

# How generative AI is transforming e-commerce

Artificial intelligence (AI) is changing what's possible in online retail with exciting capabilities, innovative companies and promising investment opportunities in e-commerce.

Online retailers, top brands, and specialised vendors are quickly evolving to embrace AI, opening the door to investment opportunities. Today's leaders will be best positioned for tomorrow.

The future of e-commerce is here.



### What is generative AI for e-commerce?

Generative AI is a specific type of AI, used to create something new based on a given set of training data.

## Tech Enablers **Datasets**

Collections of data used to train and validate AI

## Capabilities Image generation

Retailers can quickly generate high-quality imagery, showcase products and appeal to specific demographics'

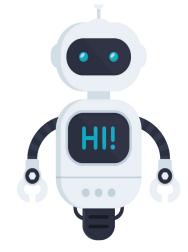
## Capabilities Machine Learning (ML)

Algorithmic data analysis with minimal human intervention



## Natural language processing (NLP)

Understanding and generation of language for chatbots, search functions, product recommendations



## Capabilities Computer vision

Teaching machines to interpret and make decisions on visual data



Tech Enablers

Large language models (LLMs)

Human-like text creation trained on vast amounts of data

## Tech Enablers Graphic processing units (GPUs)

Chips designed to handle complex calculations and parallel processing tasks

### The consumer journey, personalised

Generative AI analyses customer data and behaviour patterns to enhance and personalise the consumer experience, driving online sales and retention.

## Targeted marketing and advertising

Al tools can target customers with tailored promotions to grow engagement and loyalty

### Conversational chatbots

Virtual sales assistants, tailoring product discovery, recommendations and deals in real time



### **Product design**

Offers customisation to consumers and rapid prototype development tools for designers

## Optimised product copy and imagery

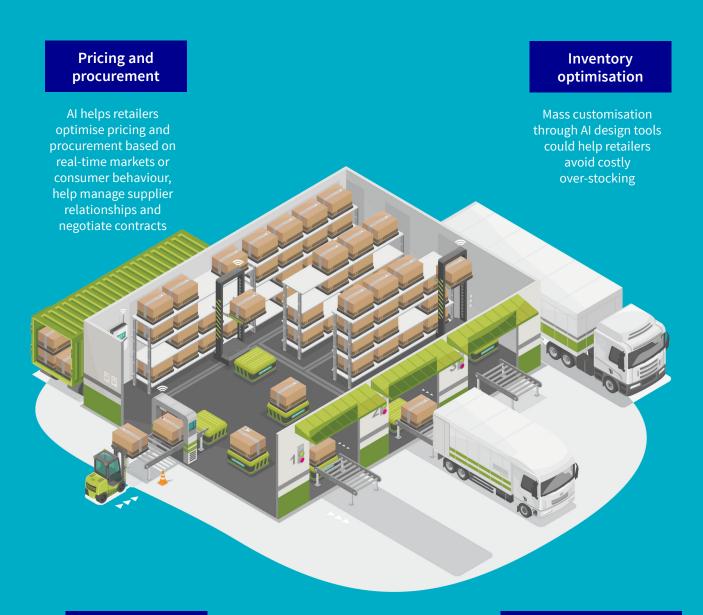
Large volumes can be rapidly generated by AI, translated and optimised for SEO

## Personalised consumer journeys

Al tools can analyse customer browsing, purchasing and zero-party data to generate recommendations

## Generative AI improves profit margins by optimising logistics

To cope with supply chain disruptions and shrinking profit margins, e-commerce leverages AI to streamline logistics across production, shipping, warehousing, inventory and pricing.



## Supply chain logistics

Al can help to reduce costs, improve efficiency and avoid delays.

## Product data and category management

Al can automate the organisation, tagging and curation of extensive catalogues for efficient management

## Are there roadblocks to generative AI in e-commerce?

New technology

Even as retailers race to leverage generative AI, rapidly evolving capabilities and a lack of industry expertise could be barriers to effective implementation.

#### **Transparency**

AI modelling can lack transparency and retailers will need a way to understand the rationale behind outputs

#### **Data collection**

Poor data leads to inaccurate or biased results. Al depends on high-quality, accessible data that is collected, cleaned and engineered for specific use cases.

### High costs

Al computing is costly, driving up the cost of these services. While investments and venture capital are boosting growth today, it's unclear if hardware, software and computing costs will decrease.

#### **Consumer trust**

Using consumer data in AI requires consumer buy-in, which means retailers must balance privacy and consent with data collection.

## Ethics and regulations

Investors should recognise that businesses will need to navigate compliance regulations and ethical considerations while balancing the risk of data breaches.

### The dynamic market ahead in online retail

To cope with supply chain disruptions and shrinking profit margins, e-commerce leverages AI to streamline logistics across production, shipping, warehousing, inventory and pricing.



"Businesses that embrace AI should in turn provide investors the opportunity to benefit from higher profits and growing market share. In an economy which might be growing more quickly, AI can be a potential driver of better investment returns."

Chris Iggo

Chair of the AXA IM Investment Institute CIO of AXA IM Core

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