Realizing the Returnable Value from Your Supply Chain Assets

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SUPPLY CHAINS ARE NOT RANDOM

But there are parts of it that are . . . .

KEY BUSINESS PAIN POINTS/BUSINESS CASES

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"
As a **QA Manager** I want to make sure…

that assets around the globe are compliant with all safety regulations . I also want actionable intelligence to foresee possible production delays due to upcoming maintenance and historical throughput at maintenance locations in order to take corrective actions.

"
As a **Plant Manager** I want to prevent…

potential risks and adverse impact on the bottom line of my organization due to suboptimal use of available high dollar assets or their insufficient maintenance.

"
As a **Production Planner** I want to improve….

manufacturing operations and reduce costs. I need to ensure, that I have all necessary packaging containers in the right place and at the right time in order to deliver the production orders on time and in the most efficient manner.

MULTIPLE IDENTIFICATION APPROACH TO DATA COLLECTION

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As new packaging technologies are introduced, solutions need to allow those new technologies to be quickly and cost effectively incorporated for use in the tracking and identification of products as they move through the supply chain.
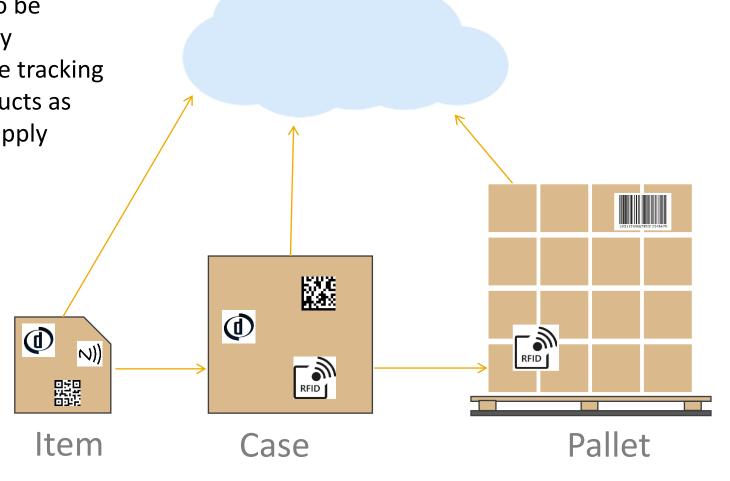
One comprehensive granular data set for use across the supply chain

- QR Code
- NFC
- Digimark
- RFID
- 2D Data Matrix
- 1D Barcode
- LE Bluetooth
- GPS

Item

Case

Pallet
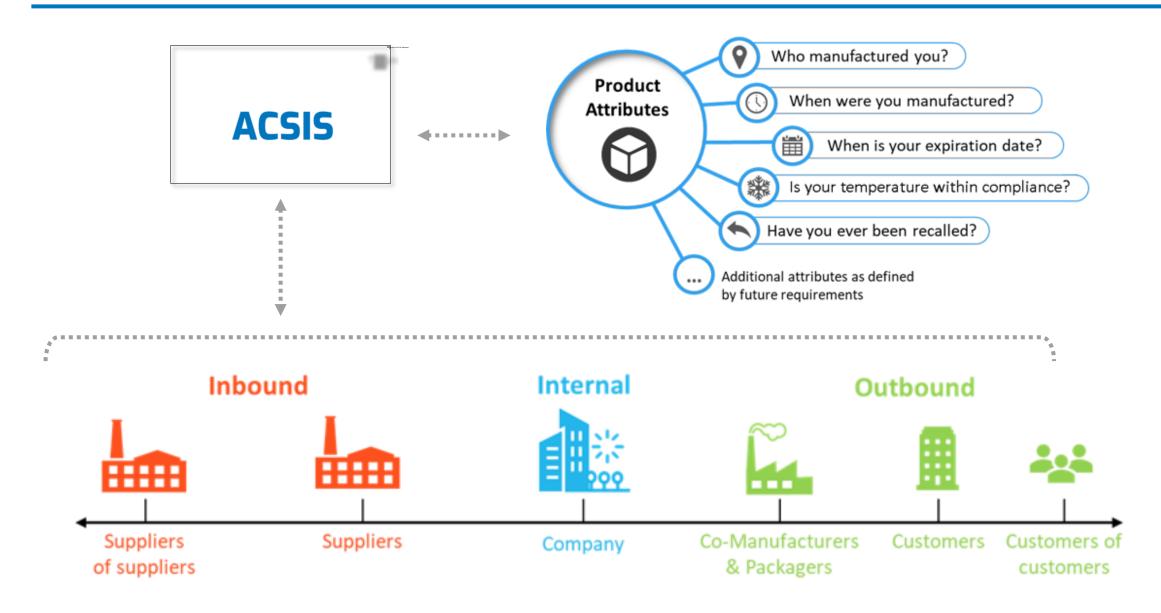
ADDING ATTRIBUTES AND CONTEXT DATA

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Product Attributes

- Who manufactured you?
- When were you manufactured?
- When is your expiration date?
- Is your temperature within compliance?
- Have you ever been recalled?
- ... Additional attributes as defined by future requirements

Inbound
Internal
Outbound

| Suppliers of suppliers | Suppliers | Company | Co-Manufacturers & Packagers | Customers | Customers of customers |

EXAMPLE OF CREATING INTELLIGENT ASSETS

ERP /Business Systems
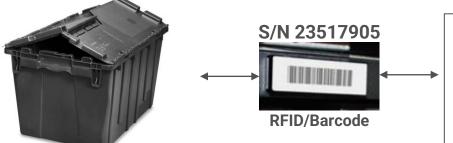
Real-time, bi-directional integration

ACSIS

Cloud Data Storage/Management

Delivery Totes

S/N 23517905

RFID/Barcode

S/N 2351790	
- Asset:	R/T Totes 19.8x13.8x11.8
- Color:	Black
- Scanned out DC:	04/03/2022 @ 11:50 pm
- Account #	39493844862
- Route/Truck Number:	13492
- Driver:	B. Jones
- SKU:	12345-67890
- Expiry:	04/06/2022
- Scanned in PC #25:	00/00/0000 @ nn:nn xx

S/N 39784475

RFID/Barcode

S/N 39784475	
- Asset:	R/T Totes 19.8x13.8x11.8
- Color	Black
- Scanned out DC:	04/01/2022 @ 3:30 am
- Account #	48293847712
- Route/Truck Number:	29376
- Driver:	S. Smith
- SKU:	12345-74639
- Expiry:	04/06/2022
- Scanned in PC #34:	04/06/2022 @ 10:13 am

REAL TIME ANALYTICS – CUSTOMER EXAMPLES

INTEGRATION WITH PRODUCTION & CAPACITY PLANNING

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- Easy-to-use dashboards with information about production vs. available or potentially available packaging capacity.

- **Planned for packaging**: components / assets are available at the location and at the time for production

- **Potentially available for packaging**: components / assets are available and unused at locations that are close enough to the production location so they can arrive on time for packaging.

- **Request Shipment Button**: user can request shipment of the potentially available components / assets.

- **Production Order Value ($) at risk for delay penalties**: provides information about the total dollar amount of the production at risk for delay due to missing packaging capacity.

PRODUCTION AND CAPACITY PLANNING

Overcapacity vs Undercapacity of Assets

Asset Availability For Packaging
- POTENTIALLY AVLBL F/ PCKG
- PLANNED FOR PACKAGING

Measure Unit
- ○ LB
- ◉ KG

Over vs Undercapacity
- ■ % of Locations w Overcapacity
- ■ % of Locations w Undercapacity

PRODUCTION AND CAPACITY PLANNING DETAILS

Day of Planned Date Of Packaging	Request Shipment	# of Assets	Capacity	Production Order Qty	Production Order Value at Risk for Delay Penal..	Over vs Undercapacity
March 16,		1	1,000	454	0	546
March 17,	Request Shipment	2	2,000	1,048	0	952
March 18,		1	1,000	972	0	28
	Request Shipment	2	2,000	2,000	0	0
March 19,		1	1,000	251	0	749
March 20,		2	2,000	5,330	146,891	-3,330
March 21,		1	1,000	5,869	161,738	-4,869
March 22,		0	0	8,624	237,650	-8,624
March 23,		0	0	14,196	391,199	-14,196
March 24,		0	0	33,160	913,811	-33,160
Grand Total		10	10,000	71,903	1,981,488	-61,903

BENEFITS OF A RETURNABLE ASSET MANAGEMENT SOLUTION

- Improved returnable asset management and control
- Lower capital costs due to reduction in the number of assets needed in the fleet
- Reduction in replacement of assets under management due to loss at customer sites
- Ability to spot bottlenecks in the supply chain
- Increased productivity through the real time location of assets
- Increased visibility of inventory information
- Reduction in expediting costs due to late / missed shipments
- Ability to provide enhanced monitoring for recall and other adverse supply chain events
- Improved compliance with emerging Environmental, Social, and Governance (ESG) Standards

CUSTOMER EXAMPLES

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> *"Compared to other vendors, ACSIS' unique, commercially off-the-shelf product has ability to track products outside the four walls of an operation and has full ERP Integration."*
>
> *-Supply Chain Executive*

Air Liquide

The Challenge

A *Global, Specialty Chemical Company* required a solution to track all of their canisters and cylinders across multiple global locations. They also needed to be able to track maintenance and inspection for all assets under management.

With no central tracking solutions in place this customer had a fragmented view and no way to:

- Manage inspection and maintenance tasks
- Streamline processes
- Manage deprecation
- Integrate the solution with production activities to track product across the supply chain

Solution

- One, central database that tracks every asset (ID#, unique location) across the enterprise
- Ability to track product through entire life cycle to comply with requirement
- Reporting, including full history
- Integrated predictive analytics for managing production and maintenance activities
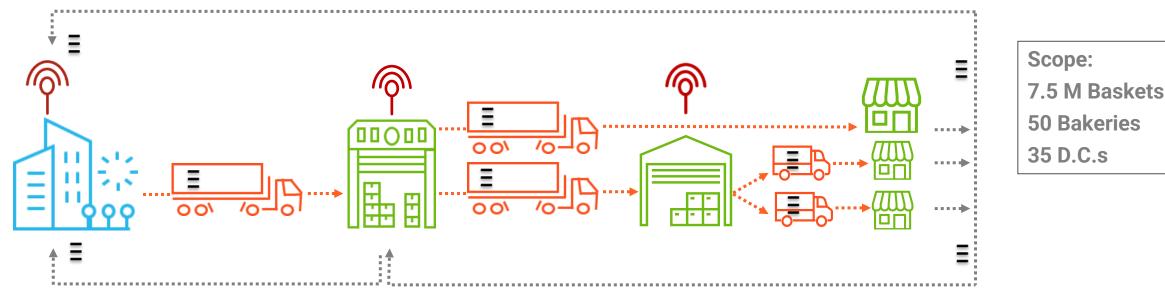
Solution Benefits

- Accurate Asset Inventories
- Improved Cycle Times
- Reduced Shrinkage
- Minimized Purchases of New Assets, Optimize Storage Space
- Exposed Supply Chain Inefficiencies can be addressed
- Improved Customer Service
- Integrated maintenance and inspection management
- Ensures that all of the RTI assets are maintained / inspected and available for use.

ROI

- 100% visibility of assets
- 20% decrease in assets needed to support current production levels
- Significant reduction in inspection and maintenance costs
- Significant reduction in rush shipments due to better RTI management

LARGE US BAKERY US CASE STUDY

Scope:
7.5 M Baskets
50 Bakeries
35 D.C.s

- Real time view of location and status of delivery baskets across the supply chain
- Initial ROI around eliminating loss of 30% of their baskets annually
- Associate product information to baskets as they are packed for shipment
- Track product through the supply chain at the basket level to provide high fidelity digital mapping of product flow through the supply chain
- Ensure compliance with FISMA including the new regulations for supply chain traceability