

# **FEASIBILITY OF RFID TECHNOLOGY TO APPAREL SECTOR IN SRI LANKA**

K.I.A. P Rajakaruna

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Department of Management of Technology

University of Moratuwa

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## **Abstract**

This study primarily focuses on the feasibility of RFID in apparel sector and proposing a usage guideline in the case of implementation. The opportunities in these areas are revolutionary. Since, Sri Lankan textile and Apparel sector continues to be the number one foreign exchange earner for the country, analysis of the usage of RFID technology would be significant and timely.

RFID feasibility in apparel sector Sri Lanka is analysed through following five sections covering technological feasibility, organizational capability, financial viability, Questionnaire analysis, Guideline to RFID implementation.

Technology capability analysis performed for RFID technology in Sri Lankan apparel shows advanced level in converting, and acquiring capabilities while all the other capabilities remains in primary levels.

Benefits and issues to the apparel sector by implementation of RFID are identified as an objective of this study. Hence it can be seen that from the benefits available in RFID, Reduction of claims, Improvement of customer service, are not attractive to the Sri Lankan apparel sector while Enhanced availability of information, reduce inventory are the best benefits to the apparel industry. In the issue analysis it is evident that privacy issues, training problems are given as the non concern issues while initial implementation cost is identified as a heavy obstacle in the path of RFID implementation. Further there are critical issues which have to be answered before implementation of RFID. Most of them are technical aspects such as integration, dead at arrival, data overload .etc.

A proven technology like Bar code is still not penetrated in Sri Lankan market. Only 30% entire sample of apparel sector is using bar codes. Hence it is questionable whether Sri Lanka is still ready for RFID? But to confront the challenges in the apparel industry at this juncture, it is worthwhile to leap frog to RFID from manual counting.

Sri Lankan apparel sector is technologically feasible in RFID technology while operational capability and financial viability are still questionable. In the case of financial viability all three sub sectors came with a positive NPV and pay back period of ranging from 2 years 4 months to 3 years. Naturally apparel sector is driven through low

pay back period projects to cover the investments ambitiously. But RFID would not be one of those eye catching low pay back projects but would be steady and reliable long term investment. Following table summarize the findings of NPV and Pay back calculations.

NPV - sewing	\$139,646
NPV - Washing	\$ 109,449
NPV - finishing	\$267,577

Above table indicate positive NPV meaning feasible) RFID technology to implement in Sri Lanka. Special emphasis can be given to Finishing compared to sewing and washing

Hence it is recommended for apparel giants to start RFID implementation pilots now, where with in next two years they can implement to all garment sewing , washing and garment finishing plants. Initial trial can be start from sewing and washing and spread to finishing. Further costs of RFID implementation will be considerably lower in future due to mass scale production of tags. Hence ,at the end of two to three years NPV and pay back will be favorable for implementation of RFID to all apparel sector garment sewing, washing and finishing. For one off factories it is time to wait. With neither attractive NPV nor lesser pay back period it is better to adjust to the role of early follower.

In case of implementation of RFID technology as an auto ID method, Recommendations are given to guide the implementation of RFID in Sri Lankan apparel factories. These guide lines will help to reduce the issues pertaining with RFID implementation as well as give a structured manner for implementation. These recommendations are based on the detailed discussion with the industry experts. Further specifications given in chapter 4.1.1 0 specifications will help on implementation of RFID in Sri Lankan apparel sector.