

Instructional Scenario

AI in Supply Chain and Inventory Management



Course/Duty Area: Artificial Intelligence Fundamentals/Developing Employability Skills

Scenario: A logistics company is experiencing issues with inventory shortages and overstocking. The management is considering implementing an AI-powered inventory management system to optimize supply chain operations. Your task is to evaluate AI tools that predict demand and manage stock levels efficiently. The company aims to implement the solution within six months.

Big Question: How can AI improve supply chain efficiency and inventory management?

Focused Questions:

- What role does AI play in predicting supply and demand?
- How does AI-based inventory management reduce costs and improve efficiency?
- What are the challenges of integrating AI into existing supply chain processes?
- How do AI-driven logistics impact the workforce and business operations?

Student Project or Outcome: Students will analyze AI-based inventory management tools, compare their effectiveness, and propose a solution to improve supply chain operations. They will outline cost savings and efficiency improvements.

Project-Based Assessment: Students will present a business proposal detailing how AI can enhance inventory management, including cost analysis and projected efficiency gains, using a report or slideshow presentation.

Teacher Resources:

AI in Supply Chain Tools

- [SAP AI Supply Chain Solutions](#)
- [IBM AI for Inventory](#)
- [Amazon AI Logistics](#)

Articles & Case Studies

- [How AI is Optimizing Supply Chains](#)
- [AI in Inventory Management](#)

Challenges & Workforce Impact

- [AI in Logistics & Employment](#)
- [AI Challenges in Supply Chain](#)

Lesson Plans & Videos

- [AI in Logistics – YouTube](#)
- [AI & Supply Chain Management – EdX](#)

General AI Business Resources

- [AI in Business Course – Harvard Business School](#)

Scenario submitted by Jocelyn Forest, Southern Virginia Higher Education Center 2025

- [MIT AI Ethics & Policy Toolkit](#)
- [National AI Ethics Framework \(OECD\)](#)

Note: This instructional scenario was created with the help of AI.