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Product Oriented Thinking And Expert Knowledge In Consulting Services

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Abstract — **This article focuses on problematic field of creating service products out of expert knowledge, especially within the field of consulting in the field of IT. This article seeks answer to basic question: "under what circumstances producing products out of expert knowledge is most efficient?" using theory creating conceptual-analytical approach. Here a theoretical discussion towards common concepts known as product, consulting and expert knowledge is encouraged and a new theoretical framework based on previous studies within the fields of consulting and product oriented thinking, as well as knowledge management is presented.**

Keywords —**Product, Expert Knowledge, KIBS, Consulting.**

I. INTRODUCTION

This article focuses on problematic field of creating products out of expert knowledge. Main research problem presented in this article is *whether it is always possible to create products out of expertise*? More precisely, the research question presented is: *"under what circumstances producing products out of expert knowledge is most efficient?"*

This article encourages theoretical discussion towards common concepts known as product, consulting and expert knowledge - and when using taxonomy created by Järvinen [1] it can be defined as theory creating, conceptual-analytical research. Here a new theoretical framework is constructed based on previous studies and theories within the fields of consulting and product oriented thinking, as well as in knowledge management.

II. METHOD

Comprehensive literature review forms the very beginning of this study and there the concepts of product oriented thinking and characteristics of expertise are discussed. Later these are used for further analysis of possibilities for providing consulting services under different circumstances. In practice, this translates into packaging of knowledge intensive business services (KIBS), which has been studied widely [2]. Results of this study will provide a working toolbox for evaluating possibilities of merchandising services based on expert knowledge, as well as an up-to-date theoretical framework for studying different forms of services based on expert knowledge.

Methodologically this new theoretical framework is created through induction, e.g. through generalizing and comparing findings from previous studies. Hence, using this approach a comprehensive theoretical framework about product oriented thinking is created and it is being enhanced with ideas concentrated on characteristics of expert knowledge. In this article authors have outlined the area to be studied to cover only consulting services, especially within the field of IT.

According to Lee and Baskerville [3] when generalizing concepts from theory, a researcher generalizes from theoretical propositions in the form of concepts to the theoretical propositions that make up a theory (specifically, a set of logically consistent propositions that, pending the results of empirical testing, could qualify as a theory). According to them another form of generalizing from concepts to theory is the formulation of a theory based on the synthesis of ideas from a literature review. In this article, theories from previous studies are utilized and enhanced, to be fully functional in different context.

III. CONSULTING AND PRODUCT

Development of new consulting products produces as concrete conceptions and models of products and services provided to customers to the market as possible. This way invisible product becomes visible and benefits gained through these services are emphasized. This makes the decision of purchase easier for the customer. Consulting can be defined as *a situation in which one person has a problem or difficulty and seeks help from someone with special skills*. Usually consultants influence or advice others without any formal authority or choosing not to use what authority they have [4].

Consultancy can also be defined as activity, recommending appropriate action and helping to implement those recommendations. In the field of information technology consultancy can be defined as professional activity, which provides customers with assistance in identifying and investigating problems and/or opportunities concerned with management, information technology, or some other things in the field of IT [5]

Today's IT field has expanded to such an extent, that it is impossible for one person to master the whole field. Because of this IT management do need consultants. Situations where the use of consultant is well justified can be listed as follows [6]:

- assistance in establishing new venture,
- additional resource for example in certain development projects,
- source of information,
- connector: utilizing consultants social network,

- outsider, impartial and competent partner for discussion,
- as a help in problem recognition, evaluation and solving,
- developer of new methods and systems,
- support for organizational change., and
- trainer for managers and personnel.

Järvinen [7] states that the use of consult in problem situation usually increases the amount of alternative solutions to check and therefore support the holistic approach towards management. Järvinen [8] also suggests that IT management includes different personnel groups and potential suppliers along with consultant into considering different options. Using this approach it is possible to get as broad picture of problem field before any decision making.

KIBS are specialized in knowledge-intensive services, which mean that the core of their services is the contribution of the knowledge processes of their clients and which is reflected in the exceptionally high proportion of experts from different scientific branches in their personnel. There are several strong prospective trends in the KIBS sector. At least two of them are important considering this article. First, consultative way of working is becoming common in all KIBS sectors. In some sectors this is a big change, and other sectors have engaged in consultancy for long time, but are now moving into the field of actual management consultancy. Second, the content of the service provided to the client is broadening. This means the packaging of expert services and offering integrated solutions to customers. This requires adequate recourses of the service providers [9]. To conclude, consulting as a knowledge intensive service is so multidimensional activity that it is sensible to try to make it less abstract and easier to understand. This means that we try to create service products out of expert knowledge.

From the point of view of marketing, there is no single product or services, but one product may consist of both services and product [10]. Quite often companies producing products are trying to include services as an integrated part of their everyday routines, and service oriented companies try to package their services as products. [11].

It is also claimed, that products, or deliverables, consist of services and goods and information [12, 13] Most manufacturing or service businesses offer their customers a package, that is sometimes referred as to "augmented product", which consist of core product like computer, and core, and supplementary services [14]. Therefore we can claim that even completely standardized products can still be customized by people in marketing and delivery [15].

Consulting is service. Therefore it is important to consider first, what service is, and what the service characteristics are. The most commonly and traditionally stated characteristics of services are intangibility, inseparability, heterogeneity, perishability, and ownership. In comparison with (physical) products, services are intangible, which means that you cannot see, feel, taste, touch, display or physically demonstrate a service. Service organizations use tangible clues to make services more understandable. Inseparability means simultaneous production and consumption. This can be seen as the myth, because there is also a tangible element in a service, which enables the separation of production and consumption, and technology development has separated the production place from the consumption place in those cases when the service is delivered through electronic channels. Heterogeneity means that services are performances produced by individuals, and therefore, no two services are precisely alike. Perishability refers to the fact that services cannot be saved, stored, resold, or returned. This causes problems of under- and over-capacity, because an organization must be ready to create the service when and how (quantity etc) customers want and where they want it. Ownership means that services cannot be owned and ownership cannot be moved similarly to goods, but when services are connected to tangible goods the ownership can be transferred [16].

Consulting is a professional service. Services can be classified across two dimensions that significantly affect the character of the service delivery process. The first dimension is the degree of labor intensity, defined as the ratio of labor cost to capital cost. The second dimension measures the degree of customer interaction and customization. Customization describes the ability of the customer to affect personally the nature of the service delivered. Little interaction between customer and service provider is needed when the service provides is standardized rather than customized [17]. Table 1 illustrates examples of these approaches.

There are also other ways to classify services, such as dividing services to those requiring tangible actions or intangible actions, those with continuous delivery or discrete transactions, etc. In addition there are other dimensions, such as customizing vs standardizing, low touch vs high touch, and low tech vs high tech [18].

There is no exact definition of professional services, which could draw a sharp line between them and other services. Anyway we can find many characteristics of the professional services in the literature. First, professional services are provided by qualified persons with a substantial fund of specific knowledge. Second, problem-solving approach is essential characteristics of professional services. Recognizing the fundamental problem, and addressing the solution, as well as implementing it, are integrally associated with this approach. Third, service providers typically operate in terms of assignment requested by the customers. Fourth, a code of ethics is centrally connected to professional services. This can be official and written, or based on traditions. Fifth, professionals in a certain area often form a professional association[1]. Sixth, many professional services require confidentiality. Seventh, in the marketing of professional services advertising has an insignificant role, but understanding the customer's fundamental problem, soil contacts, and referrals have a significant role. Eight, there is

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[1] An example of the association in Finland is Liikkeenjohdon konsultit (management consultants).

a high degree of customer uncertainty in professional services. Ninth, professional services are affected by the characteristics of information, which is expandable, compressible, substitutable, transportable, and shareable [19].

TABLE 1
CLASSIFICATION OF SERVICES

Degree of interaction and Customization

		Low	High
		Low	**High**
Degree of Labor Intensity	**Low**	*Service factory* – airlines – hotels – etc.	*Service shop:* – hospitals, – auto repairs – other repair services – etc.
	High	*Mass service:* – retailing – schools – etc.	*Professional services:* – consulting – lawyers – doctors – etc.

Virtually all firms compete on the basis of customer service and service offerings. The service at can take many forms. First of all, it can be customer service, such as responding to customer inquiries, taking and fulfilling orders, and even more broadly having a company culture stressing service excellence. Second, free value-added services can accompany, support, and enhance the utility (and potentially price) of a good. Third, service can be the product offered for sale. Although clearly evident in traditional service industries such as hotels, airlines, and banks, product-based firms are increasingly offering services as a product for sale. The rapid growth of IBM's Global Services, for example, is seen in its successful marketing of product support, networking, and professional services. [20]. In this article we consider the service mainly as a product.

Services could be regarded as products also because both in firms providing goods and firms providing services have fundamental similarities:

1) Both are production systems, which require human, material, capital, and other kind of resources
2) Both have internal, intermediate and ultimate customers/clients/users
3) Both require that the firm sustain itself in a fiscally sound fashion
4) Both have to constantly seek what customers need and want, how they are meeting or exceeding expectations, and how they are adapting to the constantly changing customer base economically, politically and socially, and demographically [21]

New service could be considered as an innovation, which Rogers defines as an idea, practice, or object that is perceived as a new by an individual or other unit of adoption. Newness does not mean that an idea is objectively new as measured by the lapse of time since its first use or discovery. The perceived attributes of an innovation are one important explanation of the rate of adoption of an innovation. From 49 to 87 percent of the variance in rate could be explained by the five attributes: relative advantage, compatibility, complexity, trialability, and observability. Relative advantage is the degree to which on innovation is perceived as better than the idea it supersedes. Compatibility is the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters. Complexity is the degree to which an innovation is perceived as relatively difficult to understand and to use. Triability is the degree to which an innovation may be experimented with on a limited basis. Observability is the degree to which the results of an innovation are visible to others. Complexity is negatively related to its rate of adoption, but the four other attributes are positively related to its rate of adoption. [22].

KIFs (Knowledge Intensive Firms) can be defined as companies where most work can be said to be of an intellectual nature and where well-educated, qualified employees form the major part of the workforce. The category 'knowledge intensive' embraces a broad and heterogeneous range of firms, for example high-tech scientific and engineering firms and consultancies, and general management consultancy firms. The category 'knowledge intensive' overlaps with (and can include) professional service firms. However it is a broader concept and does not emphasize the features ascribed to a typical profession, such as a code of ethics, standardized education and criteria for certification, a strong professional association etc. [23]

The before mentioned service characteristics easily illustrate, why packaging of services is beneficial for a firm: it can fox example make marketing easier while service become clearer, and easier for customer to understand the offer. This might be extremely important in abstract knowledge intensive services.

It is claimed, citing the before described Rogers model of adoption of innovations, that 80 percent of new product failures are due to lack of customers acceptance. The model is used when developing high-tech products [24].

Product oriented thinking in this article means that we try to take all the good characteristics of a tangible products to intangible products like consulting services. This means that consulting service becomes more concrete, easier to produce and purchase etc. The big question is, is it always possible to create products out of expertise, and under what circumstances it is most efficient.

IV. CREATING PRODUCTS AND SERVICES

To create products out of services that require expert knowledge simply means definition, description, planning, development, production and continuous improvement so, that benefits for customer are maximized and the goals of company providing expert knowledge are met. The whole process of creating products is a way of thinking, which utilizes product- or product development strategy in

practice. This is all about specifying and analyzing whole service production into a more easily controllable form [25]. In healthcare creating products is defined to mean definition, specification, specifying and profiling services to customer which are being produced by organization or working unit [26].

In the end of development process for new consulting products a packed consultancy product is being born [27]. Kotler [28] also refers to packaging and claims that it can be subsumed under product or promotion within the traditional framework of marketing. From the customers point of view this means customer communication and customer value.

It is said, that development processes of services differ from development processes of physical products. There are often no specialists that concentrate on service development, whereas product development specialists exist in many organizations. Service production process is often vaguely defined compared to production of physical products. The outcome of service development is often an abstract offer that usually cannot be tried in advance [29].

One solution to the before mentioned problem is, that we use some kind of process thinking while creating or developing services. There is a quite a much literature concerning process management [30, 31] and quality management [32] which is full of different methods and frameworks of how to make processes more simple and well-functioning

To create new consulting products offers a beneficial approach to be used when utilizing expert knowledge accumulated in organization [33]. Basic problem is to be able to recognize possibilities as well as possible threats. Thinking patterns usually associated into industrial production processes do not automatically apply into immaterial goods, such as consulting, and thus open discussion over possibilities is necessary. When creating consulting products there exists always a conflict, which is foundational by nature. Customer wants always unique and personal solution, but almost always consult is forced to create products of his/her core business in order to ensure competitive advantage for the future.

V. TEHCNOLOGY INFUSION IN SERVICES

The interpersonal focus of service encounter research is not surprising as most encounters have traditionally been facilitated by interpersonal contact. Consumer services in business-to-business services such as consulting have, until recently, been delivered by human providers. Due to the emphasis on "high touch," virtually all of the service research has explored the interpersonal dynamics of the encounter. Yet, across industries, technology is dramatically altering interpersonal encounter relationships and, in some instances, eliminating them altogether. In some cases, technology may dramatically increase the number of encounters a customer has with a firm. For example, an E-Trade client may check his or her accounts daily instead of waiting for a monthly statement or quarterly call from his or her financial adviser. [34]

The ability to adapt in real time is a distinct advantage for service providers who wish to be responsive to customer desires for individualized service. For example, consultants can all adjust or adapt the service they deliver to fit the immediate expressed needs of a particular customer. In the services literature, this type of customization is also referred to as "discretion", "personalization", and "adaptation" [35].

Cisco Systems is effectively training customers to use technology on their own in order to generate spontaneous delight. Cisco has created a database with questions and answers for many commonly asked questions. For more complex problems, Cisco has developed an expert system that walks users through problem-identification and resolution processes without the need to directly contact Cisco. The company uses a series of questions created by service experts to lead customers to a solution for their specific need [36].

In the study concerning self service technologies (SSTs) they found that in the context of SSTs, instead of experiencing spontaneous delight, customers appear to be highly dissatisfied with unexpected technical failures. Anyway, with the advent of new technology and the evolution of SSTs, SSTs are likely to be developed that have the capability to mimic and/or surpass the positive aspects of interpersonal encounters in the future. This means for example, that companies will have systems in place that not only monitor if and how an SST is functioning but also prevents failures before they happen and/or provide real-time service recovery for customers as they interact with an SST. This is similar in many respects to what firms such as Caterpillar and Xerox already do in anticipating equipment breakdowns through remote monitoring systems. The potential of customization for Internet-based SSTs has already been demonstrated clearly by a handful of leading firms. Given that technology enables firms to know more about their customers (i.e., their preferences and past behavior), it is expected that mass customization will become increasingly common. It also creates an endless array of possibilities for delighting customers in highly customized, unique ways [37].

Firms cannot risk sitting on the sidelines as competitors deploy technology to help facilitate service encounters. Yet, in moving forward, management must carefully address the impact of technology on encounter costs and customer satisfaction and loyalty [38].

VI. CONSULTING WITHIN IT

The traditional goal of an information systems services is to build, maintain, and operate information delivery systems. Users expect efficient and effective delivery systems. However, for the user, the goal is not the delivery system, but rather the information it can provide. Information systems services have many functions: responding to questions about software products, providing training, and giving equipment advice. In each of these cases, the user's goal is to acquire information, and to get high quality service. [39] According to studies concerning

service quality, responsiveness is a more important factor in the people-based industries like consulting, whereas tangibles are a more important factor in the facility/equipment-based industries. [40] Responsiveness means willingness to offer prompt service and to help people. Tangibles refer to facilities, equipment, and appearance of personnel [41].

We could conclude from the before mentioned studies that if we try to create products out of services, for example within the field of IT, we should answer following questions. First, we should know how we can make expert knowledge in consulting services concrete enough. That may not always be an easy task because expert knowledge is complicated and multidimensional by nature. Second, we should know what kind of consulting services can be made to products, because we can't make products out of all services. When considering this, we should think about the customers' needs and goals of a company at the same time. Every consulting service provider must be able to answer these questions.

The central concepts in service development are service idea, service concept and service design. These concepts have been used freely and undefined. This has caused confusion and difficulties in comparing different studies with each other [42].

In a Swedish study concerning new service development from idea to launching, in a four different consulting services in a computer consultant company, they found four phases in a service development: the idea phase, the project formation phase, the design phase, and the implementation phase. The borders between the phases are diffuse and the phases overlap. The study implicated, that the service development influences the whole company in a way or another, it was not carried out in a systematic manner and explicit methods were used only sporadically, it was carried out together with customers since the services were developed through customer specific projects, and it is an activity which can develop the competence of the personal. In order to ensure the quality of the new services it was considered important to involve many employees and customers in the service development work [43].

In the field of ITC industry firms can use more technology in their service than firms on average. Therefore it is good to consider the impact of technology on services.

VII. FRAMEWORK FOR CONSULTING

Because focus of this article is in product oriented thinking, all the good characteristics of a tangible products as well as intangible products like consulting services are taken into account in order to be able to outline the scope of product oriented thinking in consulting. In general, it appears that there simply does not exist one single product or service. Instead, one product may consist of services, product or information, thus making it often very hard to separate these three levels.

Because virtually all firms are competing on the basis of customer service and service offerings, service is indeed

very difficult — if not possible to exclude when focusing on product as concept. On the other hand, as discussed earlier in this article, services can be quite naturally regarded as products, mainly because of the shared similarities between companies specialized in goods or companies specialized in providing services.

Process for creating products out of expert service is quite forward process. Table 2 summarizes our views on this, while providing simple illustration over the process of creating products and services.

TABLE 2
CREATING PRODUCTS AND SERVICES

Creating product out of expert service	Possible tools to improve expert service packages	Good new (service) product
Definition	– Process management practices: definition and describing, of processes	– Clearly defined service production process
Description	- " -	– Is perceived as relatively easy to understand and to use, not too abstract
Planning	– Use of technology: SST, mass customization, real time service,… – Process management practices: planning of processes	– Is perceived as consistent with the existing values, past experiences, and needs of potential adopters – Is perceived as better than the idea it supersedes
Development	– Use of technology: an expert system that walks users through problem-identification and resolution processes without the need to directly contact a firm;	
Production	– Use of technology: increase of the number of service encounters	– Has results which are visible to others (observability) – May be experimented with on a limited basis (triability)
Continuous improvement	– Quality management tools: process improvement, continuous improvement, etc.	– Good service quality

To be able to focus on consulting services and on expertise it requires, a clear summary of characteristics within the field of consulting is necessary. In table 3 an illustrative summary of characteristics of the process of creating a consulting product is provided.

It is difficult to make a clear distinction over what kind of expert service can not be packaged into product. On general level, we can only vaguely assume that services of extremely abstract nature, which include very few tangible clues, are extremely difficult to make into product. This is

to say, that there are plenty of tools to be utilized when developing services.

TABLE 3
CONSULTING WITHIN IT.

Development of a consulting product	Tools and ideas to be taken into consideration while developing expert services

Idea phase
↓
Project formation phase
↓
Design phase
↓
Implementation phase
	− Process management and quality management practices to make product easier to understand, and to improve service quality (responsiveness, etc.)
	− Develop a service which is perceived as
	  a) consistent with the existing values, past experiences, and needs of potential adopters,
	  b) better than the idea it supersedes, and
	  c) relatively easy to understand and to use, not too abstract
	− Make results of a service visible to others (observability) and possible to be experimented with on a limited basis (triability)
	− Use of technology: SST, mass customization, real time service, an expert system that walks users through problem-identification and resolution processes without the need to directly contact a firm, increase of the number of service encounters

To summarize our findings, it appears that it is easiest to create product out of service, when following predeterminants are met: 1) *we have product development competence in a firm and we can apply it also in service development*. This refers to the fact that traditionally the development of services has not evolved like for example in product development has; 2) *We can use process management and quality management practices in a firm*. This refers to relevant working methods which are followed; 3) *We can use technology*. This refers to dilemma of "high tech" vs. "high touch"; 4) *We can use tangible clues in a service*. This refers to the way how the service is being presented.

VIII. DISCUSSION

It appears that the ability to use process-, and quality management practices will be very beneficial in situations, where product oriented thinking is required along with required competence within product development. This does emphasize creative thinking and ability to adapt known practices into service development.

In order to succeed in contemporary business environment, access to existing technology is necessity. Lesson learned from IT project management failures is that *IT really matters* [44]. Neglecting the significance of the role of IT in contemporary business environment is not only careless, but hazardous as well. Therefore high competence and extensive professional knowledge of

consultants within the field of IT is crucial. Thus it is extremely important to be able to foresee *when and where expert knowledge is easily transferable into services and even further – utilized into product oriented thinking.*

With help of tangible clues even expert services could be made easier to understand. Tangible clues are physical or tangible representations of services, such as buildings, offices, service personnel, letters, or other kinds of physical surroundings [45]

In general, it appears that product oriented thinking and it's applications in business context appears to be a question of organizational maturity. Although services have been around for a while, but when comparing these with product development techniques and traditions, there is still a lot to do.

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