Packaging of IT Services

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Abstract

Information technology (IT) organizations provide their customers professional services. In many cases, the business units (i.e. internal customers) and IT organizations do not have the same world picture and objectives. Usually an IT organization does not know what the needs of customers are, and further, how they can satisfy those needs. In addition to this, customers do not necessarily know what services are available and how to use them.

One way to reduce the gap between the customers and IT service organization is the *packaging of IT services* (i.e. productization, branding) which transforms IT services into accurately defined and marketable products. Thereby, the customers really know what the services are.

The packaging of IT services according to customers' needs adds value both to the customers and the IT organizations. It forces an IT organization to analyze and systematize its activities into well-defined processes. By means of it, the organizations can have benefits such as improved effectiveness and service quality. The packaging of IT services offers one possible way to manage an IT organization.

In this paper, a method of packaging of IT services along with product development in the context of process theory is researched and a process model is introduced. Experiences and research findings from a single-case study and the benefits of the method in the Finnish subsidiary of Telefonaktiebolaget LM Ericsson are reported. Future research needs are also addressed.

Keywords: Development of professional services, IT service development, product development, process management.

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1. Introduction

IT organizations have often difficulties in defining their services. Therefore, it is likely that these services are not clear for their customers either. IT services are often developed in a long time period without a systematic approach and full understanding of customers' needs. Customers are often normal users without high competence of IT. They do not know what kind of IT services are available and what possibilities they offer in a work context. A necessary condition for IT organization's success is that it offers perceived benefits to the customers. Products offer benefits when they satisfy customer's needs. (Ulrich & Eppinger, 1995) Without well-defined services the possible benefits are difficult, or impossible, to identify. Thereby, a systematic method is needed in order to support organizational work and to bring an IT organization and business organizations closer one another. The packaging of IT services offers a useful approach in how to take these issues into consideration.

The packaging method is based on the theory of the *packaging of professional services* (See Sipilä, 1996) and it has been presented as well as improved from the standpoint of IT in this paper. Sipilä (1996) has mentioned the benefits which can be achieved with the packaging of professional services:

(1) It eases the stress because it helps in planning personnels' own work.
(2) The method is a valuable tool in acquiring and transferring information.
(3) It improves the efficiency and quality through systematization.
(4) It enables better planning of the work.
(5) Job targets can be determined.
(6) Job training becomes more effective.
(7) With it customers' expectations can be more precisely defined.
(8) Service pricing will be easier.
(9) Thereby, it offers a possibility to profit more.
(10) It helps in the harmonization of internal organization's views by offering products to the customers.
(11) It opens greater possibilities for marketing.
(12) The packaging of professional services forces to operate in a more systematic way as well as to analyze and systematize strategies and activities.
(13) All in all, it assists in developing better models for team and business-work.
(14) Finally, the packaging of professional services improves the competitive ability of the organization.

In this paper, we introduce a case study tested approach in how to develop an internal IT organization's services based on the ideas of the packaging of IT services.

The objectives of this paper are (a) to describe how to use the method of packaging of IT services in the internal IT organization, (b) to introduce the process model of packaging of IT services along with product development, and (c) to define what kinds of benefits the packaging of IT services and products can bring to the IT organization.

This paper is organized as follows. Firstly, the definitions, essential phases of the process, and the internal description are introduced. Secondly, the research design is presented. It is followed by the empirical analysis of the case study in the IT unit of Oy L M Ericsson Ab, the Finnish subsidiary of Telefonaktiebolaget LM Ericsson. Furthermore, the process model of the packaging of IT services is introduced. Finally, research findings and future research needs are discussed. Additional information and comparisons were collected with a benchmarking study.

2. Packaging of IT Services

2.1 Definitions and Descriptions

In order to understand the developed model, some definitions must be clarified. One has to concentrate on the meanings of (i) a process, (ii) a product development process, (iii) services, (iv) a service product, (v) professional services, and naturally the theory of (vi) the packaging of professional services. After these concepts (vii) the packaging of IT services is introduced.

(i) A *process* is a related group of tasks that together create a result of value to the customer and produce financial results (Hammer, 1996; Kaplan & Norton, 1996). According to Hammer: “The tasks are the bits of work that people actually perform, but the tasks themselves do not create value nor do the individuals performing them. It is only all the tasks put together, that create value.” Business process is a basic unit for the company and one example of it is a development of the new product (see Clark & Wheelwright, 1993; Dolan, 1993; Hannus, 1994).

Ulrich & Eppinger (1995) define (ii) a *product development process* as the sequence of activities that a company employs to conceive, design, and commercialize a product. A well-defined development process is needed for quality assurance, coordination, planning, management, and improvement (see Ulrich & Eppinger, 1995, for more).

Different (iii) *services* can be seen as a series of processes, and a lot of literature exists about service features and the quality of services (Alalääkkölä, 1993; Blomqvist et al, 1993; Gerson, 1994; Grönroos, 1990; Lehtinen, 1986; Lovelock, 1991; Mäkelin & Vepsäläinen, 1989; Sipilä, 1992; Sipilä, 1996; Zeithaml et al, 1990). Services contain characteristic features, which do not exist in products: intangibility, heterogeneity, inseparability, and perishability. Services demand special activities in many ways but strict distinguishing from tangible products is not always necessary or even possible. Also the service and the product can be equal in strength in the total product. The gaps model of service quality (Zeithaml et al, 1990) serves as a framework for service organizations attempting to improve quality service and increase customer satisfaction. From the customer’s point of view, service quality includes both the technical quality of the end product and the functional quality of the process. Technical quality - service product and technical knowledge - is an important factor for the customer who is skilled with IT. If the customer does not know anything about the offered IT service then functional quality is more important. Production and delivery processes of service define extension of a service supply. It includes attainability of a service, the interaction of customers and the service organization, and customers' participation in the process. Thus, the customer experiences an offered service as a whole, and it culminates in the moment of truth. This interaction determines the level of the functional quality.

The (iv) *service product* includes the core service and associate services. The core service is the reason for being in the market by giving what the customer really wants. Associate services are formed of assistant services and supportive services. Assistant services assist the usage of the core service. Without assistant services the core service cannot be used. Supportive services are used for value-adding purposes or differentiation of services in order to have more value for the service and the customer. Helpdesk at the IT unit is an example of supportive services. Removing supportive services from the service product will be clearly notified from the customer's point of view. For that reason, supportive services are always a decision of product planning. The product is always created for the customers and it should be based on a clearly defined product idea. It is both customer and marketing oriented to have different service products - that way they can be easily sold to the customer.

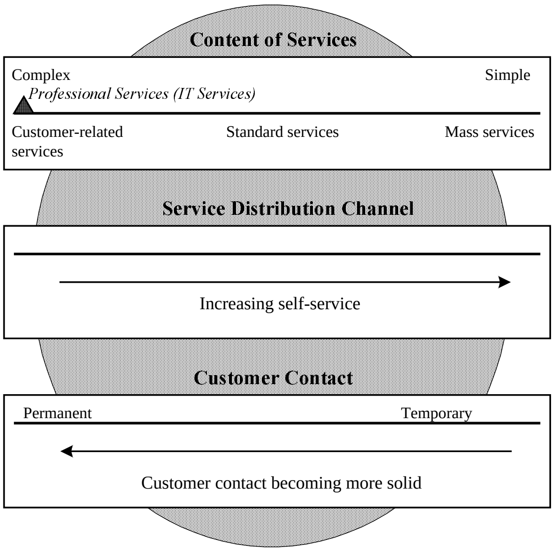

Figure 1. Elements of Service Classes and Strategies.

Hammer (1996) defines that the term professional is characterized by three words: customer, result, process. Customer-related services such as (v) *professional services*, in this paper IT services, demand more time and commitment between the customer and IT service provider as shown in Fig. 1. Often these services are knowledge intensive and they are produced by experts having high competence in IT. Order/delivery and acquirements, installations, support, maintenance and operational services are typical IT services. Customer service personnel must have expertise in a customer service, as well as expertise in the profession they represent. Offered services are very complex if they include high degree of proactively undefined factors. Functional quality is an integral part of professional services because the customer finds it hard to estimate the essence of service. Professional organizations are person-intense sellers of knowledge, skills, and feelings. Usually professional services are used whenever the customer cannot master a certain subject: in this area the customer is not always right. IT expert has to guide the customer in making a correct long-range decision. The customer should get the right service, which is not necessarily the one the customer wants but the one the customer really needs. Pedagogic aspect, creativeness and unique skills are linked to professional services as well. These kinds of requirements are seldom combined in one person only but they can be combined, for example, in the IT unit. In the majority of cases, the goal of the project is to develop a new activity. It has a clear target and a culture focused on doings. The nature of the professional service is often project-oriented: products are developed in teams. Successful product development requires effective project management because the controlling of time is critical for professional services. The fast progress of the product development cycle is an important issue in improving both the productivity and competitive ability (Karlöf & Östblom, 1993).

Sipilä (1996) has given the following definition for (vi) the *packaging of professional services*: "it is the defining, planning, developing, describing, and production of services offered to a customer in order to both maximize the benefits of service for the customer and to achieve the target profit of the professional organization". It is a kind of preproduction: everything is made as ready as possible for the customers. Experts should not only create something just once, they should be able to analyze what has been done, and even have the ability to teach other people to do the same thing again - that is the real product-thinking attitude. The packaging of professional services creates opportunities for high competence experts to move towards more challenging tasks. At the same time, less experienced members of an organization can manage the situation because product support is available to them. Sipilä (1996) points out that the packaging of professional services is the realization of a product development strategy. He presents some of the instruments that can be used for developing product strategy such as life cycle management. According to Sipilä (1996): "it is a strategic issue for the professional organization to decide whether to tailor or standardize offered services". The packaging of professional services can be divided into two parts: services can either be evolved into clear-defined service processes/entities which are offered to customers as such or the basic model is tailored by means of certain service entities for relating to customers by giving versions they need. It is useful for many professional organizations to witness the entire professional service product made up of standard, modules, and tailored components (see Fig. 2).

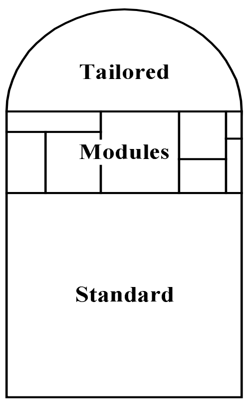

Figure 2. Standard, Modules, and Tailored Components in the Professional Service Product.

The standard part should be as large as possible. Modules can be applied to offer basic composition and continuous maintenance and/or supplement system. However,

the borders of different parts are not always so clear. The customer approaches the professional service product from the direction of the tailored part. Therefore this part seems larger than it really is. It is important to the customer to have a feeling for having a tailored product. The tailored part should be constructed inside the professional service product. The products of the professional organizations can be seen as some kind of basic models of products. Different kinds of versions can be derived from these basic models: the customer gets the product quite fastly and relatively cheaply. In professional services it is worth while describing customers' profits and results. The advantage to the customer is always the core of the professional service product. Tailoring can bring the biggest of value-adding for the customer but at the same time, the professional organization cost makes up only a small amount of the total cost of the product.
This paper concentrates on the area of IT in packaging of professional services. Therefore, (vii) the *packaging of IT services* means a systematic process of defining, planning, developing, describing, and production of services offered to a customer in order to both improve/maximize the benefits of IT service for a customer and achieve the target profit of the IT organization. The packaging of IT services develops and transforms IT services to products. These products are easy to copy and sell to the customers. This is possible with the process whereas many issues have to be considered, decided, and implemented at a selected level. The level depends on how deeply packaging of IT services is applied to the IT organization. Strategies, available resources on the packaging team, time, and different market segments are all things which affect the depth of the method and more, the result (i.e. product). The packaging of IT services should have to be done in a fairly tight time frame because constantly changing environments and situations as well as fast developing IT affect the topics of the process. For example, customer needs and requirements will vary, and this affects the process.

2.2 The Essential Phases of the Process – The Program of Packaging IT Services

The program of packaging IT services is an integral part of the whole process. It includes five phases, which are presented in Fig. 3.

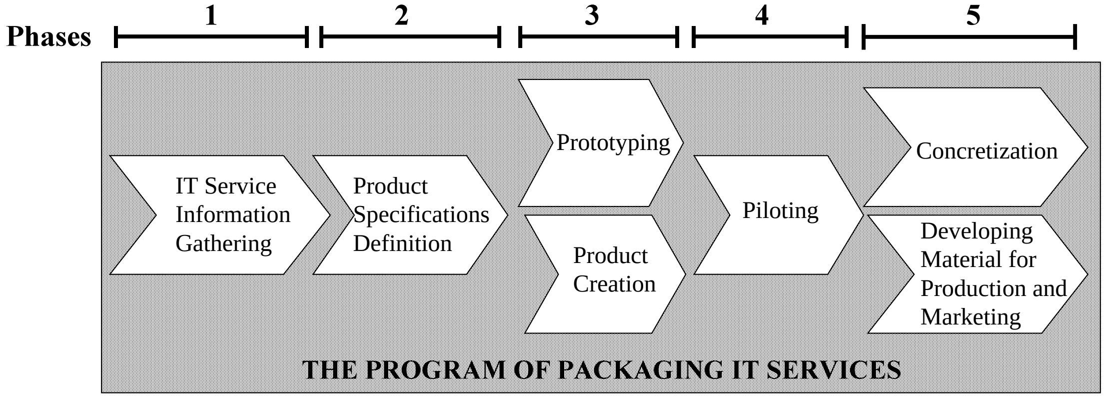

Figure 3. The Phases of the Program of Packaging IT Services.

Any new product development must be based on an analysis of previous products (Morral, 1996). Same goes for the packaging of IT services. Therefore, it is essential to analyze the existing situation i.e. present IT service before creating a new product (phase 1). A process team of packaging IT services should be able to identify customer needs without knowing how it will eventually address to those needs. This leaves flexibility for the team to generate and select product concepts.

The team sets target specifications (phase 2), which are established before the team knows what constraints the product technology will place upon what can be achieved. For technology-intensive products such as products of the IT organization, it is rarely possible to have all the product specifications at once. The target specifications have to be refined after a product concept - meaning chiefly the technical environment and cost - has been selected. At this point, the benchmarking process (see Bendell et al, 1993; Camp, 1989; Fitz-enz, 1993; Gordon, 1994; Karlöf & Östblom, 1993) can also be carried out if wanted.

The packaging of IT services requires the building and testing of prototypes when creating the product (phase 3). A prototype is a working version of a system or part of it, but it is meant to be only a preliminary design. Once operational, the prototype will be further refined until it conforms precisely to users' requirements. Prototyping is desirable if user requirements are clear enough but the development team may be unsure of certain technical aspects of the design solution (Laudon & Laudon, 1991).

There should be piloting for the new product (phase 4). Pilot groups can consist of customers and members of the packaging of IT services project team. The pilot group will give valuable information for the process. Both prototyping and piloting are essential because the product should be well-functional when shipped to the customers.

Concretization is the last phase of packaging of IT services and it can be done with developing material for production and marketing (phase 5). With concretization a difficult service is transformed into as concrete a service as possible for the customer (Sipilä, 1996). Concretization makes the customer feel that he/she is getting his money's worth. It facilitates the decision of purchase for the customer. This is quite important for the new customer because concretization reduces the feeling of uncertainty. Also it gives the IT organization the opportunity to make the customer aware of needs that he did not even know he/she had. The most typical concretization methods, in order to have tangible evidence, are names, instruction folders, and manuals (see Sipilä, 1992, for more). With design management (see, for example, Poikolainen et al, 1994) it is possible to take useful issues into consideration during concretization. The importance of the name of the product is obvious if the organization wants to resell the product. Thereby, the buyer will have a tangible product. A suitable name can be developed for the purpose of an entire product family: an extension part can be easily joined into the name and that tells the customer from what kind of product family the selected product really is or what version it is. The name should be used consistently for many years, like in our example of *Magnus*. It supports the regeneration of a product: continuity remains although contents of a product will be changed. The marketing of IT services is challenging because services are not concrete issues. A suitable marketing strategy for the professional organization can be e.g. relationship marketing (see Blomqvist et al, 1993). Another problem is the different needs of different segments: one might

have different brochures for different customers. An organization can have some kind of a basic model of the brochure, which can be easily modified for different purposes.
An evaluation of the performance of the project of packaging IT services after it has been completed is useful for personal and organizational improvement. This review is called a post-mortem project evaluation (Ulrich & Eppinger, 1995). It is usually an open-ended discussion of the strengths and weaknesses of the project.

2.3 The Role of Internal Description in the Program

The role of the internal description is significant in the case of the program of packaging IT services, especially in the first three phases in Fig. 3. Product specifications can be derived from the internal description of the present IT service. The internal description also helps in forming up marketing material. In case the packaging of IT services is invisible to the customer, it is called internal packaging of IT services. Therefore, the internal description is primarily for internal use only (see Sipilä, 1996).
The internal description includes at least the entries described in Table 1.

General description (the core service)	Describes the reasons why the product is taken into special consideration (object definition). It gives the customer what he/she really wants.
The use of service and added value for the customer (associate services)	Includes both how the service is used and what kind of added value the service promises for the customer.
Market potential and customers	Defines market potential and the customers for offered IT service.
IT services which compete with it and IT services it makes obsolete	Describes similar competitive IT services as well as previous IT services that will be replaced by the new one.
Fits in the strategies	Fit for the strategies of the customer and the IT organization.
Technical description	Technical description is important because technical knowledge of IT is an essential part of the core competence of a professional IT organization and its products. Therefore technical description can not be excluded from the internal description, even though Sipilä (1996) has not taken this entry into account.
Service description and effects on processes	In professional services it is useful to describe service as a process and see the effects of packaging on processes. The process should be established from the customer requirements and needs, and it should be individual.
Versions	Different versions for different market segments. Customer tailored versions can be formed up from these versions.
The most important references	References are an essential part of marketing.
The price of the service	Pricing models such as a fixed operational price.
Service delivery time	It describes the delivery time of the service.
People in charge	It is useful to define authorizations and responsibilities for services. There should be someone named responsible for the product.
Further actions plan	Further actions plan for development of the product. Every product has a life cycle: the product has to be developed in future. Development efforts are useful to implement in projects.

Table 1. Internal Description.

3. Research Design

Theories presented in this paper were tested in a single-case study (Yin, 1984), which made it possible to combine the theoretical knowledge with practical knowledge of the object organization and to recognize and understand the subject. Deductive research starts from the theory and ends with the confirmation, cancellation or improvement of the theory (Järvinen & Järvinen, 1995) such as this research.
Qualitative and quantitative internal benchmarking (Bendell et al, 1993; Camp, 1989; Fitz-enz, 1993; Gordon, 1994) has merely a supportive role in this research. Benchmarking included five stages: selecting the target, selecting the partner, gathering information, analysis, and implementation (Karlöf & Östblom, 1993).

Eventhough the more detailed benchmarking stages are not presented in this paper, some implemented results can be found (for more on this subject, see Nieminen, 1997).

The data collection methods were posted questionnaires, face-to-face interviews, telephone interviews, Intranet and Internet, and benchmarking partner site visits. Posted questionnaires here mean both e-mail and letter interviewing. Furthermore, face-to-face interviews mean personal meeting and interviewing. The former is the best method of data collection at a benchmarking partner site from a quality and quantity standpoint (Fitz-enz, 1993). The latter can be either structured or unstructured (Gerson, 1994): both methods were used during the interviews.

Firstly, posted questionnaires and interviews gave a view of the object organization and its services. Secondly, Intranet and Internet were used especially during the early phases of benchmarking process in order to have information about the prospect benchmarking partners and their present situations at their IT units. Prospect partners were the group composed of Irish, Norwegian, and Danish subsidiaries of Telefonaktiebolaget LM Ericsson. They were contacted by posted questionnaires in which the subject was introduced. Thirdly, a benchmarking partner was selected and a site visit was made to the IT unit in Denmark.

The topics of the benchmarking were related to general information of the IT unit and processes, internal description, the packaging of IT services, and the product portfolio.

Validity of the research was improved by using multiple sources of evidence. Some of key informants reviewed the draft reports during the research. The key members of staff of each IT unit were interviewed, then the gathered information was checked and re-checked by developing more specific questions. Also validity of the process model has been improved with discussions with a group of those who participated in the project. In order to improve reliability notes were used during the research. These notes have been archived with the theoretical references and other material of the research. These archives together with the research design would enable somebody to repeat this research.

4. Analysis of the Single-Case

4.1 How was the Older IT Service Developed?

An example of IT services offered by the IT unit of Finnish subsidiary of Telefonaktiebolaget LM Ericsson was developed little by little without any kind of systematic development and packaging of IT services approach. As time went by, the IT unit started to call this IT service Magnus, which is actually a combination of support and operational services. It was developed gradually but in an uncontrolled way. Magnus was not seen as a product but just an IT service based on some innovations and technical improvement with the possibilities it brings with it. Also customers' needs and requirements affect the IT service only at an ad-hoc basis. Needs were not systematically gathered, they were based on a feeling only. Fig. 4 presents the uncontrolled development of the offered IT service.

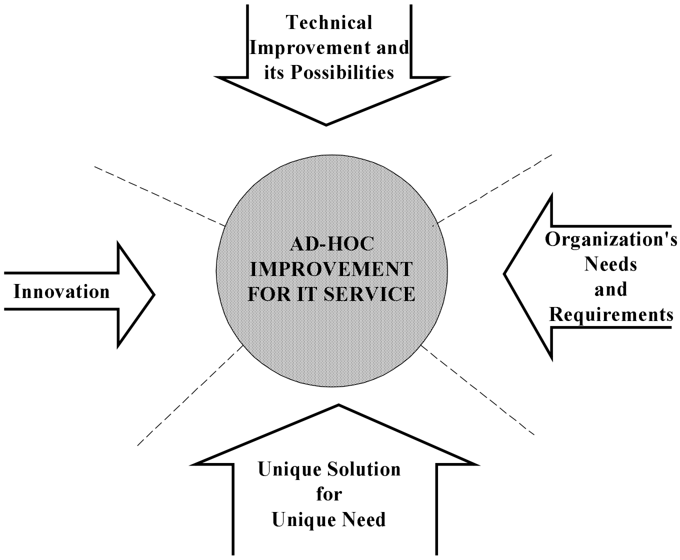

Figure 4. An ad-hoc Improvement for the Previous IT Service.

4.2 Magnus from the Standpoint of the Packaging of IT Services

Magnus is a product, which can be clarified with the model presented in Fig. 2. This model is applied to Magnus with the standard, modules, and tailoring parts. Standard part of Magnus requires a network (LAN/WAN) in order to establish connections both to internal and external environment. The network gives Magnus the backbone, which the product is founded upon. Thus Magnus needs resources such as servers from the network in order to work properly. Support services, helpdesk, and other non-visible services like backup, are provided by the IT unit. Also third party suppliers support the IT unit. Magnus includes software that offers the user tools for word-processing, mailing, scheduling etc. These form up the modules of the product. On top of that, Magnus can be tailored for customer's special purposes. All these elements together make the product into a professional IT service product because it has to be seen in its entirety, including material and immaterial elements. The packaging of IT services connects competence of IT experts into the product.

The brief analysis of Magnus in the form of internal description is presented in Table 2. Benchmarking pointed out that by using shareware as a part of the product, internal costs can be decreased. (For more detailed analysis, see Nieminen, 1997)

Both prototyping and piloting were organized, even though the project lacked employee resources. One should keep in mind that customer service and routines have to be taken care of simultaneously with developing the new product. Same resources can not be released from the line organization as flexibly as they should be. Concretization aspects, such as the name of the product, and marketing were considered. The idea of this is to make the customers more acquainted with the name of the product. Training services for the customers were arranged after the product was launched into the markets.

General description (the core service)	The main idea behind Magnus is to improve the user's personal productivity. It is one of the most visible parts of the IT unit to the rest of the organization.
The use of service and added value for the customer (associate services)	The use of service is to offer the customer a PC environment where work can be done quickly and productively. There are value-adding reasons for the customer to use the product, e.g. it allows the customer to do his/her own work without paying any attention to technology concerning problem solving behind Magnus.
Market potential and customers	Magnus is directed towards the personnel: both the employees of the IT unit and the employees of the other subsidiary organizations.
IT services which compete with it and IT services it makes obsolete	IT unit is the only service provider and Magnus is the only product for the PC environment. Still, organizations do change. Other IT service providers can offer products in the future, too.
Fits in the strategies	Magnus is well suited to the strategy of IT unit. It offers the customers the kind of IT service they need in office environment.
Technical description	Magnus is based on Microsoft® Windows NT® Version 4.0 operating system. Other technical issues (such as anti-virus software) are not presented in this paper.
Service description and effects on processes	The core processes of Magnus were researched and defined but not presented in this paper.
Versions	The configuration of the system of workstation PC or portable PC can be seen as different versions of the product.
The most important references	The IT unit is well known internally and it is acquainted with other subsidiary organizations. It can offer professional, tailored services for customers' purposes.
The price of the service	Pricing model can be categorized into time and capacity charge. Despite the fact that this is against Sipilä's opinions (1996), it is a useful pricing model because the IT unit operates internally: charges can be more realistic without hidden costs.
Service delivery time	There are contracts and service level agreements made with other units for service delivery time.
People in charge	The person in charge can be found from the team members who participated in the project.
Further actions plan	A new product demands more skills of the employees of the IT unit and the customers. Therefore, training courses were arranged. Also customer satisfaction researches were arranged.

Table 2. Internal Description of Magnus.

5. A Process Model of the Packaging of IT Services

A process model that combines both packaging of the IT services and product development for the IT organization is presented in Fig. 5. The program of packaging of the IT services and different phases in it (see Fig. 3) can be found from this process as well. The process model assumes that the IT organization has already some kind of a suitable IT service to start with. If the IT organization has not yet adapted the process, the hardest work is done at the transition stage. However, the next time it will be a lot easier. This model also fits to the internal-business-process value chain (see Kaplan & Norton, 1996).

Some benefits can be achieved with this process model. It offers a template for problematic of packaging of the IT services, because it puts all the significant phases together. Thereby, it gives guidance for the complex field of the packaging of IT services. Since the packaging of IT services is taken into consideration from the very beginning of the development of a new product, product thinking be comes a reality for the IT organization. It is also possible to integrate the process model to the other processes of the IT organization.

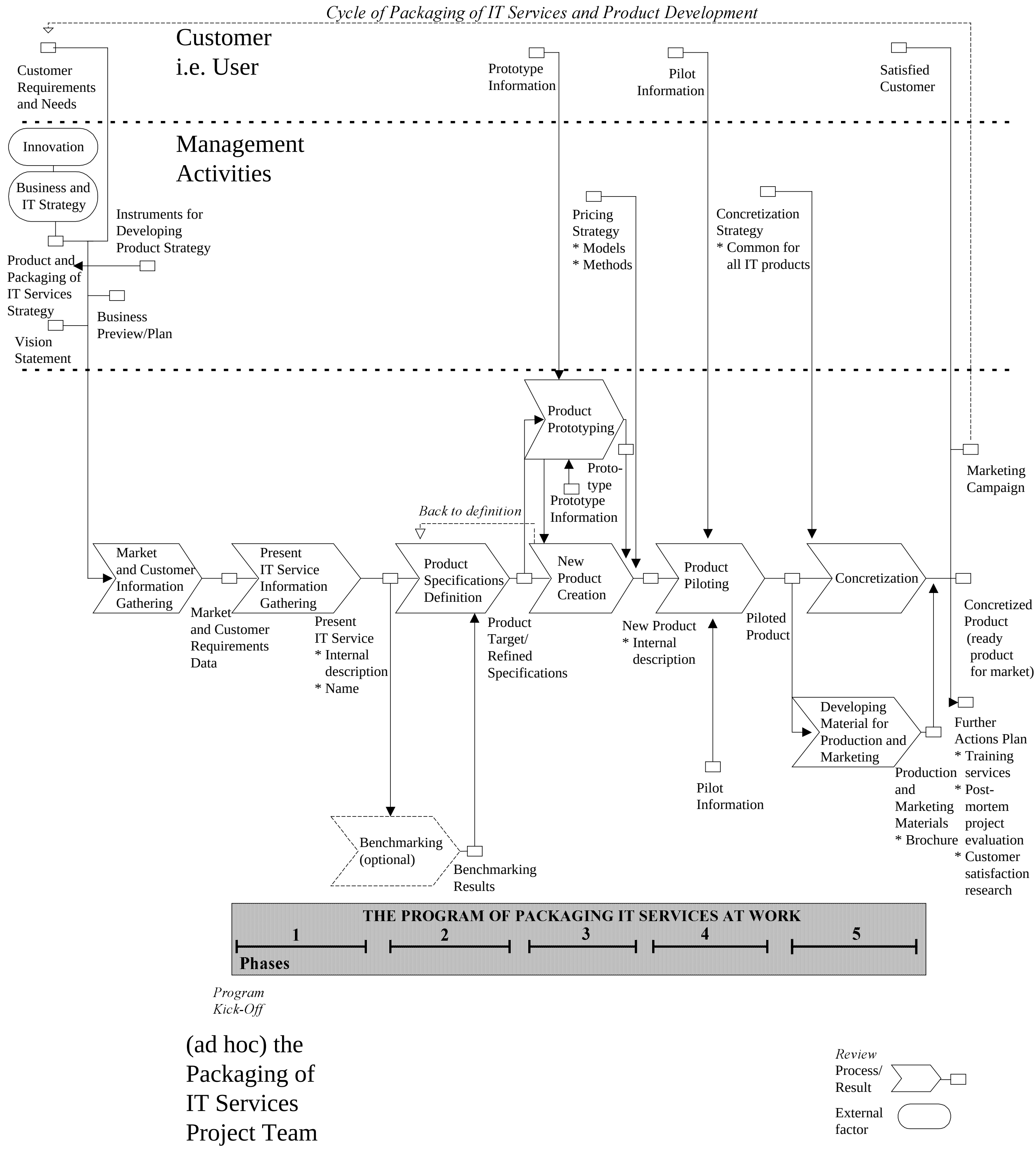

Figure 5. From IT Service to the New Product: the Process Model of the Packaging of IT Services along with Product Development for the IT Organization.

The main phases of the packaging of IT services are as follows: (a) gathering information of the market and the customer i.e. identifying the customer and market needs, (b) the present IT service information gathering, (c) product specifications definition, (d) the new product creation simultaneously with (e) product prototyping, (f) piloting, and (g) concretization with (h) developing material for production and marketing.

The process has three different levels: customer i.e. user, management activities, and the (ad hoc) packaging of the IT services project team. Ad hoc should be a combination of various kinds of professionals such as personnel of the IT organization, marketing and other experts. This team can be seen as a typical process team (see Hammer, 1996). These various process levels have different activities yet they work in a close contact with each other.

The process model of packaging of the IT services starts proactively from customer requirements and needs and ends reactively with customer satisfaction. Benchmarking indicated that the measurement and the results of regular customer satisfaction steer the efforts of an IT organization into the right direction. Strategy can be seen as an area of activities for the organization to reach the vision. Vision in this context means that the IT organization offers products. Often the management of the IT organization has to make deductions of products and markets because the customer does not yet know what the needs are in the future. Strategy of products and packaging of the IT services decreases the customer’s uncertainty factors. Management has to define the strategies for the business and IT as well. There has to be an economic analysis, such as a business preview or a business plan, in which the economical aspect is researched. It assists in deciding whether to start the program of packaging IT services or not, even though the final decision is made by the management. There is at the end of each phase of the process a need for go/no-go decisions. Therefore, the program can always be stopped or even terminated, if need be.

The ad hoc packaging of IT services project team is responsible for the program. According to the benchmarking results of the research, the project manager has an essential role in coordinating the process and in obtaining good results. It is useful for the project team to start the packaging of IT services by (a) identifying market requirements and customer needs i.e. "language of the customer". Both identifications are related to the establishment of product specifications. The project team collects the information concerning the present IT service (b). In this model there could also be benchmarking arranged in order to improve the new product. The new product has to be (c) defined before it can be created, so the product target specifications should be defined. Through (d) the creating phase of the new product the early specifications of the product should be refined because there can be e.g. some technical IT demands which can not be estimated beforehand. Management should make decisions about the pricing strategy, such as what kinds of models and methods to use for the pricing of the product. Simultaneously with the phase of creating the new product it has to be (e) prototyped. In here creating means implementation of the technical aspect of the product. Information concerning the prototypes is gathered from the customers and the project team. It is useful to arrange (f) piloting as well. A heterogeneous pilot group should be formed up from the customers and those belonging to the project

team. All these prototyping and piloting activities aim at making sure that the product is well functional when finally shipped to the customers.
The fixed product should be (g) concretized according to the concretization strategy. This strategy should be common for all the products the IT organization offers. (h) The production and marketing material shall be developed through the program. In particular, the IT organization should have some kind of a brochure to give the customers. In addition to the phases presented here, there could be need for the different production ramp-up-phase as well: the product is launched and it becomes available for distribution. After this, the product is ready for the market. An internal marketing campaign should be arranged for the product. Thereby the new product is known throughout the company.
Further actions plan includes e.g. training services for the customer for usage of the new product, post-mortem project evaluation, and a customer satisfaction research. The research concerning customer satisfaction tells how satisfied the customers actually are with the new product and what should be improved in the first place and in the long run. The results of the customer satisfaction research direct the future projects of the packaging of IT services.
In the internal-business-process perspective (Kaplan & Norton, 1996), the innovation process consists of phases from (a) to (c). Furthermore, the operations process consists of phases from (d) to (h) and the last principal business process called postsale service process includes further actions plan.

6. Research Findings and Discussion

The process model of the packaging of IT services (Fig. 5) was generated on grounds of the theories and experiences of the method applied for the single-case. The process model combines all the significant phases into a single solution in order to approach the complex field of packaging of professional services.
Benchmarking had a mainly supportive role during the research. With it possibilities for improvements were found and some gaps were reduced. These gaps were mainly related to the technical description of the product, project management, and customer satisfaction researches.
What are the actual benefits that can be achieved with the packaging of IT services and products? The benefits of packaging the professional services mentioned by Sipilä (1996) are possible to achieve in the domain of IT. A well-defined process of the packaging of IT services helps to plan personnel's own work in this context because they can have a clear target and more, a vision during the process and project. The process is easy to communicate to different parties. The packaging of IT services offers better possibilities for resource allocation both to the operative IT personnel and to the management. It can be used as a tool in acquiring and transferring information in the IT organization. The method enables to connect the competence of the IT experts to the product, and job training becomes more effective. With the packaging of IT services, customer expectations can be more precisely defined. It eases the cost definition and IT service pricing. The result of the method, i.e. the product, is easier to sell and copy for the customer than an undefined and unsystematic IT service. With the method, more precise service agreements or service level agreements (SLAs) can be made, because the packaging of IT services defines

clear borders for the product. Thereby, both parties know where they are committed: the customer knows for sure what he/she gets with the product. On the other hand, the IT organization knows what their responsibilities are. If something more is needed for the product, it can be tailored for the customer. Thereby, the IT organization can make more profit and improve its competitive ability. The process forces the IT organization to harmonize its views, to analyze its activities and to operate in a more systematic way, at least in this subject. The packaging of IT services improves the efficiency and quality of the organization. With overall product-thinking attitude, more products, and well-defined product strategy, management can have one way to evaluate, lead and manage the IT organization. Also marketing is easier because the IT organization has something concrete to offer its customers. The packaging of IT services assists in improving the model for teamwork in the IT organization. The method can be seen as a prerequisite for outsourcing as well.

According to Sipilä (1996), the packaging of professional services can be said to be fully completed whenever the product can be sold to another. However, there are different levels in the packaging of IT services - from a roughly packaged to a fully packaged product. It is possible to sell the product, which is not fully packaged. That is why it is not always possible or even reasonable to package it completely. It is quite hard for the typical IT unit to just concentrate on the packaging of IT services because it has several demands at the same time. Therefore, the packaging of IT services is often a compromise, which is dependent on strategic matters, time and resources, and market segments. It is important to realize that the product has a life cycle with different stages in it. The product does have an end, and new one replaces it. Furthermore, product thinking does not necessarily suit to everything. The packaging of IT services can sometimes even decrease innovation if it is too restrictive.

The forthcoming studies should pay special attention to the validation of the process model of the packaging of IT services. Therefore, authors suggest that the model should be tested several times and developed further in order to make further generalizations in the context of IT. One possibility is to concentrate on the Best-In-Class IT organizations and to research and benchmark how they manage their process of the packaging of IT services.

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