Case Studies in Industry 4.0

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Industry 4.0 Improvement

Industry 4.0 improvement is similar to other digital transformation efforts—but differs in scale and speed.
Enhanced inventory management through automation

Accelerate inventory updates and reporting

Van and truck manufacturer wanted to fully automate their inventory process for more accurate real-time reports.
Case Study: Manufacturing

Manufacturer had semi-manual inventory process and inadequate reporting

Issues

- Inventory management required several steps—some manual
- Management wanted to reduce manual effort
- Reporting did not always fully capture current-state inventory
- Reporting did not provide adequate visibility or interactivity

Goals

Automate inventory process
Real-time inventory reporting
Enhanced reporting

Challenges

Several systems
Existing process
Complex procurement orders
Inventory solution

Assess
- Document process and data
- Identify manual steps
- Design reporting

Automate
- Utilized RPA bots
- Set up data feeds between systems

Report
- Web-based reporting system
- Drill-down reporting
- Interface to make adjustments
Results

**Error Rate Reduction**
Automated Data Transfer
- Reduce slow/manual data transfer
- Reduced manual data entry

**Real-time Visibility**
Results made available to the business
- Real-time results for inventory system
- Updates to management reporting dashboard within two minutes

**Meaningful Reporting**
Data Visualizations, not spreadsheet
- Management reporting dashboard with visualizations
- Interactive, category-based reporting
Shipping company optimization using IoT sensors

Shipment fuel consumption issue: Where and why?

Major shipping company facing millions of dollars of losses for fuel consumption increases across the United States.
Case Study: Shipping

Major shipping company concerned about fuel consumption increases across the United States.

Issues
- Part of the fleet experienced an increase in fuel consumption across same routes and with same shipments
- No standardized data collection and analysis processes and capabilities
- Variability of fuel consumption resulted in millions of dollars in excess fuel costs
- Large volume of fleet sensor data

Goals
Create analysis capability
Identify root cause
Prescribe corrective measures

Challenges
Disparate data
Voluminous data sets
Ongoing financial losses
Shipment solution

Prepare
- Collect all GPS, shipment, and expected route data
- Prepare data for analysis

Analyze
- Utilize machine learning to identify patterns and isolate outliers
- Analyze routes, shipments, and other factors

Optimize
- Pinpoint issue
- Remediate issue
- Investigate GPS issue
Results

Financial Savings
Immediate impact
- Projected $2M in savings over 18 months
- Resumed predictable fuel budgeting

Better Risk Management
Improved risk awareness and controls
- Identified additional risks
- Remediation and risk control
Conclusion

Three concepts can bring together Industry 4.0 investments and enhance ROI.

01 AUTOMATION
Reduce Manual Efforts
Maximize employee time and digital assets through the appropriate use of automation.

02 ANALYTICS
Targeted Insights
Utilize machine learning and relevant reporting for time and cost savings.

03 TAILORED
Built for You
Customize COTS and custom-built solutions to meet your digital architecture and business requirements.