

DIGITAL INNOVATION AND TRANSFORMATION | COURSE BROCHURE

Artificial Intelligence (AI) in Warehouse Operations & Optimization

5 days | Classroom training | English

SMART HORIZON

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Course content

Why attend

This course focuses on the application of Artificial Intelligence (AI) technologies in warehouse operations, addressing real-world challenges in inventory management, logistics, and process optimisation. Participants will learn to implement AI solutions to enhance efficiency and decision-making in warehouse environments.

Warehouse operations face increasing pressure to improve efficiency and reduce costs while meeting customer demands. AI technologies can transform these operations by automating processes, optimising inventory levels, and enhancing logistics management. Professionals must understand how to leverage AI to address specific challenges, such as stock discrepancies, order fulfilment delays, and resource allocation inefficiencies. By mastering AI applications, participants will be equipped to make data-driven decisions that lead to significant improvements in operational performance and customer satisfaction, ensuring their organisations remain competitive in a rapidly evolving market and can adapt to changing consumer needs.
Participants will engage in practical exercises that simulate real-world warehouse scenarios, allowing them to develop skills in AI implementation. They will learn to analyse operational data, design AI-driven solutions tailored to their unique challenges, and assess the impact of these technologies on overall efficiency. The course will also cover critical decision-making processes, such as selecting appropriate AI tools and evaluating their effectiveness. This hands-on approach ensures that participants can directly apply their learning to improve their workplace operations, driving innovation, enhancing productivity, and fostering a culture of continuous improvement in their organisations.

Professional Problems This Course Is Designed to Solve

• Difficulty translating subject knowledge into practical workplace decisions.
• Inconsistent approaches to the activities covered in the course outline.
• Lack of a structured plan for applying and reviewing new skills.

Course methodology

The course employs a blend of case studies, hands-on workshops, and simulations to facilitate learning. Participants will work on realistic scenarios that require them to apply AI tools and techniques to optimise warehouse operations. For example, they will analyse datasets to identify inefficiencies, design predictive models for demand forecasting, and develop logistics optimisation plans. Outputs will include AI implementation plans, data analysis reports, and optimisation models, providing tangible evidence of their learning and capability development. This practical focus ensures that participants leave with applicable skills and knowledge that can be immediately implemented in their work environments, enhancing their ability to drive operational improvements.



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Course objectives

By the end of this course, participants will be able to:
• Analyse current warehouse operations to identify inefficiencies and areas for AI integration.
• Design an AI-driven inventory management system that reduces stock discrepancies.
• Implement machine learning algorithms to predict demand and optimise stock levels.
• Evaluate the impact of AI solutions on warehouse throughput and operational costs.
• Construct a logistics optimisation model using AI techniques to enhance delivery efficiency.
• Justify the selection of specific AI tools and technologies for warehouse applications.

Target audience

This course is suitable for:
• Warehouse Managers responsible for operations and efficiency improvements.
• Logistics Coordinators involved in inventory and supply chain management.
• Data Analysts focusing on operational data and performance metrics.
• IT Professionals supporting AI integration in warehouse systems.

Target competencies

Participants will develop competencies in:
• Ability to assess operational inefficiencies in warehouse settings.
• Skill in designing AI solutions tailored to specific warehouse challenges.
• Proficiency in data analysis and interpretation for decision-making.
• Capability to implement machine learning models for inventory optimisation.
• Expertise in logistics planning and optimisation using AI tools.
• Understanding of the impact of AI technologies on warehouse performance.

Course outline

Day 1: Introduction to AI in Warehouse Operations

Applied activity: Participants will analyse a fictional warehouse operation to identify inefficiencies and propose AI solutions. They will work in groups to discuss their findings, focusing on specific operational challenges, such as inventory discrepancies and order fulfilment issues, and present potential AI applications.
Output: A report detailing identified inefficiencies and proposed AI solutions, including expected outcomes.

09:00–09:54	Overview of AI technologies relevant to warehouse operations and their benefits.
09:54–10:48	Current trends and challenges in warehouse management and logistics.



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10:48–11:00	Understanding data requirements for effective AI applications in warehouses.
11:00–11:30	**Coffee break**
11:30–12:12	Understanding data requirements for effective AI applications in warehouses. (continued)
12:12–13:06	Key performance indicators for measuring warehouse efficiency and effectiveness.
13:06–14:00	Case studies of successful AI implementations in warehouse settings.

Day 2: AI-Driven Inventory Management

Applied activity: Using a provided dataset, participants will design an AI-driven inventory management system, incorporating algorithms for stock level predictions. They will discuss implementation strategies and potential impacts on operational efficiency and customer satisfaction with peers.
Output: A prototype design of an AI inventory management system with predictive analytics and implementation considerations.

09:00–09:54	Principles of inventory management and the challenges faced in traditional systems.
09:54–10:48	AI techniques for inventory optimisation, including predictive analytics.
10:48–11:00	Designing an AI-driven inventory management system tailored to specific needs.
11:00–11:30	**Coffee break**
11:30–12:12	Designing an AI-driven inventory management system tailored to specific needs. (continued)
12:12–13:06	Tools for real-time inventory tracking and analysis, including software options.
13:06–14:00	Evaluating the effectiveness of AI-driven inventory management solutions.

Day 3: Demand Forecasting with Machine Learning

Applied activity: Participants will create a machine learning model using historical sales data to forecast future demand for a product line. They will assess its accuracy and discuss implications for inventory management, including stock replenishment strategies and cost savings.
Output: A demand forecasting model with performance evaluation metrics and recommendations for use.

09:00–09:54	Introduction to machine learning concepts and algorithms applicable to demand forecasting.
09:54–10:48	Data collection and preparation techniques for effective demand forecasting.
10:48–11:00	Building predictive models for demand forecasting using historical data.
11:00–11:30	**Coffee break**



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11:30–12:12	Building predictive models for demand forecasting using historical data. (continued)
12:12–13:06	Evaluating model accuracy and performance metrics for forecasting.
13:06–14:00	Integrating forecasting models into warehouse operations for improved decision-making.

Day 4: Logistics Optimisation Using AI

Applied activity: Participants will develop a logistics optimisation model for a fictional warehouse scenario, focusing on route efficiency and delivery times. They will present their findings to the group, discussing the potential impact on operational costs and customer service levels.
Output: A logistics optimisation report detailing the proposed AI solutions, expected outcomes, and implementation steps.

09:00–09:54	Understanding logistics challenges in warehouse operations and their impact on efficiency.
09:54–10:48	AI techniques for route optimisation and scheduling to reduce costs.
10:48–11:00	Implementing AI solutions for last-mile delivery and its significance.
11:00–11:30	**Coffee break**
11:30–12:12	Implementing AI solutions for last-mile delivery and its significance. (continued)
12:12–13:06	Evaluating the impact of logistics optimisation on costs and service levels.
13:06–14:00	Case studies of AI applications in logistics management and their outcomes.

Day 5: Integrated AI Solutions for Warehouse Operations

Applied activity: In groups, participants will create a comprehensive AI implementation plan for a fictional warehouse, integrating inventory management, demand forecasting, and logistics optimisation. They will present their strategy to the class, focusing on expected outcomes and necessary resources.
Output: A full AI implementation plan with strategic recommendations, projected outcomes, and a change management approach.

09:00–09:54	Combining AI applications for comprehensive warehouse optimisation strategies.
09:54–10:48	Developing a strategic plan for AI implementation across warehouse functions.
10:48–11:00	Assessing the organisational impact of AI technologies on operations and culture.
11:00–11:30	**Coffee break**
11:30–12:12	Assessing the organisational impact of AI technologies on operations and culture. (continued)
12:12–13:06	Change management strategies for successful AI adoption in warehouses.



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13:06–14:00	Future trends in AI and their potential impact on warehouse operations.

The timings provided are estimates and may vary depending on the number of participants and the discussions taking place during the sessions. They are indicative only and do not constitute a binding commitment.

Dates, venues and fees

Current published course plans. Fees are per participant in EUR, excluding unconfirmed taxes.

Venue	Start date	End date	Fee (EUR)
Dubai Confirmed dates	16 Nov 2026	20 Nov 2026	**€3,150.-**
Online Confirmed dates	16 Nov 2026	20 Nov 2026	**€1,250.-**
Cape Town Confirmed dates	30 Nov 2026	4 Dec 2026	**€1,890.-**
Online Confirmed dates	30 Nov 2026	4 Dec 2026	**€1,250.-**
Frankfurt Confirmed dates	7 Dec 2026	11 Dec 2026	**€2,650.-**
Online Confirmed dates	7 Dec 2026	11 Dec 2026	**€1,250.-**
Kuala Lumpur Confirmed dates	14 Dec 2026	18 Dec 2026	**€1,450.-**



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Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
Online Confirmed dates	14 Dec 2026	18 Dec 2026	**€1,250.-**
Paris Confirmed dates	4 Jan 2027	8 Jan 2027	**€2,860.-**
Online Confirmed dates	4 Jan 2027	8 Jan 2027	**€1,250.-**
Istanbul Confirmed dates	18 Jan 2027	22 Jan 2027	**€2,650.-**
Online Confirmed dates	18 Jan 2027	22 Jan 2027	**€1,250.-**
Amsterdam Confirmed dates	1 Feb 2027	5 Feb 2027	**€2,540.-**
Online Confirmed dates	1 Feb 2027	5 Feb 2027	**€1,250.-**
Singapore Confirmed dates	15 Feb 2027	19 Feb 2027	**€2,820.-**
Online Confirmed dates	15 Feb 2027	19 Feb 2027	**€1,250.-**



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Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
London Confirmed dates	1 Mar 2027	5 Mar 2027	**€2,450.–**
Online Confirmed dates	1 Mar 2027	5 Mar 2027	**€1,250.–**
Vienna Confirmed dates	8 Mar 2027	12 Mar 2027	**€2,940.–**
Online Confirmed dates	8 Mar 2027	12 Mar 2027	**€1,250.–**
Dubai Confirmed dates	15 Mar 2027	19 Mar 2027	**€3,150.–**
Online Confirmed dates	15 Mar 2027	19 Mar 2027	**€1,250.–**
Frankfurt Confirmed dates	5 Apr 2027	9 Apr 2027	**€2,650.–**
Online Confirmed dates	5 Apr 2027	9 Apr 2027	**€1,250.–**
Kuala Lumpur Confirmed dates	19 Apr 2027	23 Apr 2027	**€1,450.–**



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Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
Online Confirmed dates	19 Apr 2027	23 Apr 2027	**€1,250.-**
Cape Town Confirmed dates	26 Apr 2027	30 Apr 2027	**€1,890.-**
Online Confirmed dates	26 Apr 2027	30 Apr 2027	**€1,250.-**
Paris Confirmed dates	3 May 2027	7 May 2027	**€2,860.-**
Online Confirmed dates	3 May 2027	7 May 2027	**€1,250.-**
Istanbul Confirmed dates	17 May 2027	21 May 2027	**€2,650.-**
Online Confirmed dates	17 May 2027	21 May 2027	**€1,250.-**
Amsterdam Confirmed dates	7 Jun 2027	11 Jun 2027	**€2,540.-**
Online Confirmed dates	7 Jun 2027	11 Jun 2027	**€1,250.-**



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Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
Singapore Confirmed dates	21 Jun 2027	25 Jun 2027	**€2,820.-**
Online Confirmed dates	21 Jun 2027	25 Jun 2027	**€1,250.-**
Barcelona Confirmed dates	28 Jun 2027	2 Jul 2027	**€2,840.-**
Online Confirmed dates	28 Jun 2027	2 Jul 2027	**€1,250.-**
London Confirmed dates	5 Jul 2027	9 Jul 2027	**€2,450.-**
Online Confirmed dates	5 Jul 2027	9 Jul 2027	**€1,250.-**
Dubai Confirmed dates	19 Jul 2027	23 Jul 2027	**€3,150.-**
Online Confirmed dates	19 Jul 2027	23 Jul 2027	**€1,250.-**
Frankfurt Confirmed dates	2 Aug 2027	6 Aug 2027	**€2,650.-**



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Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
Online Confirmed dates	2 Aug 2027	6 Aug 2027	**€1,250.-**
Kuala Lumpur Confirmed dates	16 Aug 2027	20 Aug 2027	**€1,450.-**
Online Confirmed dates	16 Aug 2027	20 Aug 2027	**€1,250.-**
Rome Confirmed dates	30 Aug 2027	3 Sept 2027	**€2,450.-**
Online Confirmed dates	30 Aug 2027	3 Sept 2027	**€1,250.-**
Paris Confirmed dates	6 Sept 2027	10 Sept 2027	**€2,860.-**
Online Confirmed dates	6 Sept 2027	10 Sept 2027	**€1,250.-**
Istanbul Confirmed dates	20 Sept 2027	24 Sept 2027	**€2,650.-**
Online Confirmed dates	20 Sept 2027	24 Sept 2027	**€1,250.-**



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Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
Amsterdam Confirmed dates	4 Oct 2027	8 Oct 2027	**€2,540.-**
Online Confirmed dates	4 Oct 2027	8 Oct 2027	**€1,250.-**
Singapore Confirmed dates	18 Oct 2027	22 Oct 2027	**€2,820.-**
Online Confirmed dates	18 Oct 2027	22 Oct 2027	**€1,250.-**
London Confirmed dates	1 Nov 2027	5 Nov 2027	**€2,450.-**
Online Confirmed dates	1 Nov 2027	5 Nov 2027	**€1,250.-**
Rome Confirmed dates	8 Nov 2027	12 Nov 2027	**€2,450.-**
Online Confirmed dates	8 Nov 2027	12 Nov 2027	**€1,250.-**
Dubai Confirmed dates	15 Nov 2027	19 Nov 2027	**€3,150.-**



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Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
Online Confirmed dates	15 Nov 2027	19 Nov 2027	**€1,250.-**
Frankfurt Confirmed dates	6 Dec 2027	10 Dec 2027	**€2,650.-**
Online Confirmed dates	6 Dec 2027	10 Dec 2027	**€1,250.-**
Kuala Lumpur Confirmed dates	13 Dec 2027	17 Dec 2027	**€1,450.-**
Online Confirmed dates	13 Dec 2027	17 Dec 2027	**€1,250.-**

Plan your next step

Dates, availability, exact venue, taxes, inclusions and payment terms require written confirmation. This brochure is not a quotation, registration, booking confirmation or visa invitation. Participants receive a Smart Horizon certificate of attendance; programmes are not externally accredited and do not award a professional qualification or designation. Confirm arrangements before booking travel.

For group or in-house training, contact our learning team to discuss your objectives and delivery arrangements.

Contact Smart Horizon

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View the latest course details online