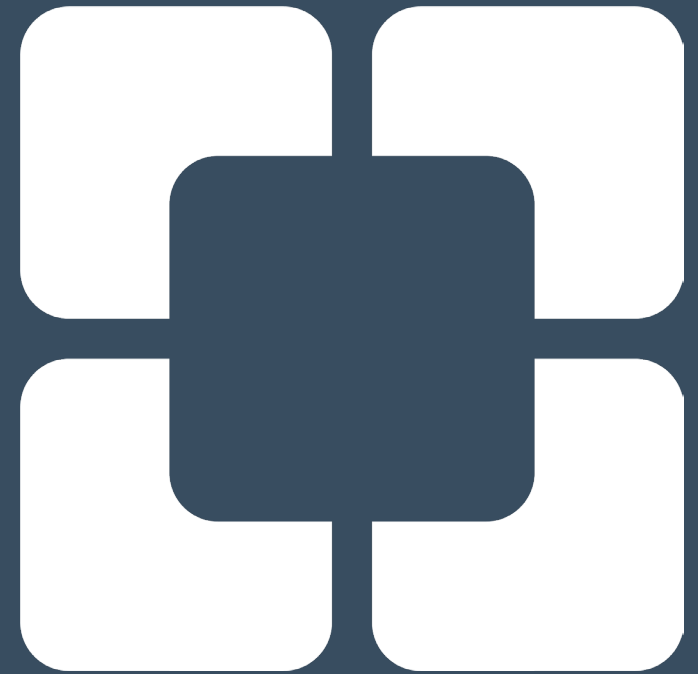


Building a Resilient Supply Chain

Steve Downey



Cleveland Clinic

By the Numbers – 2023



PATIENT CARE

3.5M unique patients worldwide	15.7M patient encounters worldwide	14.1M outpatient encounters	333K admissions & observations	320K surgeries & procedures	6.7K beds	280 outpatient locations
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CAREGIVERS

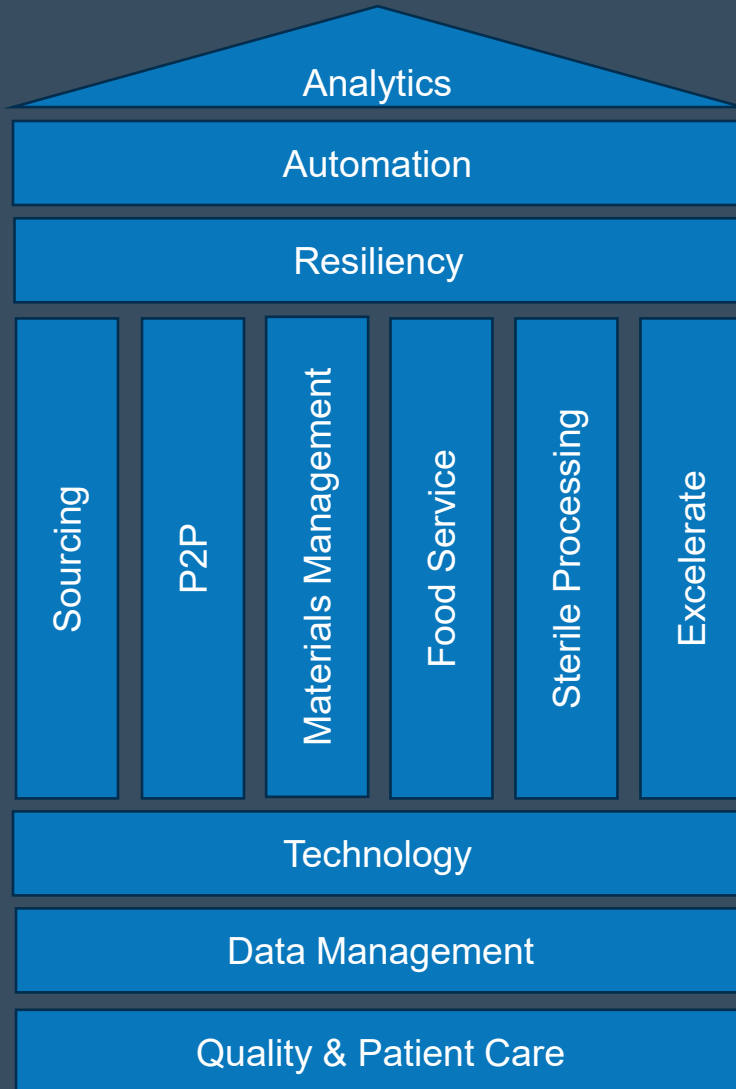
83K caregivers worldwide	5,786 physicians and scientists	16,845 nurses	2,369 residents & fellows	2
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Supply Chain & Support Services

Scale of Operations

\$5.2B SPEND OVERSIGHT		
1.3M Purchase Orders	>306K Database Items	5.7M PO Lines
>4.4K Inventory Locations	\$42M Consigned Inventory	>7K Contracts + Service Agreements
>1,600 Team Members	\$1.18B Capital Projection (2025)	10K Retail Customers/Day
28.5M Instruments Processed	15K Meals Served/Day	>28M Processed Linens (Lbs) ₃

Building a Digital Ecosystem

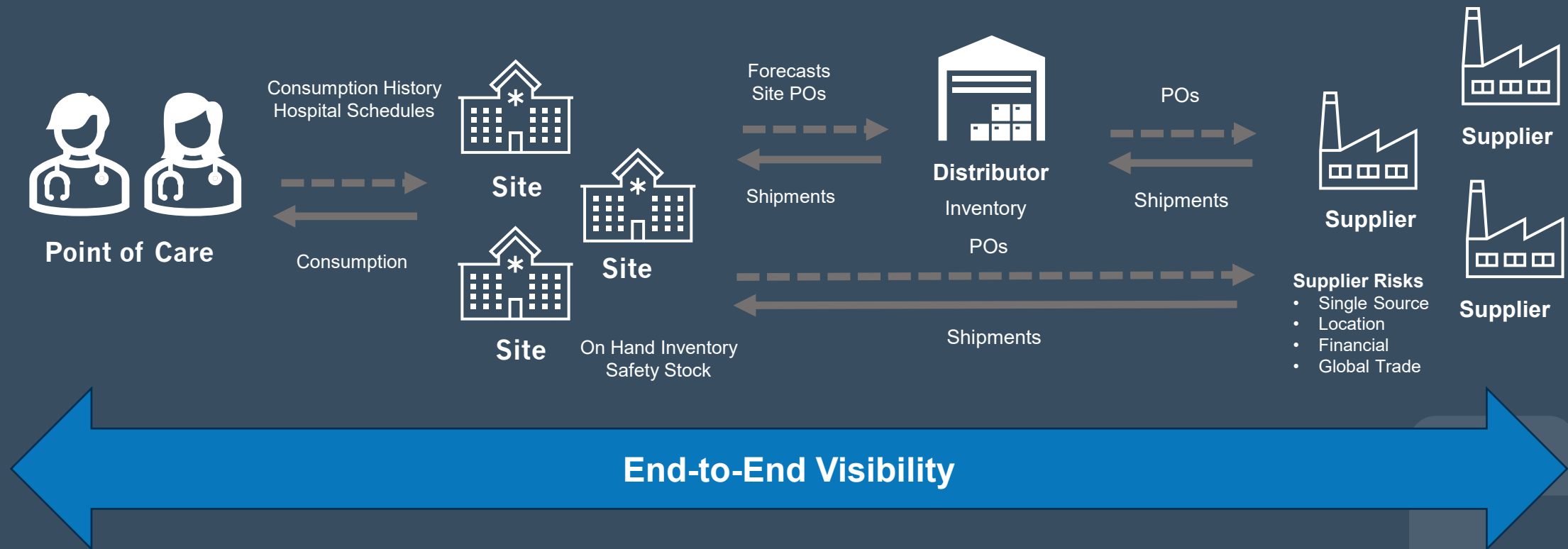


Vision:

Aligning **people**, **process** and **technology** to build a **resilient ecosystem** where information provides actionable insight to predict future trends, drive efficiency and reduce costs.

Visibility & Demand Planning

Next Step to Resiliency



Supply Chain Control Tower

Automated constraint management

Filters and Settings

Clear Filters

ON BACKORDER?

SELECT...

CONSTRAINT PRIORITY

☐ P1 Critical Priority 1

☐ P1 High Priority 1

☐ P2 Medium Priority 100

☐ P2 Low Priority 77

☐ P4 Very Low Priority 171,071

☐ P5 Special Order 20,302

Show More

ITEM NUMBER

Search...

KEYWORD

Keyword

ORDER NUMBER

Search...

SUPPLIER NAME

☐ Cardinal Health... 123,101

☐ Baxter Scientific... 4,004

☐ Stryker Sales LLC 4,344

Show More

SUPPLIER ID

Search...

MANUFACTURER NAME

☐ No value 22,761

☐ MEDLINE INDUST... 18,514

☐ P1... 1,114

Show More

Settings and Configuration

Supply Constraint Manager for Cleveland Clinic

Welcome back, Geoffrey!

Metrics View

Resolution Toolbox

Action Queue

Toggle to Table View

53,248 Open Alerts

List of open alerts requiring action

Order Number CCF2645053

Details

Constraint Priority P1 Critical Priority

Due Date Sep 5, 2025

Supplier Name Cardinal Health Med/Surg

Item Description CLIP MEDIUM CHEVRON HEART INTERNAL WECK HEMOCLIP TANTALUM LIGATE

Location Item ID MHNOOR155A_147801

Has Approved Sub No

Assigned User No value

More Details

Comments

Move to work in progress

Close Issue

Order Number CCF2650240

Details

Constraint Priority P1 High Priority

Due Date Sep 18, 2025

Supplier Name Cardinal Health Med/Surg

Item Description TUBE MALLINCKRODT LIP PRO 1.5MM WHITE PVC ENDOTRACHEAL CLIP TRANSLOCENT

Location Item ID WESHORG24_1000025

Has Approved Sub No

Assigned User No value

More Details

Comments

Move to work in progress

Close Issue

Order Number CCF2647408

Details

Showing 1 - 10 of 10,000 items

148,209 Closed Alerts

List of closed alerts

Order Number CCF2647382

Details

Constraint Priority P4 Very Low Priority

Due Date Sep 13, 2025

Supplier Name Cardinal Health Med/Surg

Item Description NEEDLE BD ECLIPSE BD PRECISION GLO 25GA BEVEL 1IN HYPODERMIC 1 HAND

Location Item ID 8372_266059

Has Approved Sub No

Assigned User No value

More Details

Comments

Move to work in progress

Move to Open

Order Number CCF2647888

Details

Constraint Priority P4 Very Low Priority

Due Date Sep 11, 2025

Supplier Name Cardinal Health Med/Surg

Item Description SET EXTENSION LUSIN INFUSION KIT

Location Item ID 96027_1438624

Has Approved Sub No

Assigned User No value

More Details

Comments

Move to work in progress

Move to Open

Order Number CCF26483343

Details

Constraint Priority P4 Very Low Priority

Showing 1 - 10 of 10,000 items

Resolution Toolbox

Close

Item Health Summary: 1437651 - CLIP MEDIUM CHEVRON HEART INTERNAL WECK HEMOCLIP TANTALUM LIGATE

PO Email Template

Update Status

Selected Location: MHNOOR155A - MHNO OR 1 SSA MART DN OR CORE DN054 MN1-305D

Across Network

Region FL Location Type Wavemark Quantity on Hand 0 Daily Usage 1.22 Days on Hand 0

Locations Blocking Item 0 Quantity on Hand 0 Daily Usage 2.18 Days on Hand 27.55

Assigned User No value

Last User Action Timestamp No value

Order Details

Backorder Quantity 3PK

Supplier Name Cardinal Health Med/Surg Supplier ID 13718 Facility ID MARTHLST

Order Date Sep 2, 2025 Order Line Number 13 Line Status Open Order Number CCF2645053

Received Quantity 0 Constrained Quantity 3PK Constrained Cost 10PK

Manufacturer Name TELEFLEX MEDICAL WECK Manufacturer Item ID 523100

Overview Substitute Items Inventory Transfer Open Orders Related Constraints

Email Vendor Manage Item

Locations with Inventory

Sort By

Region FL Location Type Pst Location Name MART DN OR CORE DN054 Location ID MART000007 On Hand Qty 20.00 Days On Hand No value Inventory St... Overback

Region FL Location Type Pst Location Name MART ON SURGI SUTURE DN078 Location ID MART000124 On Hand Qty 20.00 Days On Hand No value Inventory St... Overback

Region FL Location Type Wavemark Location Name MHNO SC 1 SSA MART DN SURGI SUTURE DN078 MHV1-141 Location ID MHNOSC153A On Hand Qty 5.00 Days On Hand 5 Inventory St... Overback

Item Transfer Confirmation

Item 1437651 - CLIP MEDIUM CHEVRON HEART INTERNAL WECK HEMOCLIP TANTALUM LIGATE

Transfer To Name MHNO OR 1 SSA MART DN OR CORE DN054 MN1-305D Transfer From Name MART DN OR CORE DN054

Transfer To ID MHNOOR155A Transfer From ID MART000007

Current State

TRANSFER TO: Quantity on Hand 0 Days on Hand 0

TRANSFER FROM: Quantity on Hand 20 Days on Hand

Project Post Transfer State

TRANSFER TO:

TRANSFER FROM:

Constraint Comments

No comments found

Loaded at 1:18:51 PM - Refresh

Use @ to add a reference

Send

Latest Alert Status Update

--

Supply Chain Control Tower

AI Driven Substitutes

Original Item Information

Item Description

SET POWERLOC 20GA 5ML/SEC 1IN INFUSION POWER INJECTABLE MAXIMUM FLOW RATE

Manufacturer Name

BECTON DICKINSON

Supplier Name

-

Lowest Unit of Measure

EA

Item ID

1431639

Manufacturer Item ID

0132010

Supplier Item ID

-

Unit Cost

\$5.49

Inventory on Hand

EA

Average Daily Usage

EA

Days on Hand

-

Locations with Inventory

6

Open Purchase Orders

2

Known Substitutes

Substitute Item Description	Substitute Item ID	Approval Status	Substitute Supplier Item ID	Substitute Supplier Name	Substitute Manufacturer Item ID	Substitute Manufacturer Name	Substitute Stock UOM	Requester	Request Justification	Additional Information	On Contract
NDL, GRIPPER PLUS, PWR INJECTABLE, 20G X 1IN, NEEDLELESS Y-SITE, 12/BX	1568990	Yes	21-3466-24	Cardinal Health ...	21-3466-24	ICU MEDICAL ...	EA				Yes

Update Request Justification

Action Toolbox

Propose a change to a substitute's status, suggest an item manually, or ask AIP to suggest substitutes for you.

Request Approval

Withdraw Approval

Reject Substitute (Hide)

Suggest a Substitute

AIP Recommendation

Close

[Org] Original Item Sub	Item id	Supplier Name	Supplier Item id	Manufacturer Name	Manufacturer Item id	Reasoning
KIT POWERLOC 20GA1 W/G...	1415311	Cardinal Health Med/Surg	2652010G	BARD ACCESS SYSTEMS INC	2652010G	This PowerLoc kit matches the 20G gauge and 1in length, includes Guardiva for added safety, and serves as a direct substitute for infusion needs in power injectable scenarios.
PowerLoc Port Access Kit 2...	2672010	No value	No value	C.R.Bard	2672010	This PowerLoc Port Access Kit matches the 20G gauge and 1in length exactly, includes a Y-site, and is designed for port access, providing comparable functionality for power injectable infusions.
SET POWERLOC 20GA 5ML...	1431613	No value	No value	BECTON DICKINSON	0132015	This is the closest match as it is the same PowerLoc infusion set with 20GA, 5ml/sec max flow rate, and power injectable features; the only difference is the length (1.5in instead of 1in), making it a suitable substitute for similar applications.

7

On-Time and In-Full

Creating a common definition

Definitions

Start = Order Placement
End = Proof of Delivery

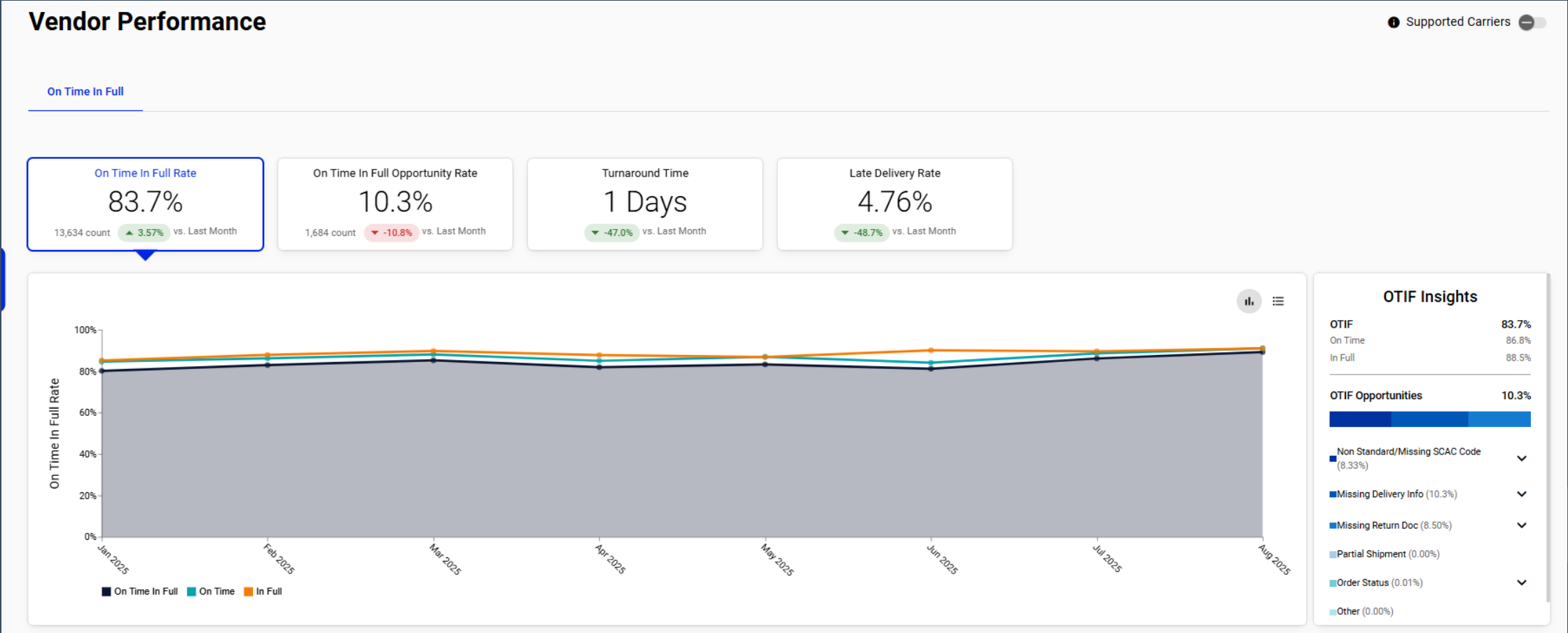
Calculation

On-Time = Line Received On-Time
(0% or 100%)
In-Full = Line Received In-Full
(0% or 100%)

$$\text{On-Time and In-Full} = \text{On-Time \%} \times \text{In-Full \%}$$

On-Time and In-Full

Creating a common platform



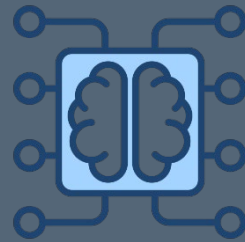
SCSS AI & Automation

Creating value, efficiency, and accuracy for our teams



RPA

- Contract Workspace Creation
- Product Conversions
- Rejection Communication
- Item / Contract Updates
- Payment Request Compliance
- pCard Termination



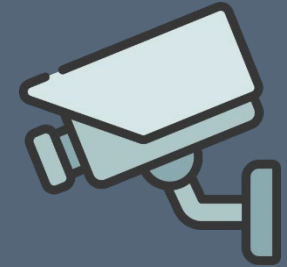
AI | ML

- Contract Summary
- RFx Assistance
- Questionnaire Assistance
- Video Training Assistance
- Purchasing E-mail Data
- Contract Risk / Clause Comparison



Predictive Analytics

- Constraint Management / Disruption Monitoring
- Tariff Analysis / Country of Origin Risk
- MFN Notification
- Advanced Inventory Management



Clinical

- Bill Only / Loaner Tray Validation
- Procedure Card Variation / Scorecards

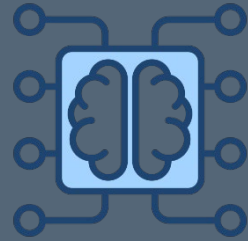
Next Generation AI Integration

Focus on Workforce Optimization & Operational Efficiency



RPA

- Item Builds
- Order Acknowledgements
- Late PO Confirmations
- Contract Data Reconciliation
- Instrument Data Updates



AI | ML

- Contract Builds
- Category Intelligence
- Intake
- Contract Builds
- Menu Suggestion / Allergy Monitoring
- Supplier Improvement Plans



Predictive Analytics

- Delayed Shipment Impact
- Contract Analysis
- Rebate Analysis
- Non-Procedural Utilization



Clinical

- Bio-burden Review
- Implant Logic
- Procedure Card Conversions
- Tray Assembly

Questions

