

MAY 17 - 19, 2022

MANDALAY BAY | LAS VEGAS, NV

# RFID JOURNAL LIVE!

# Omnichannel Enablement: The Tipping Point for RFID

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President, University of Memphis

# But, first ....

# 20 years of RFID Journal Live! Amazing



What have we talked about for 20 years?

- In the beginning, we talked about
  - 2003 Walmart / Metro / DOD
  - Pallets / cases
  - Does the technology work?
  - What is the business benefit?
  - Early key use case: reduce out of stocks



#### 2005: Launched the RFID Lab



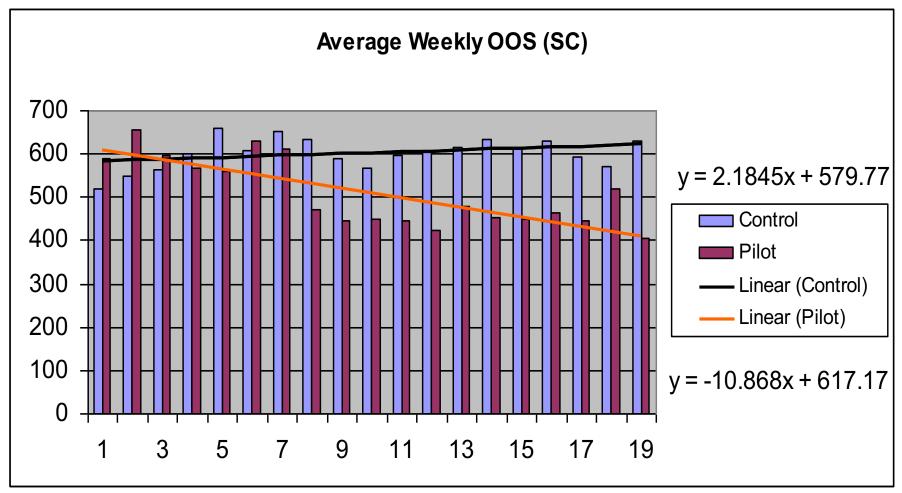
and started an OOS study







# 2006: OOS Study – Results

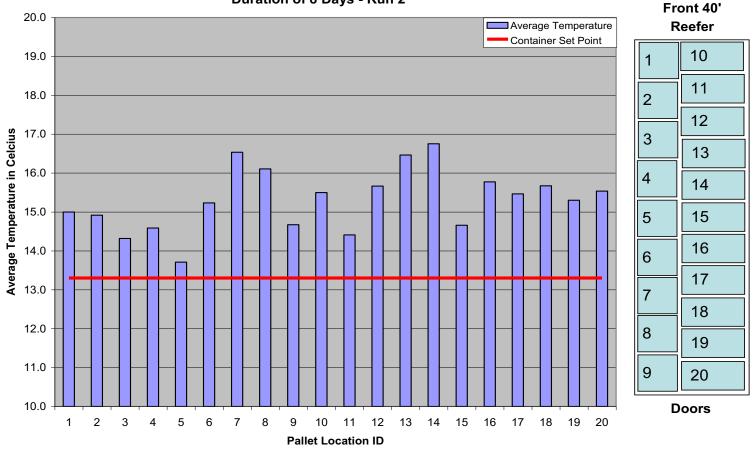






# 2007: Cold Chain Visibility

Average Pallet Temperature by Pallet Source to Distribution Center Duration of 8 Days - Run 2



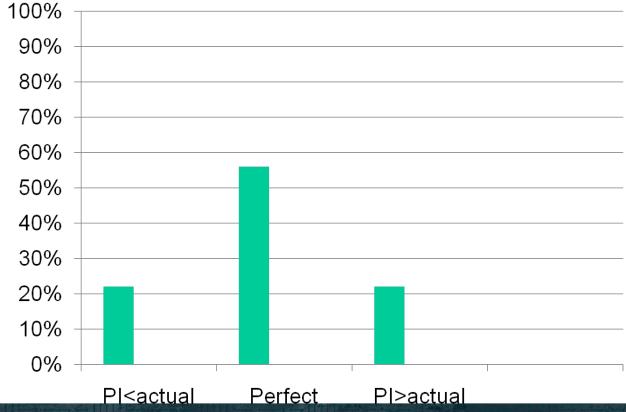




# 2008: Inventory Accuracy

Based on multiple studies ...

Before RFID:



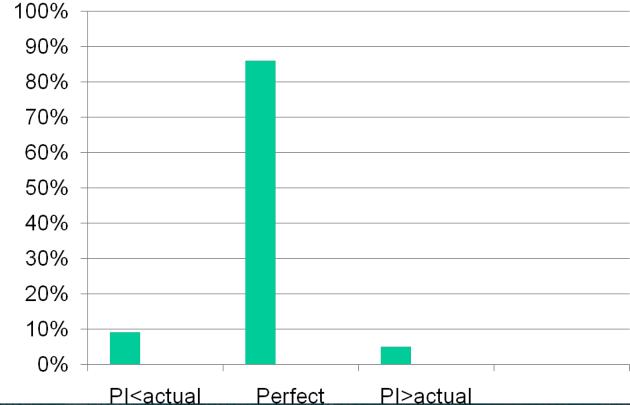




# 2008: Inventory Accuracy

Based on multiple studies ...

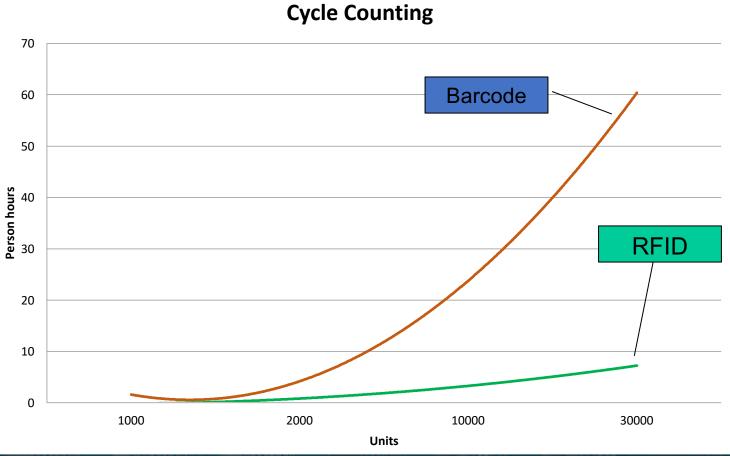
After RFID:







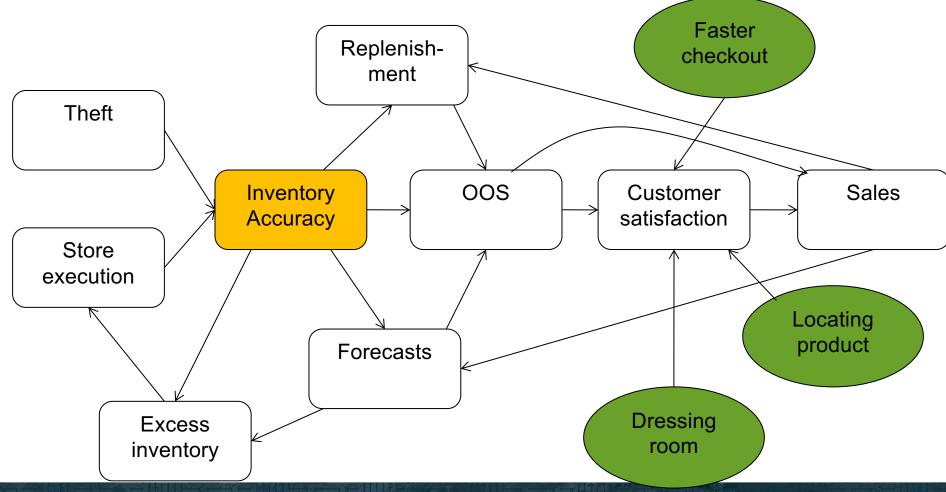
# 2009: Cycle Counting







# 2010: Inventory Accuracy







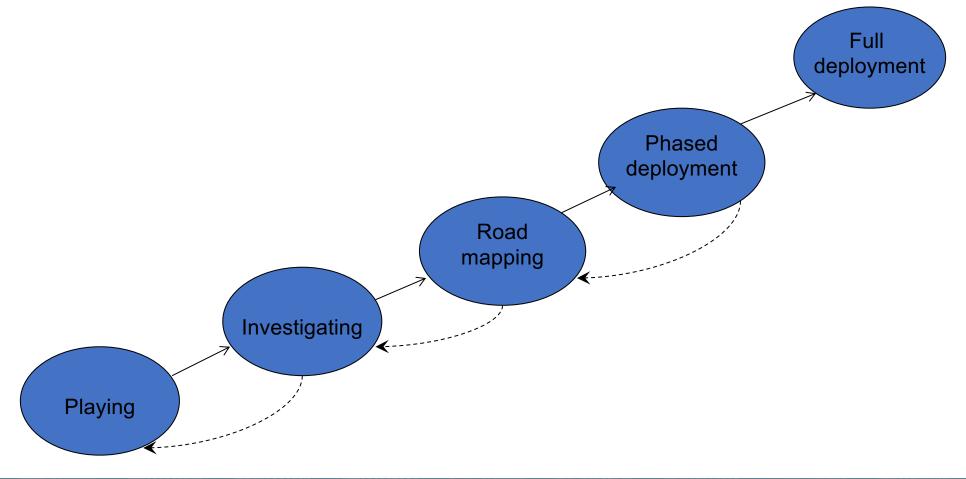
#### 2011: Loss Prevention

Test Store	Employee	Customer
	entrance	entrance
10 jeans carried in stack; walking	100%	93%
10 jeans carried in stack; running	90%	67%
2 jeans in bag; walking	100%	100%
5 jeans in bag; walking	100%	100%
1 jeans concealed under arm; walking	100%	0%
2 jeans concealed under arm; running	50%	67%





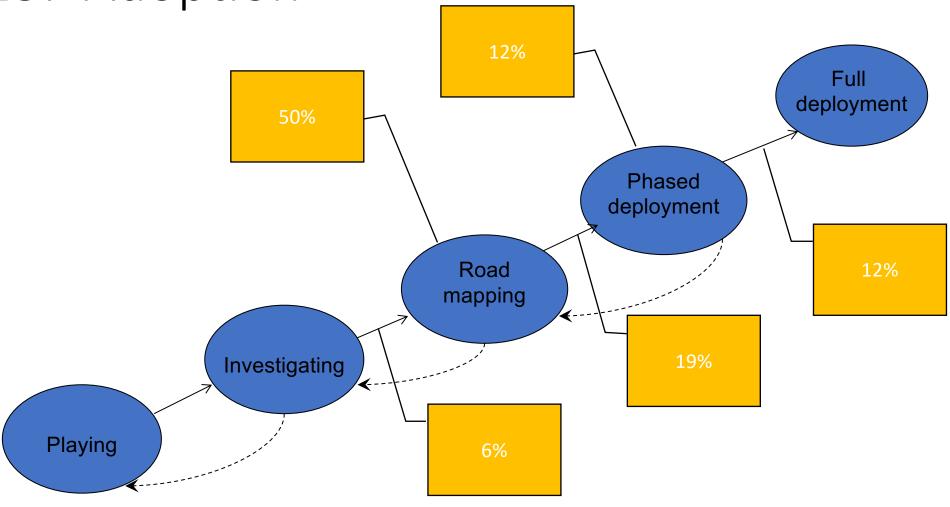
# 2012: Adoption cycle







# 2013: Adoption







# 2014: Disruptive RFID

Disrupted	Disruptor
Online retail Traditional retail	Omnichannel retail – enabled by RFID
Professional inventory counting	RFID
Electronic article surveillance (EAS)	RFID
Barcodes	RFID
Healthcare	RFID and other sensors
Food safety / food quality	RFID and other sensors



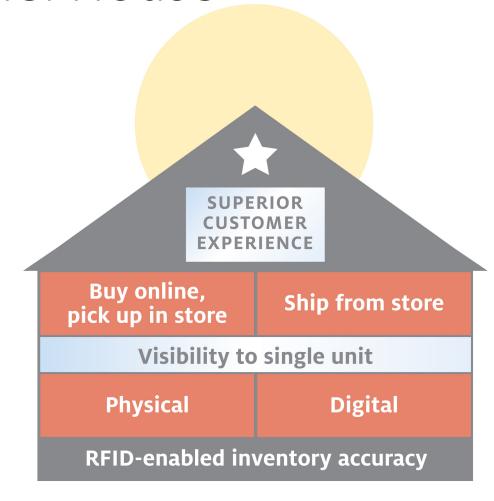


#### 2015: End-user Panel

- Macy's
- Levi's
- John Lewis



#### 2016: The Omnichannel House







#### 2017: 10 Characteristics of New Retail

- 1. More science; less art
- 2. Access to everything
- 3. Global inventory
- 4. Total transparency
- 5. Less retail store space
- 6. Different store footprint
- 7. Blend experience and products
- 8. ZTR
- 9. New type of retail associate
- 10. Complete customer experience

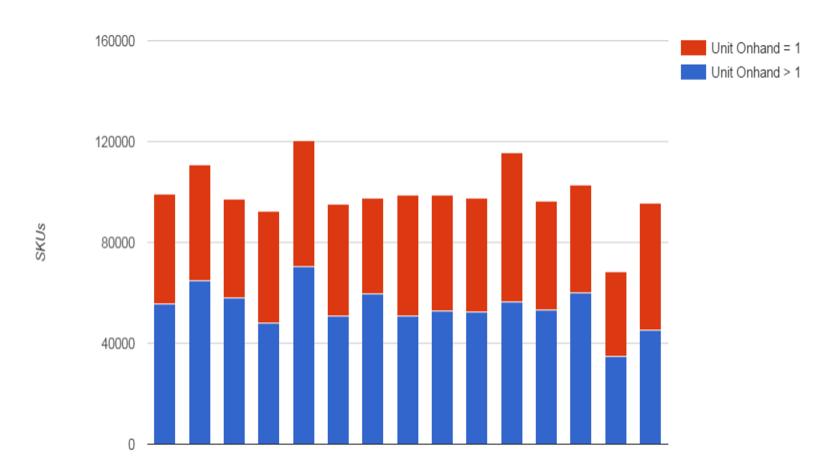
#### Key questions:

- 1. Do you have complete inventory visibility?
- 2. Can you share data with all participants?
- 3. Do you have one view of the customer?





# 2018: Inventory Visibility





# 2019: Inventory Accuracy in Supply Chain

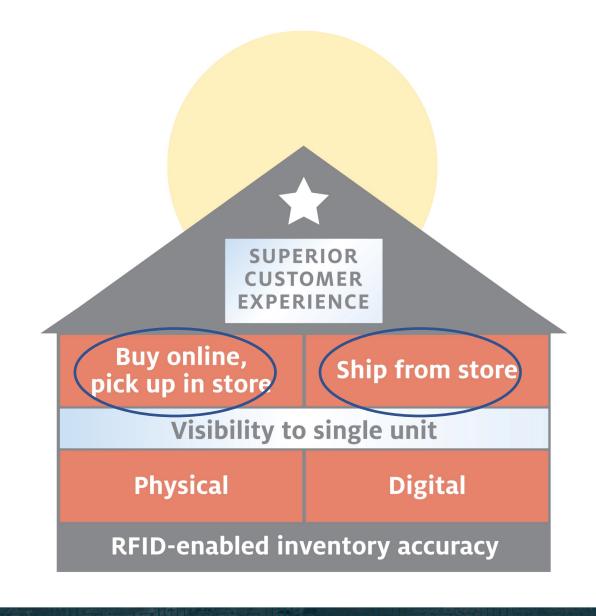
\*\* Project Zipper \*\*

- Serialized item data exchange
  - EPC Data Exchange Business Value Study
  - 8 Brands and 5 Retailers
  - Started May 2017
- 31% of orders had correct ASN Shipment Accuracy; 69% had ASN/U.P.C. mismatch





#### 2020: BOPIS and SfS







#### 2021: BOPIS Scorecard

Online Criteria	Communication Criteria	Pickup Criteria
Online Inventory Count	Number of Order-related Emails	Multiple Pickup Methods
Limits Placed on Online Orders	Receipt in Confirmation Email	Pickup at Any Hour
Accuracy of Online Inventory Count	Pickup Instructions in Order-related Emails	BOPIS-specific Parking Spots
Search by Store	Order Ready Notification	Signage for Pickup Area
Search by BOPIS	Order Ready in Relevant Timeframe	Proximity of Pickup Area to Entrance
Number of Clicks until Checkout		Dedicated BOPIS Area
Multiple Search Methods		Designated BOPIS Staff
Online Inventory = In-store Inventory		Order Ready Upon Arrival
In-store Inventory = Online Inventory		Time Taken to Collect





# Which leads us to ... 2022: The Customer is in Charge

- Retail 1.0: suppliers were in charge
  - Suppliers decided who could sell what for how much
- Retail 2.0: retailers were in charge
  - Retailers decided what to sell and for how much
- Retail 3.0: customers are in charge
  - Customers demand anywhere, anytime, any product retailing



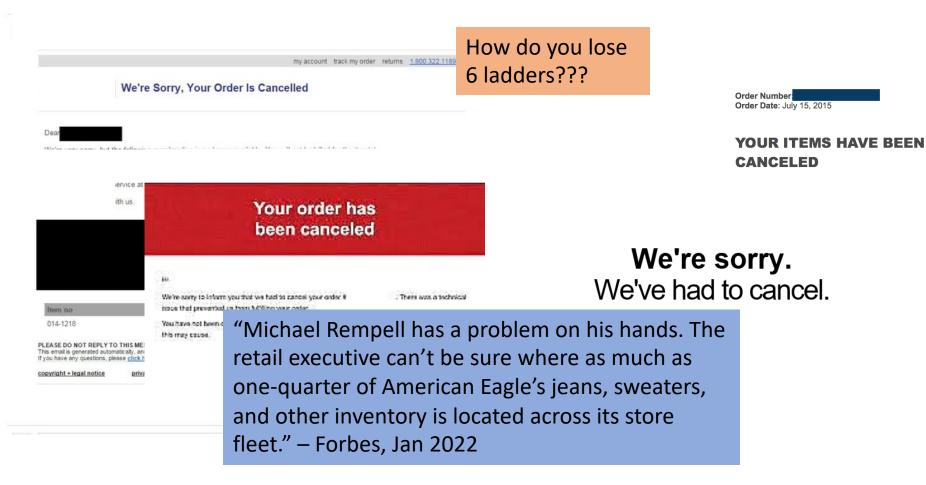


# The Customer is in Charge

- Must answer the question: what do we have and where do we have it?
- Test case: BOPIS / ROBIS



# So, how are we doing?







### Yet, BOPIS is demanded by consumers

- 64% of U.S. shoppers use BOPIS regularly; 75% have used BOPIS at least once; yet, only 53% of retailers offer BOPIS
- \$72.5 billion in 2020 (more than double 2019); \$81 billion in 2021
  - \$101 billion for 2022
  - \$125 billion for 2023
- 40% of holiday season 2021
- Walmart had 25% of all BOPIS orders in U.S. in 2021; \$20.4 billion in sales





# Matt Alexander Senior Director, Merchandising Innovation Walmart









