





Beyond Automation:

Unlocking Efficiency, Resiliency and Automation with Agentic Al Workflows

SUPPLY CHAIN TRANSFORMATION WEBINAR SERIES - CHAPTER I

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We are here to share our thoughts on how to improve your SCM performance

SCM Function	KPI	Average Improvement with Agentic Al (Illustrative)
Demand Planning	Forecast Accuracy	Improved by 20–35%
Inventory Management	Inventory Holding Costs	▼ Reduced by 15–30%
Procurement	Supplier Lead Time & Contract Cycle Time	▼ Reduced by 25–40%
Logistics & Transportation	On-time Delivery Rate	Improved by 10–20%
Warehouse Operations	Order Fulfillment Time	▼ Reduced by 20–30%
Risk & Compliance	Response Time to Disruptions/Risk Events	Reduced by 40–60%
Customer Service	First Response Time & Resolution Time	▼ Reduced by 30–50%
Sustainability Monitoring	Emissions Tracking & Compliance Accuracy	Improved by 20–25%

Supply Chain Management

- Demand & Inventory Management
- Supplier & Procurement Management
- Logistics & Transportation Management
- Warehouse & Fulfilment Operations
- Risk & Compliance Management
- Customer Service & After-Sales Support



Major Challenges in Supply Chain Management

- 1 Planning & Forecasting Challenges
- 2 Disruption & Risk Management
- 3 Visibility & Data Integration
- Logistics & Operational Efficiency
- **5** Collaboration & Workforce Limitations
- Quality Control & Agility Gaps

Major Challenges in Supply Chain Management (Cont'd)

Planning & Forecasting Challenges

- Inaccurate Demand Forecasting / Forecast Errors: Rigid models lead to stockouts or excess inventory.
- **Demand Volatility:** Lack of adaptability to changing market conditions.
- Slow Decision-Making: Human-led processes delay responses to dynamic conditions
- Disruptions (e.g., disasters, strikes, supplier failure): Manual intervention slows recovery; costly delays.
- Supplier Risk & Compliance Monitoring: Limited real-time insights; over-reliance on audits.
- Sustainability & Ethical Sourcing Gaps: Difficulty ensuring environmentally and socially responsible practices.

Disruption & Risk Management

Major Challenges in Supply Chain Management (Cont'd)

Visibility & Integration

- Lack of End-to-End Visibility / Poor Visibility: Fragmented systems hinder tracking and real-time decisions.
- Data Silos & Lack of Integration: Disconnected platforms block unified insights.
- Inefficient Logistics / Transportation: Suboptimal routing, high costs, and lack of context awareness.

Logistics & Operations Optimization

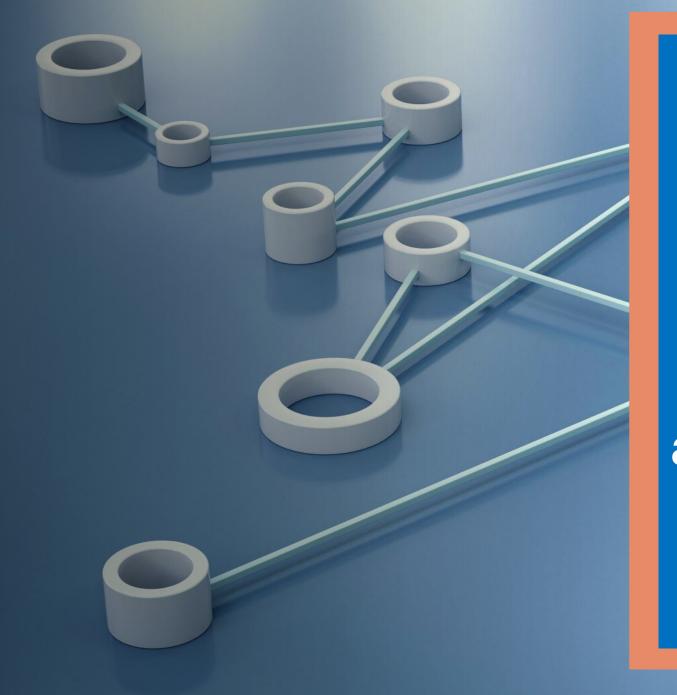
- Last-Mile Delivery Complexity: Inability to re-route dynamically or optimize in real-time.
- Inventory Imbalance / Inefficient Inventory
 Management: Static thresholds cause overstocking or
 missed demand.

Major Challenges in Supply Chain Management (Cont'd)

Workforce & Collaboration

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- Weak Supplier Collaboration / Poor Cross-Function Sync: Challenges in managing supplier networks and aligning internal teams.
- Manual Exception Handling: Human review required for escalations; slow response.
- Talent Gaps & Tribal Knowledge Dependency:
 Processes depend on experience rather than systems.
- Quality Inconsistencies: Product standards vary across suppliers and stages.
- Lack of Agility & Adaptability: Difficulty adjusting to shifts in customer behavior or supply shocks.

Quality & Agility



It is imperative to go beyond automation and augment the intelligence of the supply chain ecosystem with Al agents to resolve the **current Challenges**

Characteristics of an Al Agent

Perception

Processing and interpreting various types of input data (text, images, structured data, etc.).

Recognizing patterns and relevant information from the environment.

Reasoning

Analyzing information and making logical inferences.

Evaluating options and forming conclusions based on available data.

Meta-cognition

Understanding its own capabilities and limitations.

Monitoring and evaluating its own cognitive processes.

Self-awareness of knowledge boundaries and confidence levels

Planning

Formulating strategies and breaking down complex objectives into actionable steps.

Prioritizing tasks and allocating resources based on context and goals.

Anticipating potential challenges and developing contingency plans.

Characteristics of an Al Agent (Cont'd)

Autonomous Execution

Independently taking actions without constant human oversight.

Dynamically modifying behavior and workflows based on new information.

Managing and optimizing available resources efficiently.

Learning and Reflection

Acquiring new knowledge from experiences and outcomes.

Analyzing successes and failures to identify improvement areas.

Understanding cause-andeffect relationships in past actions.

Iteration and Adaptation

Continuously improving performance through applied learning.

Adjusting strategies based on feedback and new insights.

Evolving capabilities over time through systematic enhancement.

Real-Life Example: Al Agent for Smart Inventory Management – Global Retail Chain

Scenario:

A global retail giant (e.g., Walmart or Amazon) deploys an Al Agent to autonomously manage inventory across stores and warehouses—ensuring the right products are always in stock, without overloading storage.

Al Agent Characteristic	How It's Applied with Real-World Tech
Perception	Al Agent ingests data from: - RFID readers, barcode scanners, and smart shelves (weight sensors) in warehouses and stores - POS systems via APIs - CCTV cameras with computer vision to detect empty shelves
Reasoning	Evaluates: - Which items are moving fast (POS APIs) - What's in short supply (inventory thresholds) - Which location has excess stock (WMS APIs) Forms restocking decisions
Meta- cognition	Recognizes uncertainty (e.g., first-time sales of a new product) Flags for human review if confidence is low Learns where forecasts go wrong and improves future decisions

Real-Life Example: Al Agent for Smart Inventory Management – Global Retail Chain (Cont'd)

Al Agent Characteristic	How It's Applied with Real-World Tech		
Planning	Creates a real-time stock reallocation plan: - Re-routes stock from nearby stores - Triggers orders to suppliers (via ERP & supplier APIs) - Considers delivery time, cost, and local demand		
Autonomous Execution	Places restock orders without human intervention Uses supplier APIs for availability & delivery timelines Adjusts quantities based on warehouse space (via WMS API)		
Learning and Reflection	Learns from: - Missed deliveries - Overstock situations - Past sales trends Updates reorder rules and planning heuristics		
Iteration and Adaptation	Continuously refines strategies based on: - Weather APIs (e.g., preparing for a storm-driven spike in bottled water sales) - Customer returns and satisfaction signals from e-commerce platforms		



Al-powered, Intelligent & Autonomous Supply Chain

Leveraging Agentic AI, IoT, Blockchain, Digital Twin, and AR/VR to optimize, predict, and automate supply chain operations.

Ensuring precision, resilience, and real-time adaptability across the entire value chain.

NeuroSCM Solution Features Powered by Agentic Al Workflows



End-to-End Supply Chain Visibility & Predictive Insights



Automated & Transparent Procurement Processes



Smart Warehousing & Logistics Optimization



Proactive Risk Management & Compliance Assurance



Sustainable & Eco-Friendly Supply Chain Operations



Predictive Maintenance & Asset Lifecycle Management

NeuroSCM Solution Features Powered by Agentic AI Workflows (Cont'd)

End-to-End Supply Chain Visibility & Predictive Insights

IoT - real-time
tracking, AI predictive analytics,
Digital Twin - realtime simulations,
Blockchain - secure
data records

Automated & Transparent Procurement Processes

AI - Automated
Negotiation Agents,
Blockchain - smart
contracts for
transparent
transactions, IoT supplier tracking

Smart Warehousing & Logistics Optimization

AI - robotics &
automation, IoT real-time
warehouse
monitoring, Digital
Twin - logistics
optimization, AR/VR
- training workers.

NeuroSCM Solution Features Powered by Agentic AI Workflows (Cont'd)

Proactive Risk
Management &
Compliance Assurance

AI - risk assessment & anomaly detection, Blockchain - fraud prevention & compliance tracking, AR/VR - compliance training

Sustainable & Eco-Friendly Supply Chain Operations

AI - fleet optimization,
IoT - energy &
emissions tracking,
Blockchain sustainable sourcing
validation, Digital
Twin - sustainability
modeling

Predictive Maintenance & Asset Lifecycle Management

(IoT - sensor-based monitoring, AI - predictive maintenance analytics, Digital Twin - simulating product lifecycle, Blockchain - maintenance & warranty tracking

NeuroSCM: Business Impact



End-to-end visibility, reduced stockouts, improved forecasting, and fewer disruptions.



Faster procurement cycles, cost savings, and reduced fraud.



Faster order processing, reduced errors, optimized space usage, and cost efficiency.



Improved compliance, reduced fraud, and fewer supply chain disruptions.

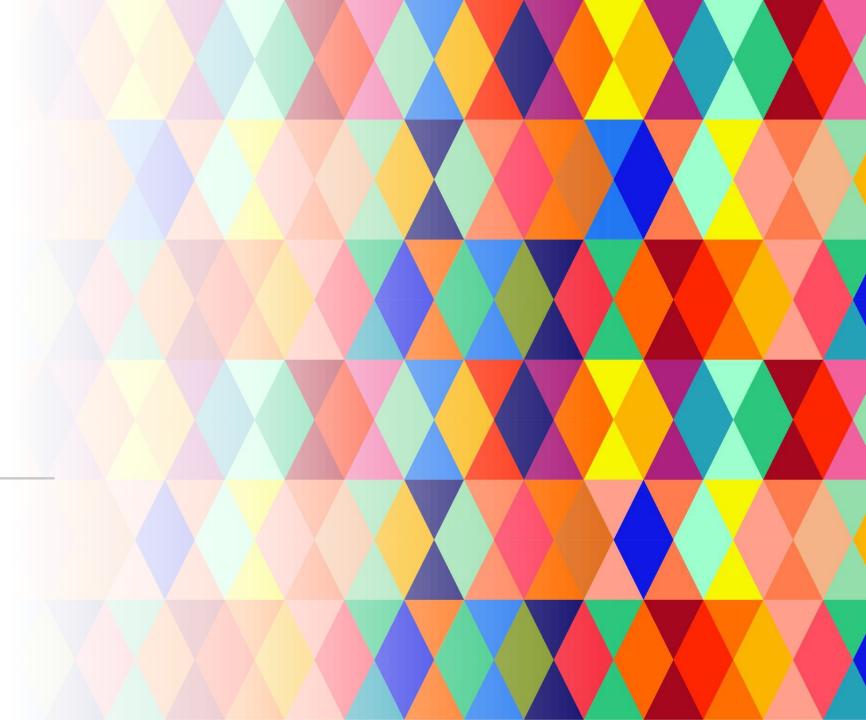


Lower fuel costs, improved carbon footprint management, and verified eco-friendly sourcing.



Prevents breakdowns, optimizes maintenance schedules, and extends equipment lifespan.

Traditional SCM vs.
Agentic Al SCM





Traditional SCM (RPA/Automation, Rule-Based)

Step	How It Works Traditionally		
Tracking Inventory	Store staff scan barcodes or check shelves manually. A system gives alerts if stock falls below a certain limit.		
Ordering Stock	A fixed rule (e.g., reorder every Monday or if fewer than 50 items) triggers a bot to send a purchase order.		
Dealing with Out-of- Stock	If an item runs out, staff notice it manually and request stock. Sometimes the customer never finds what they came for.		
Restocking	Human managers plan where to move extra stock, often with delays.		
Learning from Mistakes	After a sale is missed or too much is ordered, people analyze the issue and try to avoid it next time.		
Supplier Coordination	Mostly fixed vendors, contacted by email or automated workflows.		
Forecasting Demand	Sales data is reviewed weekly or monthly. Forecasts are made based on experience or simple calculations.		



Agentic Al SCM – The Smart, Self-Learning Way

Step	How Al Agents Handle It		
Tracking Inventory	Smart shelves automatically measure product weight; RFID tags show exact item locations. Cameras check for empty shelves.		
Ordering Stock	Al agent predicts demand in real time and places orders instantly, only for what's needed, using supplier APIs.		
Dealing with Out-of- Stock	The agent sees stock dropping and re-routes nearby inventory or orders faster options before a shortage happens.		
Restocking	It shifts stock between nearby stores or warehouses intelligently, with no human involvement.		
Learning from Mistakes	If an item sold out last week or was returned too often, the agent remembers and adjusts future planning.		
Supplier Coordination	It picks the fastest and cheapest supplier from live data – just like booking a taxi with the best price & time.		
Forecasting Demand	Uses weather, local events, past sales, and even customer behavior to predict what's needed, down to the hour.		

• In Simple Terms:

- Traditional inventory systems are like following a recipe blindly every time.
- Agentic AI is like a smart chef who senses what's missing, learns from guests, shops in real-time, and adjusts the menu on the fly.



How Does Agentic Al Work in Supply Chain Management?

Solution: NeuroSCM

Intelligent, Predictive, Agile & Resilient Supply Chain Management

TRIGGER POINTS

Demand Fluctuations

Supplier Reliability Issues

Logistics Disruptions Warehouse Bottlenecks

Compliance & Risk Alerts

Customer Order Issues

AI AGENTS ORCHESTRATION

Demand Prediction Agent, Inventory Optimization Agent

Supplier Evaluation Agent, Automated Negotiation Agent Smart Routing Agent, Fleet Optimization Agent, Real-time Shipment Tracking Agent Warehouse Robot Coordination Agent, Al-Driven Order Fulfillment Agent Supply Chain Risk Assessment Agent, Fraud Detection Agent, Regulatory Compliance Agent Al Chatbot for Order Queries, Returns & Refund Automation Agent, Product Maintenance Prediction Agent

AI AGENTS LOGIC

Large Language Models/ Short Language Models/ Foundation Models

Perception | Reasoning | Planning | Step Sequencing | Reflection | Iteration

APPLICATION INTERFACE PROGRAMS (APIs)

TOOLS (EXAMPLES)

ERP & Supply
Chain Platforms
(SAP, Oracle SCM,
Microsoft
Dynamics)

Supplier &
Procurement
Platforms(Coupa,
Ariba, Jaggaer)

Logistics & Fleet
Management
(FourKites,
Descartes,
Llamasoft)

Warehouse & Fulfillment(Manhatta n Associates, Blue Yonder, HighJump)

Risk &
Compliance(Resilinc,
Riskmethods,
NAVEX Global)

Customer Service & Order Management (Salesforce Service Cloud, Zendesk, Freshdesk)

NeuroSCM Solution: Al Agents (Objectives Focused)

Objectives	Agent 1	Agent 2	Agent 3	Agent 4	Agent 5
End-to-End Supply Chain Visibility & Predictive Insights	Demand Prediction Agent	Inventory Optimization Agent	Real-time Shipment Tracking Agent		
Automated & Transparent Procurement Processes	Supplier Evaluation Agent	Automated Negotiation Agent	Procurement Approval Agent		
Smart Warehousing & Logistics Optimization	Warehouse Robot Coordination Agent	Al-Driven Order Fulfilment Agent	Defective Goods Inspection Agent	Smart Routing Agent	Fleet Optimization Agent
Proactive Risk Management & Compliance Assurance	Supply Chain Risk Assessment Agent	Fraud Detection Agent	Regulatory Compliance Agent		
Sustainable & Eco-Friendly Supply Chain Operations	Fleet Optimization Agent	Sustainable Procurement Tracking Agent			
Predictive Maintenance & Asset Lifecycle Management	Product Maintenance Prediction Agent	IoT Sensor-based Monitoring Agent	Blockchain-based Warranty & Maintenance Tracking Agent		

NeuroSCM Solution: Al Agents (Functions Focused)

Function	Agent 1	Agent 2	Agent 3	Agent 4	Agent 5
Demand & Inventory Management	Demand Prediction Agent	Inventory Optimization Agent	Perishable Goods Monitoring Agent		
Supplier & Procurement Management	Supplier Evaluation Agent	Automated Negotiation Agent	Procurement Approval Agent	Sustainable Procurement Tracking Agent	
Logistics & Transportation Management	Smart Routing Agent	Fleet Optimization Agent	Real-time Shipment Tracking Agent		
Warehouse & Fulfillment Operations	Warehouse Robot Coordination Agent	Al-Driven Order Fulfillment Agent	Defective Goods Inspection Agent		
Risk & Compliance Management	Supply Chain Risk Assessment Agent	Fraud Detection Agent	Regulatory Compliance Agent		
Customer Service & After-Sales Support	Al Chatbot for Order Queries	Returns & Refund Automation Agent	Product Maintenance Prediction Agent	IoT Sensor- based Monitoring Agent	Blockchain-based Warranty & Maintenance Tracking Agent

NeuroSCM: Al Agents and Human Agents Collaboration

Human Role	NeuroSCM AI Agents
Demand Planner	Demand Prediction Agent, Inventory Optimization Agent
Procurement Manager	Supplier Evaluation Agent, Automated Negotiation Agent, Procurement Approval Agent
Logistics Coordinator	Smart Routing Agent, Fleet Optimization Agent, Real-time Shipment Tracking Agent
Warehouse Supervisor	Warehouse Robot Coordination Agent, Al-Driven Order Fulfillment Agent, Defective Goods Inspection Agent
Risk & Compliance Officer	Supply Chain Risk Assessment Agent, Fraud Detection Agent, Regulatory Compliance Agent
Sustainability & Procurement Officer	Fleet Optimization Agent, Sustainable Procurement Tracking Agent
Maintenance & Quality Control Manager	Product Maintenance Prediction Agent, IoT Sensor-based Monitoring Agent, Blockchain-based Warranty & Maintenance Tracking Agent
Customer Support Specialist	Al Chatbot for Order Queries, Returns & Refund Automation Agent

Al Role Transition Map in Supply Chain Management

Current Role	Al Agent Support	Transformed Role with New Skills	
Demand Planner	Demand Prediction Agent, Inventory Optimization Agent	Al-Augmented Demand Strategist – interprets Al forecasts, plans scenarios, manages demand shocks	
Procurement Manager	Supplier Evaluation Agent, Automated Negotiation Agent, Procurement Approval Agent	Strategic Supplier Relationship Manage – focuses on long-term partnerships, ethics, and resilience	
Logistics Coordinator	Smart Routing Agent, Fleet Optimization Agent, Real-time Shipment Tracking Agent	Al Logistics Analyst – supervises Al agents, resolves exceptions, enhances route intelligence	
Warehouse Supervisor	Warehouse Robot Coordination Agent, AI-Driven Order Fulfillment Agent, Defective Goods Inspection Agent	Al-Integrated Operations Leader – ensures harmony between human and robot workflows	

Al Role Transition Map in Supply Chain Management (cont'd)

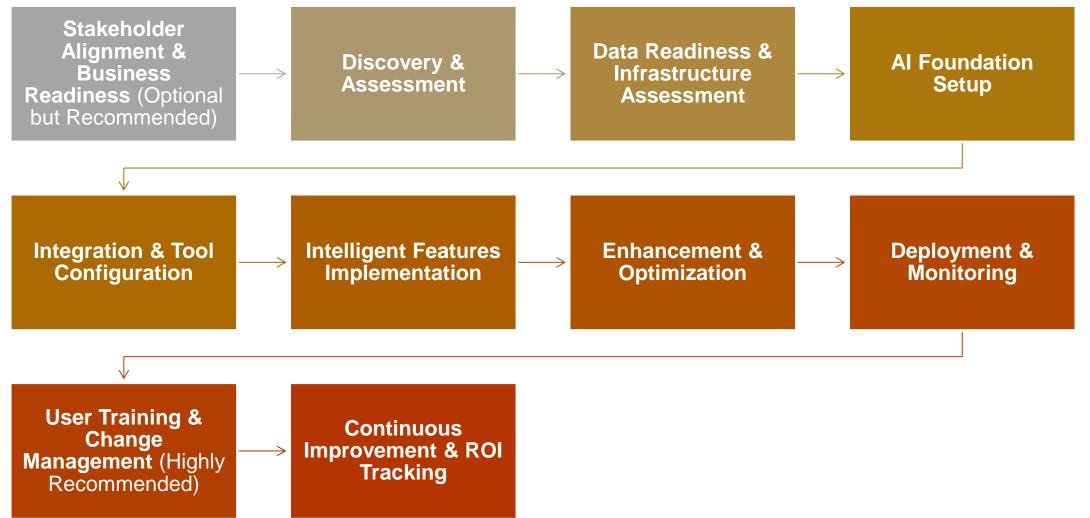
Current Role	Al Agent Support	Transformed Role with New Skills	
Risk & Compliance Officer	Supply Chain Risk Assessment Agent, Fraud Detection Agent, Regulatory Compliance Agent	Proactive Risk Architect – defines new risk models, ethical frameworks, and governance for AI systems	
Sustainability & Procurement Officer	Fleet Optimization Agent, Sustainable Procurement Tracking Agent	ESG & Al Ethics Champion – drives sustainability strategy through data and automation insights	
Maintenance & Quality Control Manager	Product Maintenance Prediction Agent, IoT Sensor-based Monitoring Agent, Blockchain-based Warranty & Maintenance Agent	Predictive Maintenance Strategist – interprets Al alerts, innovates quality assurance using new tech	
Customer Support Specialist	Al Chatbot for Order Queries, Returns & Refund Automation Agent	Human Experience Curator – handles complex cases, customer emotions, and trains AI on empathy	



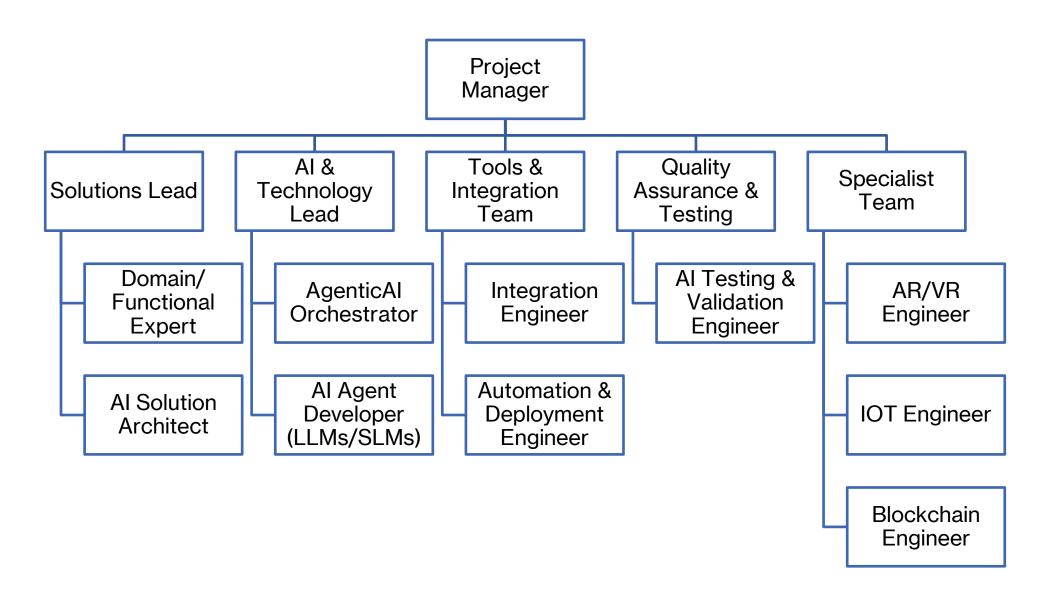
Software Service Delivery

For AI-powered, Intelligent & Autonomous Supply Chain Solution

NeuroSCM Business Sprints Service Delivery: Project Life Cycle



Service Delivery Organization Structure



Key Recommendations for Embracing Al Agents in the Workplace

Jobs Will Evolve, Not Disappear

Al Agents are not here to replace jobs but to enhance human potential by automating repetitive tasks.

Double the Output Without Increasing Headcount

 With AI Agents, organizations can significantly scale operations without hiring more people—by unlocking massive productivity gains.

Free Up Talent for High-Value Work

 Existing teams will be freed from routine, repetitive tasks and empowered to focus on strategic, analytical, and creative work.

Alignment Is Not Optional

 The shift to AI-enabled operations is unavoidable. Teams must choose to align and adapt—or risk being left behind.

Upskilling Is Urgent and Essential

 Launch AI Agent Readiness Programs to reskill your workforce, enabling them to effectively collaborate with AI agents as co-workers, not competitors.

Let's Co-Create the Agentic Al Supply **Chain of the Future**

How We Can Help:

- **Agentic Al Readiness Assessment** (people, processes, platforms)
- Al Agent Use Case Identification & Prioritization
- SCM Workforce Upskilling Programs (for AI, data, and decision orchestration)
- Rapid Pilot Launch using our NeuroSCM Business Sprints
- Co-creation Workshops to tailor AI Agents for your context

Reach Out to Explore a Discovery Session or Pilot Email: vsr@btbt.co.in Mobile: +91 98668 93307 LinkedIn: http://bit.ly/2kPl8LF

Thank You

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