

**INDUSTRIAL READINESS AND DEVELOPMENT  
STRATEGY FOR ADOPTING SMART FABRICS IN SRI  
LANKA: A STUDY BASED ON A FABRIC  
MANUFACTURING COMPANY IN SRI LANKA**

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Sri Lanka

June 2023

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The dissertation was submitted to the Department of Computer Science and Engineering of the University of Moratuwa in partial fulfilment of the requirement for the Degree of Master of Business Administration in Information Technology.

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## DECLARATION

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## **Abstract**

This research study aims to investigate the potential for the adoption of smart fabrics in Sri Lanka, with a specific emphasis on a fabric manufacturing company in the country. The study begins with an overview of the global smart textile industry and the various applications of smart textiles in different sectors. It then explores the current state of the textile industry in Sri Lanka and the opportunities and challenges for the development of smart fabrics in the country. The research involves a review of the literature, analysis of industry data, and interviews with industry experts to identify the key drivers and barriers and proposes a strategic plan for the development of smart textiles in Sri Lanka. By identifying the opportunities and potential barriers, this study aims to provide valuable insights for the company and the wider industry in their journey towards integrating smart fabric technologies.

The global manufacturing landscape is witnessing the emergence of the fourth industrial revolution, Industry 4.0, driven by automation and data exchange. Sri Lanka's fabric manufacturing industry is at a pivotal point, considering the adoption of smart fabrics. This study aims to fill the knowledge gap regarding the industry's readiness in Sri Lanka.

The study's findings will contribute to the development of a tailored industrial readiness and development strategy for the fabric manufacturing company in Sri Lanka. The strategy will encompass various aspects such as technology acquisition, process optimization, skill development, and infrastructure enhancement. By addressing the identified challenges, the company can overcome barriers to smart fabric integration and establish itself as a competitive player in the global market.

In conclusion, this study aims to provide valuable insights into the industrial readiness and development strategy for adopting smart fabrics in Sri Lanka, focusing on a fabric manufacturing company. The findings will inform the company's decision-making process and contribute to the overall growth and sustainability of the fabric manufacturing industry in Sri Lanka in the era of Industry 4.0.

**Keywords:** Smart Textile, Smart Fabric, Industry 4.0, Textile Industry

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## **LIST OF ABBREVIATIONS**

AI	:	Artificial Intelligence
CAGR	:	Compound Annual Growth Rate
IoT	:	Internet of Things
IT	:	Information Technology
KII	:	Key Informant Interview
SME	:	Small and Medium-sized Enterprise
R&D	:	Research & Development
TOE	:	Technology-Organization-Environment

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