Chartered Institute of Purchasing and Supply Management of Nigeria (CIPSMN)

The Significance of Artificial Intelligence (AI) Towards The Future of Supply Chain Management Functions.

By

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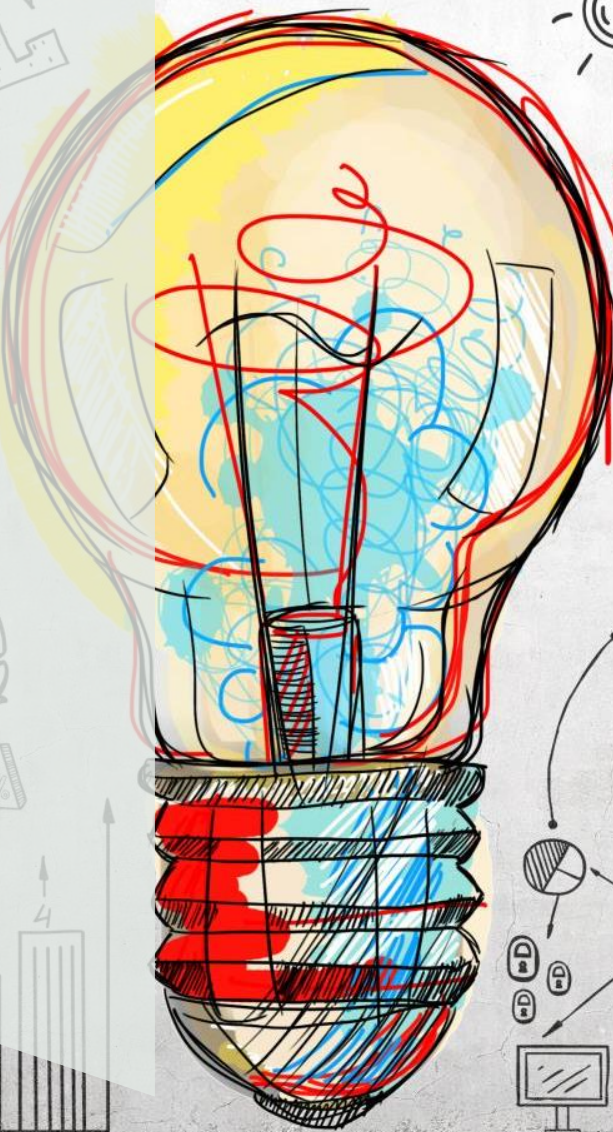**2nd Vice President, Chartered Institute of Purchasing and Supply Management of Nigeria.**

# AI AND THE SCM FUNCTION

Presented by

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AI in Supply chain

The emergence of Artificial Intelligence has marked a new era in Supply Chain (SC) management. With its unparalleled capabilities, AI has significantly enhanced operational efficiency and accuracy, leading to increased operational performance and customer satisfaction.

From managing vast datasets to providing predictive insights, AI is not just a tool but a transformative force reshaping how supply chains operate.
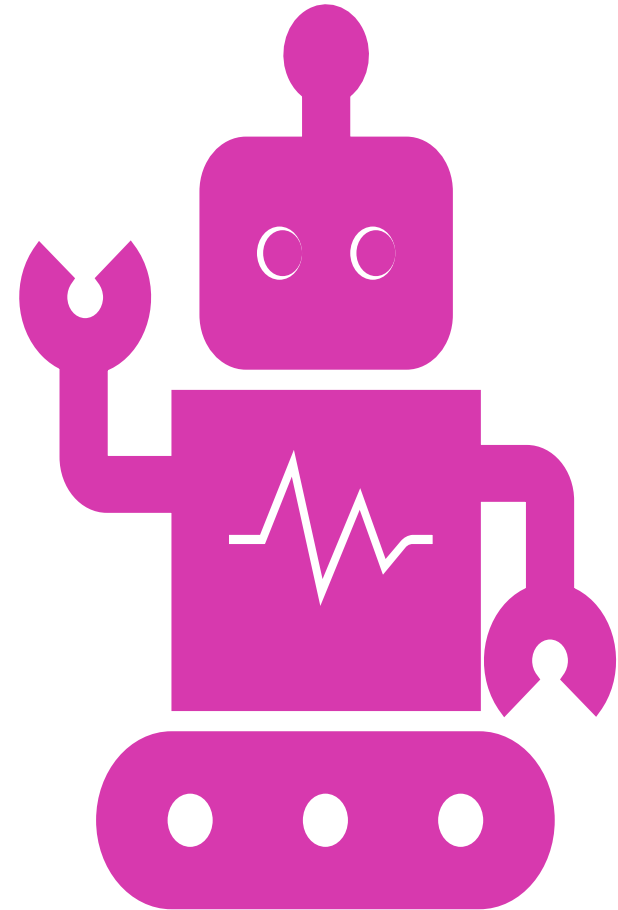
Ai in purchasing & operations

ROLE

Advanced predictive analysis

Identify real-time patterns, trends and potential disruptions
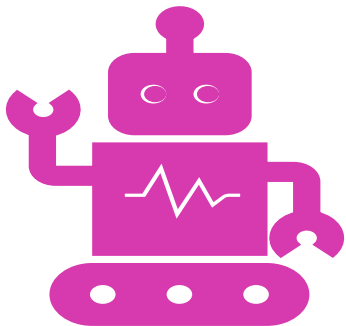
BENEFITS

Improve accuracy of forecasts and allow for more accurate forecast, e.g. Walmart uses AI to forecast demand for products in its stores.

Mitigate risk and anticipate customer demands, e.g. using machine learning, Walmart is able to finetune their inventory levels and ensure optimal stock quantities that align closely with market needs.

Ai in Logistics & INVENTORY / resource management

ROLE

Optimize logistics operations by analyzing real-time data on transportation routes, traffic conditions, and weather forecasts.

Optimize inventory management by considering historical sales data, customer behaviour and market trends

BENEFITS

Allows supply chain managers to make informed decisions regarding **route selection**, **load planning**, and **vehicle scheduling**. This results in **reduced delivery times**, **improved fuel efficiency**, and **minimized transportation costs**.

Allows supply chain managers to **accurately determine optimal stock levels**, **identify slow-moving items**, and **predict potential stockouts** or overstocks situations

Ai in INFORMATION WORKFLOW

ROLE

Provide real-time insights into various stages of supply chain, hence offering greater SC visibility.

BENEFITS

Allows businesses to **track inventory levels, monitor supplier performance** and **identify potential bottle necks or delays**. This ensures smoother coordination among intermediaries and stakeholders.

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Embracing ai for a smarter supply chain

The integration of AI across purchasing, operations, logistics and resource/inventory management translates into a SC that is not only more resilient and responsive but also ready for the future.

AI is no longer an option but a necessity for a competitive edge in today's fast-paced business environment where growing number of supply chain leaders already plan to implement AI by 2025.
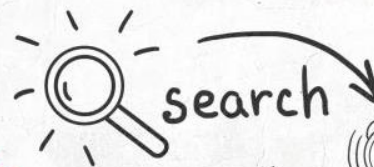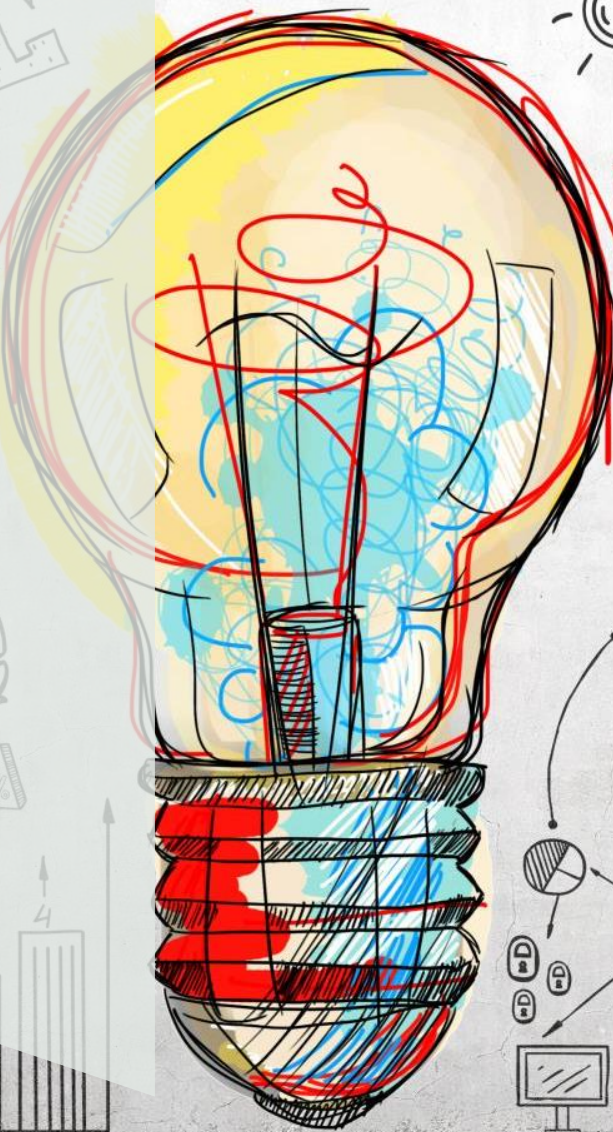
EMBRACING AI IS EMBRACING THE FUTURE OF SMART, EFFICIENT AND RESPONSIVE SUPPLY CHAIN MANAGEMENT

The Chartered Institute of Purchasing & Supply Management of Nigeria is obviously not left behind.
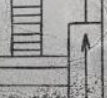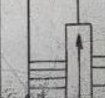
THANK YOU FOR LISTENING

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DISCUSSION TIME

DISCUSSION- SL1

AI empowers supply chain professionals to optimize processes, mitigate risks, and deliver superior customer experiences, thereby driving competitive advantage in an increasingly complex and dynamic business environment.

- Predictive Analytics: AI enables predictive analytics, allowing SCM professionals to anticipate demand fluctuations, optimize inventory levels, and mitigate risks effectively.

- Enhanced Efficiency: AI-powered systems automate routine tasks like demand forecasting, route optimization, and inventory management, boosting efficiency and reducing operational costs.

- Real-time Decision Making: With AI algorithms analysing vast amounts of data in real-time, SCM managers can make informed decisions quickly, enabling agile responses to market changes and disruptions.

- Optimized Logistics: AI-driven optimization algorithms can streamline logistics operations by identifying the most efficient transportation routes, reducing transit times, and minimizing fuel consumption.

DISCUSSION-SL2

- Inventory Management: AI-powered inventory management systems can optimize stock levels, reducing excess inventory and stockouts, thus improving customer satisfaction and **profitability.**

- Supply Chain Visibility: AI technologies such as IoT sensors and blockchain facilitate end-to-end visibility in the supply chain, enabling better tracking of goods, ensuring compliance, and detecting anomalies or potential bottlenecks.

- Risk Management: AI can analyze various risk factors, such as geopolitical events, natural disasters, or supplier reliability, enabling proactive risk management strategies to minimize disruptions.

- Customer Experience: By leveraging AI for demand sensing and personalization, SCM functions can tailor product offerings and delivery options to meet individual customer preferences, enhancing overall customer experience.

DISCUSSION-SL3(AI & PURCHASING)

• In the supply chain management, artificial intelligence has made it easier and provided a more efficient way to purchase goods. By predictive analysis, companies will be able to ascertain future demand plans / requisitions and effectively manage inventory.

• By using effective data analysis tools, companies can have access to valuable insights that will help them in making smarter and better decisions in relation to purchasing of goods.

• AI as well helps to simplify data analytics. Complex Bid Analysis pose significant challenges to Buyers by AI provides huge help on this vital unit action in the Supply Chain. AI also have application in supplier relationship management ; vendor search, purchase order creation etc.

DISCUSSION-SL4 (Ai and delivery)

AI will also impact the transportation and delivery of goods greatly.

AI aids in route optimization by providing the most efficient transportation and shipment routes through data analysis. It reduces transportation costs by cutting down on time investment which ensures goods reach their destination in a timely manner.

Automated delivery systems as well helps to ensure quick and smooth deliveries. The AI system also allows companies to track their goods and closely monitor its shipment and ensure on-time delivery.

By optimizing their routes, companies can reduce costs related to downtime and rectifying problems. This will lead to improved consumer satisfaction through faster delivery times and lower logistics cost.

AI can also analyse consumers choices and opinions and offer preferred delivery times which will be more convenient for the consumers.