existing criteria for supplier selection. This research includes over ten relevant papers from 2009 to 2022. Based on the literature research, expert workshops are conducted in which the relevant criteria for partner development are identified and transferred to the construction industry.

Building on these criteria, further expert workshops will derive a model that can be used to identify the current maturity level of the partner as well as the need for development. The expert workshops will be conducted in collaboration with a GC. On the one hand, so that the developed model can be quickly transferred into practice, and on the other hand, to compare the criteria with the corporate strategy. The expert workshops as a method were chosen because it is an effective way of collecting knowledge (Bogner, 2005). Experts in our term are department leaders and specialists of a GC located in the German construction market. The experts were selected focusing on their role, market understanding, experience (over ten years average) as well as representing different perspectives e.g. project control, tendering, site management.

Subsequently, the capability of the model will be validated by means of six case studies to show the practical use of the model.

LITERATUR RESEARCH

IDEAL PROCESS OF PARTNER DEVELOPMENT AND BEST PRACTICE

In the chapter “Production Systems”, it is evident that industries beyond the construction sector have reconsidered their approach to selecting partners. Furthermore, the manufacturing depths of companies in the stationary industry are approaching that of a general constructor. As such, this chapter presents a standardized supplier management procedure from the stationary industry, and emphasizes the successes achieved through the implementation of SRM. Figure 2 illustrates the supplier management process according to Hofbauer (2016), which comprises four sub-processes that are explained in greater detail below.

Figure 2: Supplier process (based on Hofbauer, 2016)

Supplier selection: At Audi AG, supplier selection serves to identify new and potential suppliers. The aim is to maintain and improve the supplier pool at the same level. The focus of supplier selection at Audi AG is on innovative and technology-driven suppliers. By collecting supplier information centrally, Audi AG achieves transparency throughout the company with regard to the market. Another advantage for Audi AG is the early identification of technological trends (Hofbauer, 2016).

Supplier evaluation and classification: As supplier evaluation (Wildemann, 2008) summarizes all processes, which serve for the production, selection and preparation as well as the evaluation of supplier information (Wildemann, 2008, p. 157). The aim is to verify that supplier performance meets defined requirements (Glantschnig, 1994). The supplier evaluation consists of the definition of the criteria as well as the quantitative and qualitative evaluation of the suppliers according to these criteria (Hofbauer, 2016). Audi AG conducts supplier evaluation not only at the time of award, but throughout the entire collaboration. The results of these evaluations are communicated to the supplier. Thus, a continuous improvement is achieved at the supplier. The classification of the suppliers serves to carry out a comparison with the corporate strategy and thus to identify the strategically relevant and irrelevant suppliers. The strategically significant suppliers are developed (Hofbauer, 2016).

Supplier development: Supplier development includes both the further development of existing suppliers and the qualification of new suppliers. It thus also supports supplier development. The aim is to increase the capabilities and performance of suppliers. This includes cooperation on a collaborative level as well as the transfer of know-how. At the same time, supplier development increases the competitiveness of suppliers among each other and thus reduces the dependency of the client. (Hofbauer, 2016). BMW and Porsche see supplier development as a core task. Development here extends to supplier academies and the secondment of experts. To develop its suppliers, Porsche also actively intervenes in the corporate policy of the partner (Helmold & Terry, 2016).

Supplier integration: Helmhold & Terry describe supplier integration as integrating the supplier into the existing product development process. Furthermore, it implies the use of the partner's know-how and the coordination of processes and systems. The aim is to minimize waste in the collaboration (Helmold & Terry, 2016).

EXISTING CRITERIA FOR SUPPLIER SELECTION

In the construction industry, supplier selection is a crucial activity, much like in other industries. However, the construction industry faces unique challenges due to three main factors: the type of collaboration, friction caused by a lack of development, and a lack of trust. The selection of suitable partners is thus critical for achieving economic success. (Bayazit et al., 2006; Zulficar et al., 2022)

Thanaraksakul and Phruksaphanrat (2009) examined 76 papers in a study for significant criteria for supplier selection and assigned a rank to each of the 33 criteria (Thanaraksakul & Phruksaphanrat, 2009). Helmold & Terry (2016) list ten criteria for supplier selection. In addition, Wieland & Buchholz, (2011) describes seven criteria for the type of cooperation between partners. Harshad et al., (2022) identified 21 criteria from the perspective of the lean, agile, green, and sustainable paradigms (Harshad et al., 2022). Kshaf et al., (2022) 19 factors that will improve the interaction between the subcontractor und the main contractor (Kshaf et al., 2022). Nath et al., (2021) identified ten project level enablers of collaboration (Nath 2021). Taherdoost & Brard (2019) identified 25 criteria in his study (Taherdoost & Brard, 2019).
In addition, Taherdoost & Brard make it clear that a company should only choose the criteria that are in line with the expectation of future suppliers (Taherdoost & Brard, 2019).

DERIVATION OF THE MODEL FOR PARTNER MANAGEMENT BASED ON EXPERT WORKSHOPS

The previous chapters demonstrated the effectiveness of an SRM model in other industries. In chapter "As-Is Situation in Construction the need for such a model for the construction industry was demonstrated. In this chapter, the methodology for building a partner model in the construction context is explained. The structure of the model is based on a maturity matrix. The rows represent the categories and the columns the degree of development.

THE CATEGORIES OF THE MODEL

Table 1: Example derivation of the subcategories for the partner model (Expert workshop, Nov. 14, 2022)

Attributes from supplier selection	Influence of the attribute on a service to be provided, a product or an activity (in the construction context)	Derived subcategory
Quality, Delivery, Performance. Reliability	Influences the control effort of the partner	Focus on the control

Table 2: Overview of the ten derived categories for the partner model and the respective definition (Expert workshop, Nov. 14, 2022)

Attributes from the supplier selection	Sources	Subcategory of the model	Definition
Quality, Delivery, Performance, Reliability	(Becker, 2014); (Thanaraksakul & Phruksaphanrat, 2009); (Helmold & Terry, 2016); (Taherdoost & Brard, 2019); (Nath et al., 2021)	Focus of the control	Degree of control effort of the partner based on quality and on-time delivery
Mutual trust and easy communication	(Taherdoost & Brard, 2019); (Nath et al., 2021)	Know-How Transfer	Degree with which knowledge is shared between the parties
Warranties and claim policies	(Thanaraksakul & Phruksaphanrat, 2009); (Taherdoost & Brard, 2019)	Contract type	Degree of mutual dependence
Desire for Business, Management and Organization	(Becker, 2014) (Thanaraksakul & Phruksaphanrat, 2009)	Time commitment	Duration of cooperation
Professionalism, Attitude and strategic fit, Communication system	(Taherdoost & Brard, 2019) (Helmold & Terry, 2016), (Nath et al., 2021)	Level of cooperation	Degree of efficiency of cooperation
Flexibility and Reciprocal arrangement	(Taherdoost & Brard, 2019) (Becker, 2014) (Thanaraksakul & Phruksaphanrat, 2009)	Scope of service	Degree of the partner's own product development
Innovation and R&D, Personal trainings and development, willingness of innovation	(Taherdoost & Brard, 2019) (Thanaraksakul & Phruksaphanrat, 2009) (Helmold & Terry, 2016)	Optimization and development	Degree of partnership business development
Production, facility and capacity, technology aspects	(Taherdoost & Brard, 2019) (Thanaraksakul & Phruksaphanrat, 2009) (Helmold & Terry, 2016)	Standardizatio n	Degree and scope of standardization
Financial status, cost management and transparency, financial strength of the supplier including payment modalities	(Taherdoost & Brard, 2019) (Thanaraksakul & Phruksaphanrat, 2009) (Becker, 2014)	Willingness to invest	Monetary importance of a decision for the partner
Other criteria	(Hofbauer, 2016)	Strategic relevance	Strategic importance of the partnership

In chapter “Existing criteria for supplier selection” more than ten relevant papers and over 80 criteria were identified. The following model is intended to solve the construction-specific problems of the partner selection. Additionally, the model is intended to be applicable to all partners and not limited to suppliers of physical products. Therefore, the criteria are used as bases for the categories of the following model and specifically adapted. To adapt the categories to the construction sector, the influence of each attribute in the construction context on a service, product, or activity to be performed was investigated. Table shows an example of this adaptation. In addition, **Error! Reference source not found.** shows which of the supplier selection attributes serve as the basis for the subcategories. The definition of the 10 derived subcategories can also be taken from **Error! Reference source not found.**. (Expert workshop, Nov. 14, 2022)

THE FOUR STAGES OF DEVELOPMENT OF THE MODEL

From a broader perspective, there are two stages of development within the system: "in" and "on" the system. "In" the system refers to partners who are functioning within the production system, but who do not have a strong interest in further developing it. These partners can be elevated to the next level through targeted development efforts. The more advanced stage is "on" the system, where partners with a higher level of development can be identified and have a vested interest in contributing to the production system.

To provide more detail, the system can be divided into four levels. Level 0 is the starting point, which all partners must reach. Levels 1 and 2 can be achieved independently, but Level 2 requires that all criteria be met in order to gain a holistic understanding of the system. This approach helps to prevent a single criterion from disproportionately influencing the allocation of resources. Level 3 represents an ideal situation, but no partner has yet reached this level in practice (see Figure). It represents the aspiration for a perfect partner.

In summary, the system has two stages of development: "in" and "on" the system, and is divided into four levels, with each partner starting at Level 0 and aiming to progress to Level 3. (Expert workshop, Nov, 14, 2022)

THE MODEL

In order to classify partners and identify their development potential, each level is defined in relation to the respective category. With ten categories and four levels, a 10x4 matrix is created. Level 0 represents the minimum requirement in the corporate context, while level 3 represents an idealized, maximum possible state. The definitions for levels 0 and 3 serve as the framework for the definition of intermediate levels 1 and 2. These definitions are chosen in such a way that from level 2 onwards, the categories are correlated with each other. The goal is to ensure that partners are selected holistically and developed across multiple categories, rather than only within a single category. Figure 4 shows the model with the development stages and the ten defined categories. (Expert workshop, Nov. 21, 2022)

For the further development of partners, two categories play a special role: investment will and strategic importance. If a partner reaches a defined threshold in these categories, the company will have the will to develop the partner. The action portfolio based on strategic importance and investment will is shown in Figure . (Expert workshop, Nov. 21, 2022)

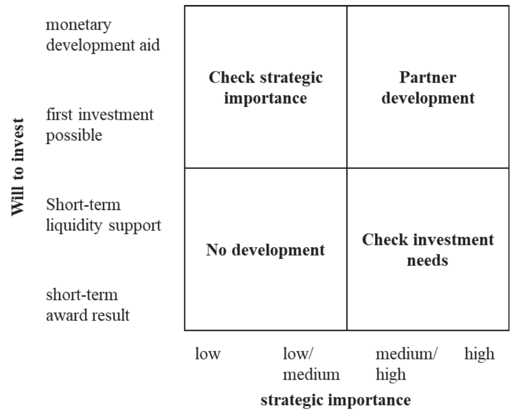

Figure 3: Recommendations for action on partner development based on strategic importance and willingness to invest (Expert workshop, Nov. 14, 2022)

CASE STUDIES

In the following, the applicability of the model for the classification of partners as well as for the development of the same is examined. As part of the expert group, six scenarios for the classification of partners and six scenarios for the development of the partners were examined. Two case studies for Classification of Partners and one case study for Development of the Partners are explained below as examples. (Expert workshop, Nov. 21, 2022)

APPLICATION OPTION 1: CLASSIFICATION OF PARTNERS

Due to the clever choice of categories, the model can be applied universally for partnerships. From the classic SUB to the material supplier and to the planning partner. This is illustrated below in two examples for the respective level (see Figure).

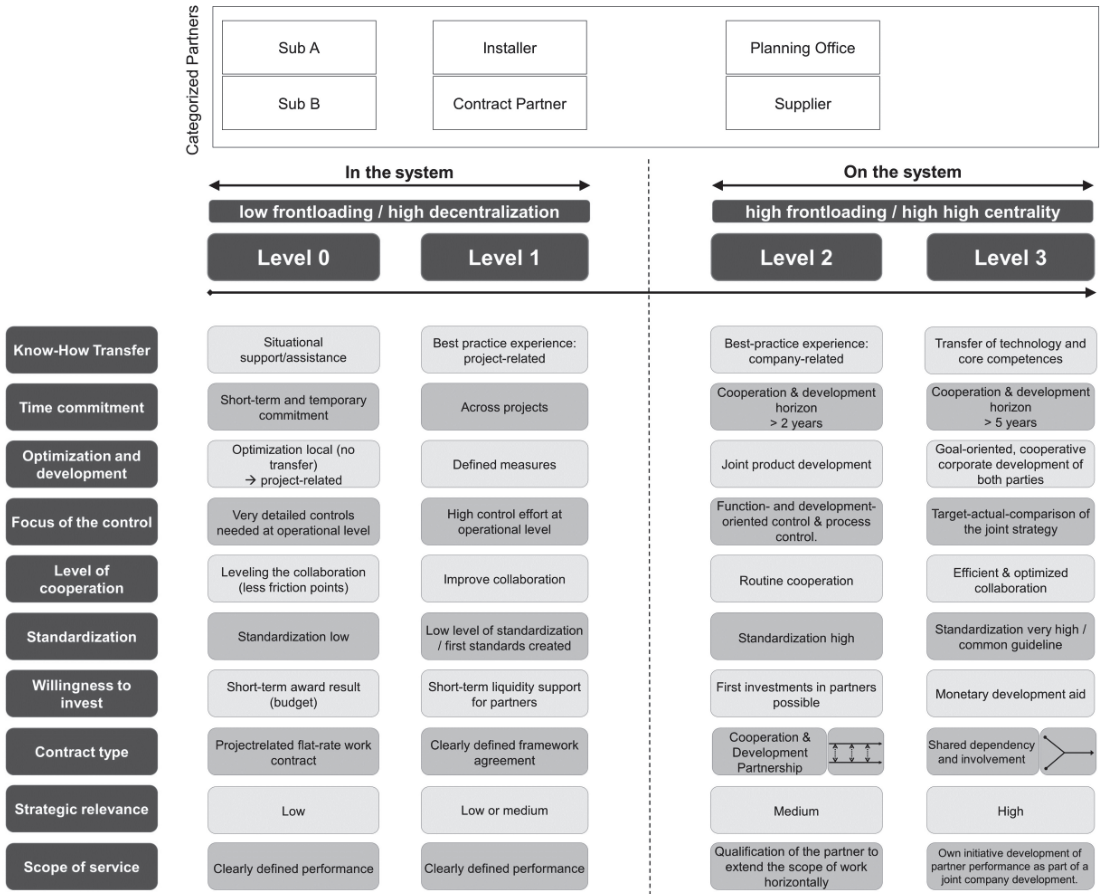

Figure 4: Partner selection, integration and development model (Expert workshop, Nov. 21, 2022)

Example Stage 0, Subcontractor A and B:

A su at Level 0 requires close quality control, as well as monitoring of quantity, adherence to schedules, and location. Know-how is transferred unilaterally, with the GC providing information to the subcontractor. Due to the nature of the contract, which is typically a project-related lump sum contract, the cooperation is limited in time. The collaboration is based on aligning the respective tasks, which is possible because the scope of the service is clearly defined and the contractor is not expected to develop the product independently. As a result, the subcontractor may optimize their work but without considering subsequent trades. The contractor's approach may not be highly standardized, and their relevance to the company's success is typically low, allowing the focus to be on the award result. (Expert workshop, Nov. 21, 2022)

Example Stage 2, Planning Office and Supplier:

Only partners who demonstrate a willingness to work on the system are placed in Stage 2. These partners have proven or can demonstrate that operational level control is unnecessary, and thus the focus of control shifts to development and process levels. Know-how transfer is not limited to individual processes or projects but encompasses all affected areas. The cooperation between the two partners is formalized by entering into a cooperation and development partnership with a commitment of over two years. Due to the long-term commitment, the cooperation is focused on routine and efficiency. The development partnership makes it possible to support the partner in horizontally expanding their scope of tasks, with a joint development of the product towards a high level of standardization (both physical and digital products). Achieving these objectives may require an initial investment in the partner (e.g. expanding the service infrastructure at the partner), which can only be justified by a medium strategic relevance of the partner. (Expert workshop, Nov. 21, 2022)

APPLICATION OPTION 2: DEVELOPMENT OF THE PARTNERS

Based on the practical examples, it is shown how a partner can be developed.

Scenario 1 Partner needs to be developed, Subcontractor A from level 0 to level 1:

Changes in environmental conditions can lead to the need for partner development. For example, if a supply deficit increases the strategic relevance of a subcontractor from low to medium, it becomes necessary to develop this subcontractor into a framework contract partner and bind them across projects to minimize production risks (Figure). To successfully develop the partner, it is important to improve the cooperation with them, creating a basis of trust for project-related exchange of know-how. At the beginning of the partnership on level 1, a very detailed control is still necessary, and the optimization or development takes place within a narrow framework, requiring short-term liquidity support. (Expert workshop, Nov. 21, 2022)

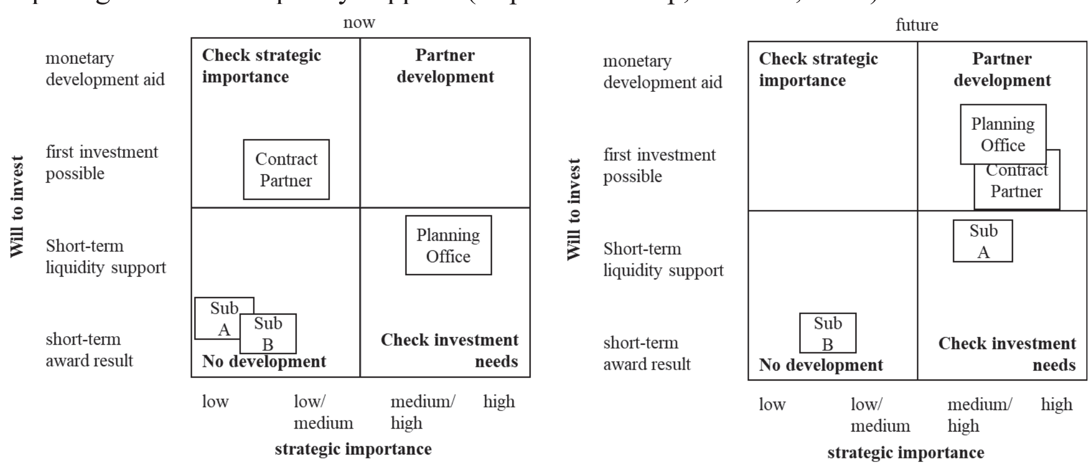

Figure 5: Example scenarios for the classification of partners in the event of a change in strategic importance and the willingness to invest (Expert workshop, Nov. 21, 2022)

CONCLUSION

Many industries have transitioned from a purely cost-driven approach to a holistic approach when selecting partners. The construction industry needs to follow this trend. The article compares the automotive industry to the construction industry, where project-specific execution, a fragmented and small-scale contractor market, and a focus on cost-efficiency and short-term partnerships have hindered the development of effective SRM. To boost production efficiency and effectiveness in the construction market, a viable solution may involve shifting its focus towards forging long-term, sustainable relationships with suppliers and partners. The paper presents a model for classifying existing and potential partners. Practical scenarios from a GC show that development stages can bring transparency for both clients and partners. The model shifts procurement from a best-price approach to a sustainable development approach for partners. Parties can use the model to decide whether and how they can deepen the partnership. Additionally, the model supports management in categorizing partners by maturity level. By creating a long-term development perspective, partners are bound to each other, promoting common understanding of goals, joint learning, and sustainable interaction. It is theoretically proven within the case studies, that the research question can be confirmed. The developed model is the base for the interaction between the GC and other partners and has the focus on developing a sustainable and stabile partnership between the parties.

This concept paper was developed in collaboration with a GC, and the model is currently being tested in practice.

DISCUSSION AND OUTLOOK

To answer the research question "How can the interaction between GC and other partners (Sub, craftsmen, planners, or suppliers) be developed sustainably on a micro level to positively influence stability" a model for partner selection has been successfully developed and tested in the case studies. The model enables the GC to choose the project partner in the right way and even develop him in a long term. Also the model proves to be a fast and efficient method to create an overview of the current partners. The case studies have shown that the model can be applied to suppliers of physical products as well as to subcontractors, planning offices and other partners of a GC for effective supplier management and thus supports the critical phase of partner selection (Bayazit et al., 2006; Zulficar et al., 2022). In accordance with the best practices from the automotive industry (Hofbauer, 2016), the clear criteria and the classification of the partners create transparency about the current development status of both parties. The model makes it possible to identify a partner's development potential in advance and to continuously track and control its development. By promoting transparency and recognizing development potential, the stability of the partnership can be positively influenced. Although the model has been successfully tested in the case studies, its effectiveness has yet to be tested in practice. In this work, the criteria were chosen according to the strategy of the general contractor (Taherdoost & Brard, 2019). It is therefore necessary to examine how the selected criteria fit the entire construction industry.

The model is currently in an initial testing phase and has yet to be extensively tested in practice. It is necessary to verify its applicability during the practical phase, which precludes final evaluations currently. Additionally, the practical phase will determine whether the selected categories require supplementation or adaptation. In further investigations, the model's impact on the entire construction industry should be examined, possibly through surveys of partners.

To select the best option from multiple alternatives, a metric should be developed and a threshold defined. As the model includes both quantitative and qualitative criteria, it would be useful to investigate the effectiveness of decision models from multi-criteria-decision-making (MCDM) such as the Analytic Hierarchy Process (AHP) (Thomas Saaty, 1980) or the Technique for Order of Preference by Similarity to Ideal Solution (TOPSIS) (Wang et al., 2009).

To define and track partner development, the experiences from the stationary industry suggest creating a catalog with measures for partner development up to the partner academy. Through a portal access, partners can monitor their current evaluation and goals required for further development. This approach will enhance transparency, interaction, and communication among stakeholders.

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