

**RETOOLING FOR 2026:
BUILDING THE AI-DRIVEN
SUPPLY CHAIN
REVOLUTION**

GLOBAL SUPPLY CHAINS AT THE TECHNOLOGY CROSSROADS

- Automation vs AI; what is the difference and when is each a solution?
- Start with these questions:
 - What is the workflow?
 - Where am I trying to create efficiencies / What am I trying to enable?
 - Where do I start?

Automation

- Executes predefined rules
- Deterministic outcomes
- Structured inputs

Examples: EDI ingestion, status updates

Key idea: Moves data

Artificial Intelligence

- Analyzes patterns in data
- Handles unstructured inputs
- Supports predictions and decisions







Examples: document extraction, forecasting

Key idea: Understands data

REAL VS NOISE

- Automations have been around for decades, but AI (especially agentic AI) along with the applications are still young in development.
 - Keep in mind, more noise has equaled more investment.
- General areas where AI has saturated?
- Where is there lag?

Types of AI in Supply Chain – Definitions & Use Cases

	Machine Learning (ML)	Computer Vision (CV)	Natural Language Processing (NLP)	Generative AI (LLMs)	Optimization & RL	Agentic AI
	<i>Predict & Classify</i>	<i>Read & Extract</i>	<i>Understand Text</i>	<i>Generate & Summarize</i>	<i>Optimize Decisions</i>	<i>Autonomous Actions</i>
Definition	Learns from data to predict outcomes	Interprets images & documents	Understands & processes language	Creates content & insights	Learns best actions through feedback	Executes multi-step tasks autonomously
Use Cases	<ul style="list-style-type: none"> • Predictive ETAs • Demand Forecasting • Risk & Delay Prediction 	<ul style="list-style-type: none"> • Doc Extraction • Inventory Scanning • Damage Detection 	<ul style="list-style-type: none"> • Email Processing • Customs Data • Contract Review 	<ul style="list-style-type: none"> • Reports & Summaries • Exception Explanations • SOP Automation 	<ul style="list-style-type: none"> • Routing Optimization • Fleet & Yard Planning • Resource Allocation 	<ul style="list-style-type: none"> • Monitor → Decide → Act • Update TMS/ERP • Notify Teams & Customers
Example	<p>Predict container delay</p> 	<p>Extract data from B/L</p> 	<p>Read shipment email & create booking</p> 	<p>Generate delay summary</p> 	<p>Optimize drayage routes</p> 	<p>Detect delay → Update → Notify customer</p> 
How They Work Together:	<p>AI Models + Operational Systems + Agentic AI = Exception-Driven Supply Chain</p>					

WHY AI IS NOW ON THE AGENDA

- Labor shortages and operational complexity
- Supply chain volatility and geopolitical risk
- Public visibility into how supply chains effect daily life
- Massive growth in focus of logistics data
- Pressure to improve efficiency and visibility

WHERE AUTOMATION AND AI ADOPTION IS HAPPENING FASTEST

- Forwarder back-office automation
- Customs documentation processing
- Freight brokerage operations
- Shipment creation from documents and predictive shipment visibility
- AP (Accounts Payable) management

WHERE ADOPTION IS SLOWER

- Enterprise-wide shipper AI programs
- Multi-party data sharing networks
- Standardized digital documentation management
- Global standards for tracking and predictive tracking data
- Project cargo and specialized logistics

BARRIERS TO ADOPTION

- Poor data quality/Lack of centralized source and global benchmarks
- Fragmented operational systems
- Unclear workflows or global standards and governance
- Undecided ROI scenarios
- Legacy technology environments
- Change management challenges

IMPLICATIONS FOR MULTI-LEG SUPPLY CHAINS

- More inland handoffs increase complexity
- Visibility across port, rail, drayage, and warehouse
- Exception management becomes critical
- Forwarders evolving into data coordinators
- Extended transit schedules allowing for more cost volatility

PRACTICAL AI ADOPTION ROADMAP

1. Is AI a solution or is Automation?
2. Start with document automation
 1. Customs document processing
 2. Shipping document processing
 3. AP document processing
3. Deploy AI for exception detection
4. Measure operational metrics
5. Maintain human oversight

































KEY TAKEAWAYS

- AI is not replacing supply chains.
 - The goal should be replacing manual management across the chain
- Winning companies will combine:
 - Clean operational data
 - Mixing AI and automation
 - Human decision making off exception flags

AI in Supply Chain – Models, Definitions & Use Cases

From Automation to Agentic Intelligence



MACHINE LEARNING (ML)	COMPUTER VISION (CV)	NATURAL LANGUAGE PROCESSING (NLP)	GENERATIVE AI	OPTIMIZATION & REINFORCEMENT	AGENTIC AI
 Learns from data to predict & classify 	Interprets images & documents 	Understands & processes language 	Creates summaries, reports & recommendations 	Learns optimal decisions through feedback 	Autonomous agents that take action across systems 
USE CASES	USE CASES	USE CASES	USE CASES	USE CASES	USE CASES
 Predictive ETAs  Demand Forecasting  Port Congestion  Inventory Planning	 Document Extraction  Invoice Processing  Damage Inspection  Inventory Scanning	 Email Processing  Order Requests  Shipment Updates  Contract Analysis	 Operational Summaries  Exception Explanations  SOP Documentation  Decision Support	 Routing Optimization  Container Allocation  Fleet Dispatch  Warehouse Robotics	 Monitor Milestones  Detect Exceptions  Update TMS/ERP  Notify Teams & Customers  Suggest Alternatives

AI Evolution in Logistics

AI as a Tool

»» AI for Automation



AI as an Operational Assistant



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