



RFID

JOURNAL

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SEPTEMBER 26 - 28, 2021
PHOENIX CONVENTION CENTER | PHOENIX, AZ

Linking RFID to Inventory-Management Best Practices

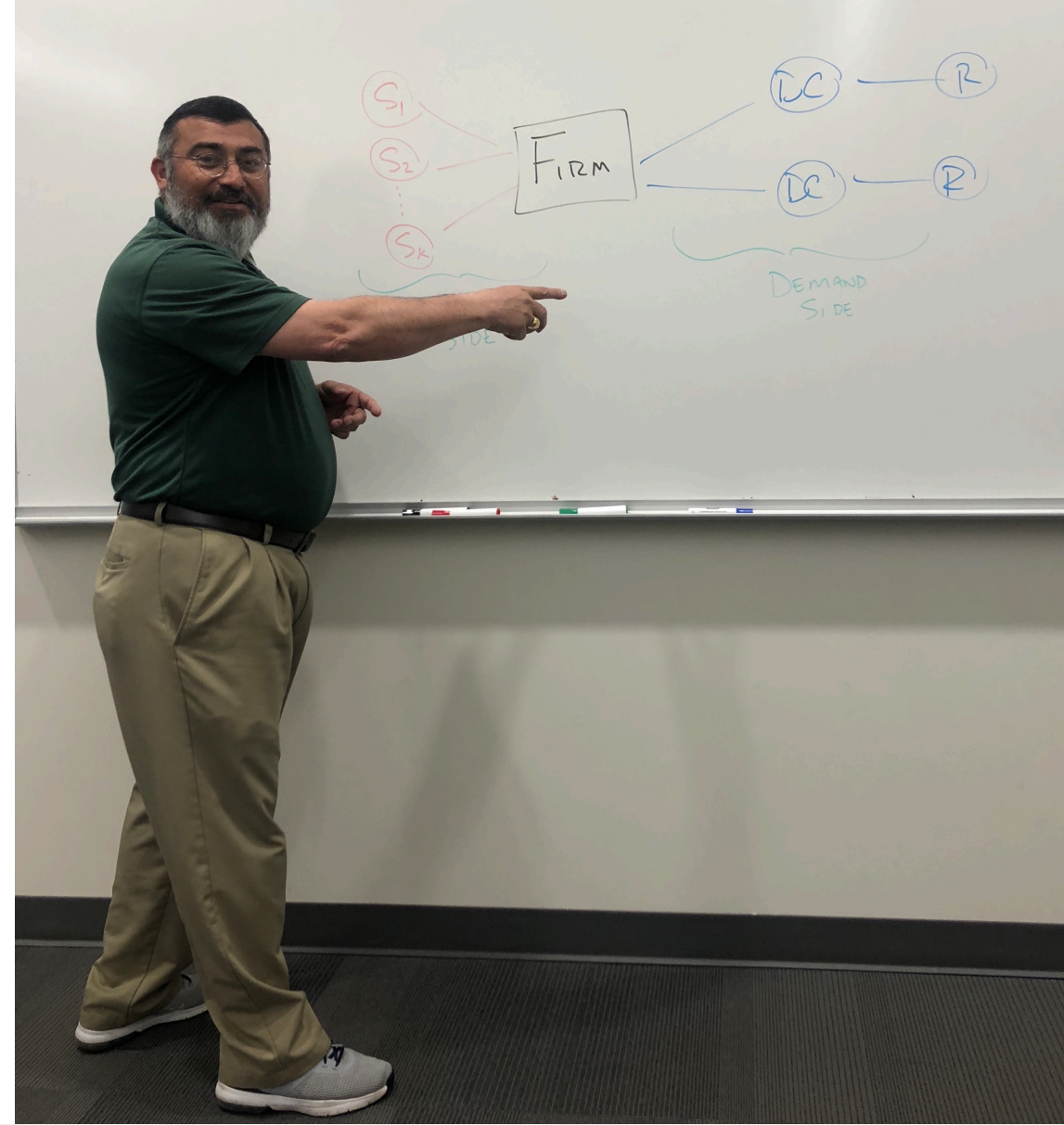
Pedro M. Reyes, PhD

Associate professor of operations & supply chain management



Your presenter

- Associate Professor of *Operations Management & Supply Chain Management*
- Baylor University



Objective of this presentation

- **Understand** how RFID links with warehouse inventory and SCM
- Identify how RFID facilitates warehouse management best practice
- Position RFID as an enabler for a more efficient W&IMS

What is inventory management

- ***Inventory*** is the stored accumulation of transformed resources
- ***Inventory management*** is the activity of planning and controlling the accumulation of the resources that flow through the supply networks

Inventory is a necessary evil

- Why do we need inventory?
 - To meet anticipated demand
 - To smooth production requirements
 - To decouple the production-distribution system
 - To protect against stockouts
 - And more...

But inventory costs money

- Why do we not want inventory?
 - Ties up working capital
 - Excess inventory takes up storage space
 - Potential for obsolescence
 - Can be damaged
 - Can be lost
 - And more...

Inventory management is about finding the right balance



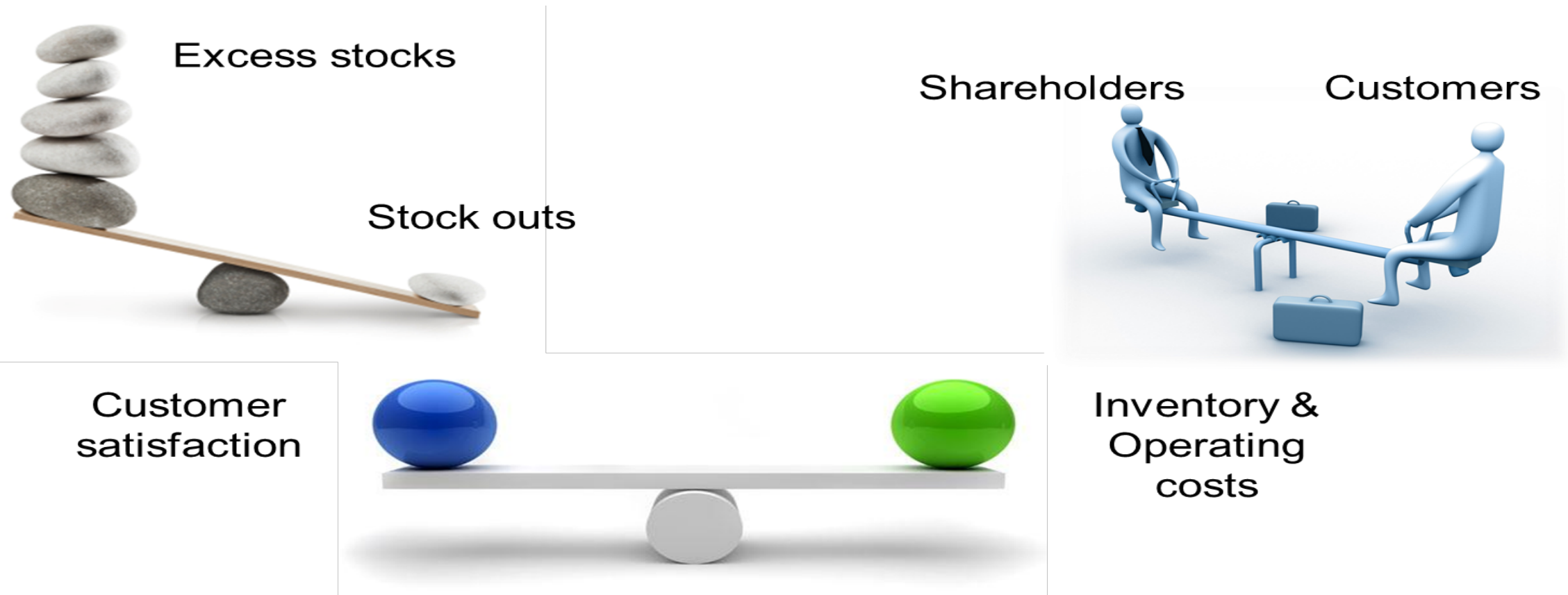
Stock outs = ☹ customer + losses

Vs



Excess stocks = costs + waste

Inventory management is finding a balance between extremes



Inventory Management & RFID

- Principal objectives of inventory management
 - Control (reduce) costs
 - Control (reduce) operating costs
 - Increase customer service
 - Increase revenues

So how can RFID help?

What is RFID's link to inventory management?

What do managers want?

- They **want** a solution to a problem
- They **want** information to do business
- They want to reduce costs
- They want to improve efficiency
- They want to improve customer service

A solution that can deliver benefits organizations can't achieve otherwise...

*They **don't want** to buy (RFID) technology*

What do managers want?

Value:

***Capturing data, translating it into information
Accessing this information!***

**RFID as an enabler &
Visibility is a mean to take
better decisions**

What is visibility?

Visibility is seeing the events “as they happen”



Source: adapted from Using EPCIS Data Sharing for Full Supply Chain Visibility K. R. Traub, Ken Traub Consulting LLC,

RFID Event

EPC (SGTIN) :ACAD000000000000010002543

EPCs (SCCCs) :ACAD000000000000010001212

2017-05-09 13:55:00

EPC (GLN): ACAD000000000000010001234

Receiving

17.4 deg

From auto data capture to information management

- From inventory data capture to inventory information
- With RFID data
 - it's not just “what you know”
 - *it's “what you do” with “what you know”*

– What: 00098700...
– When: 10:30 AM
– Where: (X, Y)
– Why: Shipping to XX
– How: 17 deg.



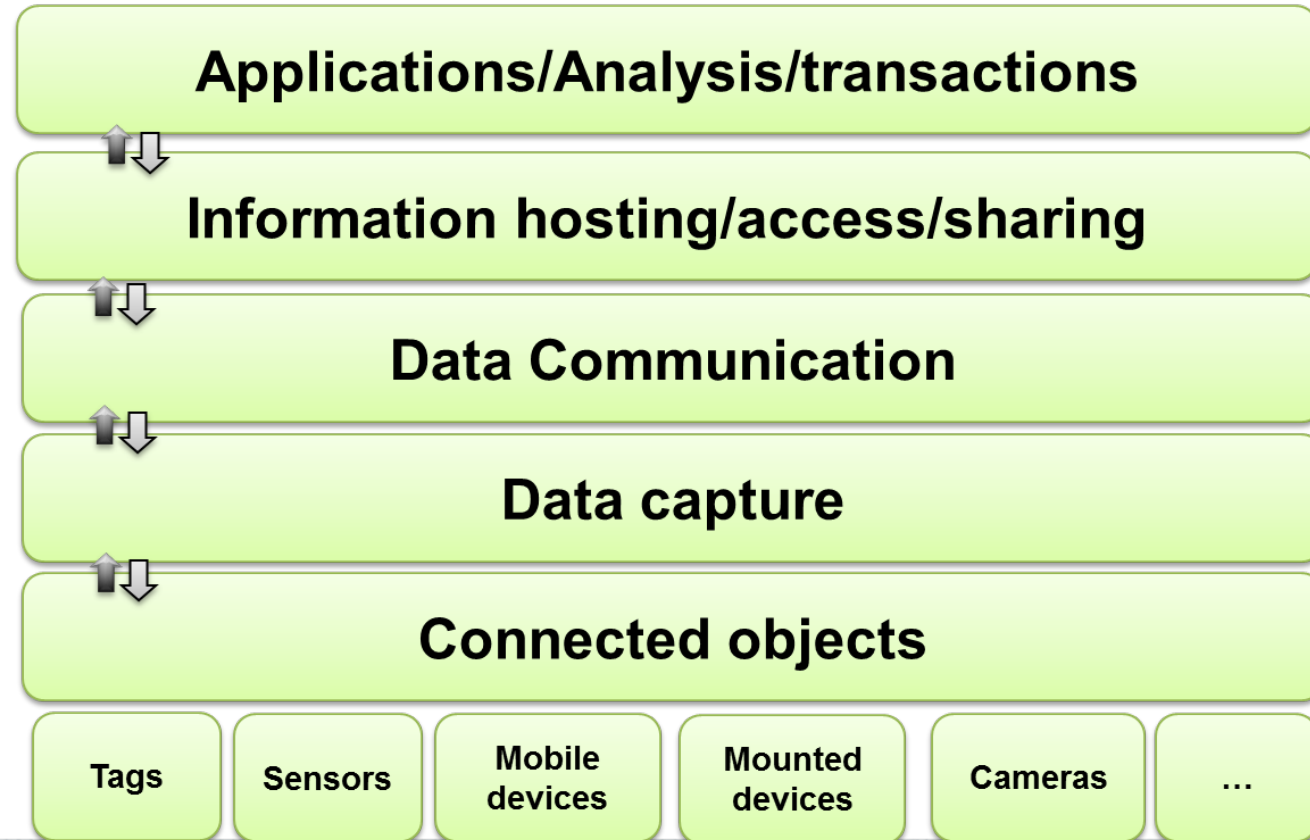
What managers want...
is a fully integrated “working” solution



Managers hate...



Linking RFID to warehouse and inventory management



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Warehouse management design

A solution for your specific needs



What problems do you intend to resolve in your warehouse?

What products do you need to track?

Warehouse management best practice *and RFID potential application*

- Obtain ASN for inbound deliveries
- Reject unplanned receipts
- Directly enter receipt into computers
- Put away items immediately after receipt
- Eliminate the receiving function
- Assign docks on the minimum warehouse travel time

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- **Position RFID as an enabler for a more efficient W&IMS**

RFID as an enabler towards a more efficient inventory management system

- Provide information to support KPI decisions
- Better inventory management KPIs
- Facilitates physical cycle counting
- Facilitates automated replenishment systems

Do you see any opportunities?



THANK YOU

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