

Don't Ignore Data Quality In Your Supply Chain!



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The Global Voice of Quality®

Introduction

SIEMENS

Ingenuity for life

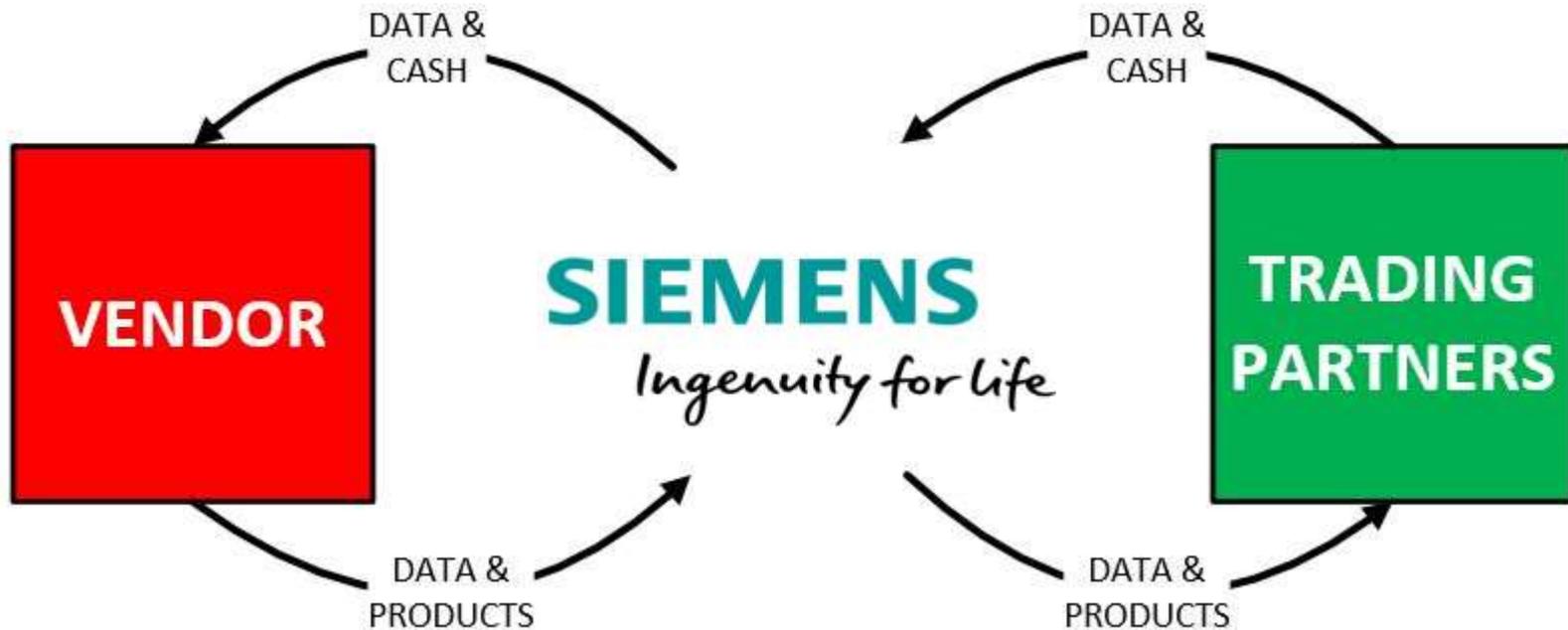
- Siemens Corporation
 - OpsEx/Business Excellence Consultant (aka Internal Lean Guy)
 - Low Voltage Electrical Management Division, Roebuck SC
- ASQ CSSBB, 2010
- ASQ CSSGB, 2009
- MBA, Indiana University, 2006
- BS ChE, Tri-State University (Indiana), 2002



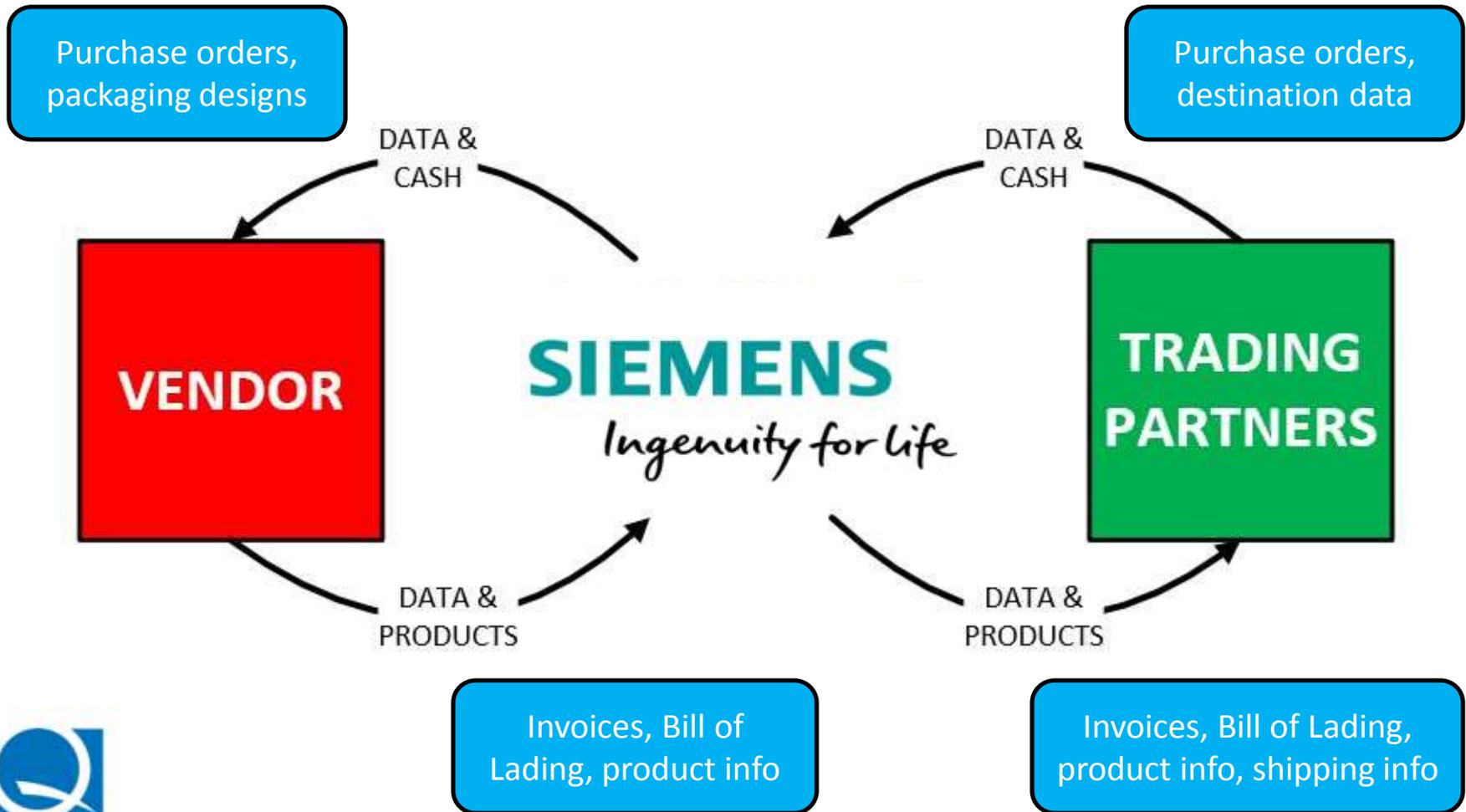
Learning Objectives

- In this session you will:
 - Understand the elements of a global supply chain
 - Learn about the use of data across a modern global supply chain
 - Learn about the growing data requirements from customers and end consumers
 - Discover new tools and technologies for streamlining supply chain data transmission and management

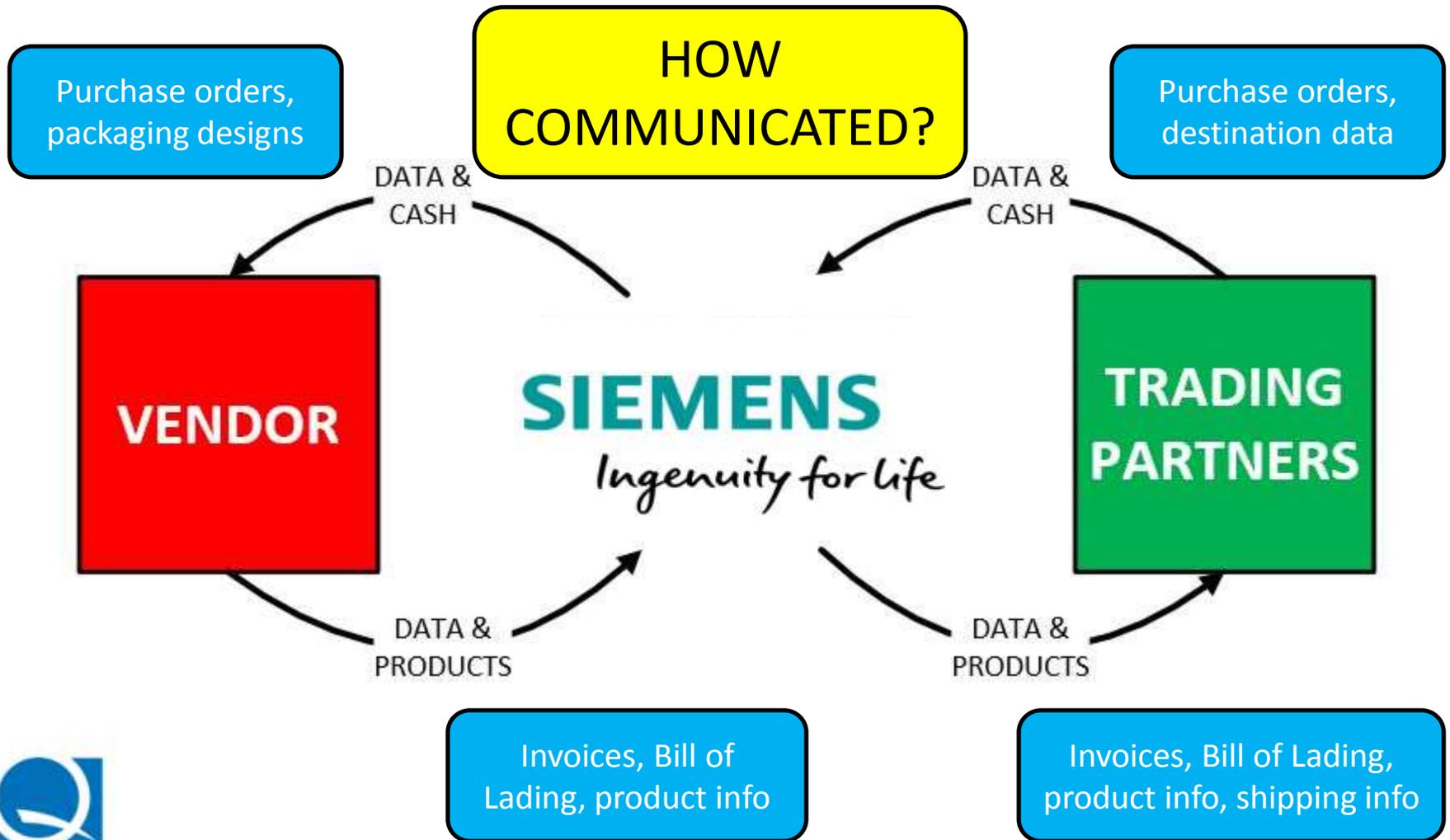
What is a Supply Chain?



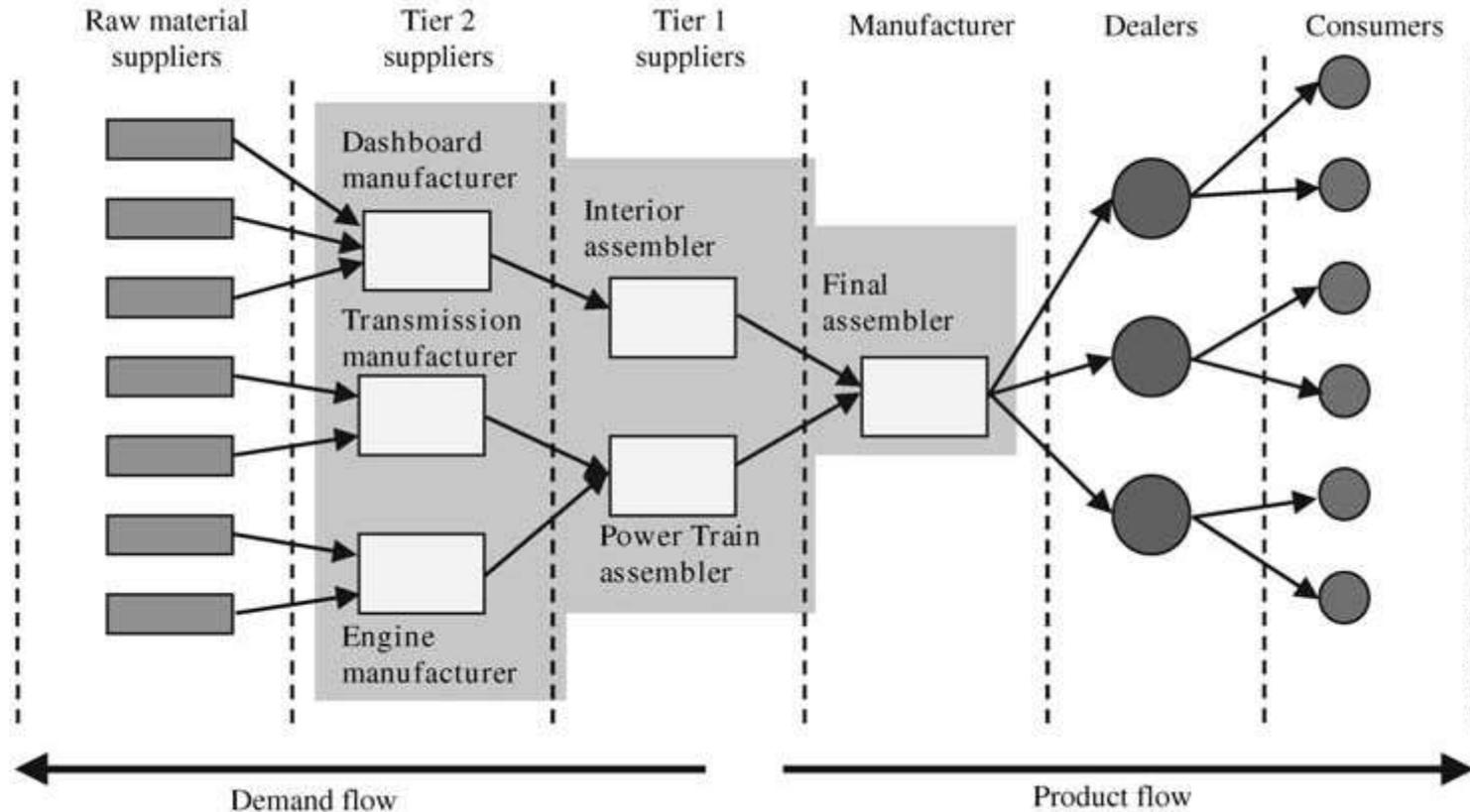
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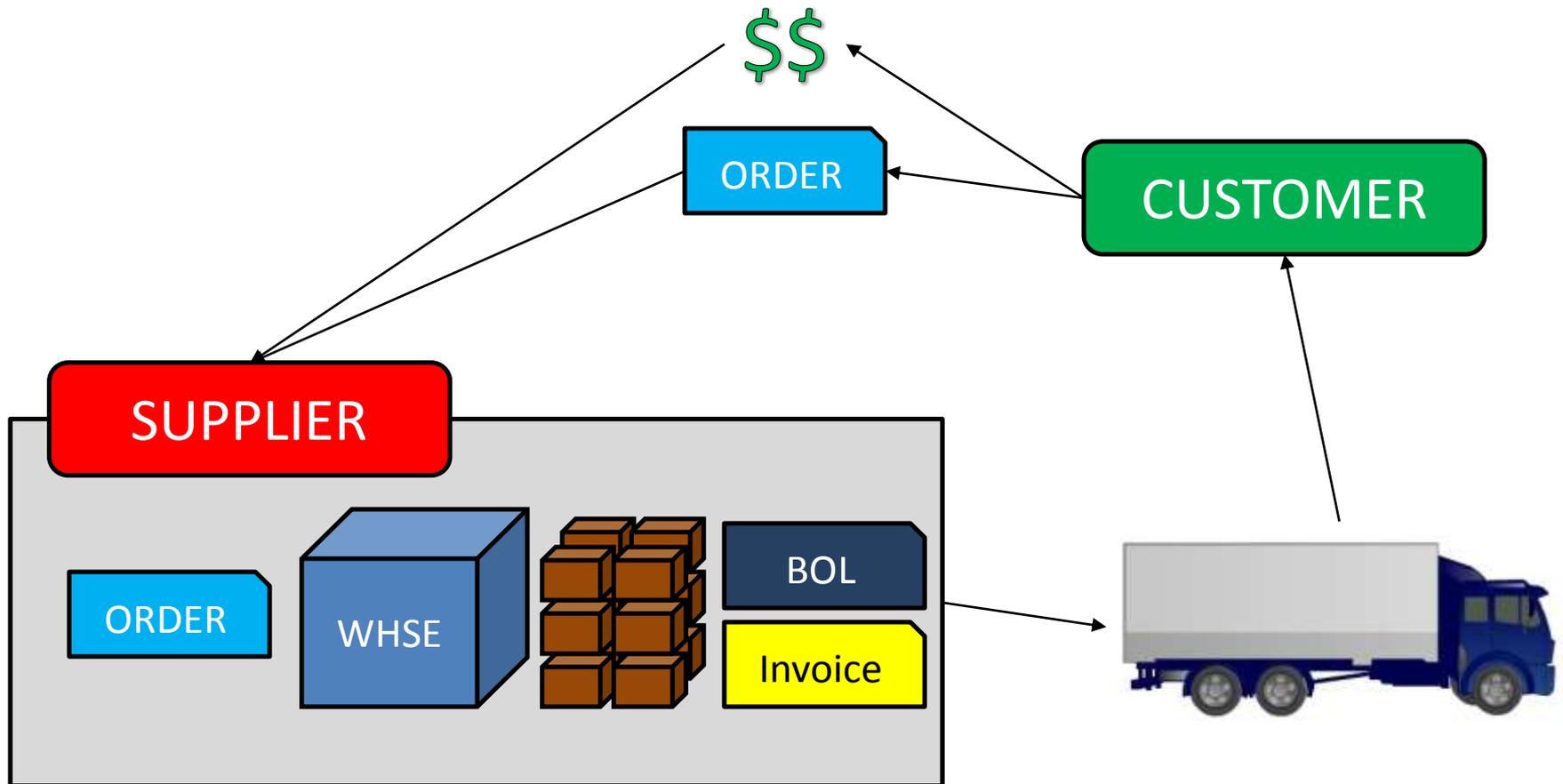
What is a Supply Chain?



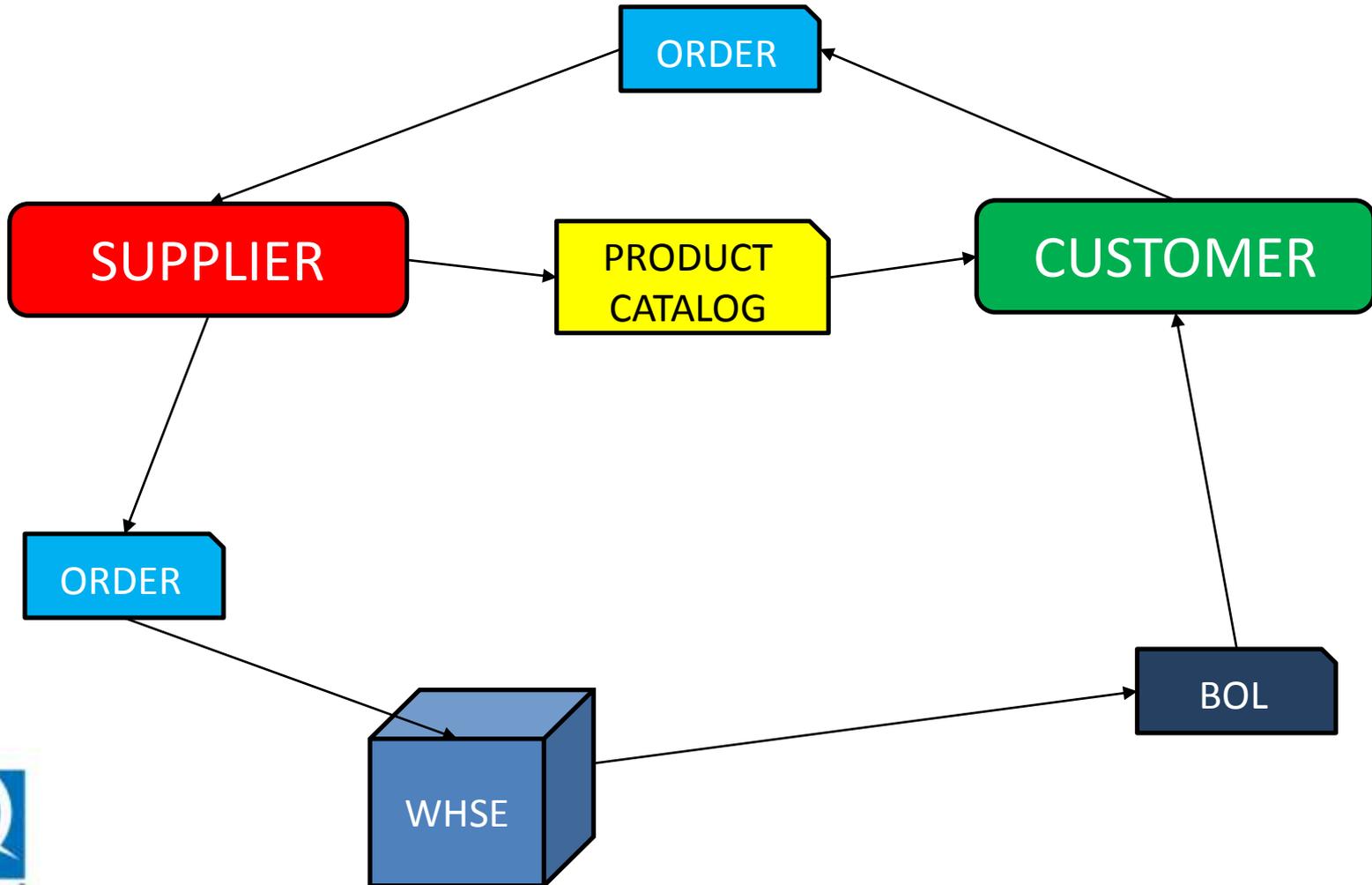
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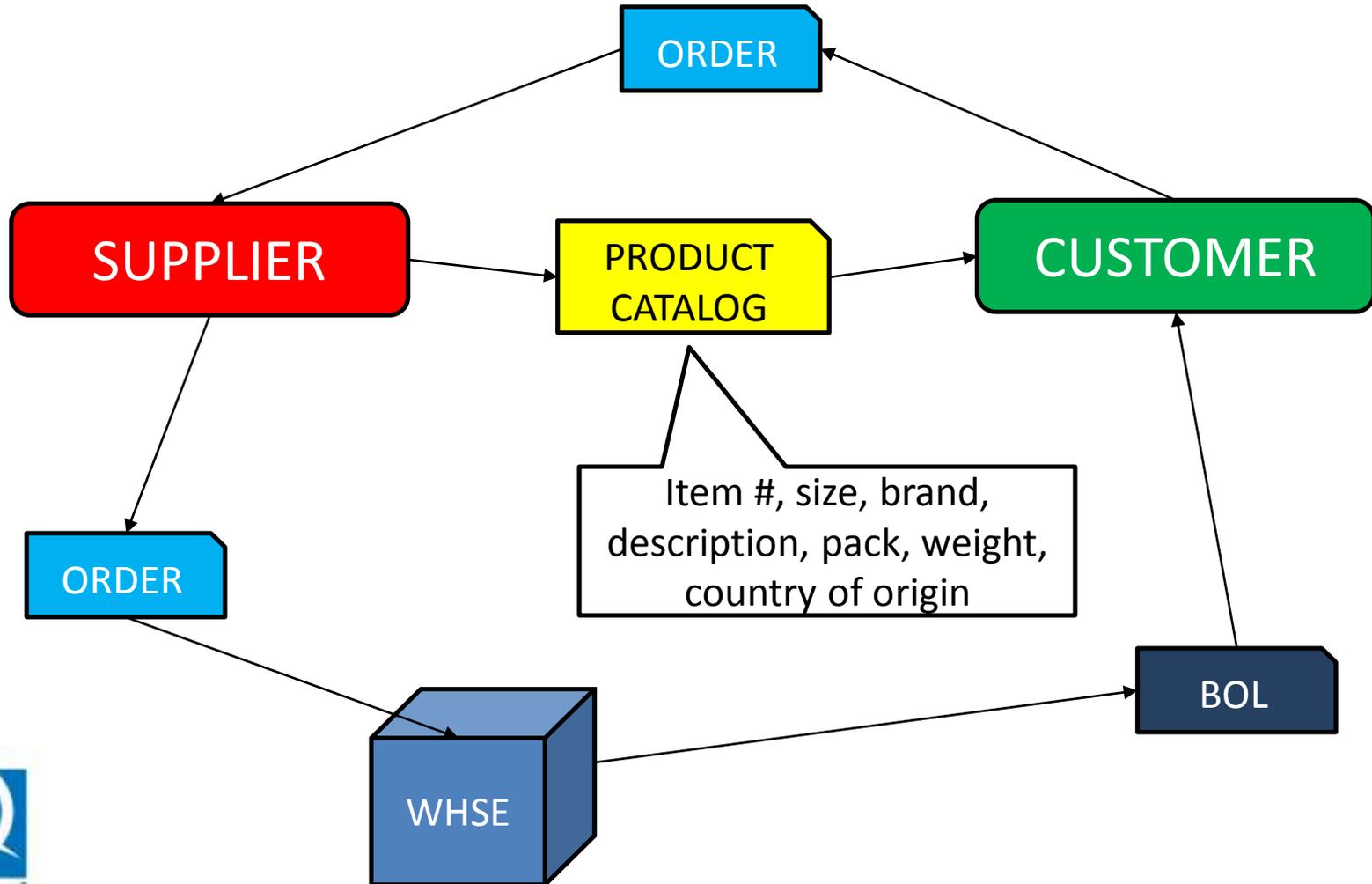
Order-To-Cash Process



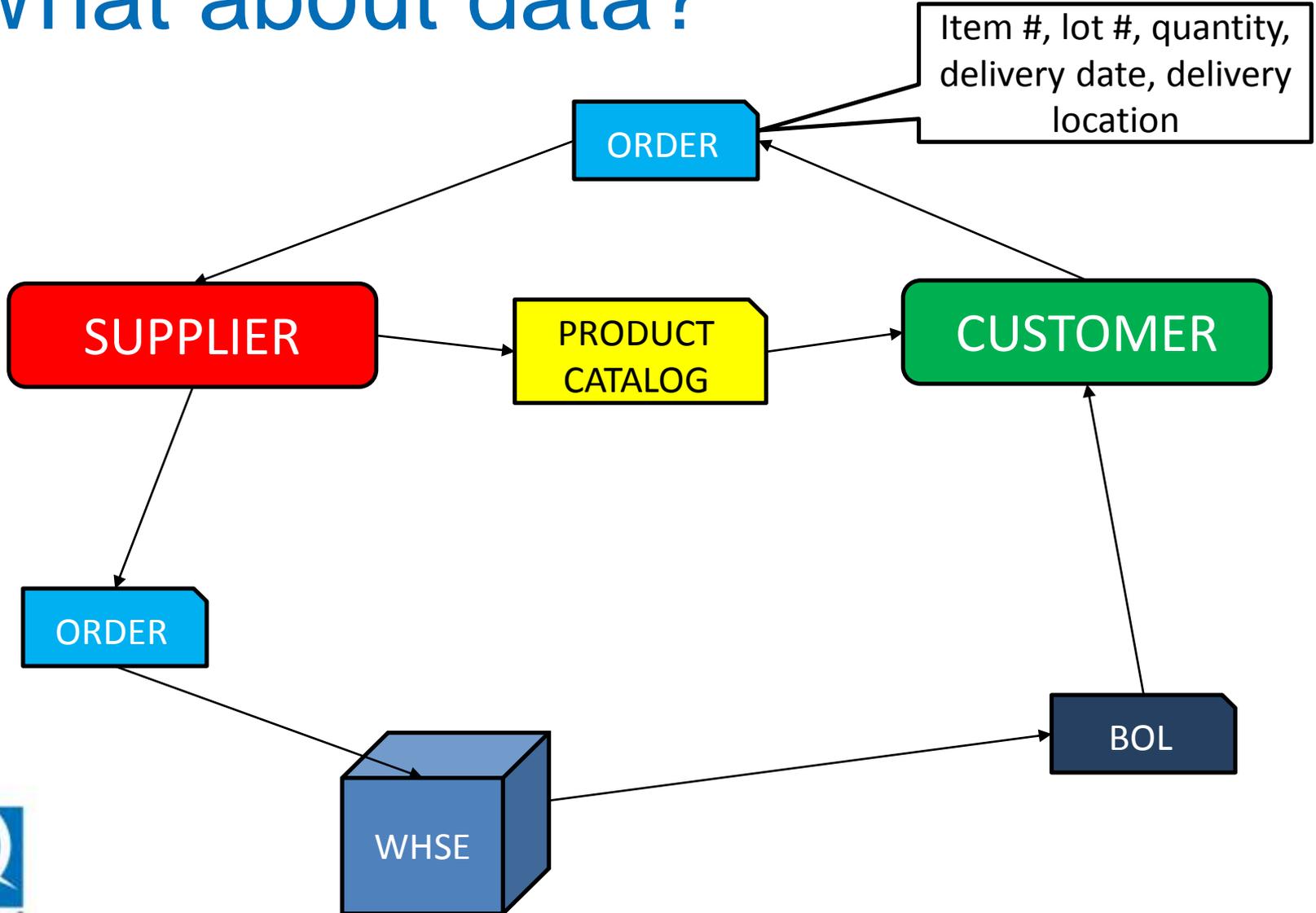
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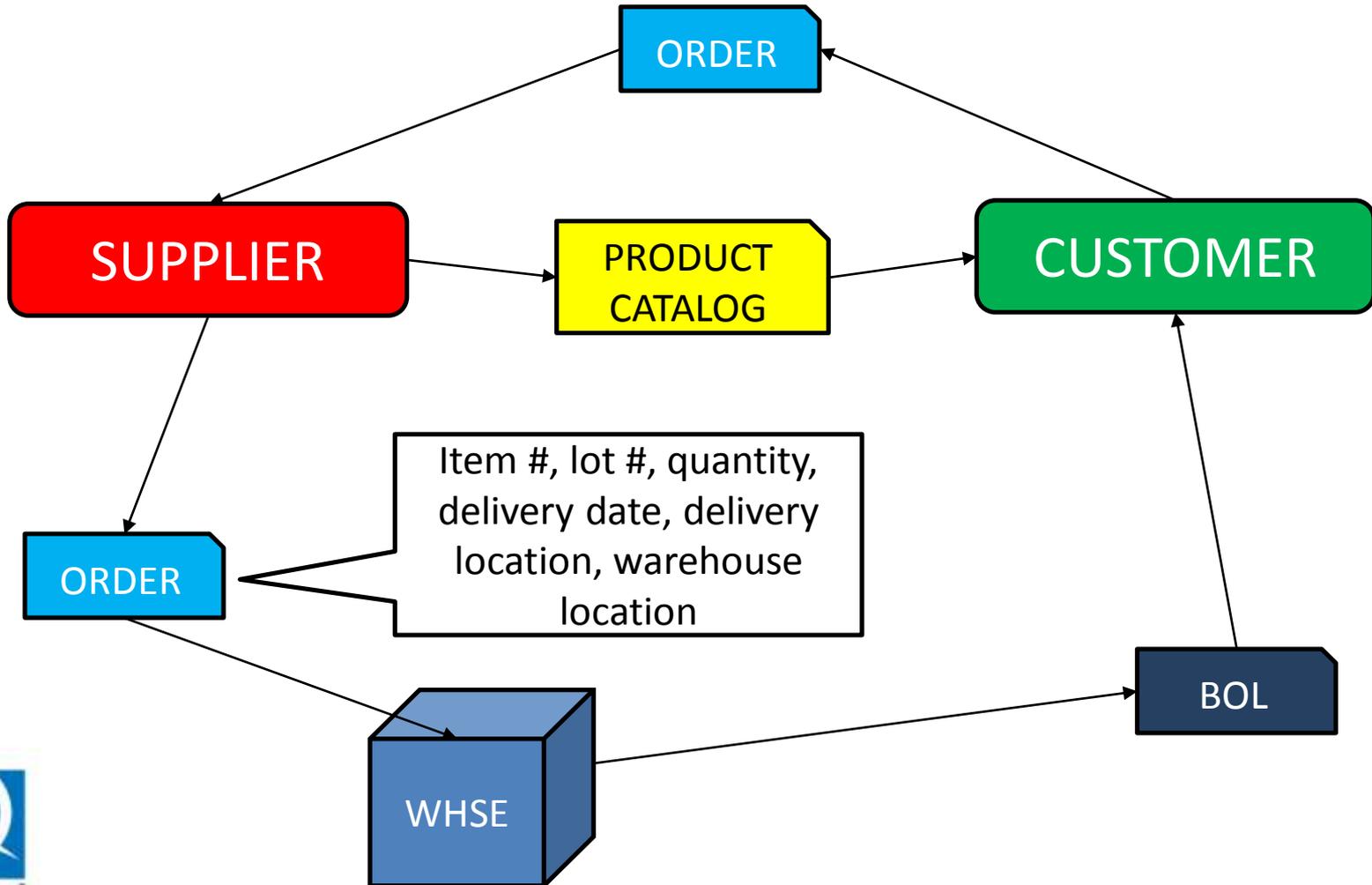
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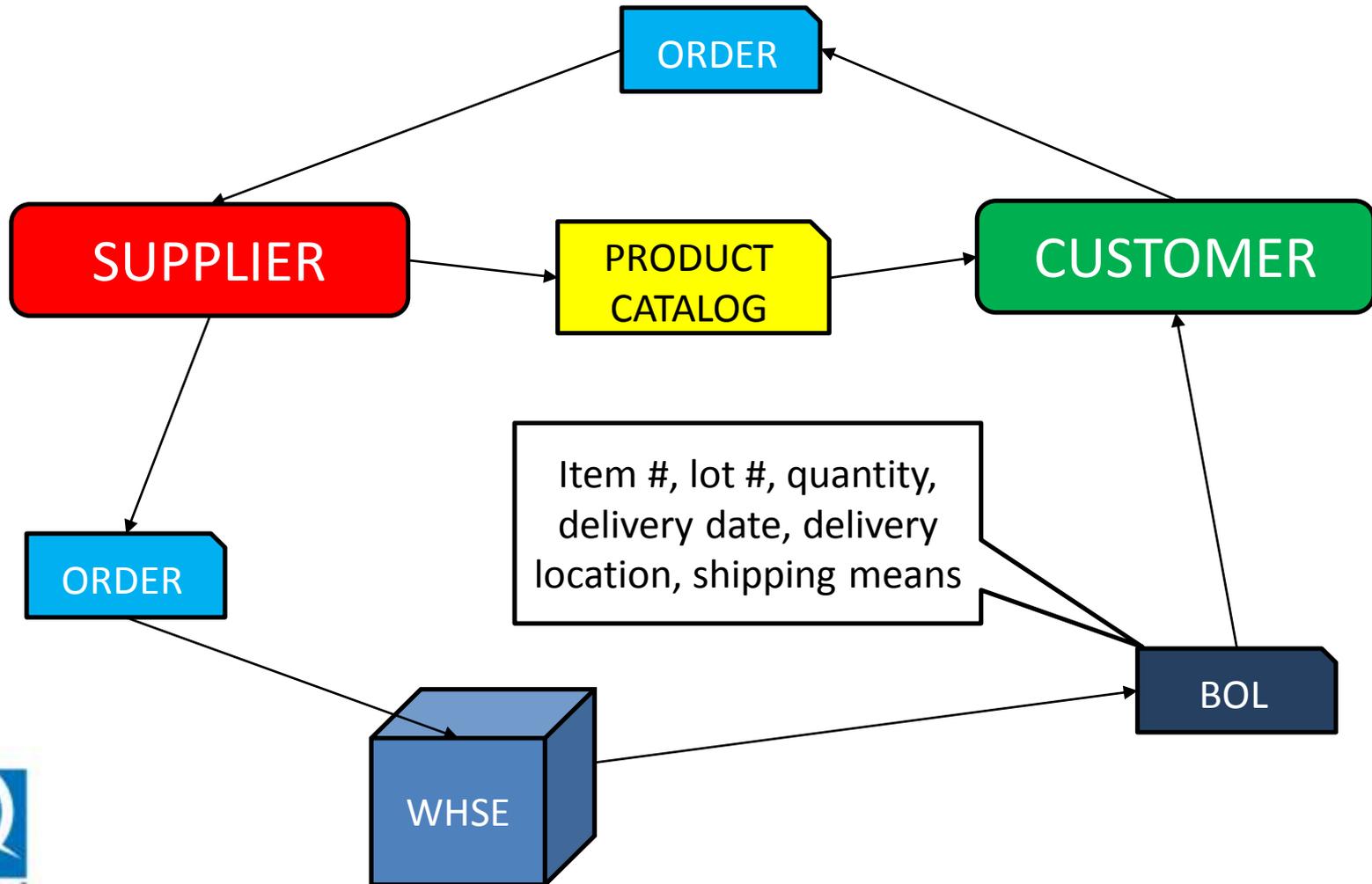
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What about data?



What about data?



Customer Data Expectations

The screenshot shows a Walmart product page for 'Sea Best Sea Scallops, All Natural, 1 lb'. The page features a blue header with the Walmart logo, a search bar, and navigation links for 'Departments', 'Pickup Today', 'Grocery Pickup', 'Weekly Ads', 'Gift Cards', and 'Credit Card'. The product title is 'Sea Best Sea Scallops, All Natural, 1 lb', with a price of \$19.98. The product is described as 'All Natural Scallops' and is available for in-store purchase only. The page includes a main product image, a vertical gallery of smaller images, and a green callout box stating 'Customers have online catalogs with product data'.

Walmart  Departments All Search  Reorder

Credit Card Savings Offer  Pickup Today  Grocery Pickup  Weekly Ads  Gift Cards  Credit Card  SI

Food > Fresh Food > Meat, Seafood & Poultry > Fish

Sea Best Sea Scallops, All Natural, 1 lb

★★★★★ 3 reviews Q&A By: Sea Best Walmart #: 551532091   





\$19.98

 Stock up on everyday essentials. [See details.](#)

Sold at **Walmart store**  In-store purchase only

 Shipping not available

 **AVAILABLE NOW** at
Jacksonville, 4250 Phillips Hwy
[See more stores](#)

This item is only sold at a Walmart store

Customer Data Expectations

Whirlpool 24.5-cu ft 4-Door French Door Refrigerator with Ice Maker (Fingerprint-Resistant Stainless Steel) ENERGY STAR

Item # 754716 Model # WRX735SDHZ

★★★★☆ (187 Reviews)



Customer Data Expectations

- Continuously expanding
 - More and more supply chain data!
 - Transparency and visibility
 - Who, What, When, Where, Why, How
 - Rich data - images, videos, special views

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- Continuously expanding
 - More and more supply chain data!
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 - Who, What, When, Where, Why, How
 - Rich data - images, videos, special views
- Why?
 - Consumer safety & sophistication
 - Online/mobile availability of rich data
 - Evidence of ethical compliance

Perfect Order Metric

- % of orders that are deemed “perfect”:
 - Shipped on-time to right location
 - Shipped complete and accurate
 - Shipped damage-free
 - Shipped with correct documentation

Perfect Order Metric

Perfect Order Metrics	Definition	Calculation
% of Orders with On-Time Delivery	The percentage of orders that arrive at their final destination at the agreed upon time. NOTE: There are many definitions of "on-time," and that the "time" may be a specific hour or day, or a window of time. "Agreed upon" means that the customer and shipper have agreed to the delivery time as a general commitment or as a part of the purchase order or contract.	Number of orders delivered on-time / Total number of orders shipped
% of Orders Shipped Complete	Measures the percentage of orders which shipped completely, meaning that all line/units ship with the order per agreement between the customer and shipper.	Number of orders shipped with all lines and units / Total number of orders shipped
% of Orders Shipped Outbound Damage Free	This measures the percentage of customer orders shipped in good and usable condition. NOTE: Orders damaged in transit are not considered here.	Number of orders shipped damage free / Number of total orders shipped
% of Orders Sent with Correct Documentation	The percent of total orders for which the customers received an accurate invoice and other required documents including ASNs, etc.	Number of orders with correct documentation / Number of total orders

Perfect Order Metrics	Major Opportunity	Disadvantage	Typical	Advantage	Best-In-Class	Median
% of Orders with On-Time Delivery	Less than 95%	>= 95 and < 98%	>= 98 and < 99.1%	>= 99.1 and < 99.8%	>= 99.8%	98.5%
% of Orders Shipped Complete	Less than 93.5%	>= 93.5 and < 96.2%	>= 96.2 and < 98.8%	>= 98.8 and < 99.7%	>= 99.7%	98.0%
% of Orders Shipped Outbound Damage Free	Less than 97.82%	>= 97.82 and < 99%	>= 99 and < 99.6%	>= 99.6 and < 99.9%	>= 99.9%	99.0%
% of Orders Sent with Correct Documentation	Less than 99%	>= 99 and < 99%	>= 99 and < 99.78%	>= 99.78 and < 99.994%	>= 99.994	99.50%

Source: WERC Watch Spring 2015 Report



Perfect Order Metric

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% of Orders Sent with Correct Documentation					99.9%	99.50%

Source: WERC Watch Spring 2015 Report

Higher expectations for data and delivery performance add complexity!



Complexity leads to errors

NACAS
powered by 1FoodService

SUPPLIERS ▾ FOODS ▾ NON-FOODS ▾ MY FAVORITES ▾

Beaver Street Fisheries, Inc. Smart Search Filters... 1 of 4

BEEF, GENERAL UNPROCESSED

Product ID	Product Name	Supplier	Action
1018006	BEEF RIBEYE STEAK THIN SL	BEAVER STREET FISHERIES, INC.	<input type="checkbox"/> Add to Compare
1177710	SKIRT STEAKS MARINATED	BEAVER STREET FISHERIES, INC.	<input type="checkbox"/> Add to Compare
1038542	BEEF, TENDERLOIN TIP	BEAVER STREET FISHERIES, INC.	<input type="checkbox"/> Add to Compare
1175223	BF PORTERHOUSE ST CH 24OZ	BEAVER STREET FISHERIES, INC.	<input type="checkbox"/> Add to Compare
1174030	12 OZ CH L/ON RIBEYE STK	BEAVER STREET FISHERIES, INC.	<input type="checkbox"/> Add to Compare

1175223
BF PORTERHOUSE ST CH 24OZ
BEAVER STREET FISHERIES, INC.
 Add to Compare

Complexity leads to errors

Trex Outdoor Furniture Rockport **3-Piece** Plastic Frame Patio Conversation Set with Spa Sunbrella Cushions

Item # 826182 Model # TXS135-2-SS5413

☆☆☆☆☆ No reviews



Number of Ottomans Included	1
Number of Sofas Included	0 (not included)
Number of Loveseats Included	1
Number of Sectional Pieces	0 (not included)
Chair Material	Plastic
Style	Traditional
Number of Pieces in Set	3
Number of Chairs Included	1
Table Top Material	Plastic
Table Material	Plastic
Number of Cushions Included	6
Cushion Fabric	Acrylic
Cushion Pattern	Solid
Patio Furniture Color/Finish	Black
Number of Tables Included	1

What happens with bad data?

- Lost sales
- Rework/reconciliation
- Customer fines
- Product obsolescence

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Bad Data =
Loss of Revenue!!

What tools help prevent errors?

- First, where do we need help preventing these errors?
 - Product information for customer portals
 - Warehouse and inventory management
 - Picking right items
 - Managing accurate inventory
 - Transportation management
 - End-to-end supply chain transparency

Product Data Synchronization

The dashboard displays the following components:

- 1** **+ Create** (Item, Case)
- 2** **Recent Items** (503)
 - 2017/01/09 10:20:12 **24 x Camba Oak Aged** (GTIN: 73763729989037, Hierarchy level: Case, State: Draft new item)
 - 2017/01/09 10:18:07 **BrewDog Paradox Islay 0,33l** (GTIN: 73763729989020, Hierarchy level: Base Unit or Each, State: Draft new item)
 - 2017/01/09 10:15:16 **24 x Box - Riegele Magnus 16 0,33l** (GTIN: 73763729989013, Hierarchy level: Case, State: Draft new item)
 - 2017/01/09 10:13:12 **Riegele Magnus 16 0,33l** (GTIN: 73763729989006, Hierarchy level: Base Unit or Each, State: Draft new item)
- 3** **Item state chart** (503 Items)
 - 503 Items inside catalog since 2017/01/09 08:20
 - 105 Tasks to work on
 - Donut chart showing item states: Not Released (214, 43%), Released (114, 23%), Sent (49, 10%), Published (126, 25%)
- 4** **Training videos** (8)
 - 1WorldSync WS Publish- Einführung in das 1WS Publishing Interface
 - Mit diesem Video werden Sie in den Aufbau des Interface des 1WS Publishing Tools eingeführt.
- 5** **Twitter**
 - Tweets by @1WS_EUsupport
 - 1WorldSync EUsupport @1WS_EUsupport



Warehouse/Transportation

- Synchronization of supply chain and ERP systems
 - Warehouse Management Systems (WMS)
 - Transportation Management Systems (TMS)



jda.

Plan to deliver™

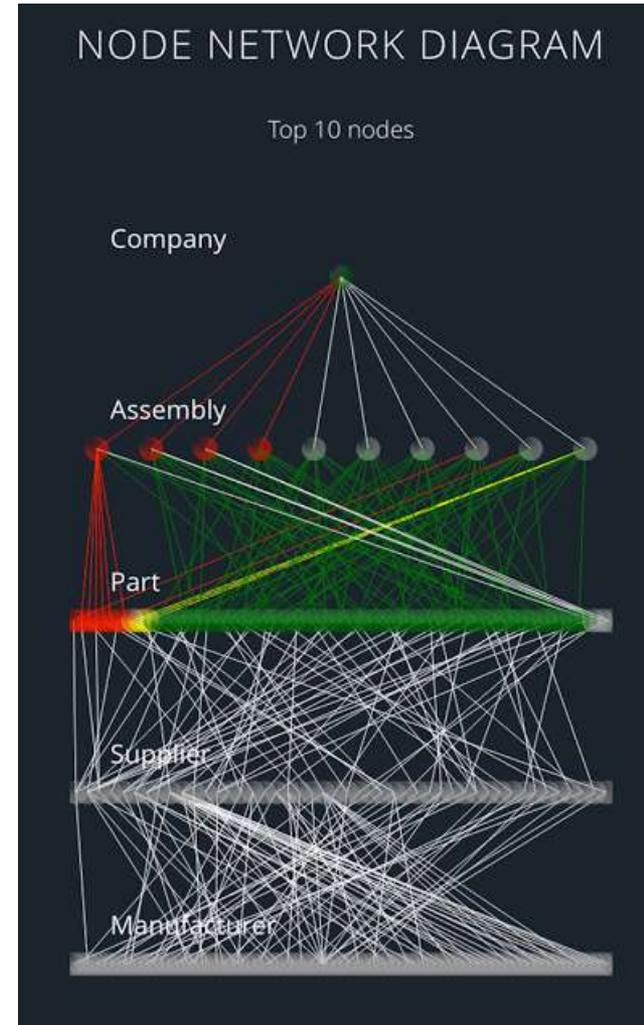
GS1 Standards & GS1-128



Jabil InControl



JABIL



Other kinds of technology

- Blockchain
- Product Information Management Systems (PIM)
- Electronic Data Interchange (EDI) and Advance Ship Notice (ASN)
- RFID tags
- Certification and compliance portals



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Questions?

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