ΔΙΟΡΓΑΝΩΣΗ

Supply Chain Sales Customer Institute

ΕΠΙΣΤΗΜΟΝΙΚΗ ΥΠΟΣΤΗΡΙΞΗ

PLANNING

ARTIFICIAL INTELLIGENCE in SUPPLY CHAIN

10 | 12 | 2021

How AI is Reinventing the Future of Logistics

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Agenda

- Statistics
- The Transformation of Customer Needs
- The Need
- AI Applications in Supply Chain
- Benefits of AI-Powered Warehouse
- AI for Sustainable Development

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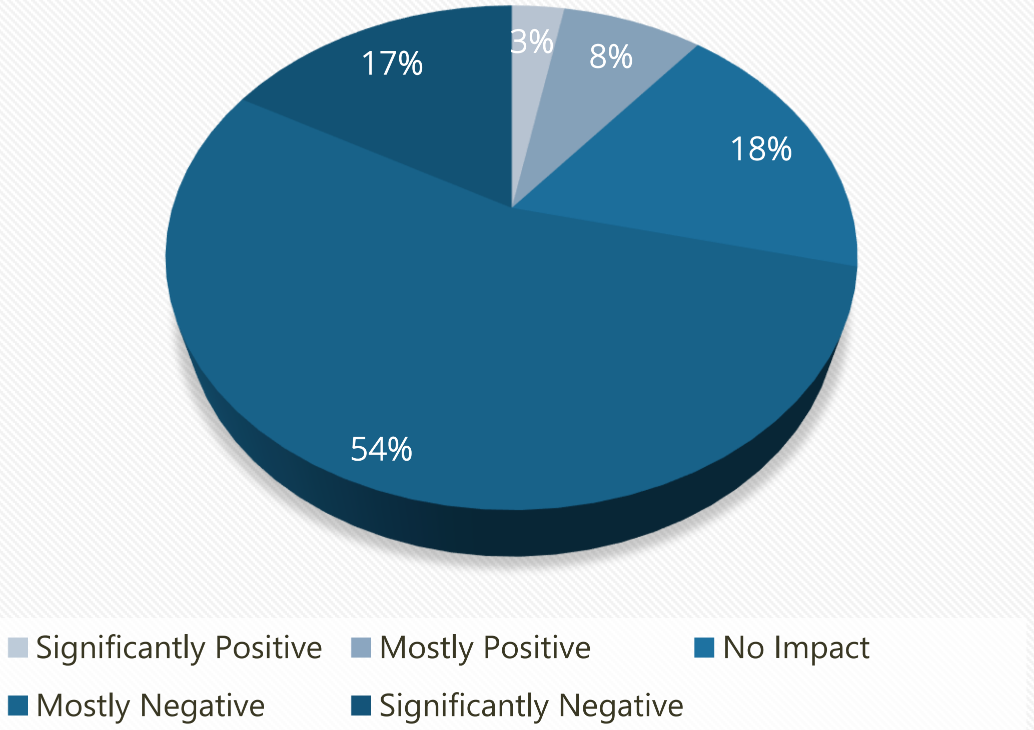
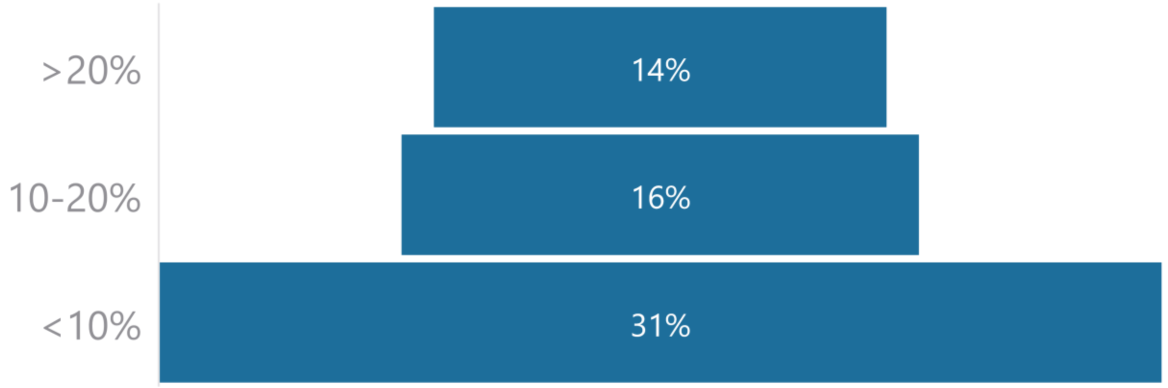
Statistics

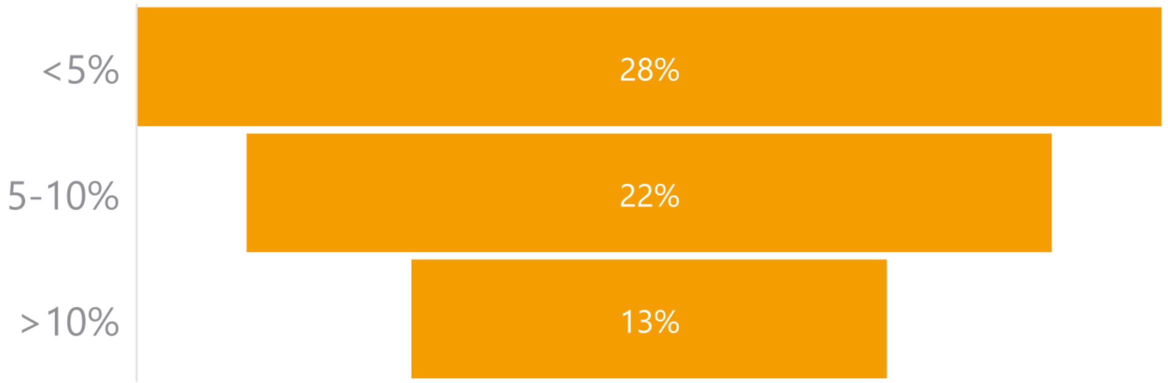
Impact of Covid-19 in Supply Chains[1]



Average Cost Decrease[2]



Average Revenue Increase[2]



[1] https://www.ey.com/en_gr/supply-chain/how-covid-19-impacted-supply-chains-and-what-comes-next

[2] https://www.mckinsey.com/featured-insights/artificial-intelligence/global-ai-survey-ai-proves-its-worth-but-few-scale-impact

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LogisticsVision Suite

The Transformation of Costumer Needs

Past

Need-linear Process

- See an advertisement
- Go shopping
- Buy the product

Present

Need-parallel Process

Learn for the Product

- Learn from Social Media
- See on Youtube
- Search Online

Make the order

- Website
- Mobile Application
- Contact Center
- Store

Receive the Product

- Click & Collect
- Home Delivery
- Store

The Need

Flexible, agile, demand-driven, profitable, accurate, efficient, networked supply chain operations.

AI Applications in Supply Chain

Chatbots for Operational Procurement

Automated chatbots trained on intelligent data sets can be utilized to optimize procurement-related tasks. These bots could be used to:

- Speak to suppliers
- Place purchasing requests
- Answer internal questions regarding procurement

Machine Learning for Supply Chain Planning

Machine learning can be used to forecast inventory, demand, and supply. This could optimize goods delivery without requiring human intervention.

Autonomous Vehicles for Shipping

Autonomous vehicles facilitate shipping and reduce leading times and transportation costs, while making operations more environmentally friendly and reducing labor costs.

Natural Language Processing for Data Cleansing

NLP eliminates language barriers and decodes untapped information. New data sets regarding suppliers could be built, which would significantly improve supplier selection.

Benefits of AI-Powered Warehouse

Accurate Inventory Management

Intelligent systems are capable of predicting customer needs in real time by analyzing huge amounts of data, and:

- Ensure inbound and outbound flows
- Prevent overstocking and inadequacies of stock
- Decrease errors

Enhanced Safety

AI-based automated tools allow smarter warehouse management, and consequently, enhance:

- Workers' safety (incidents are prevented)
- Material safety (material damages are prevented)

Reduced Operations Costs

As a result of their accuracy, efficiency, and safety, AI-based systems:

- Reduce errors
- Reduce warehouse incidents
- Increase pace of items flow

On-time delivery

Artificial intelligence decreases human effort and accelerates the entire process, providing the following benefits:

- Prevented delays
- Decreased delivery time

AI for Sustainable Development

- Optimized product management
- Decreased loses

→ ↓ Waste

- Better allocation and distribution
- Prevented mistakes and unnecessary routes

→ ↓ CO_2 emissions

- Controlled production, stocking and distribution

→ ↑ Working conditions

→

The Intelligent solutions provide us with the path to sustainable development and Industry 5.0.

European Commission's major policy initiatives:

- *"Adopting a human-centric approach for digital technologies including artificial intelligence"*
- *"Up-skilling and re-skilling European workers, particularly digital skills"*
- *"A globally competitive and world-leading industry, speeding up investment in research and innovation"*

https://ec.europa.eu/info/research-and-innovation/research-area/industrial-research-and-innovation/industry-50_en