



October 27, 2020

Warehouse and Inventory Management Virtual Event 2020

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The Warehouse is The Heart of Any Supply Chain

**Learn How RAIN RFID Makes it
More Powerful**

AGENDA

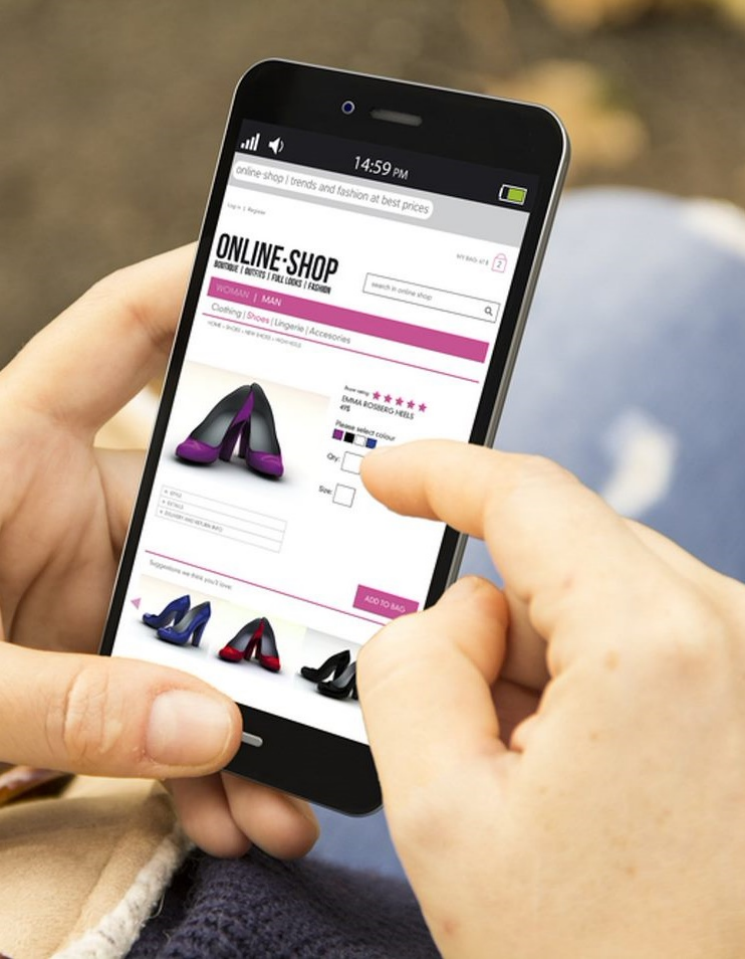
Why now? – Current trends

Meeting customers needs with the connected supply chain

Connecting the warehouse

The benefits





ECOMMERCE VOLUMES ONLY GOING ONE WAY

Increase before Covid-19

Volumes are increasing for
ecommerce sales and deliveries

Increase during Covid-19

New customers and bigger baskets
from existing customers

Increase after Covid-19

Trend looks like it's here to stay
Customers expectations changing



TOP THREE GOALS FOR SUPPLY CHAINS

Reduce costs

To increase profitability, while meeting evolving customer expectations

Increase flexibility

To react faster when disruptions occur and scale more quickly to meet changes in demand

Increase visibility

To improve inventory management, sustainability, and costs, while managing supply-chain security and risks

MEETING THE NEEDS OF THE SUPPLY CHAIN

Warehouse is **heart** of supply chain

Just delivering on time is not enough

Key to connected supply chain is **visibility**

Visibility allows understanding of

- Where things are
- Where they've been
- Dwell times, process times, etc.
- Other operational data and information



- Identify, locate, authenticate
- Long read ranges
- Read multiple items
- No line of sight
- Fast operation

RAIN RFID and complimentary technologies connecting the dots along the supply chain

THE SUPPLY CHAIN – PRODUCTION

Every item gets a unique digital identity

- Manufacturing lines using **sensors**
- **RAIN RFID** tags attached to specific items (raw materials and final medication)
- Upload unique identity to **Blockchain** ledgers aiding visibility for authorized entities



THE SUPPLY CHAIN – IN TRANSIT

Monitor progress

- Dispatching the products: **RAIN RFID** ensures right product destined for the right truck and ultimately location
- **NFC** and **RAIN RFID** tags with sensors to monitor the environment
- Tags with **tamper loops** to alert if packages have been manipulated
- **Machine Learning** and **Artificial Intelligence** predict environment and make adjustments
- **Smart shipping container** combining different technologies



SUPPLY CHAIN – WAREHOUSE

Managing the inventory

- **RAIN RFID** automatically recording what's coming into the warehouse - do shipments tally with electronic documentation?
- What's in the warehouse? Accurate inventory tracking with **RAIN RFID**
- Ensuring the right items are dispatched – Right product, to the Right place/customer at the Right time



WAREHOUSE – THE USE CASES

RECEIVING

Bulk Receipt

Lots of items received simultaneously providing both speed and accuracy.

What's arrived?

Automatic reconciliation; where are the discrepancies?

Prioritise fast order and put away

Identify products and items for expedited actions and put away.

How?

Typically hand held, conveyor or dock door readers.



INVENTORY

What have we got?

Maintains accurate data; critical to efficient and flexible operations.

Operations

Speed of data collection both faster and more often with minimal disruption.

Lower stock

Accurate and timely data results in both lower buffer stock and higher flexibility.

How?

Typically handheld readers, but overhead, fork lift truck, drones, robot readers are being used and investigated.

WAREHOUSE – THE USE CASES



CROSS DOCKING

Right orders?

Lots at the same time; speed and accuracy.

Faster order processing

Automatic reconciliation.

Eliminate inventory

No need to hold stock – true cross docking.

How?

Typically handheld readers and dock door readers.

STAGING AND DISPATCH

Eliminate errors

Right thing dispatched to the right place.
Reduced penalties.

Lower dwell time

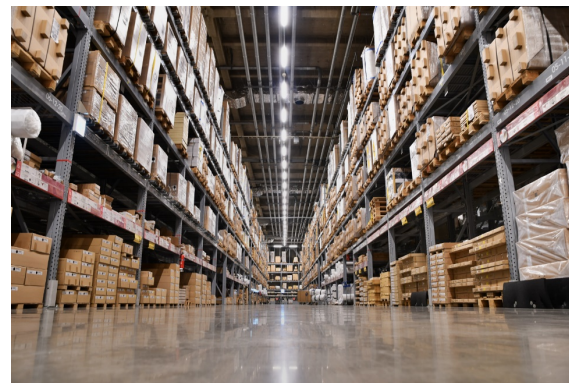
Lower manual processes and rework
speeding up operation.

Increase customer satisfaction

Ultimately meet and exceed expectations.

How?

Typically handheld readers and dock door readers.



THE BENEFITS

WAREHOUSE AT
THE HEART OF
THE CONNECTED
SUPPLY CHAIN



Increased Visibility



Enabling smarter decisions

Ensuring accurate
inventory

Facilitating new business
models

Lower Costs



Increasing efficiency
through automation

Removing unnecessary
activities

Increasing accuracy

Flexibility



Coping with variable
volumes

Predicting changes

Shifting to meet changing
customer expectations

RAIN RFID connects the dots of the Connected Supply Chain

HOW WE'RE CONNECTING SUPPLY CHAINS

NXP connects the dots of the Connected Supply Chain

- Top 10 semiconductor company globally
- 60 years of experience in semiconductor industry
- Broad RAIN RFID and NFC portfolio ranging from basic to secure chips
- Co-inventor of Near Field Communication (NFC) technology
- Billions of ICs shipped for use in Smart City applications
- Trusted partner in retail, e-government and transportation industries



CONCLUDING



Ecommerce is
growing



Expectations are
growing



The need for
visibility is growing



Now is the time for
RAIN RFID

THANK YOU

