

# **Classification of Performance Contracting Solutions: A Managerial Typology**

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**Abstract:** During the past years the commercialisation of industrial products by performance contracting continuously gained importance. In more areas of business-to-business-markets the approach of performance contracting finds its application and today can be observed in various forms. This paper describes characteristics of the phenomenon in detail and summarizes conditions for application. Due to the diversity and the complexity recommendations in form of a standardized managerial and marketing program are not suitable. For managing performance contracting a classification was derived that distinguishes performance contracting solutions concerning their main management challenges. This paper characterizes four different types of performance contracting solutions and provides first insights into relevant management implications.

**Keywords:** performance contracting, industrial services, business concepts, typology.

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## 1 Service orientation as driver for performance contracting solutions



Today, often services are becoming a central theme on the discussion about offerings in industrial markets. Usually customers are less interested in buying simple versions of products they rather expect a comprehensive solution of their suppliers (Belz/Bieger 2004, p. 220). Many manufacturers have already taken on the trend towards designing a complete solution and answer with a broad portfolio of stand-alone service offerings. Successful industrial suppliers have understood that the supplementary provision of services is only the first step on the way of becoming a solution provider. A strict service and solution orientation leads to a marketing logic that is not product dominated but rather puts the utility provided by the product into the centre of the marketing process (Vargo/Lusch 2004).



The concept of "performance contracting" strictly refers to this point. This approach means that professional utilized products, facilities or technical systems are no longer sold to the customer but instead the supplier provides and operates them and the customer only has to pay for performance (Buse/Freiling/Weissenfels 2001, p. 3). Similarly to "full service contracting" (Stremersch/Wuyts/Frambach 2001) suppliers take responsibility for reliable functional capability of their products and are motivated to optimize efficiency of processes during the product-life-cycle. The innovative character of the business concept mainly results from its revenue model. Product-oriented price setting is substituted by a value-oriented pricing, which integrates all costs of ownership within a utilization fee. Customers especially benefit from risk reduction, financial advantages and an increase in efficiency and flexibility.

Even though this kind of contractual agreement is not totally new to industrial markets (Buse/Freiling/Weissenfels 2001, p. 2) a rapid expansion of performance contracting in different industries could be observed during the last years. A constant rise of technological improvements and developments in market like business networks, high technical investments and technological complexity stimulate importance of the concept and allow its implementation for numerous outsourcing-solutions within professional markets. Freiling (2004, p. 680) assumes that the application potential of performance contracting has not been fully exploited yet. Also in consumer markets performance selling gains more and more importance (Belz 2002, p. 207 f.). In an age where networks replace markets and valuable assets decrease because of rapid technological innovation the emphasis shifts from possession to access (Rifkin 2000; Lovelock/Gummesson 2004). According to Kotler „the importance of physical products lies not so much in owning them as in obtaining the services they render“ (Kotler 1997, p.8).

## 2 Research objective: Structuring diversity of performance contracting solutions

The examples in figure 1 provide an impression on the broad application of performance contracting within industrial markets.

	<p><b>Siemens Building Technologies</b> offers customers to finance investments on renovation of buildings and infrastructure. Investments are refinanced by savings of power and heating costs.</p>
	<p>With <b>Hilti-Fleet-Management</b> customers no longer have to buy their tools. They only pay monthly usage fees. Therefore Hilti takes responsibility for the management of the entire lifecycle. Advantages of fleet management also encourage many customers to switch to other equipment of Hilti's product offerings.</p>

	<p>Coating specialist <b>Balzers Unaxis</b> operates its own coating centres at factory premises of customers. In these centers wear parts and molds are freshly coated and tempered. Customer's payments are calculated in line with area of surface being coated.</p>
	<p>With <b>Mobility Carsharing</b> business customers have the opportunity to use a total of 1.750 cars all over Switzerland. All-inclusive-fees are accounted per mileage and include costs for fuel. The integration of other means of transportation is planned.</p>

**Figure 1 - Some examples for performance contracting**

Examples illustrate the variety of performance contracting solutions. Service offerings and underlying business models are characterized by a high complexity. It can be assumed that management and success of the performance contracting approach depends on the specific context of a company and is influenced by various conditions. Diversity implies that business concepts cannot be treated similarly and require different managerial actions.

Objective of the paper is to distinguish different types of performance contracting solutions on the basis of their dominant managerial challenges. The classification aims at supporting a differentiated examination of performance contracting solutions and improving the transferability of management experiences and business knowledge. The analysis of performance contracting solutions in practice was led by following research questions: Does performance contracting solutions vary in terms of dominant conceptual and managerial tasks?, Which characteristics of performance contracting solutions have a significant impact on managerial decisions and programs?, Which types of performance contracting solutions can be distinguished? and What are the main managerial challenges for the identified types?

Within field studies various examples of performance contracting solutions in a business-to-business-context were identified and analysed by means of case study. The integration of different perspectives and data sources (principle of triangulation) enabled a comprehensive understanding of the phenomenon performance contracting within its real life context and provided explorative insights into its complex interrelations (Yin 2003, p. 13). By combining facts and linking different views scientific validity and reliability requirements could be assured within the qualitative research process (Yin 2003, pp. 34).

For improving the reader's understanding of performance contracting the next chapter provides an overview on the theoretical background and the particular characteristics of the business concept. The third chapter deals with application areas of performance contracting solutions. It provides criteria that qualify industrial products for the commercialization by the performance contracting approach. Furthermore a typology classifies different performance contracting solutions by relevant management dimensions.

### **3 Theoretical background and characteristics of performance contracting**

Scientific contributions on the topic of performance contracting are embedded in the discussion about industrial services offerings. For a long time high-quality products and innovative technologies sufficed to assure competitive advantages for industrial goods manufacturers. In saturated and global markets potentials for differentiation dissolve. Substitutable products and shrinking margins are the results (Belz/Bieger 2004, p. 529). The extension of industrial core business by services offers suppliers the opportunity to differentiate themselves from

their competitors, and achieve superior profitability. By expanding value creation and intensifying customer relationships and interaction the concept of performance contracting not only opens up new revenue potentials it also provides access to process and market knowledge that is indispensable for dynamic adaptation to changing business environments.

Corresponding to shifting requirements at the manufacturer's side it can be observed that customers are becoming less interested in buying products. In fact they expect comprehensive solutions for their problems and more infrequently draw a distinction between product and service elements (Spath/Demuss 2003, p. 468). According to Gummesson "customers do not buy goods or services: they buy offerings which render services which create value" (Gummesson 1995, p. 250). During the past years these circumstances led to an increase of importance of services and solutions, which motivated industrial goods manufacturers to transform their business into integrated product and service providers (Oliva/Kallenberg 2003, p. 161 f.).

In comparison to other service offerings the concept of performance contracting is characterized by an exceedingly high degree of service orientation and opens up an attractive revenue potential for suppliers. Despite its diversity there are some characteristics that performance contracting applications have in common. Kleikamp (2002, p. 6) provides an elementary description. Within performance contracting the customer does no longer buy products and several services separately, e.g. maintenance or repair services, instead he acquires a comprehensive service bundle. The supplier does not sell the product and instead provides the usage for a fee.

The definition of Buse, Freiling and Weissenfels (2001) outlines the concept's particularities. According to them within performance contracting a supplier or a co-operation of suppliers "renders a customized bundle of technical infrastructure with several add-on services within a frame-giving and long-lasting contract". It is based upon the idea that the customer acts as a user of the infrastructure and only pays for the performance effectively delivered. (Buse/Freiling/Weissenfels 2001, p. 3).

In order to improve the understanding of the phenomenon of performance contracting its central characteristics are explained below (Kleikamp 2002, p. 21 f.; Freiling 2003, p. 32 f.; Freiling 2004, p. 682 f.):

1. Performance contracting is a comprehensive service bundle, which is based on a technical infrastructure and includes various services and authorizations. The notion of technical infrastructure is broad. It can contain machinery, facilities, systems or even whole product fleets. The provider manages all necessary activities, that sustain functionality of the hardware and that are related with processes of its utilisation. Figure 2 lists typical service elements.

Object-related service elements	Process-related service elements
<ul style="list-style-type: none"> <li>- planning and engineering services</li> <li>- installation services</li> <li>- maintenance and repair</li> <li>- financing and insurance</li> <li>- technological upgrades (Revamping)</li> <li>- de-installation and disposal</li> </ul>	<ul style="list-style-type: none"> <li>- capacity management</li> <li>- procurement</li> <li>- internal logistics</li> <li>- quality inspection</li> <li>- operating services</li> <li>- spare part storage</li> <li>- personnel trainings</li> </ul>

**Figure 2 - Service elements of performance contracting**

2. The technical infrastructure is provided and often also operated by the supplier. The service provider carries all costs for the installation of the infrastructure. During the contracting period technical hardware remains property of the provider. However, contractual agreements on the participation of customers for investments are possible.
3. In contrast to traditional product business performance contracting fundamentally alters the relationship between customers and suppliers. Both parties agree upon a long-term-contract which includes an obligation of continuity. Since the customer and the supplier make relation-specific investments the cooperation turns from a traditional product and project business to a sub-contractor business in the sense of the typology by Backhaus (2003).
4. Accounting of performance contracting services fills the principle of "pay-per-performance". The customer only pays for the performance that he actually demanded. Due to the charging of utilization fees fixed costs are changed into variable costs. Thus, the customer's capital lockup can be reduced and additional expenses can be accounted fairly according to the input involved. Beside the utilisation fees the customer does not have to carry other costs. It is the provider's responsibility to pay attention that utilization fees are calculated in a way that they cover all expenses.

In reality basic forms of performance contracting can be observed in a broad variety of ways. Solutions differ in service scope, risk transfer, accounting modalities, flexibility, legal property or the number of contract partners.

#### **4 Application areas of performance contracting**

Freiling (2004, p. 680) anticipates various areas of application for performance contracting in business-to-business-markets. Nevertheless not every product is appropriate for commercialization within a performance contracting solution. Deciders must be able to assess to what extent the concept can be translated into their business. Within this context the question has to be answered, under which circumstances products, provided by performance contracting, are valuable for customers. If product characteristics fulfil the identified requirements and service offerings can be evaluated as appropriate then it can be helpful for the conception and planning of the business model to know how the concept can be classified in the broad spectrum of performance contracting solutions.

The following paragraph provides more clarity to these questions. Chapter 4.1 describes the qualification criteria for products getting commercialized within a performance contracting solution. Following that chapter 4.2 presents a typology of performance contracting solutions which classifies concepts with regard to relevant management priorities and provides first conclusions about the underlying success factors.

#### **4.1 Evaluation criteria for the appropriateness of performance contracting solutions**

Central to the decision of entering the business of performance contracting is the question whether or not products are appropriate for performance contracting offerings. Requirements for commercialisation within a performance contracting solution arise from a managerial perspective. According to scientific discussion (Kleikamp 2002, p. 47 f; Meier 2004, p. 9) and based on critical analysis of performance contracting solutions in business practice three central criteria could be derived that influence the customer value of performance contracting solutions. These aspects are

- derived value for the customer,
- life-cycle costs, and
- technical complexity.

The first requirement products have to fulfill for being considered for performance contracting solutions is the creation of a **derived value for the customer** (Kleikamp 2002, p. 47). In this case value is not created by the product itself but by its utilization. That means that the obtained service, which the product renders, creates value (Gummesson 1995). In this sense a vehicle fulfils mobility needs not until it is driven. In addition to its functional value a vehicle can also create original value. For example a luxury car generates a prestige value only by acquiring it. Per definition industrial goods are applied for producing other products or services and are not consumed ad-hoc. Consequently, it can be said that there principally exists a derivative value for the customer. In contrast this aspect constitutes an exclusion criterion for applying performance contracting for consumer goods.

**Product life cycle costs or total costs of ownership** are other relevant indicators for the appropriateness of performance contracting (Kleikamp 2002, p. 48). Costs that arise during the life cycle of a product can be distinguished into costs that depend on utilization and cost that are independent of utilization. Costs that are independent of the intensity of utilization are e.g. acquisition costs, insurances, taxes or others. These costs arise no matter if the product is applied or not. In contrast to that utilization-related costs increase with the degree of product usage. Among these costs are expenses for maintenance, repairs, personnel expenditures, and costs for consumable material as well as administrative costs. Following the idea of performance contracting a product is more appropriate for the concept the larger the share of costs that depend on utilisation. A large share of utilization-related costs enables the exploitation of substantial value potential for suppliers and provides various aspects for optimization of processes.

In addition to durable goods, like machinery, tools or vehicles, also expandable goods are not excluded from commercialisation within a performance contracting solution. Pure material costs for chemical raw materials like varnish or solvents are often low compared to the effort that arises through its utilization. Careful handling of e.g. toxic substances, transport and proper disposal are tasks that can often be conducted more professionally by the supplier than by the customer itself. The Swiss screw retailer Bossard is a good example. Analyses in this segment have shown that costs for fastening elements only make up 15 % of aggregated

process costs. The remaining 85 % are generated by logistics, storage, inspection of quality and assembling. With the solution "SmartBin" the customer is linked to a smart logistic network that simplifies procurement, reduces inventory and at the same time prevents delivery bottlenecks.

During the past years the **technical complexity** of industrial products is continuously increased. Operation and maintenance tasks required a high level of specialized technological knowledge from responsible employees. The greater the technical complexity and intensity of specialized knowledge for operation and maintenance the more the supplier should conduct these tasks. Professional service employees are optimally trained on product handling and are able to exploit all technical opportunities. Also commercialization of innovations can be supported by performance contracting. In particular, innovations whose benefits of utilization are uncertain for the customer can be tested within the concept. With the outsourcing of maintenance services in many countries also the liability of it is transferred to the service provider. Especially if product defects cause serious damages, e.g. personal injury, it is advantageous for the customer if one can pass on maintenance tasks and thus also responsibility to an expert in this field. This constellation is recommendable if the supplier can handle risks more efficient than the customer.

According to Meier (2004, S. 9) further selection criteria of goods being appropriate for offerings within performance contracting solutions are:

- high investment volume,
- low degree of chain-linking between services,
- good forecasting of durability,
- fixed output volume.

#### **4.2 Classification of performance contracting solutions**

It was already emphasized that performance contracting solutions can be observed in various forms. Considering the variety of options a recommendation of a general managerial and marketing program that fits all types is not suitable in this context. At the same time it is not productive to specify strategy for every single case. Therefore, it is necessary to find a typology that summarizes different designs of performance contracting solutions in a way that on the one hand generalizations are possible and on the other hand recommendations still remain useful for managerial planning (Backhaus 2003, p. 281). Hence, the value of classification is determined by the success of identifying relevant separation criteria that influence managerial challenges and programs. For these purposes phenomena within one type should occur relatively homogeneously whereas the heterogeneity between the types should be significant.

With the objective of classifying performance contracting solutions regarding their dominant management challenges criteria were selected, which strongly affect the way management and marketing actions are carried out. The detailed analysis of different performance contracting cases brought out two attributes which show a high discriminatory power: customer focus and service focus. The combination of both attributes and its main values causes different managerial implications. Thus, these characteristics are considered to be good indicators for distinguishing performance contracting solutions. Applied as dimensions they constitute the framework for classification. Before the typology for performance contracting solutions is presented the attributes shall be explained first.

The first criterion "**customer focus**" refers to the level of product customization. This dimension can also be found in other structuring concepts for transactions in industrial markets (Backhaus 2003, p. 288). Even though transitions are smooth, two basic values can be distinguished. Service offerings can either be aligned to the requests of a single customer or they are standard solutions that fit general needs of a whole market segment. Heterogeneous requirements necessitate customized solutions that are specific and can not be transferred to other customers without any difficulty (customer-specific investments). In contrast, market segments are characterized by homogeneity of customer needs regarding demanded services. In this case customization concentrates on the coordination of quantity and quality and solutions typically consist of standard components that meet the requirements of most customers.

The second dimension "**service focus**" aims at the complexity of operated products. It can be differentiated between the provision of a stand alone installation and the provision of an entire system. As an example a single machine can be completely integrated in the production process of the customer and nevertheless is operated by an external supplier. In contrast to this, within the provision of an entire system several products (so-called "fleets") or installations are managed by the provider. For the provision of stand-alone installations especially a high quality and availability are important customer requirements whereas the focus of operating an entire system lies on the efficient management of all components.

By combining both dimensions and its main values four performance contracting types can be derived: project optimization, service optimization, facility management and fleet and resource management. Figure 3 visualizes these types and provides several examples for each.

<b>service focus</b>	<b>system operation</b>	<b>TYPE III:</b> <b>facility management</b> Energy contracting, IT management, Edifical management.	<b>TYPE IV:</b> <b>fleet and resource management</b> Mobility CarSharing, ABB Turbo Systems, Hilti Fleet Management.
	<b>machine operation</b>	<b>TYPE I:</b> <b>project optimization</b> Paint-spray line operation Eisenmann AG, Build-operate-concepts.	<b>TYPE II:</b> <b>service optimization</b> Balzers Unaxis coating centre.
		<b>single customer</b>	<b>market segment</b>
		<b>customer focus</b>	

**Figure 3 - Typology of performance contracting solutions**

Each type of performance contracting is described in the following paragraph.

**Type I - Project optimization:** Within this type a customized machine that is e.g. integrated in the production process of the customer is engineered, maintained and often also operated by the provider. This type is usually found in the sub-contractor business where OEMs want to reduce investment risks (e.g. for new product serials) and transfer these responsibilities to the supplier. In addition to the smooth operation of the machinery the assessment of condi-



tions for amortization of the investments during planned contract periods is a challenging task. Contract terms that include purchasing guarantees and price differentiation according to the quantity demanded can reduce the supplier's risk of lacking success of a produced series, which can not be influenced. The high degree of customization requires clearly defined processes to handle efforts for service engineering and configuration efficiently.

**Type II - Service optimization:** Within performance contracting solutions of this kind the optimization of services is a central topic. Depending on the purpose and the expected level of demands a standard machine of the supplier's product line is offered to the customer. Within this type the reliability of the machine and the high quality of pieces being produced is an important requirement. Since a machine is a standard product and customer-specific adjustments are low fluctuations in utilized capacity can be compensated by externally processed orders or by the exchange of the product (e.g. upgrade). In contrast to the first type of project optimization these options reduce the supplier's risks of refinancing and strong dependency significantly.

**Type III - Facility management:** The third type of performance contracting solutions draws a linkage between the provision and the operation of an entire system that is adjusted to special customer needs. Systems are composed of several components which could also work independently but together they can be operated in a more efficient way, e.g. power and water supply within buildings. Within this type customer benefits can be clearly seen in reduction of managing complexity of the entire system. Central tasks for the supplier are the documentation of customer needs and given technical premises as well as the specific composition of a comprehensive bundle of services. The complexity of activities often requires the integration of several specialized firms within a network of suppliers. During the contracting period the provider takes on the coordination function between different partners which should be supported by effective information and governance systems.

**Type IV - Fleet and resource management:** The fourth type of performance contracting solutions is given when a large number of products, being distributed by the same manufacturer or having a similar purpose, are managed by the provider (e.g. vehicle or tool fleets, and also consumables). In general the devices are standard products that are aligned to the needs of a homogenous market segment and can even be exchanged between customers if necessary (e.g. Mobility Carsharing). One advantage in particular is an improved utilization of capacities. Furthermore, the registration of all products by information technology enables considerable savings of administrative and process costs. Important issues concerning the success of fleet and resource management solutions are reaching a critical mass in user communities and establishing industry standards. The implementation of complementary services and an increase in user numbers stimulate network effects, which can enhance value for the customer additionally (Shapiro/Varian 1999).

The examination of different performance contracting types provided valuable insights into managerial challenges of handling this particular form of service offerings. For developing successful business concepts deciders have to pay attention to different issues and principles. In further studies success factors and resulting implications for management and marketing should be completed and detailed.

## 5 Conclusion

The commercialization of industrial products within performance contracting solutions provides attractive revenue potentials for suppliers. Due to the creation of intense customer relationships and the extension of value generation it can be anticipated that the performance

contracting approach will gain further importance in many business-to-business-markets. The paper has given an overview on the particularities of the performance contracting approach and described the possibilities of its application.

The empirical study showed how diverse the phenomenon appears in reality. As a result of different characteristics performance contracting solutions cannot be treated similarly and require solutions for different management and marketing problems. In particular, the aspects "customer and service focus" have significant impact on dominant managerial challenges that have to be overcome. The combination of these dimensions provides four types of performance contracting solutions. Each type requires a differentiated management and marketing program that fits the characteristics of the specific performance contracting solution. Even if examples within the typology can give an orientation for the creation of successful solutions it is necessary that a detailed business concept, which includes aspects like value proposition, value configuration and revenue model, is developed for every service offering.

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