



## **Volvo Trucks**

## **Volvo Technology**



### **Examples of RFID Projects**

Cab Plant in Umeå: Paint Shop

Cab Plant in Umeå: Trim Shop

Pilot Project: Fuel Tank Racks

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# AB VOLVO – RFID in the Production

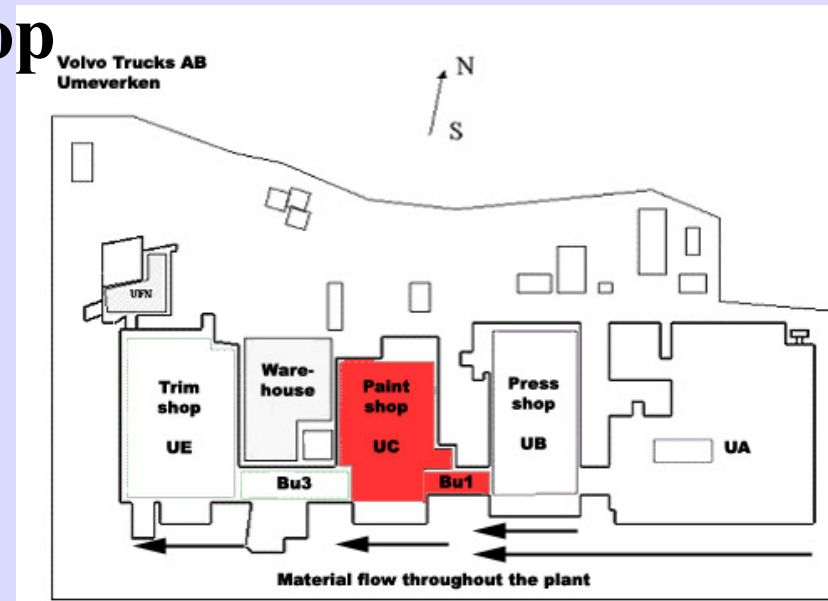
## Cab Plant in Umeå: Paint Shop

### Old System with Barcode Plates:

- + ID-number pressed on Barcode plates ⇒ Visual Identification
- + Long experience of the Barcode system
- Too much paint made the Barcode plates unreadable and in need of demounting and manual cleaning
- Sensitive cameras and barcodes bent or out of place ⇒ Reading Problems
- Communication loss with the database ⇒ Disturbances in the production

### New System with RFID:

- + Escort Memory System (EMS) carrying all needed information ⇒ No Production disturbances
- + No need of line of sight. The tags can be read even if they are covered in paint ⇒ High Readability
- + The tags need small amount of maintenance
- High Purchase cost due to the large R/W memory, and due to the chemicals and high temperatures it has to handle
- Data redundancy
- Not extendable with other systems



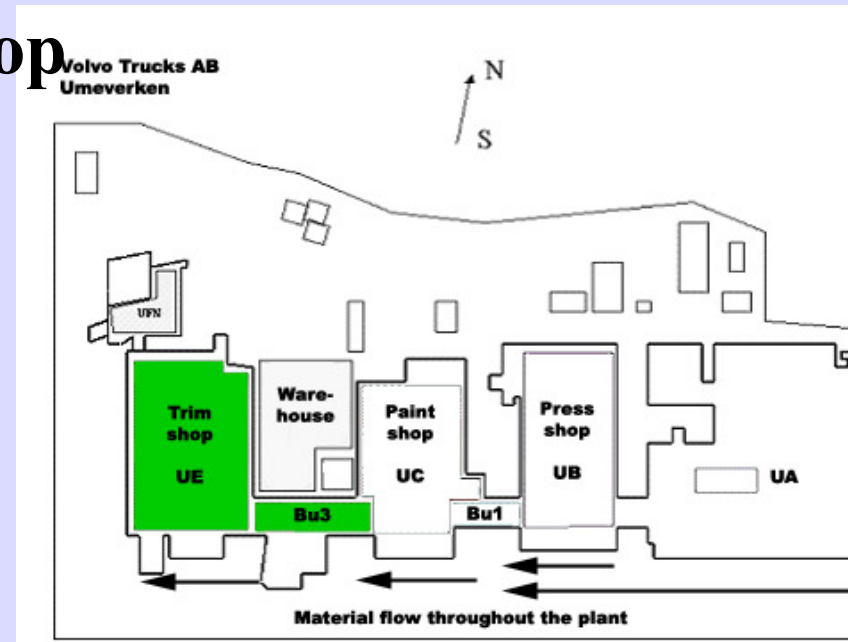
# AB VOLVO – RFID in the Production

## Cab Plant in Umeå: Trim Shop

**Volvo Trucks went from short flows to a line and needed a system to keep track of the exact position of the cab**

### New System with RFID:

- + The monitoring applications have become more reliable
- + Better control of the cab flow (exact tracking). Starting parallel processes along the line
- + Increased automation grade
- Closed system which is hard to complement
- Lack of education within the RFID technique



Short-flows until 2004

Hand scanning

Line from 2004

“Tracking-application” Wednesday w.32

Hand scanning w.32-40

RFID system w. 40

*The hand scanning is kept as a backup*

# AB VOLVO – RFID in the Production

## Pilot Project at Volvo Trucks, Tuve

### Objectives:

- Keep track of the racks
  - Easier to plan maintenance ⇒ Less damage on goods
  - Decrease the number of racks
- Updated information of what articles that actually has arrived
  - Deviations can be corrected in time ⇒ Less need to mount articles after the production line
  - Collected Statistics help to evaluate the deliveries from each supplier

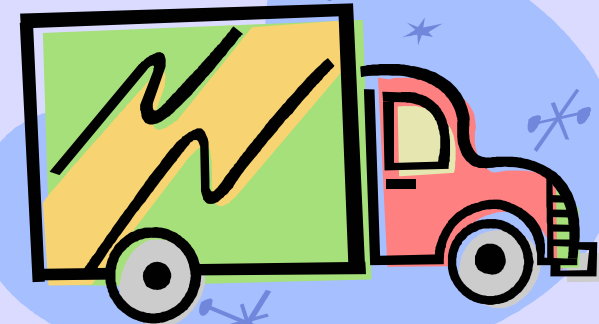
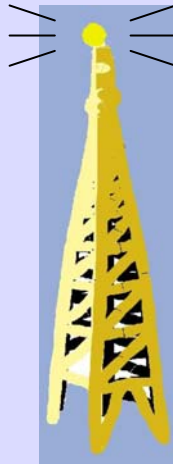


## Volvo Trucks at Tuve

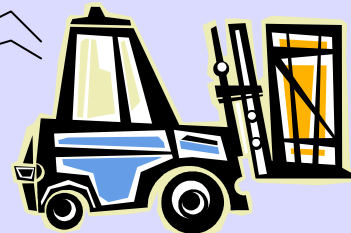
Updated  
information



Communication  
WLAN



Reading while  
unloading



## Why RFID in the Production?

- **High reading accuracy**
  - No line of sight, no contact required
  - Performs in rugged, harsh environments
  - Read/write capability plus multi-read option
  - High data storage capacity
  - High data transfer rate
  - Reusable
  - Durability
  
- **Inventory Accuracy**
  - Visibility
  - Improve control and management
  - Traceability
  - Decrease the necessary amount of stored articles
  
- **Labour Costs**
  - Eliminates human error – less manual handling more automation