Implementing Electronic Commerce in SMEs: Processes and Barriers

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EXECUTIVE SUMMARY

Partwell Limited is a small to medium sized (SME) manufacturing and supply company based in the United Kingdom. This case study discusses the circumstances that led the company to consider the implementation of two Internet Web sites for the purpose of conducting Electronic Commerce (e-commerce). The history and culture of Partwell are described, as are the histories and characteristics of key personnel involved in this e-commerce project. Furthermore, the company’s previous experience with information and communication technology (ICT) is described. Following on from this the process by which e-commerce was introduced into the company is explained. This information provides the background for analyzing the case study. Finally, the case study goes on to show the importance of SMEs to the economy of the UK and identifies the main factors that inhibit SMEs from adopting e-commerce. The tangible benefits and consequences of this e-commerce project are identified.

Keywords: electronic commerce; Internet; organizational culture; SME

ORGANIZATIONAL BACKGROUND

In many areas of manufacture there is a need to cut or convert materials to create a finished product. For example, leather needs to be cut into precise shapes so as to form well-made footwear. Partwell Limited, a family-owned UK-based company established in 1979, was initially involved in supplying cutting technology to the shoe, leather and textile industry. They supplied specialized equipment such as cutting presses, cutting surface and creasing rules for this industry. They also help manufacturing plants optimize their cutting capabilities through consultation and training. During the 1980s the manufacture of shoe and leather products gradually moved to countries such as India where the cost of labor was considerably lower than in the UK. Consequently the company was compelled to seek new products and markets in which they could exploit their knowledge of cutting technology. The plastic-cutting industry seemed to offer a fertile opportunity, for example, plastic cog wheels for the motors of domestic appliances such as washing machines. Cog wheels, however, are mass-produced compo-
nents and the market for them is saturated by large players in the cutting industry. Partwell’s Managing Director recognized that there was a niche market that had not yet been exploited by Partwell’s competitors, namely the manufacture and supply of small batches of plastic components machined exactly to customer requirements. An example of this is plastic food-cutting boards for the catering industry, which need to be manufactured in a variety of shapes and sizes, and from a wide variety of composite plastic materials. Larger cutting technology companies had little interest in this market because they were equipped to supply mass produced components. This market was seen to provide a new opportunity for Partwell to exploit their cutting expertise. Consequently the company invested in a three-axis computer numerically controlled (CNC) machine, which had ample flexibility to produce a vast range of plastic components. Customers can design a shape using computer aided design (CAD) software, and e-mail the drawing to Partwell, who then guarantees to manufacture the part within seven days. This is a very flexible service that requires the company to be extremely responsive to the needs of its customers. For example they have produced the plastic tracking that is used on the rails of the “Big One” — the world’s largest roller coaster located at Blackpool Pleasure Beach in the North West of England. Partwell was able to respond successfully to this unusual challenge because of the adaptability inherent in their culture.

Today the company’s core business is still in providing cutting technology solutions to other manufacturers, although it is now mainly for the automotive and packaging industries. For example they supply the machinery and equipment that enables precise creases to be formed in cardboard to make finished products such as cigarette packets (Figure 1).

Figure 1: Partwell’s Technology Enables Precise Creases to be Scribed in Cardboard to Make Folding Packing Boxes

Figure 2: A Typical Press Cutting Machine
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