RAIN INDUSTRIAL LOGISTICS APPLICATIONS

RAIN RFID ALLIANCE MEETING – SEATTLE – JULY 20, 2017

RAIN RFID

CONFIDEX

CONFIDEX SMART MOBILITY & INDUSTRIES

SMART MOBILITY

SMART TICKETING

- **Automated fare collection**

SMART ACCESS

- **Leisure**
- **Hospitality**
- **Site Access**

SMART MEDIA

- **Stations**
- **Airports**

SMART INDUSTRIES

SMART AUTOMOTIVE

- **WIP**
- **Inbound**
- **Outbound**
- **Components**

SMART LOGISTICS

- **RTI**
- **Supply chain**
- **Pulp, paper**
- **Metals**
- **Cold chain**

SMART MANUFACTURING

- **Machines**
- **Aerospace**
- **MRO**
- **Asset management**
- **Tool tracing**

Metal Manufacturing

Full Chain with RAIN

BULK METALS

FORGING AND CASTING

STAMPING

PACKAGING SOLUTIONS

FINISHED PRODUCT AUTHENTICATION

Smart Manufacturing and Logistics at metal industry SUPPLIERS:

Die / Cast authentication

Critical tool identification

Automated logistics, Shipping verification

Machine MRO

Truck Identification

Quality control

Service optimization

Component tracking

Just-in-time & Just-in-sequence

WIP monitoring

Lean manufacturing

Pulp, Paper & Packaging

Full Chain with RAIN

LOGS → PULP → *Paper products:* FLUTING → PACKAGING SOLUTIONS → FINISHED PRODUCT AUTHENTICATION

Smart Manufacturing and Logistics at paper industry SUPPLIERS:

- Product authentication
- Critical tool identification
- Automated logistics, Shipping verification
- Machine MRO
- Truck & Train identification
- Quality control
- Cross Docking
- Service optimization
- Component tracking
- WIP monitoring
- Lean manufacturing
- RTLS

Automotive

Full Chain with RAIN

PARTS | ASSEMBLIES | WIP | DISTRIBUTION | SERVICE

Smart Manufacturing and Logistics for automotive industry

Product authentication

Container Tracking

Machine MRO

Component tracking

Tool Tracking

KANBAN

Just-in-time & Just-in-sequence

RTLS / Monitoring

Automated logistics, Shipping verification

Truck & Train identification

Quality control

Lean manufacturing

Warranty Data

Spare parts authentication

IT Equipment

Full Chain with RAIN

COMPONENTS

BLADES

CHASSIS

FINISHED PRODUCT AUTHENTICATION

Smart Manufacturing and Logistics for IT industry players:	WIP monitoring	Critical tool identification Lean manufacturing	Automated logistics, Shipping verification Quality control
Smart Manufacturing and Logistics for IT industry SUPPLIERS:	Component tracking	Product authentication	Audit Compliance MRO

FORD OUTBOUND DISTRIBUTION WITH RFID

Visibility Without Errors From Car Release to Dealers

RAIN label for car distribution. The label is applied automatically, it tolerates the weather but doesn't leave any residuals when removed.

Ford is now able to reliable automate several parts of the car release, quality control and distribution procedures.

Challenge

- Manual handling of car release processes. Time-consuming process with human errors in car distribution.

Benefits

- Optimize correct distribution from the factory by reducing waiting times and eliminate errors
- All car-related data continuously available
- Entire loading process optimized and accelerated. Final RFID reading and verification at the entrance of each vessel: truck, train and ship.

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GOODPACK RTI MANAGEMENT

Real-time accuracy

RAIN RFID tag for identifying metal returnable transit items. Tracking can be done reliably in varying process and weather conditions.

Goodpack, and many other container logistics companies, rely on the RFID Tag to be able to track their assets real-time and optimize their usage in lean operations.

Challenge

- Tracking and managing 2.3 million assets in 400 warehouse locations and multiple customers all around the world efficiently. Manual or barcode based tracking resulted errors and high resource consumption.

Benefits

- Automatic tracking reduces errors and brings real-time data of the assets
- Asset availability optimization, asset pool utilization increase
- Increase of administration efficiency, administrative time and resources saving

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METSA FIBRE PULP BALE TRACKING

Material Flow Management

RAIN offers an effective and reliable way to track pulp units and generate savings in material flow management.

Specialized RFID tags meet the unique requirements of the manufacturing processes in pulp and paper industry.

Challenge

- Metsä Fibre needed an effective and reliable way to track pulp units and generate savings in material flow management.
- When RFID tags are attached into pulp bales the tags' materials need to dissolve in the pulping process and have no effects on the further papermaking process. Additionally, the tags need to comply with food contact regulations.

Benefits

- The RFID based solution translates into reduced shipping errors and increased visibility of goods within a supply chain.

TERNIUM STEEL LOGISTICS

STEEL COIL INVENTORY MANAGEMENT

RAIN RFID tag for identifying metal returnable transit items. Tracking can be done reliably in varying process and weather conditions.

Goodpack, and many other container logistics companies, rely on the RFID Tag to be able to track their assets real-time and optimize their usage in lean operations.

Challenge

- Tracking and managing millions of steel coils coming from multiple suppliers. Manual or barcode based tracking resulted errors, high resource consumption, and risk of injury

Benefits

- Automatic tracking reduces errors and brings accurate data of the assets
- Positively identify assets from the safety of the fork truck
- Increase of warehouse management efficiency, time and resources saving
- Automated feedback when loading onto vehicles for distribution

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HENDRICKSON PARTS LOGISTICS

Outbound Parts Accuracy

RAIN RFID tag for identifying metal automotive parts. Tracking can be done reliably in varying process and weather conditions.

Hendrickson International, and many parts suppliers, rely on the RFID Tag to be able to track their products real-time and optimize their usage in lean operations.

Challenge

- Tracking and managing outbound parts logistics to multiple locations and multiple customers all around the world efficiently. Manual or barcode based tracking resulted errors and high resource consumption.

Benefits

- Automatic tracking reduces errors and brings real-time data of the parts
- Reduce costly errors associated with missing parts
- Increase of efficiency by automating routing of boxes based upon read success

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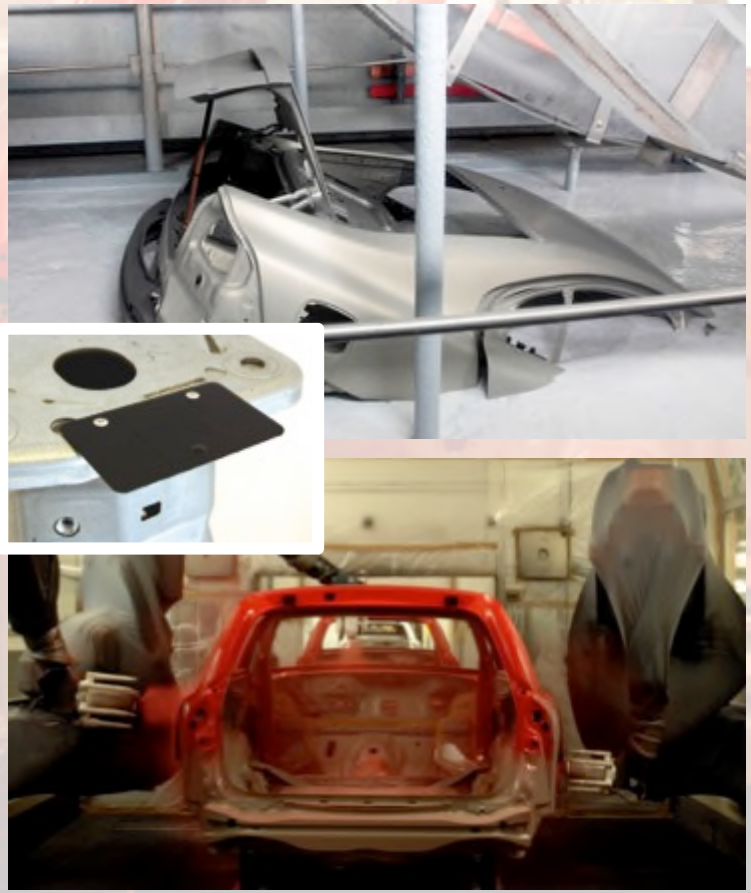
LEAN OPERATIONS
VOLVO WIP MONITORING

Robust passive UHF RFID tag capable of withstanding the harsh conditions of car manufacturing.

Now Volvo Cars is able to track the car bodies all the way from the welding and paint shop to the point of final assembly.



Challenge

- Control complex product mix and manage customized cars by from the beginning of the bodyshop until the end of final assembly.
- The old tracking solution consisted of several ID technologies and was not reliable enough.

Benefits

- Real-time production monitoring system with UHF RFID, all car body related data available continuously (body number, color, status, quality)
- Lean operations and smart automation improve cost-efficiency and productivity. Process yields 99.96%

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Thank you!
RAIN RFID
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