



## CASE STUDY

**KARAM is a leading global occupational safety brand with a vast portfolio of over 3500 certified products, conforming to multiple national and international standards. With operations spanning over 100 countries and a workforce of 4200+ professionals, KARAM is dedicated to providing world-class personal protective equipment (PPE), fall protection solutions, and fixed-line systems. The company is committed to innovation, efficiency, and sustainability.**

## The Organisation

KARAM is a leading global occupational safety brand with a vast portfolio of over 3500 certified products conforming to multiple national and international standards and exporting our safety solutions to over 100 nations.

## Industry

Safety Equipment Manufacturing

## Region

100+ Exporting Countries

## Employees

4200 Employees

## Requirement

Karam required a robust digital solution to streamline its manufacturing, inventory management, and order processing. The goal was to enhance operational efficiency, improve supply chain visibility, and automate sales forecasting, ensuring timely deliveries, reduced production waste, and optimized resource allocation.



**50+**  
Global Offices



**100+**  
Exporting Countries



**3500+**  
Products



**4200+**  
Professionals

## Challenges

- 01** Lack of Production Visibility:  
No real-time tracking of work progress in the production line, leading to inefficiencies and order status ambiguity.
- 02** Unorganized Workflow Management:  
The production process, spanning multiple stages (Cutting Rope, Stitching, Assembly, Stitching Again, Fusion, QC, and Packaging), lacked structured monitoring
- 03** Absence of BOQ & SOP:  
No standardized Bill of Quantities (BOQ) or Standard Operating Procedures (SOP), leading to material wastage, excess consumption, and production delays.
- 04** Manual Employee Tracking:  
Employee work tracking was done in Excel, requiring extensive time for monthly consolidation and making wage calculations inefficient
- 05** Ineffective Material Utilization:  
Excessive or insufficient material cutting resulted in increased costs and decreased operational efficiency.





# Solution

- **Smart Card System:** Employees were provided with smart cards that served as both digital job cards and ID cards.
- **Automated Tracking via Data Acquisition System:** A custom hardware solution was developed to track order progress at each stage. Employees scan a barcode at each stage of production, updating real-time order status and work logs.
- **Real-Time Work Monitoring:** The system tracks production in real time, allowing management to monitor work status across all production stages and optimize resource allocation.
- **SOP & BOQ Implementation:** By defining precise material requirements and step-by-step workflows, material wastage was reduced, and production delays were eliminated.
- **Automated Employee Productivity & Wage Calculation:** The barcode system automatically tracks work hours and completed tasks, replacing manual Excel tracking, saving time, and ensuring accurate wage calculations based on output.
- **Employee Performance Tracking:** Integrated analytics that provided insights into employee productivity based on projected vs. actual sales, helping in performance management and workforce optimization.

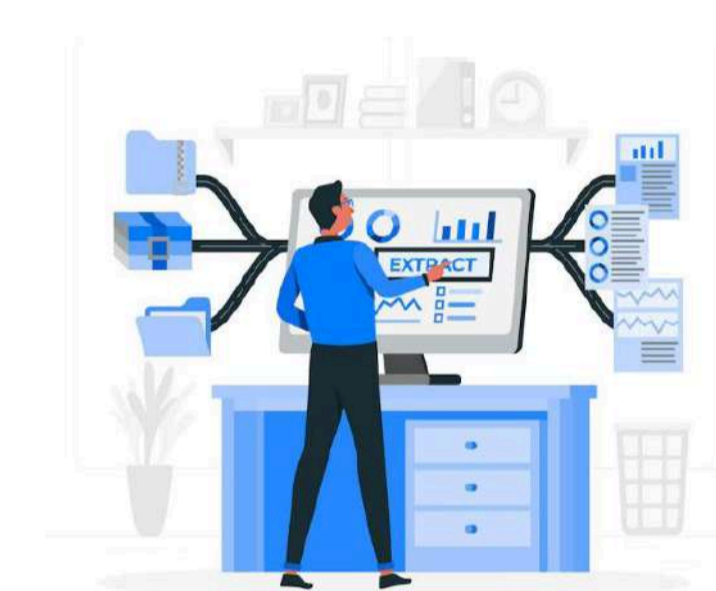
# Impact

50% Increase in Production Efficiency: Real-time tracking streamlined operations and reduced delays.



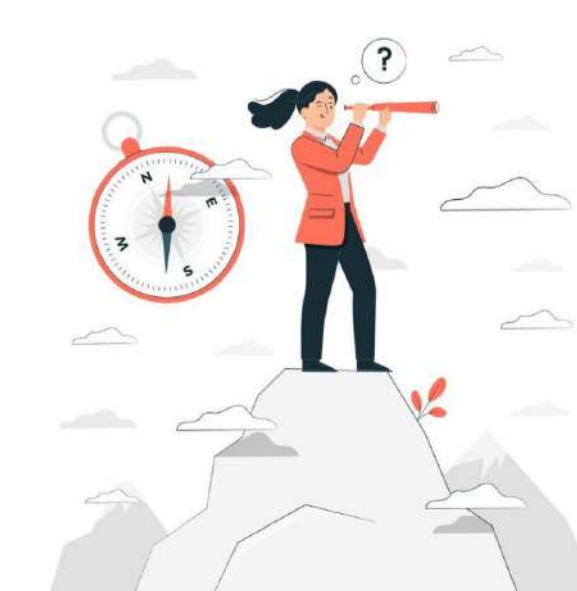
30% Reduction in Material Wastage: Implementation of BOQ and SOP minimized excessive consumption and cutting errors.

80% Reduction in Manual Work Tracking Effort: Automated tracking eliminated the need for Excel-based manual consolidation.



Improved Workforce Utilization: Employees' productivity was effectively monitored, ensuring fair wage calculations and better resource allocation.

Enhanced Order Management & Customer Satisfaction: Accurate production tracking improved order fulfillment and timely deliveries.



Informed Business Strategy – The availability of accurate forecasting data enabled management to make proactive and strategic business decisions.