Retail Agility

NAVIGATING THE AI FRONTIER IN RETAIL

For what comes next

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Introduction

Retail Revolution: A Deep Dive into AI's Impact and Potential

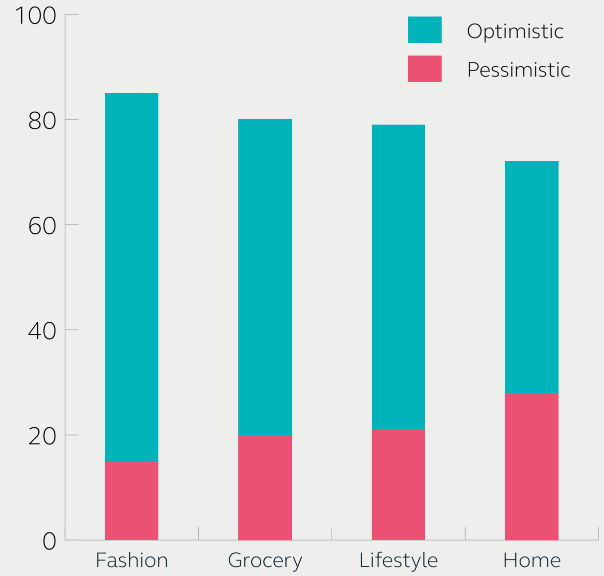
In the dynamic world of retail, the integration of Artificial Intelligence (AI) has emerged as a transformative force, promising unparalleled advancements and presenting an array of challenges. In this report, we present a detailed analysis of our research findings, consider the legal framework and guidance that will govern this developing area and include a glossary of terms to help translate this new language of technology.

Our research indicates a prevailing sense of optimism among the UK's top 100 retailers regarding the acceleration of AI adoption. 79% express positivity towards the transformative power of AI, with the fashion sector leading with 85%, closely followed by the grocery sector at 80%. However, beneath this optimism lies a critical challenge – a low level of confidence in understanding the full impact of AI on the retail industry, with only 3% feeling very confident on how to use it.

3%

Just 3% of retailers rated themselves 10/10 for confidence in understanding the impact of AI on the retail industry.

Are you generally feeling optimistic or pessimistic about the acceleration of AI in retail?



AI ADOPTION

While retailers are actively experimenting with AI, a mere 6% claim to be leveraging it extensively. Supply chain management and logistics emerge as the frontrunners in AI adoption, followed closely by customer service and support, and marketing and advertising.

DRIVING FORCES AND BENEFITS

The motivators behind AI adoption are efficiency, cost savings, enhanced customer experience, personalisation and the competitive imperative to stay technologically current. Within the supply chain, retailers report improvements in demand forecasting accuracy, enhanced inventory management and optimisation and reduced operational costs and waste. However, challenges persist, with integration complexities and employee resistance being key obstacles.

FUTURE INVESTMENTS AND UNCERTAINTIES

Looking forward, retailers are poised to invest heavily in IT infrastructure, automation, and business intelligence, signalling a clear commitment to AI-driven innovation. Yet, amidst this enthusiasm, there lies uncertainty surrounding the long-term legal impact of AI in the retail sector, posing critical questions about regulatory frameworks and ethical considerations.

Perran Jervis
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“In the ever-changing retail landscape, AI is both a beacon of hope and a crucible of challenges. This report unveils the nuances shaping the future of retail in the AI-driven era where enthusiasm meets complexity - and provides an insight into how retailers are using AI to drive efficiency, innovation, and growth.”

Perran Jervis, Head of Retail and Consumer Goods

The rise of AI

In retail, AI's evolution over the last 30 years has transformed how businesses interact with customers, manage operations, and enhance decision-making processes.

1990s
Early experimentation with AI begins, primarily focused on inventory management and supply chain optimisation.

2000s
AI applications start to expand, with the introduction of recommendation systems.

2010
Chatbots and virtual assistants start to gain popularity for customer service and support.

2012
Introduction of AI-powered personalisation tools for e-commerce websites, enabling targeted product recommendations and customised shopping experiences.

2015
Visual search technology emerges, allowing customers to search for products using images rather than text.

2017
AI-powered pricing optimisation tools become widely adopted, helping retailers dynamically adjust prices based on demand, competition, and other factors.

2018
Adoption of AI-driven analytics tools for customer behaviour analysis, allowing retailers to gain insights into shopping patterns and trends.

2019
Integration of AI-powered virtual mirrors and fitting rooms in brick-and-mortar stores, enabling customers to try on clothes virtually.

2020
Expansion of AI in supply chain management, with predictive analytics tools being used to forecast demand, optimise inventory levels, and streamline logistics.

2022
OpenAL launches ChatGPT, marking a significant milestone in AI technology, enabling retailers to provide personalised customer service and support through conversational AI.

2024
Advancements in AI technology continue to reshape the retail landscape, with new regulations playing a pivotal role in guiding its ethical and responsible implementation.

Impact of AI

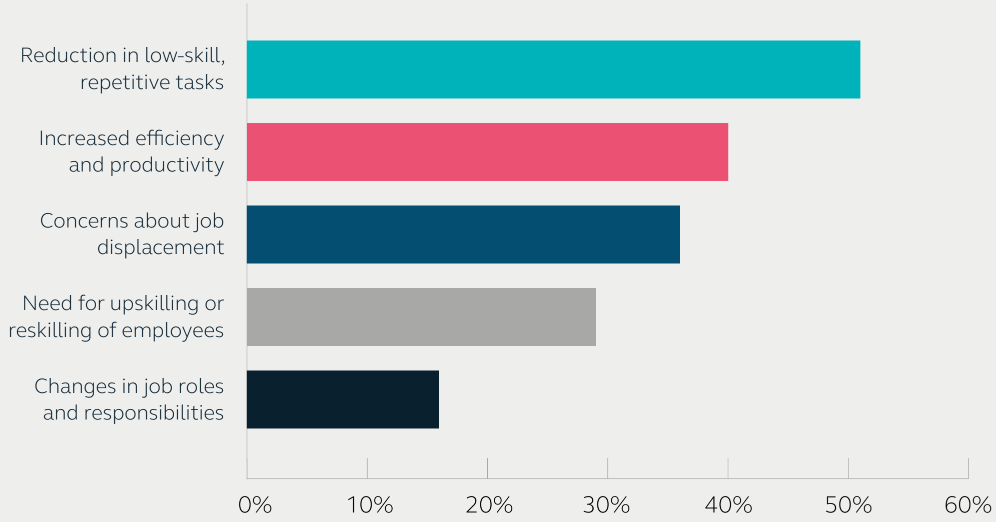
AI's Transformative Influence on the Workforce

As retail undergoes a profound transformation with the integration of AI, from the impact on employment to supply chain optimisation and product development, our research highlights how retailers are navigating the challenges and opportunities it presents.

STRATEGICALLY HIRING FOR THE FUTURE

The retail sector never stands still, and according to our research 49% of retailers are actively planning to hire AI professionals, recognising the need to introduce new specialist expertise into the workforce. A significant 51% anticipate AI technologies affecting their workforce by diminishing the need for low-skill repetitive tasks, with 40% foreseeing increased productivity and efficiency across their teams.

How will AI technologies affect your workforce in the future?



Despite concerns about job displacement (36%), retailers are addressing the issue by providing training and upskilling programmes. Collaborative efforts with employees to identify AI-related solutions and offering career development opportunities showcase a proactive approach to workforce challenges. Long-term perspectives predict AI will increase human capabilities and create job opportunities (30%). Despite some uncertainty about AI (24%), many retailers believe that while there will be some job displacement, new roles will also emerge.

What measures have you taken to address the potential job displacement or changes caused by AI adoption?

17%
Providing training and upskilling programs

15%
Collaborating with employees to identify AI-related solutions

13%
Offering career development opportunities

12%
Implementing policies to ensure fairness and transparency

8%
Redeploying displaced workers to new roles

55%
No specific measures

The research underscores a crucial shift in workforce dynamics, with a significant proportion of retailers recognising the strategic imperative of hiring AI professionals. The anticipation of AI technologies impacting low-skill repetitive tasks raises concerns about job displacement, but the proactive measures taken by retailers, such as training and upskilling programs, reflect a commitment to addressing these challenges together.

AI'S IMPACT ON EFFICIENCY IN SUPPLY CHAINS

For 23% of retailers, AI has improved demand forecasting accuracy, while 21% have experienced enhanced inventory management and optimisation. The reported enhancements in demand forecasting accuracy and inventory management underscore how AI's is revolutionising supply chain efficiency. However, it's essential to address the integration complexities with existing legacy systems, which often entail contractual and regulatory implications.

How has the integration of AI technologies impacted your supply chain operations?

Overcoming challenges, especially integration complexities with existing systems (23%), remains a primary focus. Resistance to change from employees and partners (13%) and regulatory compliance and oversight (10%) present significant obstacles. However, 23% believe AI will revolutionise supply chain efficiency and agility.

WHAT CHALLENGES HAVE YOU ENCOUNTERED WHEN IMPLEMENTING AI IN YOUR SUPPLY CHAIN?

1. Integration complexities with existing systems
2. Resistance to change from employees or partners
3. Regulatory compliance and oversight
4. Data security and privacy concerns
5. High initial implementation costs

Perran Jervis, Head of Retail and Consumer Goods comments

Difficulties with integration exacerbated by resistance to change demonstrates the need for proactive, operational and legal strategies.

Resistance to change from internal stakeholders and partners, as highlighted in the findings, demonstrates the need for proactive legal strategies. Collaborative efforts must be made to ensure compliance with evolving regulations while mitigating potential legal risks associated with AI implementation. As AI's role in supply chain operations evolves, it is imperative for retailers to anticipate and navigate emerging regulatory landscapes to safeguard against potential liabilities and uphold ethical standards.

Adoption of AI

Experimentation to Strategic implementation

Although AI is emerging as a transformative force in the retail sector, the journey for most retailers towards widespread AI adoption is still in its experimental phase. According to our research, only 27% of retailers are actively experimenting with AI, with a mere 6% stating extensive usage.

When it comes to leveraging AI-generated data for decision-making, only 7% of retailers rely on AI extensively, while 26% consider AI as a secondary source to traditional data. The spotlight on AI adoption is brightest in supply chain management and logistics (33%), followed by customer service and support (23%) and marketing and advertising (20%).

The primary driver for AI adoption in retail is efficiency, with a significant 62% citing cost savings as the top factor. Enhanced customer experience and personalisation follow closely at 42%, with pressures to stay technologically relevant acknowledged by 21% of retailers.

CHALLENGES AND GOVERNANCE

While the benefits of AI adoption are apparent, retailers are grappling with establishing AI governance and compliance guidelines, as indicated by 51% of respondents. Despite the ongoing challenges, 49% of retailers are actively hiring or planning to hire AI professionals, anticipating significant changes in workforce dynamics to enhance productivity and efficiency.

COMPETITIVE EDGE

There exists a split opinion on whether AI provides a competitive edge in the retail sector. Approximately 32% of respondents agree with this statement, 31% disagree and 37% remain undecided. Retailers remain indecisive on whether the adoption of AI will provide competitive advantages and shape the retail sector.

Primary drivers for AI adoption

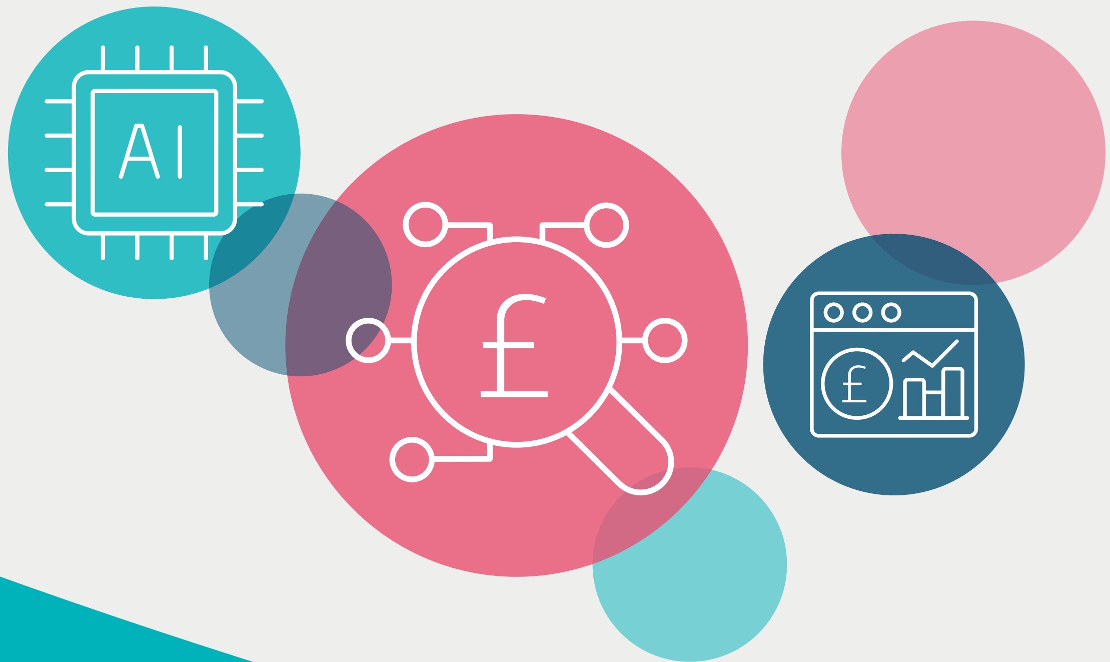
62%
Improving efficiency

42%
Customer experience and personalisation

21%
Competitive pressure

“As the retail industry undergoes an evolutionary shift with the integration of AI, its approach is marked by experimentation and strategic adoption. While efficiency and cost savings remain at the forefront, enhancement of customer experience remains an imperative. The current uncertainty about the benefits of using AI highlights the need for ongoing exploration and adaptation to reap any potential rewards.”

Perran Jervis, Head of Retail and Consumer Goods



Future of AI

Navigating the next frontier of innovation

Dan Read, Partner Technology & IP comments

As retailers look to the future, strategic investments take centre stage, with 67% prioritising IT infrastructure, including cloud hosting and networks. Grocery retailers lead the charge, with 80% planning to spend on their IT systems. Other key areas for future expenditure include automation (56%), warehouse distribution and logistics (51%), sales platforms (51%) and business intelligence/analytics (45%). Significantly, over 50% of retailers view their technological investments as pivotal for enhancing their resilience and efficiency.

Which of the following areas of technology is your company investing in?

67%

IT infrastructure e.g. cloud hosting, networks

56%

Automation/AI

51%

Sales platform

51%

Warehousing, distribution and logistics/Other inventory management

45%

Business intelligence/ data analytics

32%

Robotics

Investing in IT infrastructure and emerging technologies presents both opportunities and risks for retailers. Whilst investing in the right AI solutions could have a substantial benefit for businesses the rapid development of new technology often gives rise to a concern about when and what product to invest in whilst maintaining flexibility.

Increasingly retailers are embracing multi-supplier ecosystems to ensure that they have the option to replace suppliers and upgrade systems in a more agile way and are looking to contractual structures to enable this move away from traditional single source arrangements. Organisations are also choosing to invest in software vendor products but are looking to service integrators and consultancy organisations to actually implement them and be responsible for organisational change at the same time.

Addressing the challenges of AI adoption, only 51% of retailers are proactively establishing clear AI governance and compliance guidelines to foster a culture of AI literacy within their organisations. Collaboration with AI technology vendors and partners is a strategy endorsed by 28% of retailers. Looking at legal oversight, 80% of grocers believe AI's increasing role in retail requires heightened legal scrutiny to address ethical and privacy concerns. Only 9% of retailers think AI will have no significant long-term legal implications. Furthermore, 80% of all retailers express uncertainty about the long-term impact of AI on legal parameters.

When deploying AI, it is important to create a practical governance framework to enable the business to make informed decisions on when not to implement and use the new technology. This framework needs to take into account the legal, ethical, practical and financial consequences and benefits of AI deployment and needs to be a conversation which all parts of the business needs to participate in rather than it being the preserve of the IT or legal departments.

What legal and regulatory challenges have you encountered or anticipate as AI technologies become more integrated into the retail sector?

81%
Navigating intellectual property and liability issues in AI technologies

72%
Data privacy and security concerns in AI-driven customer interactions

68%
Addressing potential biases and discrimination in AI-driven decision-making

62%
Compliance with evolving AI-related regulations and standards

56%
Legal implications of AI-powered product recommendations and marketing

48%
Ensuring transparency and fairness in AI-powered pricing and promotions

Dan Read, Partner Tech IP and Data comments

As retailers prepare for the future, it is clear they need to make strategic investments in IT infrastructure and emerging technologies to keep pace with market demands and maintain competitiveness. The legal framework, especially around the use of AI, demands proactive governance and compliance to address ethical and privacy concerns. Navigating these challenges requires a holistic approach that combines technological innovation with a keen understanding of legal parameters to ensure a sustainable and responsible future for the retail industry.

AI Regulation

Three key regulations shaping the Retail landscape in 2024

The results of our research has shown that the dawn of Artificial Intelligence (AI) beckons a new era of possibilities for the retail sector, promising new levels of efficiency, personalisation, and innovation. However, amidst this transformative wave, retailers must navigate a labyrinth of regulations to harness the full potential of AI while mitigating risks and ensuring compliance. In 2024, three pivotal regulations are demanding attention and strategic adaptation:

1 AI ACT

The cornerstone of AI regulation, the EU's "AI Act," ratified in December 2023, stands as a pioneering effort to establish a comprehensive legal framework governing AI technologies. Notably, the Act imposes stringent transparency requirements on AI companies operating high-risk technologies, aiming to enhance accountability and safeguard consumer rights. Retailers leveraging AI-powered solutions must navigate these new obligations, ensuring compliance with transparency standards while fostering innovation within regulatory boundaries. Companies that operate in the public sector, or are deemed 'high risk', must ensure their AI solutions are compliant by preparing fundamental rights impact assessments, an AI road map, and running a company-wide AI compliance review.

2 UK'S PRINCIPLES BASED APPROACH

In contrast to prescriptive regulations, the UK government's AI white paper, unveiled in March 2023, embraces a principles-based approach, emphasizing core principles such as safety, transparency, fairness, and governance. Designed to foster a culture of responsible AI adoption, this approach seeks to position the UK as a global leader in AI innovation while prioritising ethical considerations and societal impact. In response to the Government's white paper, the Competition and Markets Authority (CMA) highlighted chatbot errors, harmful search algorithms, fake product reviews, and the targeting of vulnerable customers, as areas where AI can cause consumers harm. For retailers, aligning AI strategies with these principles not only ensures regulatory compliance but also cultivates consumer trust and brand integrity in an increasingly AI-driven marketplace. To prepare, retailers should consider consumer risk laws when integrating AI into B2C products and ask their relevant regulator/s how to practically implement the legislative principles highlighted in the white paper.

3 DATA PROTECTION & DIGITAL INFORMATION

Amidst the AI revolution, data protection emerges as a critical concern, particularly in the realm of generative AI models. The Information Commissioner's Office (ICO), in January, launched consultations to address the intersection of data protection laws and AI development, providing guidance on navigating the complex landscape of AI-generated data while upholding privacy rights. For retailers, understanding the implications of these guidelines is essential, as it informs data governance practices and ensures responsible AI deployment while safeguarding consumer data. The second version of the DPDI Bill, introduced in March 2023, proposes changes to the existing UK GDPR and Data Protection Act 2018. Changes include a reduction in cookies and paperwork, a clarification on rules regarding automated decisions and profiling, and the appointment of a Senior Responsible Individual (SRI). Businesses shouldn't have to make significant changes; however, TLT will continue to keep an eye on the DPDI Bill's progress and provide regular updates on new developments.

Emma Erskine-Fox, Managing Associate Tech IP and Data comments

The government has written to a number of regulators impacted by AI to ask them to publish an update outlining their strategic approach to AI by 30 April 2024.

Retailers should continue to monitor developments and ensure they understand how regulators will practically implement the principles set out in the white paper.

Conclusion

Recommendations for navigating uncertainty and embracing AI

Perran Jervis, Head of Retail and Commerical Goods

Our research has shown that an AI enabled future for the retail sector is an exciting and inevitable prospect. But uncertainty in the industry on how to adopt the technology, and where to rely upon it, shows that its adoption as a helpful tool (and not an output in itself) in driving efficiencies and other benefits must be carefully handled with appropriate processes, checks and balances.

As we venture into the exciting future of integrating AI into the retail sector, it's crucial for retailers to acknowledge and address the inherent risks that come with this transformative technology.

1 ESTABLISH ROBUST DATA MANAGEMENT

In tackling the legal challenges concerning big data in retail, a proactive approach is key. Retailers should establish clear policies for data collection, storage, and usage, ensuring compliance with GDPR while prioritising data security. Collaboration with legal experts specialising in data privacy is crucial. AI can aid in automating compliance processes, flagging potential legal risks, and streamlining data management, thereby reducing the burden on retailers. By integrating AI-driven solutions with legal expertise, retailers can effectively navigate the legal landscape while maximising the benefits of big data to enhance customer experiences and drive business growth.

2 ADOPT ETHICAL AI PRACTICES

Ethical considerations surrounding generative AI technologies demand a thoughtful and transparent approach, particularly with regard to the approach to personalisation, emphasising accountability to mitigate any potential risks associated with unintended consequences. By doing so, retailers pave the way for responsible AI practices that inspire public trust and confidence through ethical AI and clear communication about the use of AI in retail operations.

3 HARNESS AI-DERIVED INSIGHTS

Collecting and using AI-derived insights will help retailers to refine product offerings, manage stock control more efficiently and sustainably and deliver personalised shopping experiences, fostering customer loyalty and satisfaction. As AI continues to evolve, the future promises an enriched retail landscape with elevated customer experiences and optimised operational efficiency.

The future of AI in retail is a delicate balance between mitigating risks and embracing opportunities. Retailers that prioritise data, ethical considerations and AI insights stand to reap the benefits of improved margins, streamlined operations and enhanced customer satisfaction.

“As retailers embrace the transformative journey into AI, finding the delicate balance between mitigating risks and embracing opportunities becomes the compass for innovation”.

AI Glossary

Common terms and uses in retail

Artificial Intelligence (AI):

Definition: AI refers to the simulation of human intelligence in machines that are programmed to think and learn like humans.

Use in retail: AI in retail involves using algorithms and machine learning to analyse data, predict customer behaviour, optimise inventory and enhance the overall shopping experience.

Generative AI

Definition: Generative AI refers to a class of artificial intelligence algorithms and models that are designed to generate new content, whether it's text, images, audio or other types of data. These systems use machine learning techniques, often based on neural networks, to learn patterns and generate novel content that resembles the input data they were trained on.

Use in retail: Generative AI can be applied in various ways to enhance customer experiences, optimise operations and drive innovation.

Hallucinations

Definition: AI hallucinations occur when artificial intelligence systems generate inaccurate outputs not grounded in actual data or reality.

Use in retail: AI hallucinations may lead to faulty product recommendations or misinterpretations of customer preferences, impacting user experiences and marketing strategies. Regular quality control and diverse training data are crucial for minimising these inaccuracies.

Machine Learning (ML):

Definition: ML is a subset of AI that focuses on developing systems that can learn from and make predictions or decisions based on data.

Use in retail: ML algorithms are employed to analyse customer preferences, forecast demand and personalise marketing strategies, improving recommendations and customer satisfaction.

Natural Language Processing (NLP):

Definition: NLP enables machines to understand, interpret and generate human language.

Use in retail: Retailers use NLP for chatbots, customer service automation and sentiment analysis to gauge customer feedback and improve communication.

Predictive analytics:

Definition: Predictive analytics involves using statistical algorithms and machine learning techniques to identify the likelihood of future outcomes based on historical data.

Use in retail: Retailers leverage predictive analytics to forecast sales, optimise pricing and anticipate inventory needs, ultimately improving operational efficiency.

Computer vision:

Definition: Computer vision enables machines to interpret and make decisions based on visual data, often through image or video analysis.

Use in retail: Retail applications include cashier-less stores, inventory management through visual recognition and personalised shopping experiences through facial recognition.

Augmented Reality (AR) and Virtual Reality (VR):

Definition: AR overlays digital information onto the real world, while VR creates a simulated environment.

Use in retail: AR and VR are utilised in retail for virtual try-on experiences, virtual showrooms and interactive product displays, enhancing the online shopping experience.

Supply chain optimisation:

Definition: AI is used to optimise the end-to-end supply chain processes, from production to distribution, by predicting demand, reducing lead times and minimising costs.

Use in retail: Retailers apply AI to streamline supply chain operations, reduce shortages and overuns and enhance overall efficiency.

Chatbots:

Definition: Chatbots are AI-driven virtual assistants that can engage in conversations with users.

Use in retail: Retailers employ chatbots for customer service, order tracking and providing product information, improving customer support and engagement.

Dynamic pricing:

Definition: Dynamic pricing uses AI algorithms to adjust product prices in real-time based on demand, competition, and other market factors.

Use in retail: Retailers employ dynamic pricing to optimise revenue, increase competitiveness and respond to changing market conditions.

Fraud detection:

Definition: AI is used for identifying and preventing fraudulent activities through pattern recognition and anomaly detection.

Use in retail: Retailers use AI to detect and prevent fraudulent transactions, enhancing security and protecting both customers and the business.

About TLT

TLT advises many of the UK's leading retailers and consumer goods businesses. Our clients represent over 15,000 stores, one million employees and £100 billion of retail sales.

Our national retail team has an in-depth understanding of the industry, offering advice in context and solutions that work. We provide strategic advice on major projects, as well as support for in-house teams on day-to-day matters.

We are ranked among the very best law firms in Chambers UK 2020 for Retail (UK-wide), an independent guide to the legal profession. We also support retailers through our retail-specific training programme, seminars, e-alerts, industry reports, risk reports and are actively involved in retail industry groups.

To find out more visit **tlt.com/retail**

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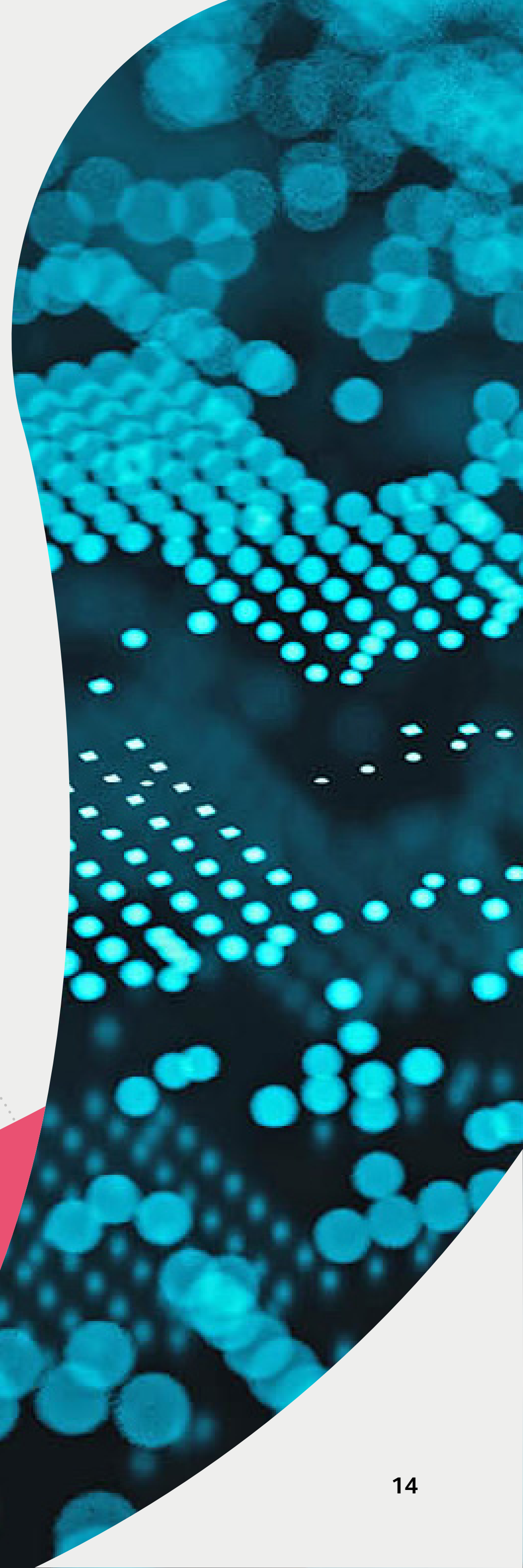
Find out more

RESEARCH METHODOLOGY

To gain a sector and category view of the retail sector, independent research was conducted by GlobalData on behalf of TLT LLP. GlobalData interviewed 100 leading UK retailers in December 2023. In all cases, interviews were carried out with senior management. The sample was representative of sectors within the retail space including: food and grocery; fashion and beauty; home sectors; and lifestyle and leisure.

All charts, data and statistics featured in this report are the product of the research. All rights reserved, March 2024.



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