

Demand Planning Roadmap

*Competencies And
Characteristics Required For A
Highly Resilient Supply Chain*

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Contributor Recognition

Thank you to the Demand Planning Workgroup who contributed their time and expertise to develop this resource. Workgroups provide opportunities for supply chain executives from across the industry – from manufacturers to distributors to IDNs to GPOs – to network with partners while also delivering guidance on industry pain points that drive resources and initiatives. The companies that have contributed to this effort include:

- B. Braun Medical
- Baptist Health South Florida
- Charleston Area Medical Center
- Cardinal Health
- Claflin Company
- Dartmouth-Hitchcock Medical Center
- Geisinger Health System
- Johnson & Johnson Health Care Systems
- Mayo Clinic
- Owens & Minor
- Roche Diagnostics
- Ron Denton & Associates
- Stryker
- TIDI Products
- University of Vermont Health Network
- Vizient
- VueMed

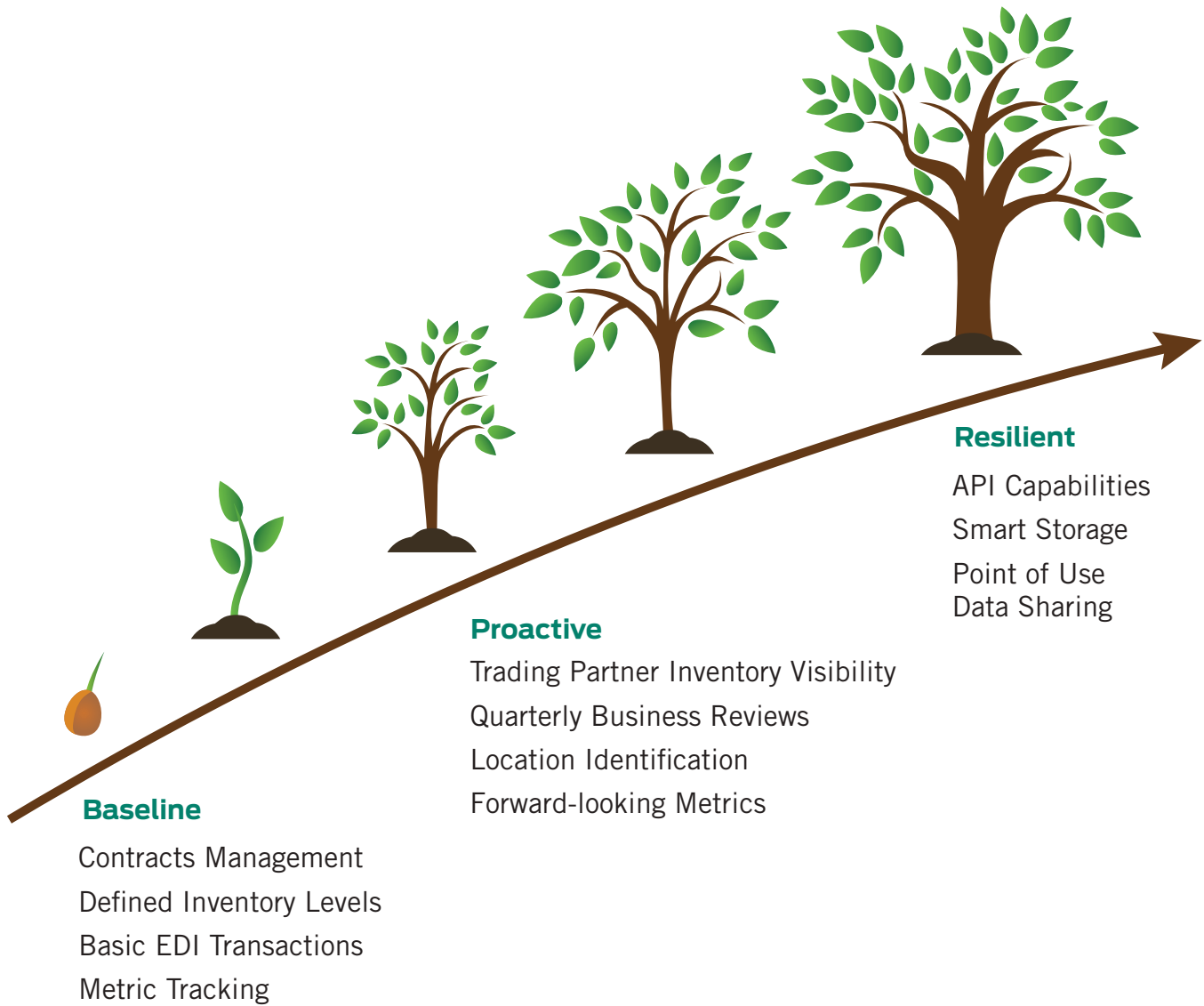
Introduction

Successful supply chain organizations rely on a mature and proven demand planning process to enable them to quickly respond to sudden changes, especially in today's highly dynamic environment.

Leaders from a cross-section of industry companies participating on the Demand Planning Workgroup came together to identify the practices that characterize organizations that have an effective demand planning process. The result is this resource, which lists 47 key characteristics across four categories: General Standards, Processes, Systems, and Tracked Metrics.

This roadmap provides guidance to supply chain organizations for their strategic planning. The full list of characteristics and their value statements detailed in this document are applicable to all segments – manufacturers, distributors, and providers. Any chain is only as strong as its weakest link, and as the industry adopts these standards resiliency across the entire supply chain is increased.

Demand Planning Roadmap



Benefits Of Mature Model

- Quickly respond to sudden demand shifts
- Build a foundation of characteristics integral to top performers
- Emphasize standards, systems, and metrics

Demand Planning Roadmap

Categories And Key Characteristics

	Baseline	Proactive	Resilient
General Standards	<ul style="list-style-type: none"> • Key sales/spend are under contract • Trading partners comply with contractual obligations • Safety stock is well-defined • Safety stock is maintained 	<ul style="list-style-type: none"> • Downstream inventory visibility • Upstream inventory visibility • Scheduled procedure information sharing 	<ul style="list-style-type: none"> • Point of use data sharing (including electronic health record) • Patient scheduling information sharing • Diagnostic equipment data sharing
Processes	<ul style="list-style-type: none"> • Combination of barcodes and/or RFID used in supply inventory management • S&OP process exists • Purchase order data is shared with supplier via EDI 850 • Purchase order receipt confirmation is provided to customer via EDI 855 • Advanced ship notice is shared with customer via EDI 856 	<ul style="list-style-type: none"> • Key manufacturers and key accounts hold quarterly business reviews • Prime vendor and provider hold regular business reviews • GLNs are used to identify locations • Performs short-term, mid-term, and long-term forecast • Return to market date provided 	<ul style="list-style-type: none"> • Inventory level data is shared with customer via EDI 846 • Inventory level data is shared with supplier via EDI 852
Systems	<ul style="list-style-type: none"> • Barcode-capable • EDI is e-Fax or similar if not true EDI • EDI is submitted via CSV/.xlsx if not true EDI • EDI is true EDI • Electronic requisitioning • EDI 850 capable (purchase order) • EDI 855 capable (purchase order receipt confirmation) • EDI 856 capable (advanced ship notice) 	<ul style="list-style-type: none"> • EDI-capable with common carriers • EDI 846 capable (inventory level to customer) • EDI 852 capable (inventory level to supplier) 	<ul style="list-style-type: none"> • API-capable • RFID-capable • Smart shelves/cabinets
Tracked Metrics	<ul style="list-style-type: none"> • Days inventory on hand • Fill rate • Shipping accuracy • Shipping damage • Shipping received on time 	<ul style="list-style-type: none"> • Average number of shipments per order • Issue resolution • Lead time variance • Return to market date accuracy • Stock transfer notification 	<ul style="list-style-type: none"> • Forecast accuracy and bias trend

Categories And Key Characteristics

Term Definitions

General Standards

1. Diagnostic equipment data sharing

Maturity Level: Resilient

Value/Purpose: Able to perform predictive analytics based on geographic disease hot spots

2. Downstream inventory visibility

Maturity Level: Proactive

Value/Purpose: Understand sudden demand spike risk

3. Key sales/spend are under contract

Maturity Level: Baseline

Value/Purpose: Supports S&OP process

4. Patient scheduling information sharing

Maturity Level: Resilient

Value/Purpose: Allows suppliers to estimate demand based by combining actual schedule with historic usage

5. Point of use data sharing (including electronic health record)

Maturity Level: Resilient

Value/Purpose: Improved understanding of which supplies are being used at the point of consumption

6. Safety stock is maintained

Maturity Level: Baseline

Value/Purpose: Ensures key items are adequately stocked in case of a disruption event

7. Safety stock is well-defined

Maturity Level: Baseline

Value/Purpose: Defines key items are adequately stocked in case of a disruption event

8. Scheduled procedure information sharing

Maturity Level: Proactive

Value/Purpose: Improved forecasting by knowing upcoming procedures

9. Trading partners comply with contractual obligations

Maturity Level: Baseline

Value/Purpose: Lower variance on predicted consumption over a contract period

10. Upstream inventory visibility

Maturity Level: Proactive

Value/Purpose: Understand supply risks

Processes

1. Combination of barcodes and RFID used in inventory management

Maturity Level: Baseline

Value/Purpose: Automated inventory counts minimize errors and improve speed

2. GLNs are used to identify locations

Maturity Level: Proactive

Value/Purpose: Enumerating locations based on a common nomenclature improves shipping and pricing accuracy

3. Inventory level data is shared with customer via EDI 846

Maturity Level: Resilient

Value/Purpose: Provides data on upstream inventory levels so to help measure stockout risk

4. Inventory level data is shared with supplier via EDI 852

Maturity Level: Resilient

Value/Purpose: Provides data on downstream inventory levels so to measure sudden demand spike risk

5. Key manufacturers and key accounts hold quarterly business reviews

Maturity Level: Proactive

Value/Purpose: Scheduled recurring conversation fosters collaboration between key trading partners

6. Performs short-term, mid-term, and long-term forecast

Maturity Level: Proactive

Value/Purpose: Understand long-term product needs

7. Prime vendor and provider hold regular business reviews

Maturity Level: Proactive

Value/Purpose: Scheduled recurring conversation fosters collaboration between key trading partners

8. Purchase order data is shared with supplier via EDI 850

Maturity Level: Baseline

Value/Purpose: Provides in-the-moment product order needs

9. Purchase order receipt confirmation is provided to customer via EDI 855

Maturity Level: Baseline

Value/Purpose: Confirms that order has been received by supplier

10. Return to market date provided

Maturity Level: Proactive

Value/Purpose: Downstream trading partners know when to expect for a product to become available

11. S&OP process exists

Maturity Level: Baseline

Value/Purpose: Aligns projected sales/consumption to supply needs

12. Sends EDI 856 data (advanced ship notice)

Maturity Level: Baseline

Value/Purpose: Provides shipping date information so to allow downstream partner to plan for incoming inventory

Systems

1. API-capable

Maturity Level: Resilient

Value/Purpose: Real-time data sharing (including inventory levels) between trading partners

2. Barcode-capable

Maturity Level: Baseline

Value/Purpose: Ensure product accuracy when performing inventory counts; improves consumption tracking in EMR

3. EDI 850 capable (purchase order)

Maturity Level: Baseline

Value/Purpose: Automated process to communicate order needs ensures communication takes place and hedges against inaccuracy

4. EDI 852 capable (inventory level to supplier)

Maturity Level: Proactive

Value/Purpose: Automated process to communicate downstream inventory levels ensures communication takes place and hedges against inaccuracy

5. EDI 855 capable (purchase order receipt confirmation)

Maturity Level: Baseline

Value/Purpose: Automated process to communicate receipt of order ensures communication takes place and hedges against inaccuracy

6. EDI 856 capable (advanced ship notice)

Maturity Level: Baseline

Value/Purpose: Automated process to communicate shipping date ensures communication takes place and hedges against inaccuracy

7. EDI-capable with common carriers

Maturity Level: Proactive

Value/Purpose: Automated process to communicate transit tracking data takes place and hedges against inaccuracy

8. EDI is e-Fax or similar if not true EDI

Maturity Level: Baseline

Value/Purpose: Automated process that is a scheduled communication

9. EDI is submitted via CSV/xlsx if not true EDI

Maturity Level: Baseline

Value/Purpose: Process that is a scheduled communication

10. EDI is true EDI

Maturity Level: Baseline

Value/Purpose: Automated process ensures scheduled communications hedged against inaccuracy

11. Electronic requisitioning

Maturity Level: Baseline

Value/Purpose: User sees product before it is requested; auto-requisitions generated from pre-determined inventory reorder points

12. RFID-capable

Maturity Level: Resilient

Value/Purpose: Real-time inventory level tracking

13. Smart shelves/cabinets

Maturity Level: Resilient

Value/Purpose: Real-time inventory level tracking

Tracked Metrics

1. Average number of shipments per order

Maturity Level: Proactive

Value/Purpose: Trading partners understand how many shipments are typically required to fill an order

2. Days inventory on hand

Maturity Level: Baseline

Value/Purpose: Trading partners understand the amount of inventory in the supply chain relative to typical consumption

3. Fill rate

Maturity Level: Baseline

Value/Purpose: Trading partners understand patterns in ability to fulfil orders

4. Forecast accuracy and bias trend

Maturity Level: Resilient

Value/Purpose: Trading partners can track where potential flows in forecasting methodology exist

5. Issue resolution

Maturity Level: Proactive

Value/Purpose: Trading partners know which channels resolve service issues

6. Lead time variance

Maturity Level: Proactive

Value/Purpose: Trading partners understand the amount of variance when ordering specific products or via specific channels

7. Return to market date accuracy

Maturity Level: Proactive

Value/Purpose: Trading partners understand where gaps in accuracy exist

8. Shipping accuracy

Maturity Level: Baseline

Value/Purpose: Trading partners understand gaps in accuracy of orders

9. Shipping damage

Maturity Level: Baseline

Value/Purpose: Trading partners understand which products or channels have the greatest risk of products being damaged in transit

10. Shipping received on time

Maturity Level: Baseline

Value/Purpose: Trading partners understand patterns in which products or specific channels do and do not deliver on time

11. Stock transfer notification

Maturity Level: Proactive

Value/Purpose: Trading partners know when upstream inventory is moved between warehouses

HIDA And SMI Join Efforts To Ensure Business Continuity And Supply Chain Visibility

The Health Industry Distributors Association (HIDA) and Strategic Marketplace Initiative (SMI) are combining their efforts to address backorder and shortage issues throughout the healthcare supply chain. The team is committed to creating policies and practices to increase supply chain visibility, improve product availability, and ensure continuity of patient care.

Mismatched supply and demand creates unnecessary costs for the supply chain and can threaten patient care. This joint effort accelerates progress in addressing supply chain inefficiencies. Resources developed through this joint effort are made available to the industry regardless of membership status in either organization.

The initiative's focus areas include:

- Education to help healthcare organizations improve demand planning and supply chain operations
- Backorder management protocols and tools, including allocation practices
- Crisis management playbooks for suppliers and providers in the supply chain

About HIDA

The Health Industry Distributors Association (HIDA) represents the country's medical product distributors – the nation's essential link between manufacturers and patient caregivers. HIDA members offer critical services increasing the efficiency of U.S. healthcare providers, including hospitals, nursing homes, laboratories, home care, and physician practices. HIDA formed the Healthcare Supply Chain Collaborative to advance best practices for processes and data. The Collaborative includes leaders from across the end-to-end supply chain including manufacturers, distributors, providers, and GPOs. For more information, visit HIDA.org.

About SMI

The Strategic Marketplace Initiative (SMI) is a non-profit, member-driven organization dedicated to improving the supply chain through direct information exchange and collaboration between senior healthcare supply chain executives and senior IDN supply chain executives. SMI members include healthcare providers, manufacturers, medical distributors, and other healthcare supply chain businesses. The members of SMI have created over 30 tools and resources, available free of charge, designed to help industry professionals address real supply chain challenges. For more information about SMI, including a complete list of members, visit smisupplychain.com.

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