Automotive Manufacturing

An Automated Data Collection Solution from RES

Auto Part System (APS)

In addressing the abovementioned market challenges, APS aims to improve the automation of managing and tracking parts for the automotive industry. All execution processes encompasses from **Parts Receiving, Binning process, Picking, Packing and Delivery verification with gate passes** for transportation check point are easily accessible online with seamless integration to any back-end Inventory Management System (IMS) with minimal configuration.

As an extension of the execution system to the IMS, APS is designed with best practice in Automotive Parts Industry with incorporating 1D or 2D barcode technology coupled with state of the art mobility. APS is suitable for contract manufacturers and warehouse distribution centres for parts.

KEY APS REALISED BENEFITS

- Improve Binning Process by 50% compare with manual process – Snap'n'Go concept with flexibility of parts label printing during Receiving Process

- Increase through-put of Outbound by 40 to 50% - Snap'n'Pack and Case ID printing on the fly

- Mobile Stock Count for your IMS – option to have Full or Cycle Count on the Go!

- Overall Parts accuracy by 10 to 20% across the fast moving parts!

- Bin Location Maintenance – Parts allocation based on the floor availability and instant update to IMS location master

- Flexibility with localization for local governance compliance especially in parts labeling – allowing for flexibility to meet local requirement with incorporating global parts labelling compliance.

PRODUCT MODULES

SNAPSHOT OF SOLUTION MODULES:

1. Inbound/Receiving

- Ability to manage the verification of multiple container loads of parts simultaneously
- **Online verification** and control alleviates inbound process and reduces need for large staging area
- KPI Reports on damaged parts, shortage or excess stocks can be immediately generated, with easy PDF export functions for quick referencing
- **Parts label designing** module provides ability to design and configure localized part labels with ease
- **Cross Dock** or **X-dock** during inbound process is easily managed where Parts will get routed to outbound staging area, X-Dock label will be printed at the same time before placing in the staging area.

2. Binning

- Purchase Orders taken into consideration; minimizing warehousing errors as binning labels and location barcodes ensure all inventory is housed in the right location
- Ability to initiate **Sub-Location Transfer Process** if main sellable location is full.

3. Picking

- Provides for Integrated Picking process based on various scenarios (Normal Stock Order or Urgent Order or Promotion Order)
- Able to configure and instruct different **Picking Mechanisms** affecting both response and route of transportation
- Ability to multiple users to pick multiple sales orders concurrently, **Consolidated Picking**
- Picking ticket sorting can be changed instantly according the specialized picking request needs or targeted campaigns
- **Bulk picking** by mobile device.

4. Packing

- Completed with **100% scanning** for all picked parts either on mobile device or workstation
- Integrated to Sales Order and Customer Databases for verification and corss-checking
- Reports can be tailored to indicated Pending Parts, Specific Container IDs, and Completed Picking List
- Instantaneous Delivery Order forms and Gate Passes can be printed upon packing completion for security validation
- Process easily configured to be managed solely on Mobile Terminal or a combination both on **Mobile** and **Workstation**
- Ability to manage multiple packing lines, volume of sales or delivery routes thereby increasing the efficiency of the outbound process.

5. Stock Count

- Consists of both Cycle Count and Stock Count Module support multiple user allocations
- All Stock Count Reports are available for confirmation, update or write off parts and comparison to IMS status.

6. KPI

- Able to extend across multiple warehouses and business units
- Reports on the Outbound and Inbound productivity, User control and registration, Regional setting, Bin Location printing are easily configurable
- Full flexibility from GUI, Interfacing and localization allows for acceleration of the warehouse execution proces.

ABOUT RES

The RES Group has been providing complete Automated Data Capture (ADC) solutions to leading multinational corporations since 1983. RES provides end-to-end supply chain automation solutions encompassing process consulting, outsourced IT services and customized development of standalone ADC systems as well as integrated ADC-ERP systems. Our areas of technological expertise includes enterprise wireless networks, barcodes, RFID and voice-driven logistics systems.

Our solutions are designed to help our customers increase efficiency and productivity while greatly reducing paperwork and data errors associated with other traditional data entry systems. The solutions are designed around best-in-class mobile computers, industrial label printers and barcode/RFID readers that effectively extend an information system from the wired desktop to real-world wireless mobile environments. We help organizations capture data at the source, gathering, processing and seamlessly communicating information directly from the origin to centralized servers.

In the highly competitive and cost-sensitive automotive sector, our solutions currently help leading automotive companies in multiple countries across the region improve efficiency, reduce costs and gain real-time visibility over the entire supply chain – both in the production and after-market sectors.

Driving the growth of the RES Group is our professional team with over 20 years of proven experience. Our continuous effort to maintain technology leadership and improve customer satisfaction enables us to serve all our clients - from large MNCs to growing SMEs - better. Let us show you our commitment in making your business perform better.

"RES provides excellent competency to integrate various middleware and data collection hardware with our ERP backbone. The solution has improved quality of processes and increased productivity in our logistics centers."
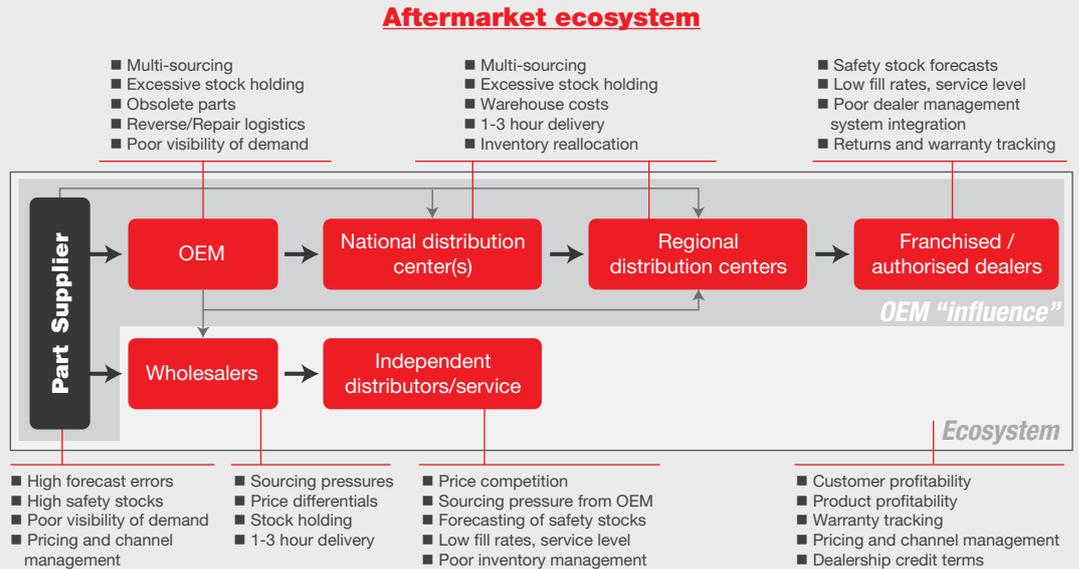
Tejmur Farrokhpur,
Daimler ITM Overseas – Manager CoC After Sales

INDUSTRY OVERVIEW

OPTIMISING THE AUTOMOTIVE SPARE PART INDUSTRY

The global automotive industry is undergoing tremendous amount of change – both with globalisation and the increasing competition coming from emerging markets.

Companies are challenged to sell more, faster and at better qualities. Aftermarket performance becomes a crucial part of business for the automotive industry as accessibility to quick and affordable spare parts becomes a key determinant to a consumer's choice of vehicle. The cornerstone to all this obviously is the automotive spare part industry.

Aftermarket ecosystem

- Multi-sourcing
- Excessive stock holding
- Obsolete parts
- Reverse/Repair logistics
- Poor visibility of demand

- Multi-sourcing
- Excessive stock holding
- Warehouse costs
- 1-3 hour delivery
- Inventory reallocation

- Safety stock forecasts
- Low fill rates, service level
- Poor dealer management system integration
- Returns and warranty tracking

Part Supplier → OEM → National distribution center(s) → Regional distribution centers → Franchised / authorised dealers

OEM "influence"

Part Supplier → Wholesalers → Independent distributors/service

Ecosystem

- High forecast errors
- High safety stocks
- Poor visibility of demand
- Pricing and channel management

- Sourcing pressures
- Price differentials
- Stock holding
- 1-3 hour delivery

- Price competition
- Sourcing pressure from OEM
- Forecasting of safety stocks
- Low fill rates, service level
- Poor inventory management

- Customer profitability
- Product profitability
- Warranty tracking
- Pricing and channel management
- Dealership credit terms

With such importance thrust upon the industry across all levels of the automotive supply chain, the industry is not without its challenges. In order to succeed, the organisation which revolutionises itself to perform at optimum will be the one to beat.

INDUSTRY CHALLENGES

Just in time (JIT) requirements	With the rising costs of real estate, car manufacturers are keeping their facilities lean – taking only necessary inventory to complete assemblies. This means heavily relying on automotive spare part suppliers to ensure that they are able to meet supply of the right parts at the right times.
Constraining legacy IT systems	With a wider network both upstream and downstream, the demand on product accountability is greater. Products are more often required to be tracked from concept through disposal, from top level stock-keeping unit (SKU) down through the bill-of-material to the component level. This means that having an efficient, versatile and scalable technology backbone is crucial to the success of the business.
Fierce competition	Automotive spare part suppliers face stiff competition from all corners of the industry – from third parties, suppliers, counterfeit and the grey market – to sales competition from dealers, large retailers, chains and the Internet. The challenge remains in ensuring product and brand integrity across all inventory.
Compliance to local manufacturing regulations	Operating in a region like South East Asia means compliance to various in-country industry rules and regulations. It's imperative that the business processes and systems are able to handle the demands of various import-export requirements on parts.
Traceability	How parts are tracked through the various stages of the supply chain becomes critical as automotive spare part suppliers need to have the ability to forecast demand as well as track each single unit of inventory. Having a flexible backend system with the necessary track and trace processes built in becomes key in ensuring business continuity.

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