Abstract

The Enterprise Resource Planning (ERP) implementation projects have high failure rates. Any conflict done during the ERP implementation process leads to errors in business decision making, decrease productivity and profitability, and can affect the project success. The main purpose in this paper using Failure Modes Effects Analysis (FMEA) approach to deal with help in increasing the success rate of ERP implementation projects. This achieved through defining main failures and failure factors related to ERP implementations. The ERP projects are divided into three stages; Pre, during and post implementation. Each stage analyzed to define its main characteristics and its different failures and failure factors. Many risks can affect and lead to failure in ERP Implementation. The risk management techniques are very useful before, during and post ERP Implementation phases. The FMEA approach assesses and evaluates the defined failures and failure factors providing a quantitative measure for each risk of failure. Our study describes how to reduce ERP Failures by decreasing the risk value, so the researchers enhance the FMEA approach by a Proposed Enhanced FMEA approach to measure the risk. Based on the four organizational critical areas the researchers’ uses four sub categorization
aspects, Financial, Customer, Legal & Regulation, and Business Operation. The Enhanced FMEA approach leading to success of ERP implementation.

References

2. Chetan S. Sankar “factors that improve ERP implementation strategies in an organization”, June 2010
5. Mutaz M. Al-Debei and Enas M. Al-Lozi “Implementations of ICT Innovations: A Comparative Analysis in terms of Challenges between Developed and Developing Countries”, 2012
8. L. Kambara, S Mhlanga and T Chikowore “EVALUATION OF ENTERPRISE RESOURCE PLANNING IMPLEMENTATION SUCCESS: CASE STUDY IN ZIMBABWE”, July 2012
10. ALA’A HAWARI and RICHARD HEEKS “Explaining ERP Failure in Developing Countries: A Jordanian Case Study”, 2010
14. T.SUGANTHALAKSHMI and C MOTHUVELAYUTHAN “GROUPING OF CRITICAL SUCCESS FACTORS FOR ERP IMPLEMENTATIONS”, April 2012
15. Hany Abdelghaffar “SUCCESS FACTORS FOR ERP IMPLEMENTATION IN LARGE ORGANIZATIONS: THE CASE OF EGYPT”, 2012
16. Hany Abdelghaffar and Reem Hamdy Abdel Azim “SIGNIFICANT FACTORS INFLUENCING ERP IMPLEMENTATION IN LARGE ORGANIZATIONS: EVIDENCE FROM EGYPT”, April 2010
17. Ayyub Ansarinejad, Mohsen-Sadegh Amalnick, Mohammad Ghadamayari, Samad Ansarinejad and Loghman Hatami-Shirkouhi “EVALUATING THE CRITICAL SUCCESS FACTORS IN ERP IMPLEMENTATION USING FUZZY AHP APPROACH”, 2011
18. Arun Madapusi “An Overview of ERP in Indian Production Firms”, Mar 2011
22. Murat OZKOK “RISK ASSESSMENT IN SHIP HULL STRUCTURE PRODUCTION USING FMEA”, Feb 2013
25. ICH-Q9 standard, INTERNATIONAL CONFERENCE ON HARMONISATION OF TECHNICAL REQUIREMENTS FOR REGISTRATION OF PHARMACEUTICALS FOR HUMAN USE “QUALITY RISK MANAGEMENT Q9” 09 Nov 2005.
29. Vijayakumar Bharathi, Dhanya Pramod and Ramakrishnan Raman “A FUZZY PETRI-NET BASED CONCEPTUAL MODEL FOR RISK PREDICTION IN ENTERPRISE RESOURCE PLANNING ACQUISITION DECISIONS FOR SMALL AND MEDIUM ENTERPRISES”, 18 Mar 2013
36. Rodrigo de Queiroz Souza, and Alberto José Álvares “FMEA AND FTA ANALYSIS FOR APPLICATION OF THE RELIABILITY-CENTERED MAINTENANCE METHODOLOGY: CASE STUDY ON HYDRAULIC TURBINES”, 2008
40. Tim Sandle “The use of risk assessment tools for microbiological assessment of
cleanroom environments”, 2010
45. DAVID W. VINCENT, and BILL HONECK “Risk Management Analysis Techniques For Validation Programs” May 2004
51. HE Xin, and TAO Xin “A Software Safety Test Approach Based on FTA and Bayesian Networks” 2011.
57. Guoqi Li “Ontology-based Reuse of Failure Modes for FMEA: Methodology and Tool” 2012.
Index Terms

Computer Science  Information Systems

Keywords

Information and Communications Technology (ICT), Information Technology Transfer (ITT), Critical Failure Factors (CFF), User Requirements Specifications (URS).