Implementing Automation and Validating them with Study and Evaluation of Business Process Re-Engineering

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Abstract: **Business Process Re-engineering is widely considered to be the most important application to bring in continuous improvement to the organization. It makes sure it keeps the authorities in the organization updated very often regarding the change that the company will require. This report acknowledges the importance and need for Business process Re-engineering in the Bhuvaneshwari Cotspins Pvt. Ltd which is a manufacturing industry. Bhuvaneshwari Cotspins Pvt. Ltd. specializes in manufacturing cotton spun yarn since 2003. The major issues faced by the Bhuvaneshwari Cotspins Pvt. Ltd., firstly, a lack of updated culture practiced in the organization and lack of automation used in the production and packaging unit.**

Keywords: **business process re-engineering, lack of culture, lack of automation.**

1. Introduction

Business Process Re-engineering is the most popular source since its initiation. It is popular because the impact that it holds is immaculate. BPR can identify the places where change is essential, so it always keeps the managers updated for the need to change in their processes.

Business process Re-engineering is nothing but the process of rethinking the complete process of what is happening in the organization and bringing in the changes that are needed.

Radical changes and dramatic improvements for good are direct outputs of Business process Re-engineering.

Fragmenting the entire process of the industry is something most of the industry does, but the expenses that the fragmentation creates is additional and a lot, so by bringing in BPR into effect, solutions will arrive.

Whereas Bhuvaneshwari Cotspins Pvt. Ltd., did face the need to bring in Business process Re- engineering to resolve immediate issues like Cultural Re-development and introduction to Automation and here in this project report you will see how BPR influenced to solve the issues.

2. Literature Survey

In their 2017 study, Shanmugasundaram and Panchanatham evaluated the employee-related problems experienced by garment export companies operating in the Madras.

Export Processing Zone, the Special Economic Zone, and also by 100% export-oriented units. According to the report, employees at garment factories willingly chose to leave their positions owing to hard workloads, bad work practices, high pollution levels, water shortages, inadequate infrastructural facilities, hostile senior relationships, and incorrect labour management planning. According to the report, personnel turnover is the main bottleneck (problem) this industry in Chennai faces and has a direct impact on the functioning of the export units.

3. Problem Faced and Solutions

Lack of culture followed in the workplace and lack of automation resulting in inefficiencies across the factory floor, Lack of Employee oversight over following company culture, Insufficient training on work culture, Absence of SOPs addressing work culture.

Business Process Reengineering can be as simple as shaping unclear processes and continually looking for areas of improvement and making critical changes which can be as complicated as reengineering ventures.

Problems in Flexibility, Enhancement of Productivity, Reduced risks, Transparency, Employee Contentment, Improved customer's reaction, consistency, durability etc., Can be solved.

Other general problems like worker fatigue, employee satisfaction, work life balance, stress of the work, time management can also be solved using Business Process Re-Engineering.

4. Automation

The project is about an Android-based system that aims to manage different aspects of a company's operations. The project includes four phases:

Employee Database: This phase involves the management of employee details such as personal information, salary, address, designation, and attendance.

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Fig. 1. Database

Inventory management: This phase includes the management of stock details, tracking of inventory location, and keeping track of inventory inwards and outwards. The system maintains details of inventory such as cost, quality, quantity, and description. The system also predicts future sales and alerts about the inventory that will be needed to fulfill the requirements based on previous year analysis.

Fig. 2. Inventory

Logistics: This phase involves the use of GPS logistics tracking and monitoring of products from point of origin to point of consumption. The system provides deep knowledge and insight to alleviate pain points and eliminate slowdowns before they occur. GPS technology has transformed the transportation industry, and the system allows for optimization of routes, increased safety with driver behavior monitoring, and increased accuracy of timelines, delivery dates, and contract compliance.

Production management: This phase involves the planning and control of industrial processes to ensure that they move smoothly at the required level. The system includes responsibility for and process design, planning, and control issues involving manufacturing operations. The system notifies the concerned department manager when a fault occurs.

5. Conclusion

Textile and clothing industry is fragmented and is highly unstructured. There is a lack of management practices. The main aim of this project is to develop an integrated android app for Bhuvaneshwari Cotspin India Private Limited spinning mill. The android app contains four phases such as employee database, inventory management, logistics GPS, and production management. This app helps to the management to calculate the employee's salary based on their attendance, inventory management, monitor the logistics using GPS, and notify the concern department manager for fault occurrence.

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