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The Applicability of Radio Frequency Identification Devices to the New Zealand Army

A thesis presented in partial fulfilment of the requirements for the degree of
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Abstract

The purpose of the study was to examine if the application of Radio Frequency Identification Devices (RFID) to the New Zealand (NZ) Army Supply Chain would increase the efficiency of the supply chain, improve inventory accuracy and reduce the workload on the NZ Army Supply Technicians (SupTech). An effective supply chain is critical to the NZ Army to ensure soldiers have the required items to perform their roles on operations and during training. Failure to get this right can prevent the NZ Army from meeting its Government outputs, and worst case can cost lives.

Due to reduced numbers of trained SupTech, and an increasingly large and complex inventory, the Sup Tech workload has significantly increased in the last ten years. This has resulted in the NZ Army Supply chain not being as effective or efficient as it should be.

New technologies such as RFID could be a way to improve the effectiveness of the supply chain. RFID is an automatic identification technology that uses radio waves to identify and track objects in real time. RFID technology is considered to have great potential to improve the efficiency and accuracy of many processes in the supply chain by providing detailed information on the flow of the products throughout the entire chain.

This thesis conducts a comparative case study of the NZ Army Supply Chain and that of EastPack Ltd, who have recently implemented RFID. Time and cost analysis is conducted on the main units in the NZ Army and interviews are conducted with the top SupTech in these units to gauge the efficiency of the NZ Army supply chain. At EastPack Ltd interviews examine the RFID implementation decisions and results, and process mapping conducted to determine the efficiency of their supply chain.

The results show that the NZ Army processes are time and labour intensive and units do not have sufficient SupTech to meet compliance requirements and provide a good level of support to their customers. EastPack Ltd had similar problems prior to implementation of RFID but since the technology has been in use they have had significant improvements in their inventory accuracy, gained savings in costs and labour and achieved an early ROI from the implementation.

The study finds that while not all of the problems of the NZ Army Supply Chain can be solved by RFID its implementation would significantly reduce the workload on Sup Tech and help with the accuracy of the inventory in the NZ Army supply chain and improve its effectiveness.

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