

STATE OF THE ART IN SERVICE DESIGN AND MODELLING

Executive Summary

The present high level of competition in the global market, combined with the perfection of hardware technology and the increased demands of customers, has created a need for new innovations in the way that products are offered. In response to these needs the concept of Total Care Products (TCP's), sometimes known as Functional Products has emerged. These products are integrated systems comprising hardware and services where services are the set of functions or activities that enable the hardware to be integrated into a total functional provision. The success of Total Care Products therefore depends upon both hardware and services.

In order to produce the service element of a total care product, the service element must first be designed. Knowledge of services in general is required as a pre-requisite to specific aspects of service design. The objective in reviewing current practices in service design in general is to be able to adapt existing methodologies for use in the service design process in the context of total care products.

This document comprises a literature review in service design taking in papers and books written by researchers from the USA, Sweden, UK, Germany, Chile, Switzerland and Brazil, published in journals including Marketing Science, the Service Industries Journal, International Journal of Services, European Journal of Marketing, Journal of Operations Management amongst others.

Various topics related to services have received attention from researches over the years including: service quality [Parasurama et al (1985)], service failure and recovery [Schlesinger and Heskett (1991), Michel (2000)], how services benefit industry [Gadrey and Gallouj (1995)], the selection of service specifications [Swan et al (2002)], the analysis of service operations [Bitran and Lojo (1993)], human issues in service design [Cook et al (2002)] and case studies involving modelling of services [Bitran and Mondeschein (1995)], to mention but a few. However for the purpose of this document the focus will be on service design and modelling methodologies.

In this document definitions of 'what is a service' are presented. From the literature, distinct stages can be identified in the service design process. The findings for each stage are reviewed, described and discussed in detail. The importance of service modelling in the service design process is highlighted. Historical practices relating to service modelling are described and the different approaches reviewed. The merits and weaknesses of each approach are discussed. This information will be of use in the development of a modelling approach for services in the context of total care products. Finally, conclusions and recommendations for further work are presented.