

# Enhancing Customer Service and Business Growth by Integrating Manufacturing & Logistics Operations and Digitally Orchestrating Logistics Networks

**tracelink**<sup>®</sup>  
NETWORK FOR GREATER GOOD

## Leveraging a Digital Network Platform for Customer Service and Business Growth

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# Is This Your Company?

## Vision

To empower businesses with an **end-to-end digital** ecosystem, leveraging **intelligent AI** and **digital twin** capabilities to **orchestrate** truly **adaptive** and **resilient** supply chains. We strive to deliver **transformative** solutions that foster **aligned collaboration**, providing unprecedented **visibility** and **control tower** functionality to **accelerate efficiency**, drive **innovation**, and **future-proof** operations, ultimately achieving supply chain **excellence** through seamless **digitalization**.

## Slogan

**Innovate** with **Intelligence**, Achieve **Resiliency**, Deliver **Excellence**:  
Your **Digital** Transformation **Accelerated**.

# The Next Industrial Revolution Will Be Orchestrated and Agentic

**Agentic** is the ability to perceive what's happening, reason about it, and take action within guardrails as experts in your supply chain.

**Orchestrations** are the information and process foundation for you and your partners and systems to coordinate and collaborate across the entire supply chain in real-time



# TraceLink **Already Digitalizes End-to-End** for Global Track-and-Trace

- 291K+** Total Network Members
- 51** Countries with Customers
- 30+** System Integrations (LMS, ERP, WMS)
- 339K+** Active Network Links
- \$4.4B+** Customer Savings on Point-to-Point Integration Costs



**Distribution & Logistics**  
60+ Customers | 870+ Partners



**Life Sciences Manufacturing**  
775+ Customers | 1,816+ Partners



**Contract Manufacturers & Packagers**  
150+ Customers | 850+ Partners

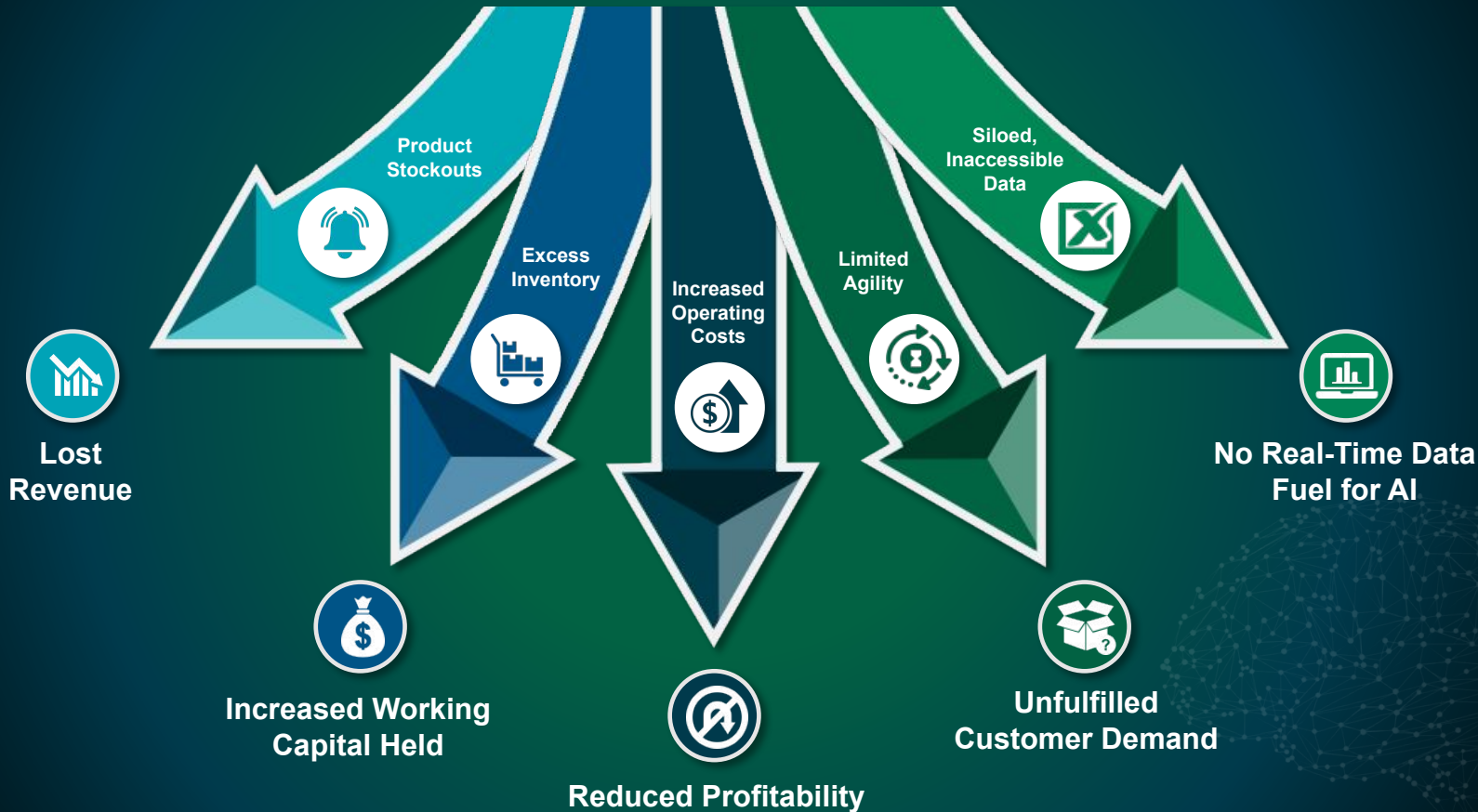


**Healthcare & Pharmacy**  
300+ Customers | 249K+ Partners



**Direct Materials Suppliers**  
1,650+ Partners

# Siloed, Unsynchronized Data Reduces Revenue & Profitability



# Information and Process Fragmentation Create Blind Spots, Friction, and Delay



**TraceLink integrates every partner, system, and process into one intelligent network.**

# TraceLink's Proven B2N Integrate-Once™ Model is a Breakthrough

tracelink.



PO IDoc → PO Canonical

PO Canonical ←→ X12 PO

ASN IDoc → ASN Canonical

ASN Canonical ←→ X12 ASN

Serialized Shipment EPCIS → Serialized Shipment Canonical

Serialized Shipment Canonical ←→ Serialized Shipment CSV



## Digital Twin

TraceLink enables a digital representation for every entity, site, and product, delivering clean, real-time supply chain



## Integrate-Once™

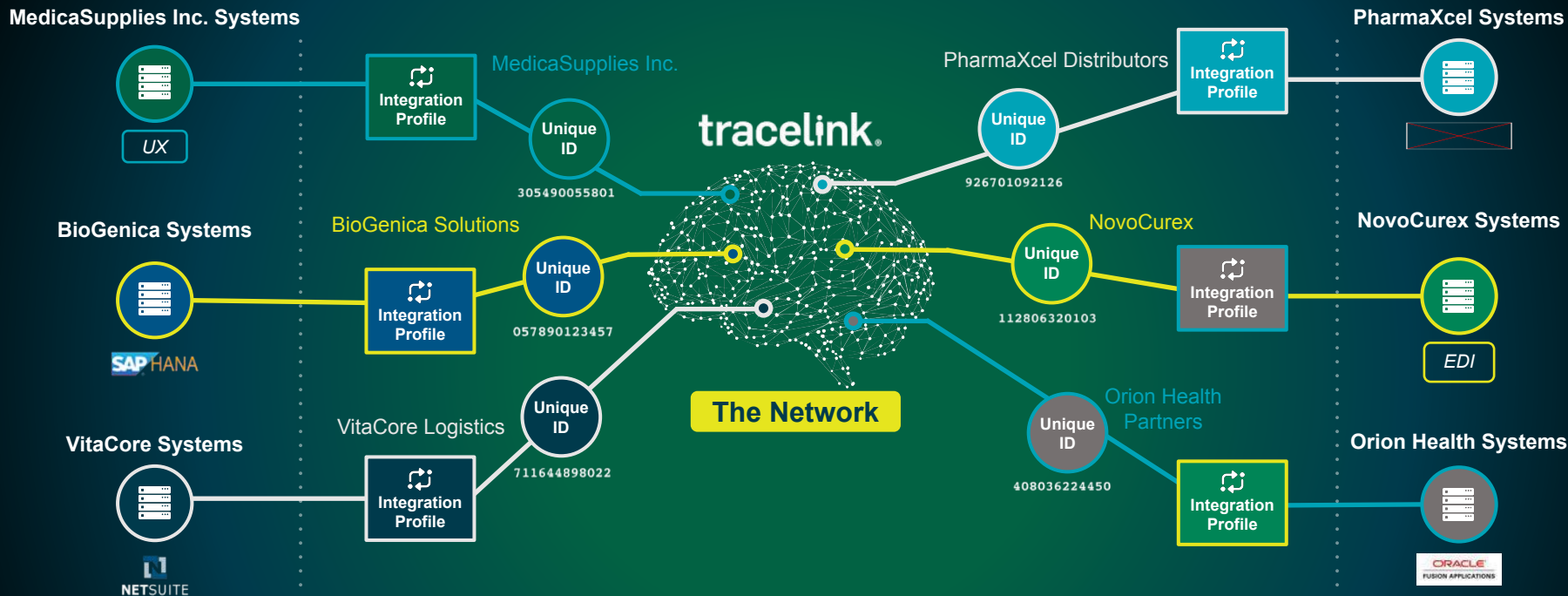
The only solution that integrates a company to all trading partners for all transactions through a single link



## Interoperate-with-Everyone

All trading partners can easily link to the network, choosing their own preferred integration method and formats

# TraceLink B2N Integrate-Once™ Scales Seamlessly As You Grow



## Multi-Modal Integration

Companies communicate effortlessly with all network partners regardless of integration method (B2B, API, UI, Email)



## Network Success

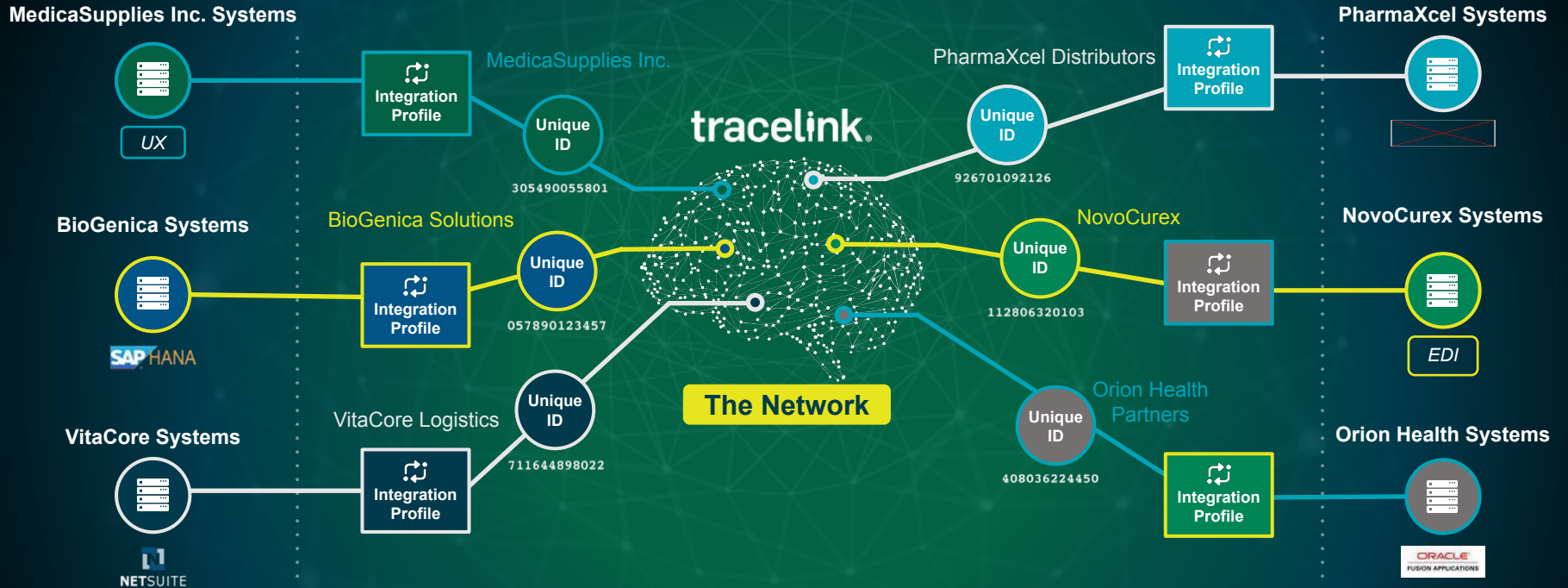
Dedicated team manages your digital twin including partner onboarding, integration, and maintenance



## Independent Maintenance

The network remains operational and adaptable, insulated from trading partner changes, ensuring sustainable growth

# TraceLink B2N Integrate-Once™ is the Foundation for Digitalization



## No-Code Linking

Modern no-code tools simplify integration configuration and speed connectivity across diverse trade partner networks



## Collective Network Growth

Each customer contributes to expanding the network, creating exponential value



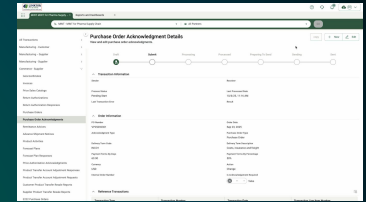
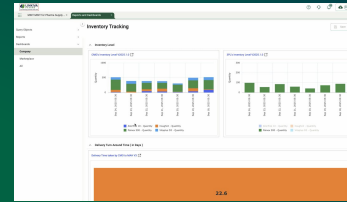
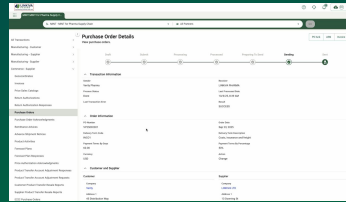
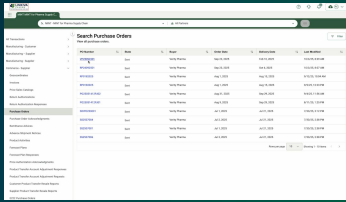
## Massive Scale

Over 290,000 companies, 1,750 customers, and 330,000 active links exchanging terabytes of data annually.

# MINT Supports All Transactions, Systems, Formats and UX



UI



Format

EDI

ANSI

X12

EDIFACT

IDoc

EPCIS

XML

CSV

API



System Integrations



Transactions

- Forecast Planning Schedule
- Forecast Planning Schedule Response
- Planned Order
- Process Order
- Order Status Inquiry
- Materials Issued/ Consumed/ Produced
- Batch Master/Batch Closure
- Master Data
- Inventory Balance Report
- Inventory Adjustment
- Inventory Update/ Confirmation
- Purchase Order
- PO Acknowledgement
- Advance Ship Notice
- Invoice

- Warehouse Stock Transfer Shipment Advice/Receipt Advice
- Warehouse Ship Order
- Warehouse Shipping Advice
- Handling and Movement Instructions
- Inventory Adjustment
- Inventory Balance Report
- Inventory Update/ Confirmation/ Request
- Article Master
- Credit/Debit Adjustment
- Remittance
- Return Authorization
- Receiving Advice/ Acceptance
- Product Activity

- Price/Sales Catalog
- Price Authorization/ Acknowledgement
- Purchase Order
- PO Acknowledgement
- Advance Ship Notice
- Invoice
- Remittance
- Return Authorization
- Product Transfer Account Adjustment
- Credit/Debit Adjustment
- Forecast Planning Schedule/Response
- Schedule
- Product Activity

- Carrier Shipment Status
- Routing and Carrier Information
- Ocean Shipment Status
- Motor Freight Invoice
- Advance Ship Notice
- Warehouse Ship Order/ Shipment Advice
- Warehouse Stock Transfer Shipment Advice/Receipt Advice
- Warehouse Shipping Advice
- Receiving Advice
- Receiving Advice Acceptance
- Inventory Update Confirmation
- Return Authorization



Orchestration

**Manufacturing Orchestration**

- Serialised Shipments
- FDA Recalls
- Price/Sales Catalog
- Forecasting
- Product Activity

**Logistics Orchestration**

**Commerce Orchestration**

**Transportation Orchestration**

# **Aurobindo Pharma** provides high-quality generics, APIs & biosimilars to enhance global healthcare.



The **No.1 Generic Drug Distribution Company in the United States**. Aurolistics is the Logistics / Serialization COE arm for AP USA.

**Mission:** To become the most valued pharma partner to the world pharma fraternity by continuously researching, developing, and manufacturing a wide range of pharmaceutical products that comply with the highest regulatory standards.



## MAH Enables Visibility From Planning to Distribution with E2E Digitalization

An India-based pharmaceutical manufacturer with a presence in 150+ countries selected TraceLink MINT to unify shipment tracking across multiple road, air, sea, and rail freight service companies into a single system of record—reducing errors and enhancing forecasting and production planning.

### Company Type

- MAH / Brand Owner

### Company Scope

- Generics and Branded Pharma Manufacturer
- 20,000+ FTEs
- ~\$2B+ Revenue
- Operates in 150+ Countries

### Key Sponsors

- Chief Executive Officer
- Chief Information Officer
- Vice President, Distribution

### Target KPIs for Engagement

**95%+**

OTIF Rate to Customers

**100%**

Product Shipment Visibility

**50%**

Fewer Manual Adjustments

## Customer Business Challenges

- Lack of order visibility causes failure-to-supply penalties in excess of \$50M annually
- Delayed container pickup at ports result in additional fines of \$1,500+ per container
- Higher-than-average inventory carrying costs constrain working capital and limit growth

## Partners Orchestrated



## Key MINT Transactions

- PO / PO Ack / ASN / Invoice
- Forecast Plan / Status Reporting / Booking Coordination
- Port Arrival / Customs Release / Port Pick Up
- Carrier Tracking

## Processes Digitalized

- In-Transit Visibility & Status
- Financial Settlement

## The Solution

- End-to-end multienterprise digital platform enables real-time product visibility
- A single system of record unifies operational functions across nine transportation nodes
- Eliminating manual data entry reduces data errors and exception management

# Project Scope - Transactions

The below transactions in scope have been mapped and blueprinted against Aurobindo product movement flows between partners from manufacturing facility in India to Aurobindo US distribution location and outbound from US distribution to US customers

- Forecast (830)
- Purchase Order (850)
- Purchase Order Ack (855)
- Order Status Report (870)
- Receiving Advice/Acceptance Cert (861)
- Routing & Carrier Instruction (853)
- Transportation Carrier Shipment Message (214)
- Status Details – Ocean (315)
- Arrival Notice – Ocean (312)
- Motor Carrier Load Tender (204)
- Response to Load Tender (990)
- Motor Bill of Lading (211)
- Freight Invoice (210)
- Air Shipment Information (104)
- Air Shipment Status Message (114)

# OPUS Enables **Agentic Orchestration** via Partner, Process, & Product Digitalization



## Agentic Orchestration – Amadeus

*AI Agents for Creating Purchase Orders, Accepting Sales Orders, Optimizing Inventory, Managing Recalled Products, and much, much more...*

### Partner Orchestration – MINT

*Procure-to-Pay, Order-to-Cash, CMO Production Tracking, 3PL Inventory Visibility, Forecast Collaboration, Financial Reconciliation*

### Process Orchestration – POET

*Compliance Exceptions, Supplier Onboarding, New Product Launch, Change Request, Artwork & Label Management, Tech Transfer*

### Product Orchestration – Track & Trace

*Track-and-Trace, Serialization, Country Compliance, Product Recalls, Serialized Inventory Management*

## OPUS – The Orchestration Platform for Universal Solutions

### OPUS Solution Environment

*No-Code Solution Design & Open Ecosystem for Solution Partners & Technology Partners*

### OPUS Reports & Dashboards

*No-Code Reporting and Dashboarding for Business Users*

### Metadata Manager

*Rich Metadata Definition of All Objects and Operations*

### Shared Catalog

*Transforms, Link Actions, & Solutions*

### Network Administration

*Company, Master Data, & Network Administration*

### B2B Transaction Processor

*B2N Integrate-Once™ for Interoperable Information Exchange*

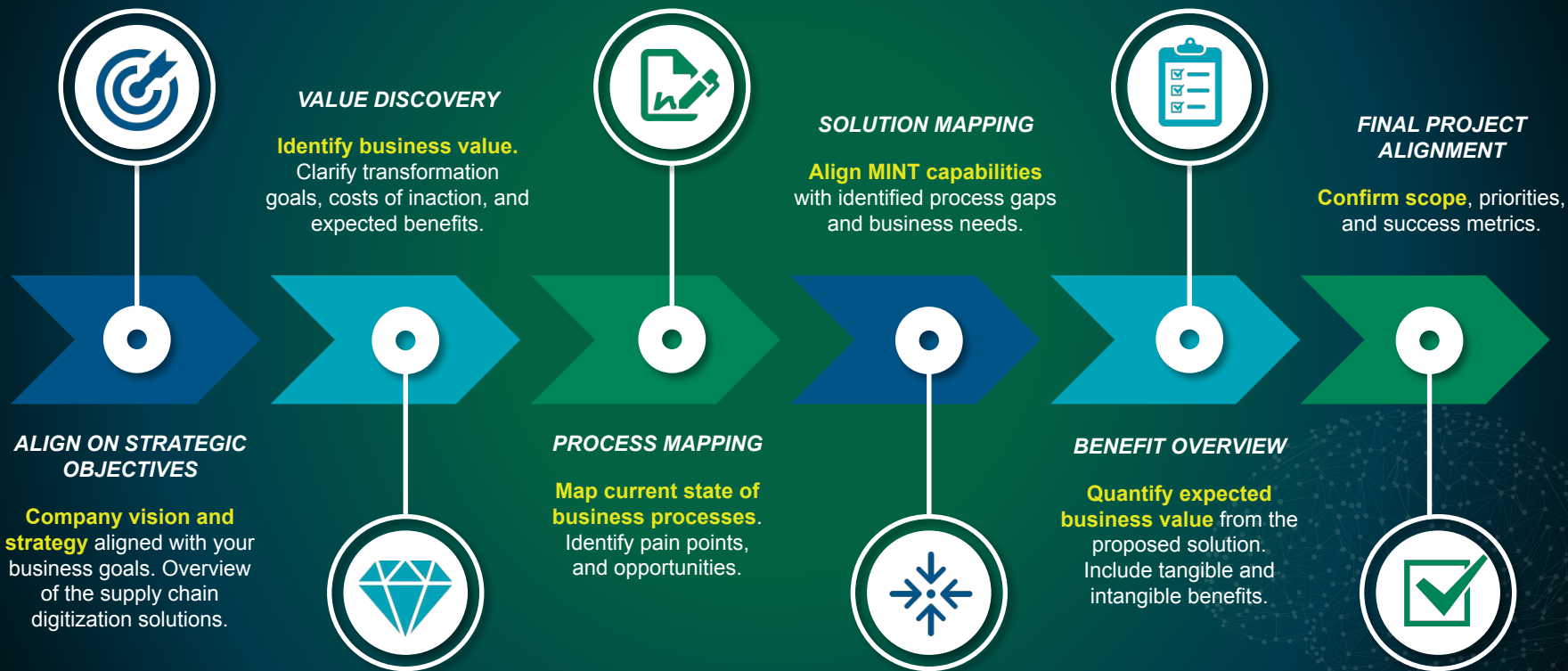
### eXtensible TraceLink Transfer

*API, AS2, FTP, Email*

## TraceLink Digital Supply Chain Network



# Engagement Roadmap - Proposed Engagement Framework



# Value is the Cornerstone of Our Methodology

*Structured approach to support decision making process*

## *Transformational Case for Change*



- Strategic vision of the company
- Alignment on current scenario & negative consequences
- Alignment on future state & positive business outcomes

## *Analysis of Current Processes*



- Process interviews to document as-is state
- Digital maturity assessment
- Business KPI Benchmarking
- Identify process gaps
- Collect relevant data

## *Benefit and Value Summary*



- Consolidated findings in a report
- Qualitative and quantitative implications of transformation
- Outline of strategic value

# Example Deliverables

Structured approach to support decision making process



## Our Understanding of Your Strategy

Strategy and Vision/Growth	Digital Transformation and Supply Chain Digitalization
<ul style="list-style-type: none"> <li>Digitalize E2E Supply Chain Network and current processes</li> <li>Preparing Phase III and GTM by handling 5x volume</li> </ul>	<ul style="list-style-type: none"> <li>Digitized supply chain with real-time visibility to absorb volume growth during phase III and anticipate high growth during phase IV operators.</li> </ul>
Current Scenario & Negative Consequences	Future State & Positive Business Outcomes
<ul style="list-style-type: none"> <li>Huge overstock at the DMU sites to secure supply due to inventory leads to expired material, waste and losses</li> <li>Reduced inventory visibility leads to risk of lack of</li> </ul>	<ul style="list-style-type: none"> <li>Establish proactive inventory management by getting full visibility on DMU stock levels</li> <li>Real-time (daily) visibility on DMU inventory to reduce</li> </ul>

## Business KPIs vs. Your Industry Peers

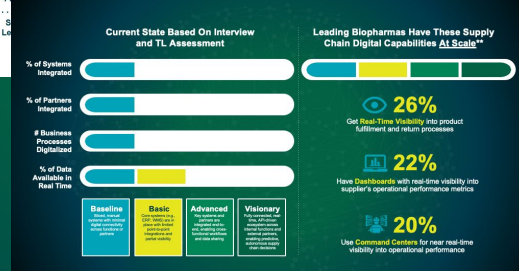
KPI	Bottom Quartile	Median	Top Quartile
Customer OTIF	<85%	90%	>95%
Days Sales Outstanding (customer payment cycle)	>60 days	45 days	<30 days
Days Inventory Outstanding	>250 days	<220 days	<180 days
Inventory to Revenue (%)	>20%	<15%	<10%
Procure-to-Pay Cycle Time	>60 days	~45 days	<30 days
Supplier OTIF	<70%	80%	>85%

## Quantifiable Benefits

Positive Business Outcome 1	Positive Business Outcome 2	Positive Business Outcome 3 (optional)
180k-220k FTE Efficiency Savings	320k-390k Inventory Holding Costs Savings	1,200k-1,500k Additional Revenue from Sales
50k-70k Error Remediation Time Savings	3,500k Freed Cash Flow from Inventory Reduction (non-cashable)	200k-300k Reduction in Procurement Spent (long term)
	30-40% P2P Cycle Time Reduction (non-cashable)	100k-200k Cost avoidance from unplanned expenses
SUBTOTAL		
TOT.		

Inventory Management	Supply Management	Manual Processes
500,000\$ of annual loss due to stock destruction	90% OTIF Target	Can lead to data entry issue and important mistake
4M\$ Inventory Reconciliation issue	No centralized PO acknowledgment	Error limitation needed for Pivotal to always ensure 100% on treatment delivered on time at the DMU
	Not scalable for Phase III	

## TOP Business Challenges



## Digital Maturity Assessment

Positive Business Outcome 1	Positive Business Outcome 2	Positive Business Outcome 3 (optional)
Reduction in FTE Time Due to Increased Efficiency: Enabling focus on value-adding tasks for your Supply Chain Planners	Improved Inventory Holding Costs: Reducing ongoing costs from access inventory	Increase Revenue From Sales: Improvement in on-time delivery from reduced lead times
Reduction in Data Entry Errors: Reduce risks of impact on supply chain and customer satisfaction	Reduction in Safety Stock Inventory: Free-up cash flow for growth and operational improvements	Reduce Maverick Spend: Include granular data points to monitor supplier performance
	Improvement in Procure to Pay Cycle Time: Improved Cycle Times leading to shorten lead times and possible finance impacts	Avoid unplanned expenses: Reduce expedite shipping and overtime expenses by real-time visibility into operations

## Benefit Drivers