

# Hyperconnecting the Omnichannel Supply Chain



# The Physical Internet

## My Definition:

*The efficient movement of goods without human intervention.*



# Hyperconnection

For this to happen we need a “hyperconnected” supply chain that knows how to dynamically accomplish:

- ▶ Communication across all parties
- ▶ Flow of goods safely, sustainably, and efficiently
- ▶ Sharing of infrastructure
- ▶ Changes based on real-time information
- ▶ Financial transactions



# Baby Steps

- ▶ **Phase 1:** Leveraging existing processes to improve efficiency
- ▶ **Phase 2:** Collaborating on design to ensure efficiency
- ▶ **Phase 3:** Designing systems and infrastructure to dynamically create efficiency

**Phase 1**  
Transportation  
Pooling



**Phase 2**  
Collaborative Storage  
& Ordering



**Phase 3**  
Dynamic Routing &  
Storage

*LTL Pooling*

*ES3*

*FLEXE*



# It is worth the effort!

	Phase 1: Leverage	Phase 2: Collaboration	Phase 3: Automated
Communication	Manual	Scripted	Dynamic
Efficiency	Transportation Pooling	Orders Designed to Improve	Dynamically Designed
Asset Sharing	Transportation	Transportation & Storage	All Aspects of Supply Chain
Fill Rate	Average	+4%	Optimized
Savings	<5%	~30%	>50%





# Hyperconnected Omnichannel

Think it and it will  
come...

- ▶ What I want
- ▶ When I want it
- ▶ Where I want it



# We are not that far away...





# What will it take?

- ▶ **Communication:** Standards, protocols
- ▶ **Real-time Information:** RFID, IoT, Smart Devices
- ▶ **Collaboration:** Sharing data and infrastructure
- ▶ **Technology:** Artificial Intelligence, Self-driving Vehicles, Automation, Drones





# The Panelists



**Siobhan O'Bara**  
SVP, Industry Engagement



**Ardetha Bradley**  
Business Systems Implementation & Global Product Standards



**Bill Connell**  
SVP, Logistics & Operations



**Brenda Hambleton**  
Former Chief Customer & Strategy Officer



# The Physical Internet

Siobhan O'Bara

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June 30, 2016



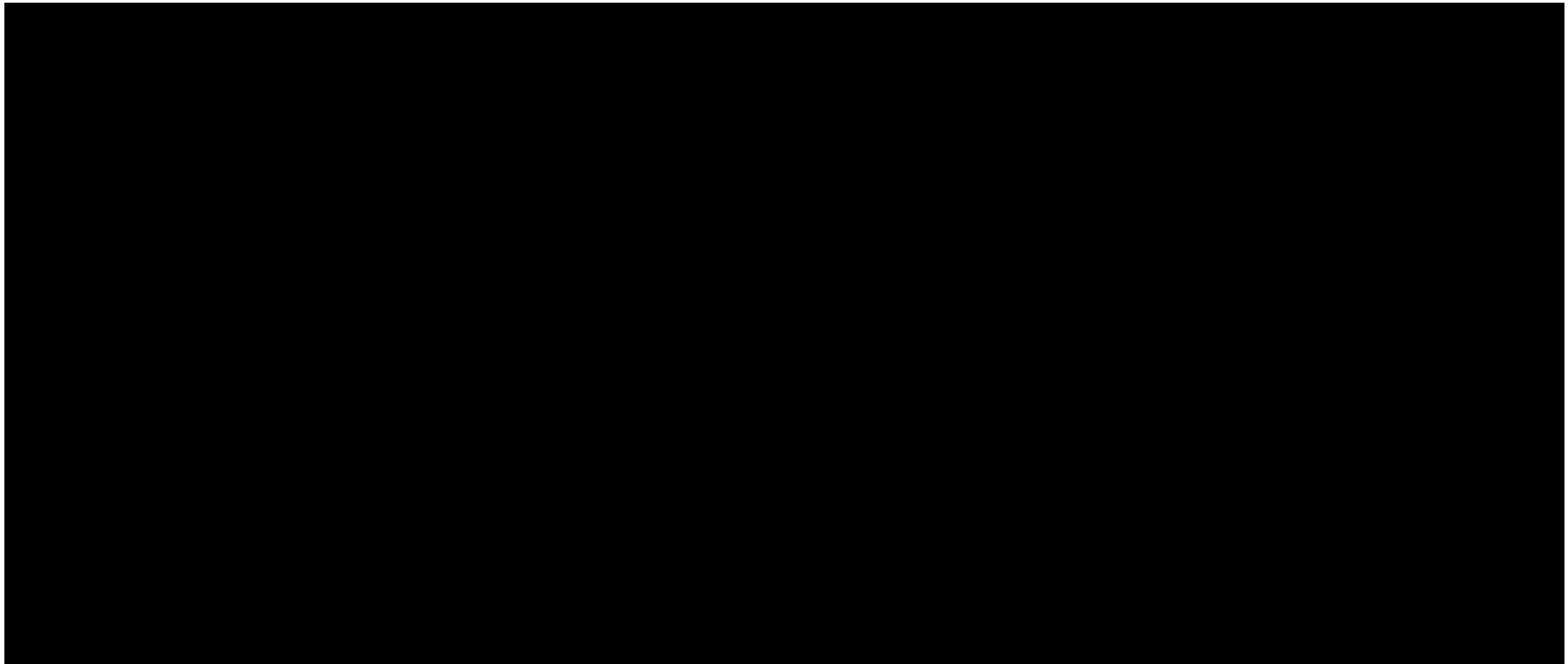
# GS1 - Making a Difference More than 5 Billion Times a Day

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# GS1 - Making a Difference More than 5 Billion Times a Day

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# Visibility

is the ability to see and act on information.



For visibility to exist, internal  
and external systems must be

**aligned.**



Alignment depends on  
**standards,**



And standards are the result of  
**collaboration.**





# Three Converging Forces

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1. Pace of change
2. Globalization
3. The need to aggregate information



# The State of Convergence

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## Some industry pioneers have begun the journey

- Many examples of the use of standards working and adding value to organizations
- Numerous implementations have proven the concept of re-engineering the supply chain with the use of standards
- Other organizations need to adopt what has been benchmarked as “best practice”

The only way businesses big or small can move forward is to work together.

They need to be able to understand each other, anywhere in the world.

**Business requires a common language, and we make that possible.**



# GS1 Purpose & Beliefs

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**GS1® believes in the power of standards to transform the way we work and live.**

- We **create** a common foundation for business by uniquely identifying, accurately capturing, and automatically sharing vital information about products, locations, and assets
- We **enable** visibility through the exchange of authentic data
- We **empower** business to grow and to improve efficiency, safety, security, and sustainability

## **We are:**

- Neutral and not-for-profit
- User-driven and governed
- Global and local
- Inclusive and collaborative





# The Power of Industry Moving as One

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- **The application of GS1 Standards is ever-evolving, driven by ongoing engagement with industry leaders working together to forge new paths and create better ways of doing business.**
- The pioneering effort of industry leaders builds momentum for the industry as a whole as more companies use the standards.
- Eventually what was once new becomes the norm— an established way of doing business that can benefit all companies.
- Individual companies benefit competitively from implementing standards-based solutions tailored to the needs of their organization.

# Visibility



# We Make **Visibility** Possible

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- By providing the foundational standards for the technology behind business processes and applications
- By facilitating the exchange of common visibility data
- By helping to accurately answer the who, what, when, where, and why of a specific product's movement



# The Global Language of Business

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**The results are:**

**visibility  
efficiency  
security  
collaboration**

**for business**

**convenience  
value  
safety  
satisfaction**

**for consumers**



**Georgia-Pacific**

**Ardetha Bradley**

**[abradley@gapac.com](mailto:abradley@gapac.com)**

**Georgia-Pacific Consumer Products, LP**



**Georgia-Pacific**

## ABOUT

- Georgia-Pacific is one of the world's leading makers of tissue, pulp, paper, packaging, building products and related chemicals.
  - Respected brands in Building and Consumer Products, Away From Home, Foodservice, and beyond.
- ➔ **Approximately 35,000 employees globally**
- ➔ **Approximately 200+ locations worldwide**
- ➔ **Active GS1 Member**





## GS1 Standards Applications

- Electronic Transactions
- GS1 Standards Usage
- Global Data Synchronization via the GDSN
- Benefits



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WASHROOM & WIPER SOLUTIONS				FOOD SERVICE SOLUTIONS				
Towels	Tissue	Skin Care	Wipers	Cutlery	Napkins	Beverage	Plates & Containers	Food Wraps



# Georgia-Pacific



### WASHROOM & WIPER SOLUTIONS



Towels



Tissue



Skin Care



Wipers

### FOOD SERVICE SOLUTIONS



Cutlery



Napkins



Beverage



Plates & Containers



Food Wraps



An Omnichannel Evolution

# Who is Macy's Inc.



*America's  
Department  
Store*



## Our Brands

Macy's  
Macys.com  
Macy's Backstage

Bloomingdale's  
Bloomingdales.com  
Bloomingdale's Outlet

Blue Mercury  
Bluemercury.com

900 stores in 45 states, the District of Columbia, Guam and Puerto Rico

Direct to consumer delivery across the U.S. and over 100 countries worldwide

## Our Support Network

Logistics & Operations  
Technology

Credit & Customer Service

Systems &



*Like No Other  
Store  
In the World*



*A Team of 170 Thousand - Driving \$28 Billion Annual Sales*



# *Our Core Strategy*

## M

### My Macy's

Deliver a merchandise assortment and shopping experience in each location and channel that meets the needs of local and diverse customers

## O

### Omnichannel

Operate with a single view of our customer, inventory and business – no matter how, when or where the customer is shopping

## M

### Magic Selling

Help our customers understand that the products at Macy's were selected to meet their needs – whether it be by size, color, style, fabric weight or brand.

*What She wants - Where She wants it - When She needs it*



*1858 – 1995...a single channel*



*900 Stores across the United States*

# 1996 - 2012...Multi Channel



*900 Stores Across the United States*

*and*



*Websites with Fulfillment Center Delivery*

*Same Brands  
Operating Independently*

# 2013 & onward... Omnichannel

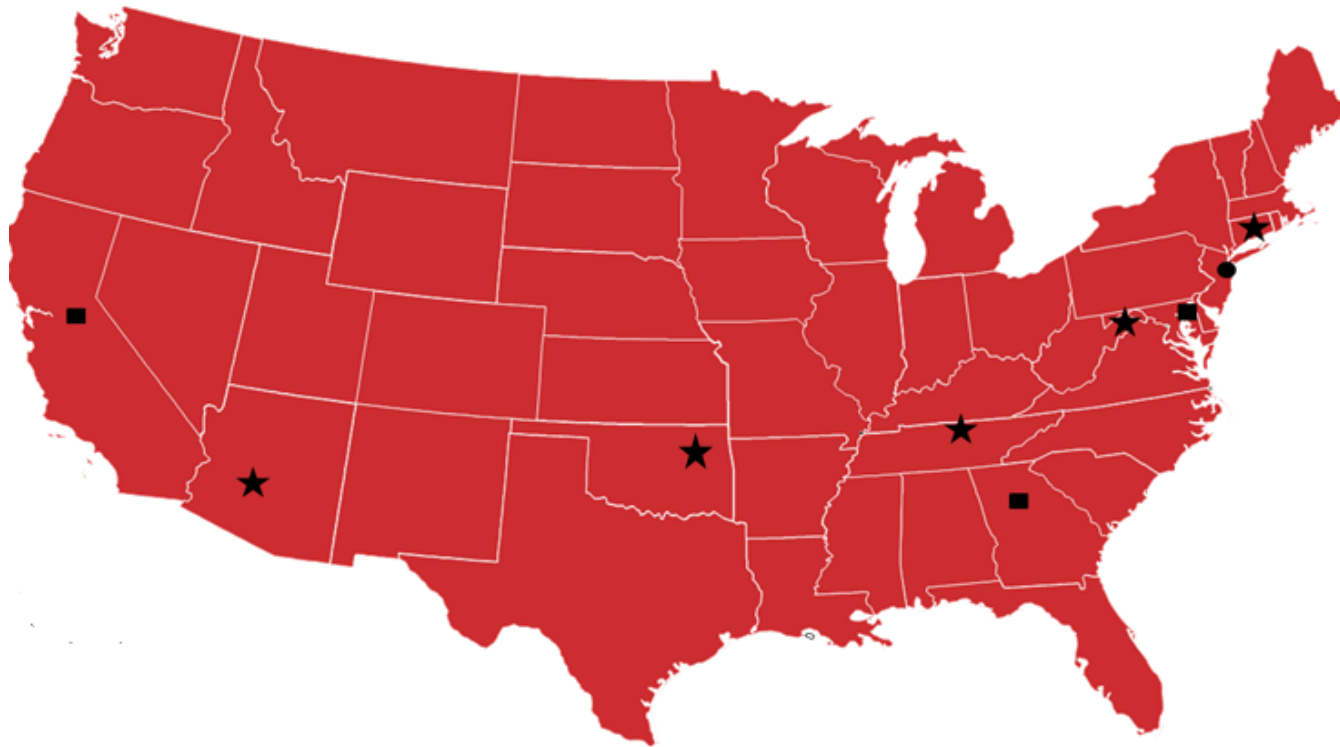


*A Unified Network*

*A Single Agile  
Inventory*

*Flexible Fulfillment*

*The Seamless  
Shopping  
Experience*



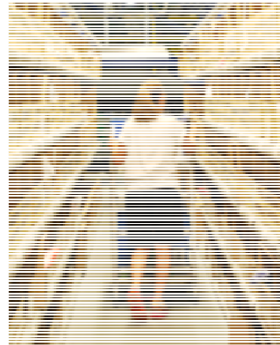
*9 Fulfillment Centers... 5 Megacenters & 4 Product Specific*

*Strategically located to align with customer base*

*Over 1 million units shipped a day at peak*



# *What is a Megacenter*



1.0 – 1.3 million square feet



Fully automated & designed to process multi unit orders



Annual sales capacity in excess of \$1 billion



Capacity for 500K unique UPCs

# Store Fulfillment



600 fulfillment locations

Sales associates pick orders

Average store can ship up to 1 thousand orders a day

Buy On Line – Pick Up in Store

Same Day Shipping enabled through mall partnership & local courier service



# *Flexible Fulfillment*

*Achieved by Leveraging DC and Store Strengths*



*Distribution Centers*

Low delivery cost per unit

Multi unit order  
processing

Productivity, from  
automation



*Stores*

Convenience / Delivery  
Speed

Single Unit order  
processing

Minimal capital  
investment

*Omnichannel success with any fulfillment method is driven by the accuracy of our inventory*

# *The Role of RFID at Macy's*



Inventory Accuracy

Pick to Last Unit

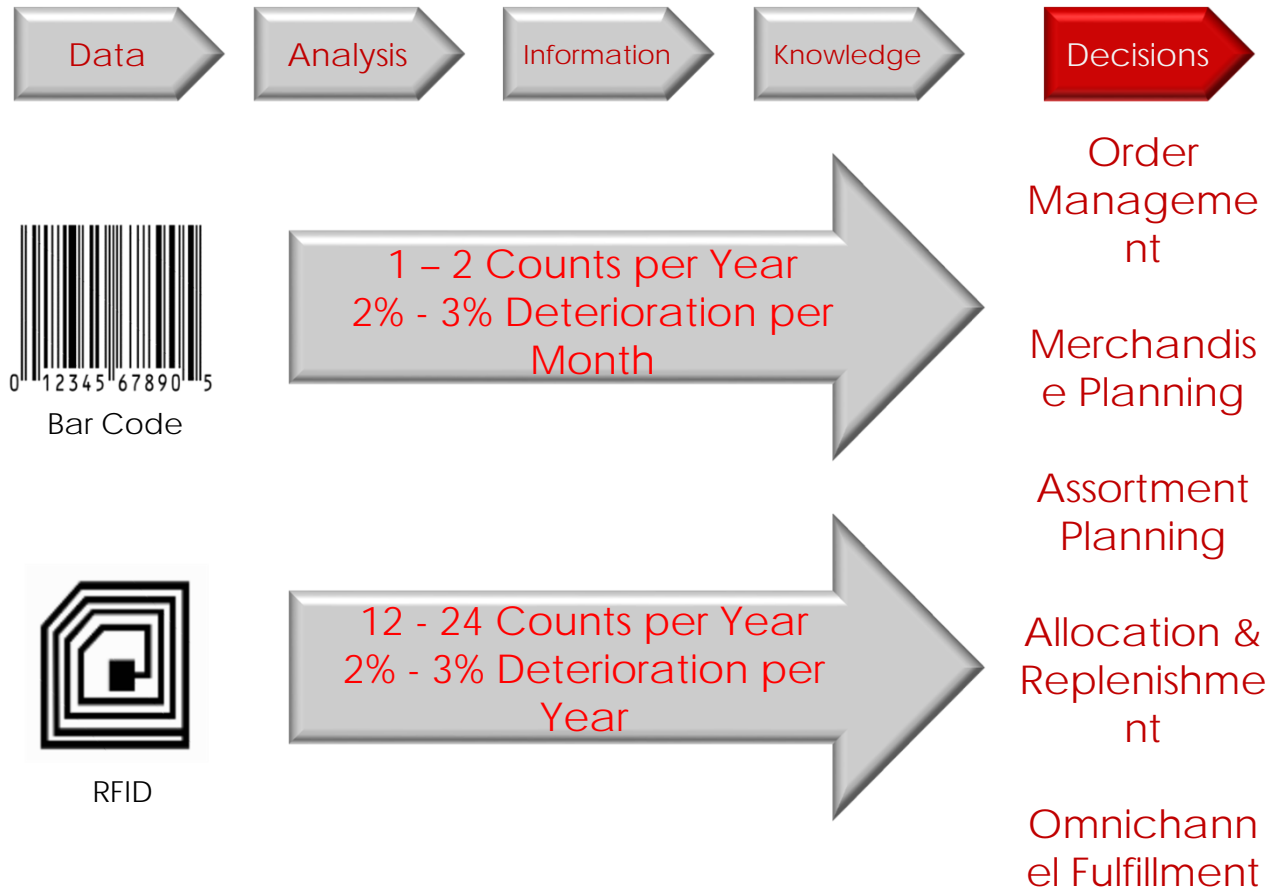
Display Audit

Back to Front....Sales Floor Replenishment

*RFID empowers our inventory in the dynamic store environment*

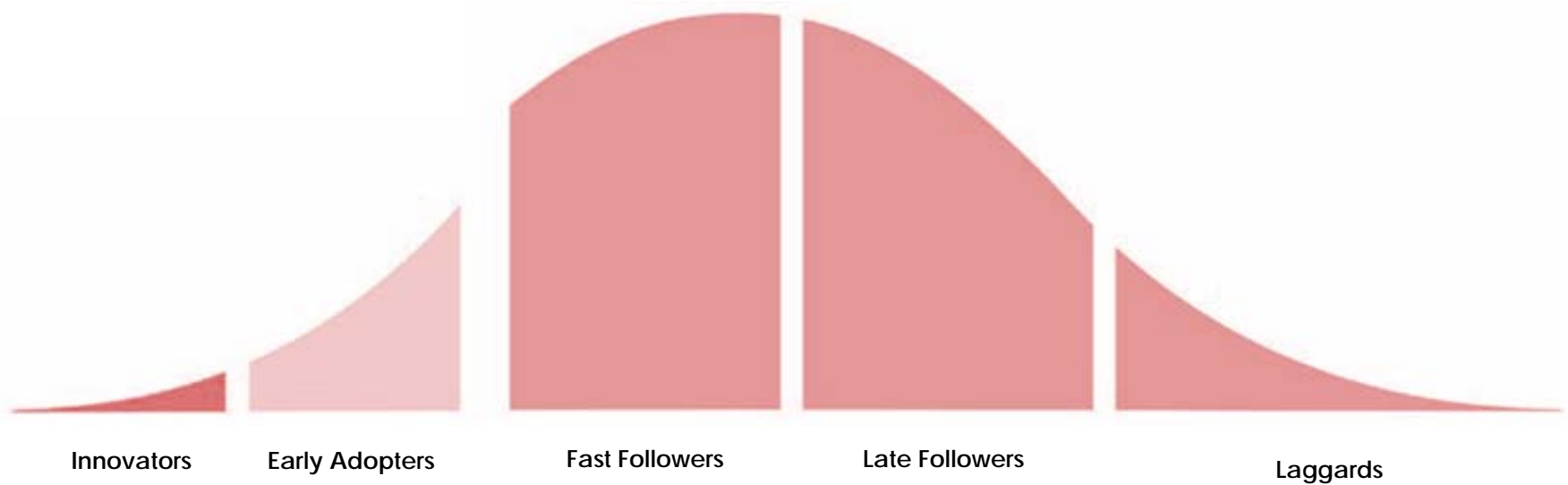
# Inventory Accuracy

*The imperative for effective decision making*



*The analysis, information, and knowledge that drive our decisions require timely and accurate data*

*Transformational* technology for our industry

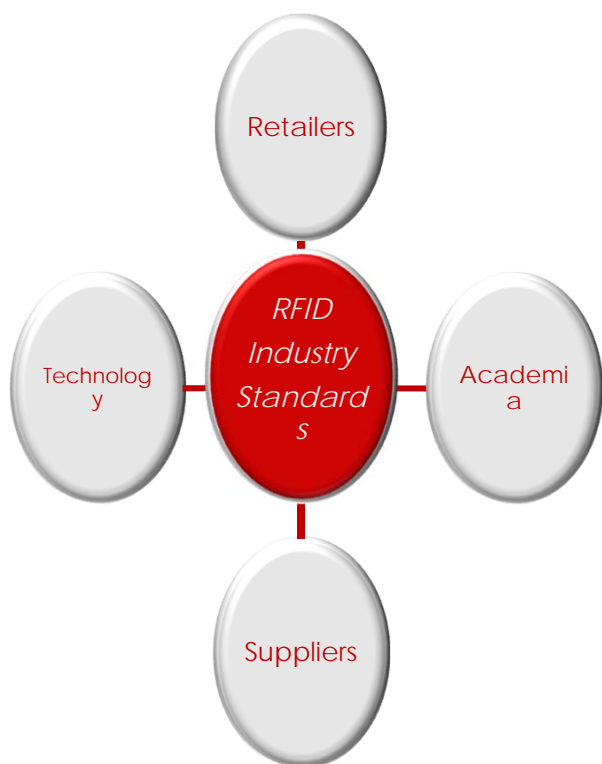


*Industry adoption must* ***Faster***  
*move*

The  
Power  
Of

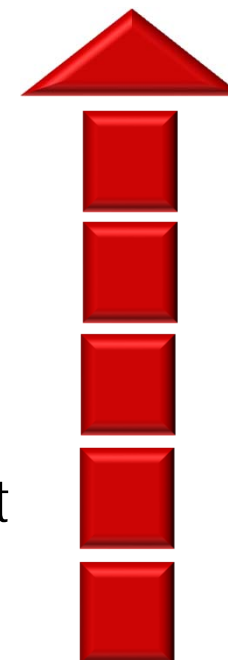


Forging Collaboration  
Driving Industry Momentum  
Advancing RFID Depth of Usage



## Realizing the Benefits of RFID

- ✓ Market Share
- ✓ Sales
- ✓ Gross Margin
- ✓ Customer Centricity
- ✓ Mobile Engagement
- ✓ Omnichannel Fulfillment



*Thank You*





# Brenda Hambleton

Former Chief Customer &  
Strategy Officer



# Current Supply Chain



3 to 5 days from order to delivery is no longer good enough



Support for more frequent delivery requires scale to keep costs down



Consumer needs are evolving and supply chains need to be able to keep up with new options



# Why?

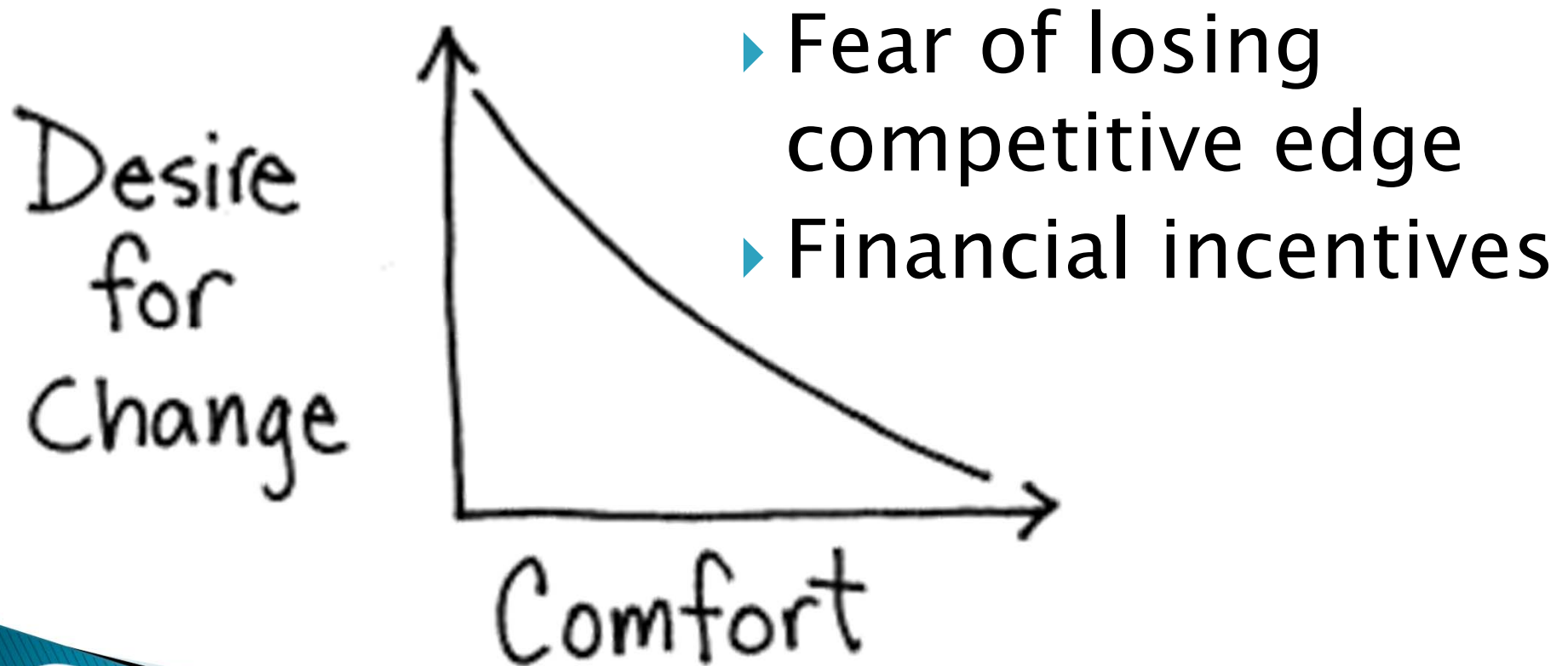
- ▶ Everyone has their own assets (usually right next to each other)
- ▶ Each manufacturer and retailer is optimizing their own, individual supply chain
- ▶ There is no coordination across a region
- ▶ Companies are afraid to share data and infrastructure



**It is hard to change...**

# What will it take to change?

Desire to change must be greater than the desire to stay the same



# Life is Getting Harder

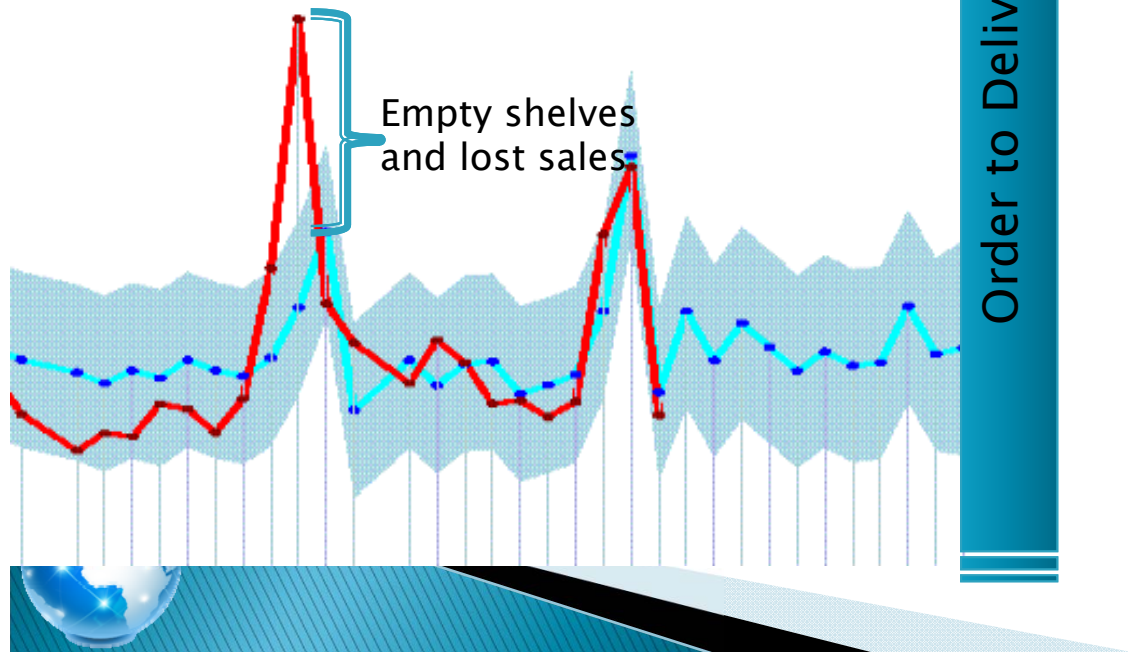
- ▶ Number of items are growing
- ▶ Shelf space is shrinking
- ▶ On-shelf availability is going down
- ▶ Truck drivers are in short supply
- ▶ Costs are going up
- ▶ Consumers are very price sensitive

Faster, More Frequent,  
Flexible



# Speed

The solution to forecasting errors is not empty shelves



It is *faster delivery cycles*

Shared Storage  
*<18 hours*

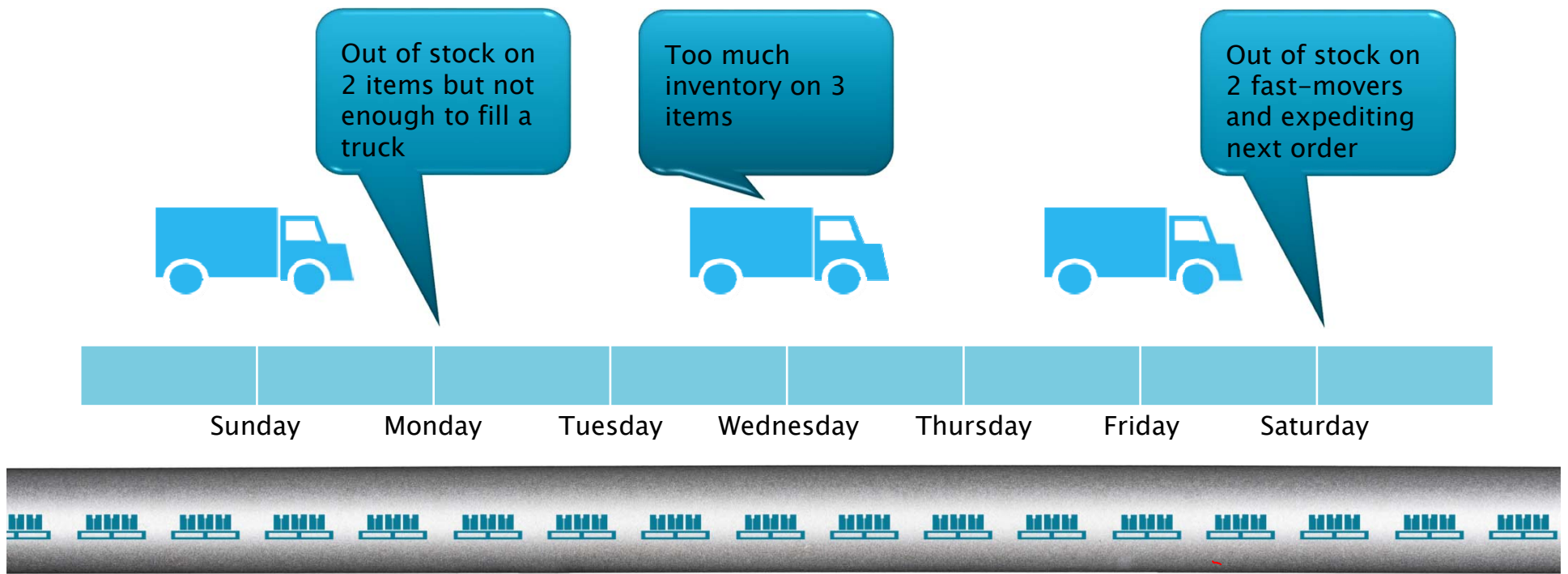
Order Collaboration  
*<24 hours*

Status Quo  
*<48 hours*



# Frequency

Daily delivery makes a difference...

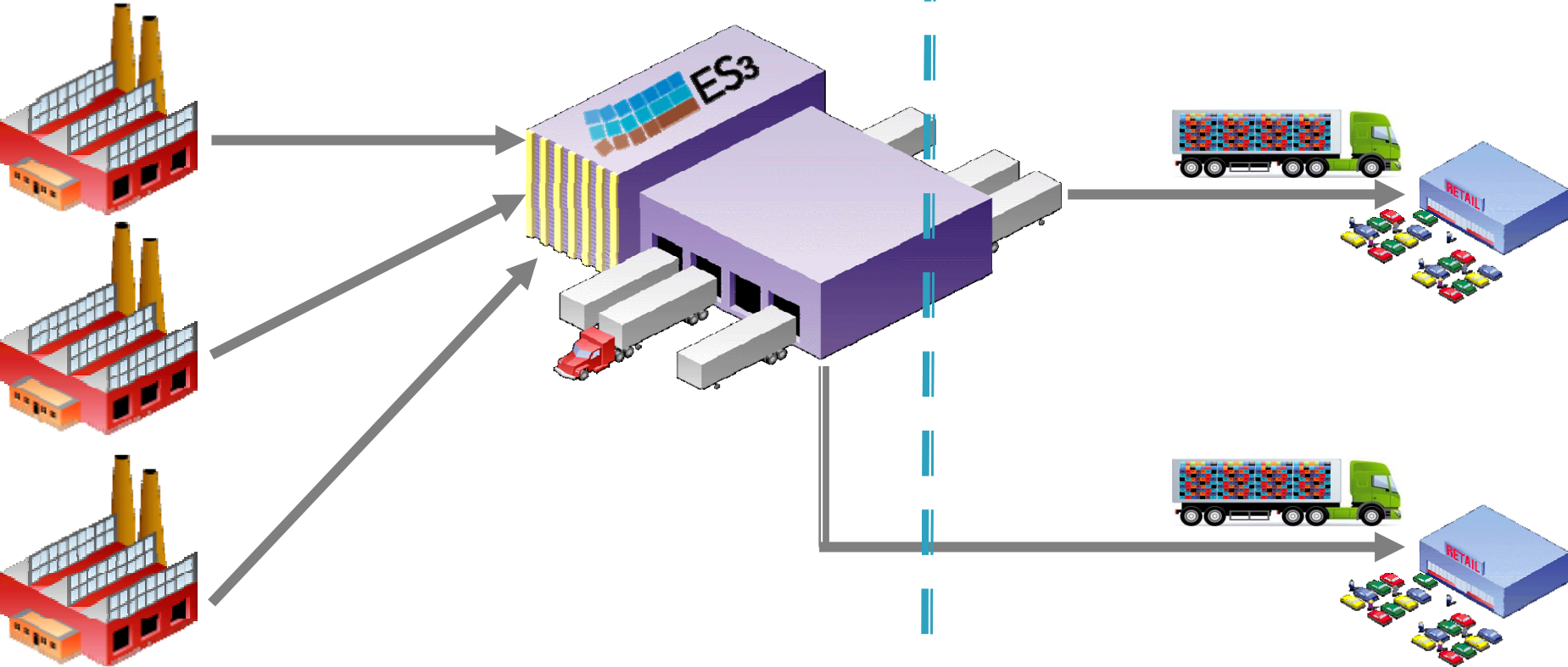


It is the pipeline to on-shelf availability.

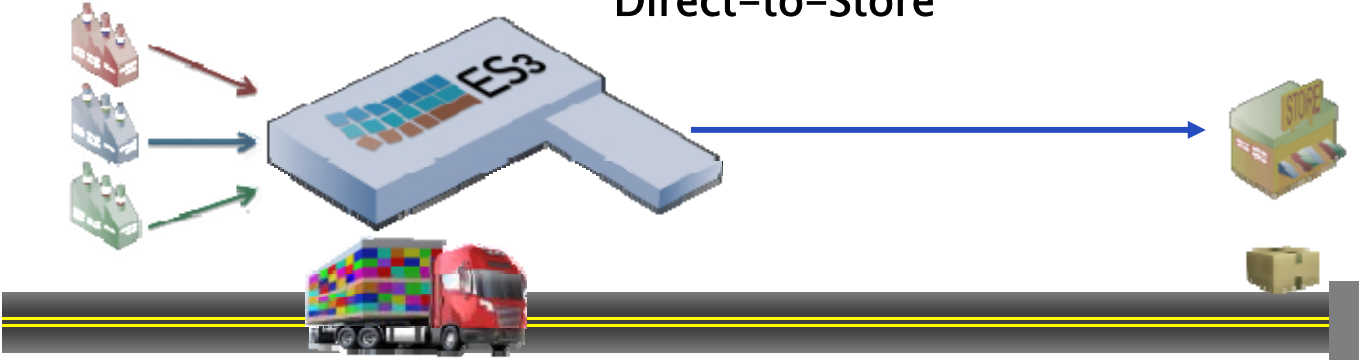


Manufacturer

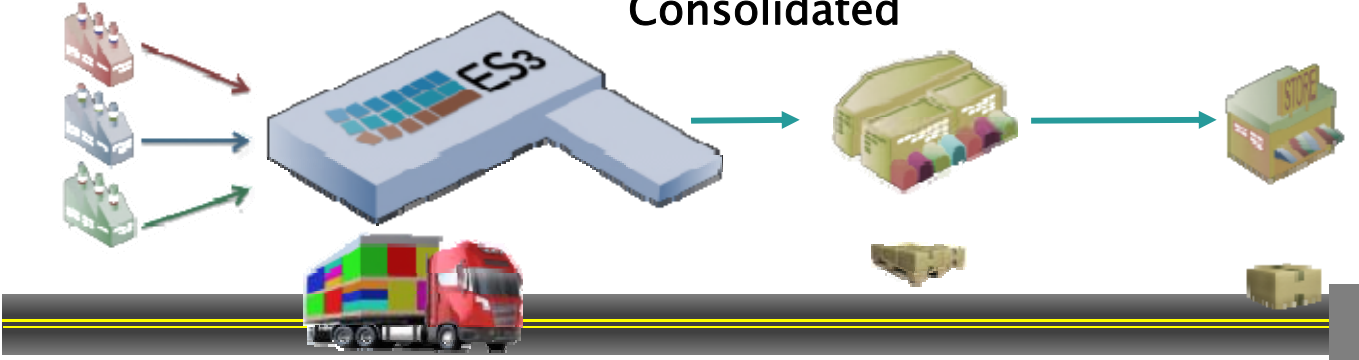
Retailer



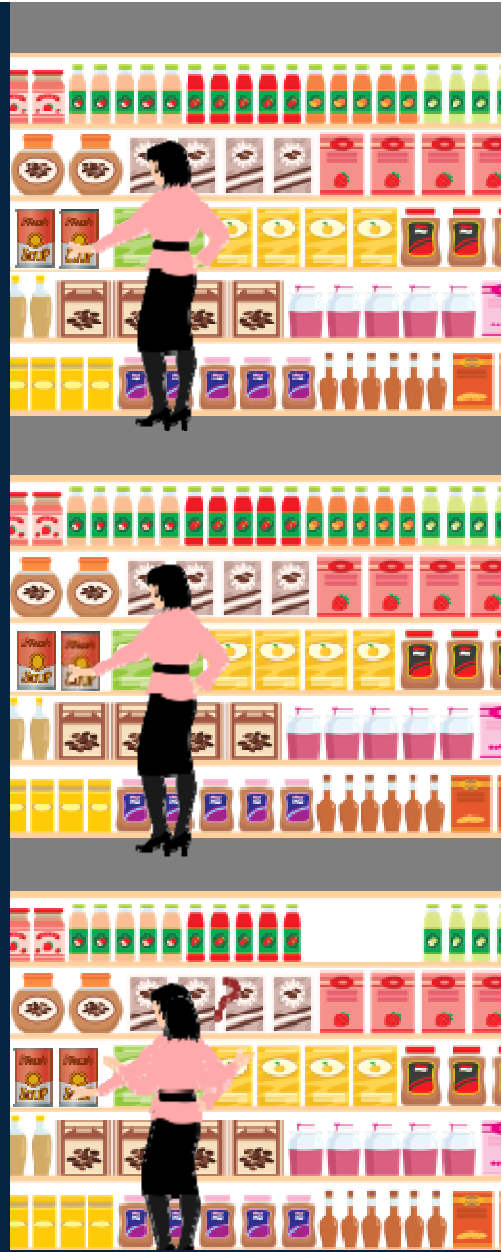
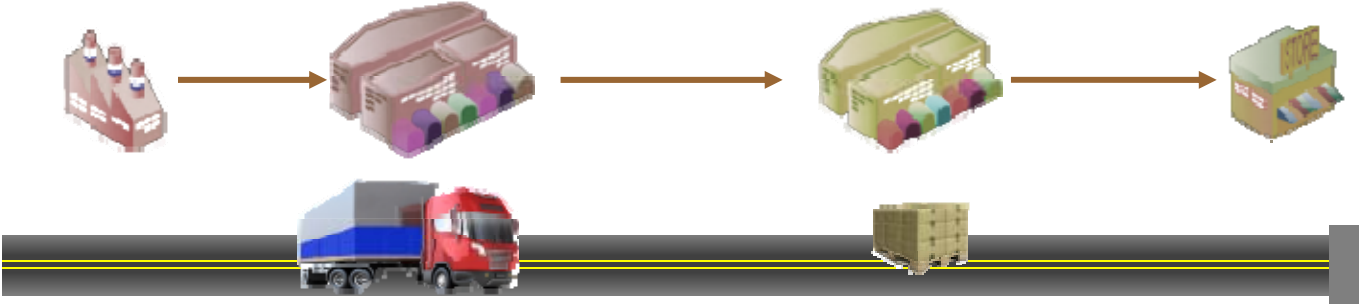
### Direct-to-Store



### Consolidated



### Traditional



1 day

2 days

3 days

4+ days

# Financial Incentives

## MANUFACTURER

- 10–20% reduction in warehousing
- 50+% reduction in picking
- 30+ reduction in delivery

> 30% Savings

## RETAILER

- 50% reduction in inventory
- 50% reduction in delivery

> 30% Savings



# What does it take?

- ▶ Standards and protocols
- ▶ Real-time information
- ▶ Neutral 3<sup>rd</sup> party to:
  - Develop the rules of engagement
  - Be able to see all of the information without sharing data across competitors
  - Handle financial transactions
  - Guarantee savings through contract rates
  - Balance needs across all players



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# Q&A

