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IMPLEMENTING ENTERPRISE RESOURCE
PLANNING AND ITS RELATION TO BUSINESS
PROCESS REENGINEERING WITH SPECIAL
REFERENCE TO SRI LANKA

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A Dissertation Submitted to
The Department of Mathematics
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Of the Degree of Master of Science
In Operational Research

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DECLARATION

I Hereby declare that this dissertation is my own work and that, to the best of my knowledge it contains no material previously published or written by another person nor material which, to substantial extent, has been accepted for the award of any other academic qualification of a university or other institute of higher learning except where an acknowledgment is made in the text.



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ABSTRACT

Implementation of Enterprise Resource Planning (ERP) systems is relatively new in Sri Lankan context and very few studies have been carried out on this topic. With the ever-increasing need to successfully implement ERP systems, such studies have become very important.

The study was designed to analyze how organizations can lead successful ERP implementations, use of best practices and to signify the extent of Business Process Reengineering (BPR) required for project success. A questionnaire survey covering 40 organizations implemented ERP solutions and inputs from experts in the field were used in the study.

A related literature review showed that, failure of any ERP implementation wastes colossal amount of money and time due to lack of top level support, poor change management, poor planning, inadequate communication, poor knowledge of best practices or BPR etc.

The survey revealed that, in Sri Lankan context, Finance, Manufacturing and Distribution were the most popular areas used in ERP systems. Manufacturing organizations were more interested on implementing ERP. The use of consultants in the areas of change management and BPR, was less.

In addition, the survey found Twenty Critical Success Factors for ERP projects, highlighting comprehensively that BPR must be done parallel for a successful implementation of an ERP system.

Based on the conclusions, it is recommended that managers should not change the system to suit the local processes, but should use more help from external consultants for BPR and change management. They must make the employees familiar to computers before training and educating them about the ERP systems.

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ABBREVIATION

BP	-	Best Practice
BPR	-	Business Process Reengineering
CBA	-	Cost Benefit Analysis
CIM	-	Computer Integrated Manufacturing
CPI	-	Continuous Process Improvement
CS	-	Current State
DBMS	-	Database Management System
ERP	-	Enterprise Resource Planning
GIGO	-	Garbage-in-Garbage-out
GRN	-	Goods Received Notes
GUI	-	Graphical User Interface
IT	-	Information Technology
JIT	-	Just in Time
MPS	-	Master Production Schedule
MRP I	-	Material Requirement Planning
MRP II	-	Manufacturing Resources Planning
OM	-	Operations Management
PFA	-	Process Flow Analysis
PFC	-	Process Flow Charts
PO	-	Purchase Order
ROI	-	Return on Investment
SF	-	Sales Forecast
SMED	-	Single Minute Exchange of Dies
TQM	-	Total Quality Management

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