Case Study:
Challenges of Transition from a Manufacturing Company to a Maintenance Partner

Teuvo Heikkinen, Department of Mechanical Engineering, Savonia University of Applied Sciences, Kuopio, Finland

ABSTRACT

The paper discusses the new aspects of services and product lifecycle management could bring to the manufacturing company presented in this paper as a case study. The paper starts with a literature review and continues on to the case study. In the discussion section the findings are presented, following a conclusion section, where plausible miniature scenarios for circling the problems found earlier are presented. The service orientation is discussed through product lifecycle management aspect. The main topics discuss about the practical problems that came forth during the research. Many of those could have been avoided if the possibility of service orientation had been taken into account earlier. Companies need to seek new ways for creating profit and differentiate among the competition. Differentiating through services is seen as a favorable decision, although the implementation might not be as straightforward. Adding services to a core product creates more opportunities for a customer, but also enhances the company’s position in the markets. The goal of this research is to give insight to the challenges that a modern manufacturing company faces when in transition. Practical problems, intra- and extra-company are presented with discussion, results and suggested outcome.

Keywords: Manufacturing, Manufacturing-to-Maintenance, Product Lifecycle, Services, Transition

1. DRIVERS TOWARDS TRANSITION

The main drivers toward services are differentiation and creating revenue; staying on the cutting edge in the industry (Gebauer et al., 2008). The recent trend proposes that original equipment manufacturers are adding services to their core products (Laine, Ojala, & Paranko 2004). Staying at the top requires a constant stream of innovations in processes, products and services.

As a global business the services also have to be global. This is recognized through the customers; they are relatively small as presented in this case, and scattered all over the globe. This creates extremely challenging situation for the service provider in providing the services and getting the maintenance deals.

DOI: 10.4018/jssmet.2012100101
The services provided are mainly the selling of spare parts. Customers inform the company about a problem they have encountered; company sends spare parts or experts to solve the problem. This service model works in some cases, but with complex products, such as piling machinery the services have to work in much more faster pace. Whenever the machinery is not working as supposed, the customer is not making profit. This reactive model lacks the customer’s interest in having high utilization rate and reliable product. (Junttan LLC, 2011)

Thus the driver for moving more into services comes from the customers. Customers buy the machinery for making profit, thus reliability, predictability and services are highlighted for maximizing the satisfaction; sacrifice in product margin and restore in services delivered (Malleret, 2006). High utilization of new technology, processes and services enable the engagement in providing lifecycle services. The next section continues on the literature review and background information.

2. LIFECYCLE AND SERVICES BACKGROUND REVIEW

Literature serves as the base information source for the project. Collected data, interviews and material provided by an external expert service are the primary sources of information. The information gathered concerns about the challenges encountered in providing basic (i.e., selling spare parts) services and the problems that might arise during the transition process (Junttan LLC, 2011). The most urgent challenges are in the current situation. The challenges are introduced and discussed in detail later in this paper.

2.1. Managing the Lifecycle

Business entities are demanded to manage product and all of its aspects throughout the lifecycle, accompanied by new innovations (Ohvanainen & Hietikko, 2012). The need for this kind of management is intra- and extra-company; stakeholders, consumers, public bodies, regulations and so on (López-Ortega, Sapidis, & Wallace, 2006). The requirement is to sustainably and comprehensively manage the products lifecycle. (Gecevska et al., 2010) The internal requirements usually are about savings in costs; critical in product planning (Ben-Menachem & Gavious, 2008). Requirements may also be creating more business and better customer satisfaction, whereas external needs descent from regulations or customers. Using a Product-Service Systems, PSS, concept could achieve the goal of better products and services (Dongmin et al., 2012).

The product is managed throughout its lifecycle; from the design table to recycling, and all related aspects (Zheng et al., 2008). It is not only about the design process or manufacturing, but also about procurement, distribution, people and processes, information distribution; reaching the full spectrum of a business.

Cost reductions are realized through lesser use of resources and minimizing inefficiencies (Grieves, 2006). Businesses seek new ways to implement data gathering and distribution, mainly through information communication technologies; software. Repetition changes to more iterative orientation, since the product’s history is traceable. Flaws, defects and mismanagement of resources are excluded or minimized from the process continuously (Grieves, 2003).

Product lifecycle management is thus about the managing of product related data, knowledge and processes related to it (Gecevska et al., 2010). Data is gathered and distributed correctly; internal efficiency of a business heightens (Lin et al., 2011). Usually standardization of parts, products and processes are the first noticeable benefits from product lifecycle management philosophy.

As proposed, product lifecycle management is not software, neither a method; it is a functional concept and a set of methods for controlling product related information (Saaksvuori & Immonen, 2008). There are several software packages to be used for this purpose, but the lack of people’s commitment to the concept is a challenge. It is about effectively managing company’s intellectual capital and
10 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the product's webpage: www.igi-global.com/article/case-study-challenges-transition-manufacturing/75156?camid=4v1

This title is available in InfoSci-Journals, InfoSci-Journal Disciplines Business, Administration, and Management. Recommend this product to your librarian: www.igi-global.com/e-resources/library-recommendation/?id=2

Related Content

Colored vs. Black Screens or How Color Can Favor Green e-Commerce

Case Studies in Customization of E-Health Services
(2012). *Services Customization Using Web Technologies* (pp. 171-189). www.igi-global.com/chapter/case-studies-customization-health-services/65835?camid=4v1a

Cloud Computing Paradigm for Indian Education Sector
Developing Information Communication Technologies for the Human Services: Mental Health and Employment
www.igi-global.com/chapter/developing-information-communication-technologies-human/43959?camid=4v1a