

The Study of Critical Success Factors for Implementing Computer Integrated Manufacturing

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ABSTRACT

After creating the world famous economical miracle in the past one decad, Taiwan now encounters a bottleneck of continuously maintaining the remarkable economical growth. High labor cost has making many traditional manufacture industries lose the competition with other country gradually. In order to regain the competitive advantage and growth rate as before, the manufacturing industry must improve their infrastructure. More investment are required to improve their manufacture process. Many movements have been done. One of the most important and efficient movement is implementing Computer Integrated Manufacturing (CIM). CIM can improve the manufacture process and reduce the manufacture cost in the long term. It thus creates competitive advantage over other competitors. In Taiwan, the government and managers of industry cares CIM very much, They believe this matches the trend in the world and can help the Taiwan's manufacture industry rebuild their system.

However, not all companies can implement CIM successfully. Many companies fail. Some companies follow the way of other company which has implemented CIM successfully before. But it doesn't receive equal amount of benefit. Studying the reason we find that to create the best benefit of CIM successfully, can not just introduce the machines and technics, but also need to make the new process fit in the philosophy and characteristics of individual company. This research paper studies the critical success factors of implmenting CIM. Four main categories can be classified, they are Strategy, Technology, Managment and Implementation. In these categories, total of 21 key factors affecting the success of implementing CIM are listed and discussed. The study is descriptive research. By interviewing and investigating a specific company which has successfully implemented CIM and combining with studying the related articles and research papers, the results which can be used as a reference to those companies who are interested in CIM and the subsequent research use are possible to make. The research results find that in the process of implementing CIM, we need to consider not only the factors on technical side, but many others from non-technical sides, Among these non-technical sides, the most important one is Human effect. Human effect includes the support of company high level manager, quality of CIM project team member, executor's capability and recognition of colleagues. These are all the critical factors to lead the implementing CIM to the success. To gain the best benefit of CIM, the management system may need to be adjust and reorganization of the company may also be required sometimes. Finally, a clear mission statement and proper movemnts can guide the company to build up Computer Integrated Manufacturing System successfully.

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Keywords : CIM ; Critical success factors

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