

have a reasonable level of inventory, a good inventory management and handling systems is required [9].

The main objective of this project is to study the current equipment and spare parts inventory management system of all the Bauer Far East locations. It will identify the problems faced, and then propose an Integrated Inventory Management system to help BFEH reduces their total inventory holding, provides inventory visibility and availability for all the Far East locations.

In addition, we will also try to explore the latest current information technologies to facilitate the integration of the inventory management system. It is important to mention here that, as the system proposed will be implemented in multiple locations, the standardisation of the technologies chosen is important to ensure consistency in implementation and training in all the locations.

2.0 Technological Changes/Trends

Technologies permeate and greatly affect all levels of human endeavor. They have revolutionised our culture and the way we do business [2, 4]. They are employed to manage organisations in product development, production, procurement, marketing and almost all aspects of organisation management (see Figure 2.1) The advancement in technologies has resulted in shorter product development cycle, and hence many new and knowledge-based products were invented. For example, Bauer has incorporated a computer based monitoring devices for all its boring rigs to monitor the depth of the pile, the inclination, the pressure of the equipment, etc while operating the rig. Product and Marketing information can be retrieved easily from computer databases for product enhancement or use as marketing intelligence.

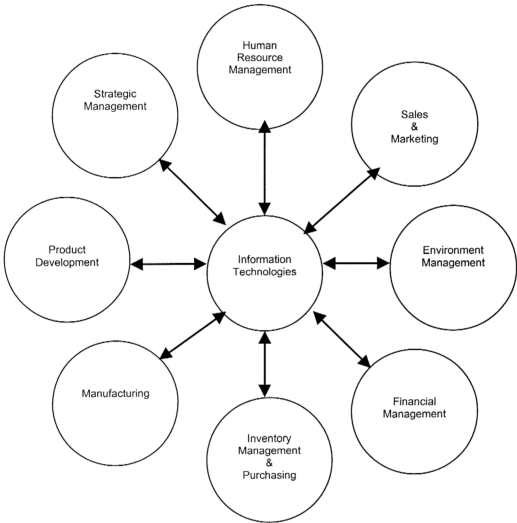


Figure 2.1: The Usage of Information Technologies in the Organisation

In the 90s, with the emergence of Internet, e-commerce, database management, satellite communication, one cannot ignore the changes that information technologies might bring about. However, the pace of change is so rapid that technological advances come, and in some cases, will have gone sooner than we expected.

2.1 The high-tech Challenge to Management

In light of the rapid change that characterizes high technology, there are numerous issues, opportunities, and obstacles that decision makers have been forced to address. These include the following:

Finance. Often, the pace of technological breakthroughs outstrips the schedule for the return of investments in a given technology. The organisation must decide whether to upgrade to the state of the art technology even though the cost of the incumbent technology has not yet been fully justified its original financial plans. In addition, the organisation must also consider that a delay in embracing a new generation of technology may affect the company competitiveness and may cause it to forgo opportunities for substantial cost reduction or revenue generation that would more than offset the cost of upgrading.

Marketing. We must weigh the trade-off of automation against personalization and the human touch. Ultimately, customer focus is often the deciding factor. People fear or are presumably uncomfortable with technology. They demand or require human approach. It is important that adequate training or guidance is provided to enable hesitant user to 'give a try' and once, comfortable with the technology, continue using the machine without assistance.

Human Resources. The deployment of human capital must be adequate to introduce, operate, and maintain high-tech systems. Unfortunately, management and employees do not always understand how to use equipment efficiently. This may be attributed, to a large extent, to the lack of proper training. In addition, technical personnel have long been criticized for failing to understand the user's actual needs and preferences; they simply do not know the business. They must see the business

through the eyes of their internal client or user, anticipate questions or concerns reflecting the user's particular orientation, and provide information before it is actually requested. In fact, they might even offer suggestions regarding ways that information can best be used. For example, an IT manager serving an internal client or user in the marketing department might anticipate his client's focus on segmentation and take the liberty of organizing databases toward that end. He might even include comments and recommendations as to which market segments are likely to be worth targeting.

Another important human resources issue involves the contention that heavy utilization of technology may actually be explained as undue dependence on it. The late Calvin Pava, foremost expert on office design, warned against such over dependence. He stated that the effect of technology on human behavior can be to "engender passivity" and to stunt human potential [6]. If the theory is correct, the dilemma arises as to where exactly to draw a line between proper use and abuse.

Engineering/Security. The deployment of backup systems to avoid loss in the face of catastrophes is absolutely essential. The unscheduled downtime and damaged of equipment, unauthorized access to computer systems by hackers and the introduction of 'viruses' which destroy or distort information, underscore the need for sophisticated security measures.