3D Cloud

Making a Measureable difference

At 3D Cloud, we believe the best ideas move retail forward when they are shared, celebrated, and put into practice. That is why we are proud to support the RTIH Retail Technology Hot 100 - this year's list of the 100 technology vendors making the biggest impact on retail.

2026 has been a challenging year for UK retail, but those willing to invest are still finding meaningful growth opportunities. Several have outperformed the wider market by backing fresh investment, whilst spring's brighter weather provided a welcome lift across the sector - proof that, with the right conditions and the right technology, retail can still flourish.

What stands out about this year's Hot 100 is technology delivering measurable results in real retail environments, tackling operational complexity while enhancing both business performance and the customer experience.

The same goes for retailers backing it: none of this works without those willing to invest and innovate rather than wait, and that choice deserves recognition too.

At 3D Cloud, we see this daily with retailers like B&Q, John Lewis, and DFS, where the hardest part was never the technology; it was finding partners on both sides who understood the customer well enough to make it worth using. If 3D Cloud has earned its place on this list, it's largely thanks to those partnerships.

Congratulations to everyone recognised this year, and thank you for helping shape the future of retail technology.

Leigh Davidson, Managing Director, UK and International at 3D Cloud

Vineta Bajaj: One should judge tech by the size of the problem it attacks and whether it can prove that, in the real world, it pays.

BORING WINS

As a RTIH Hot 100 judge, Vineta Bajaj argues the most bullish signal in this year's list is that the hype has quietly moved from the front of the shop to the back.

I have judged enough of these lists to know when the ground shifts. Two years ago almost every entry for award shortlisting was a chatbot with a nice interface and a demo that fell over the moment you asked it a second question.

This year the companies that made me sit up are the boring ones. The ones fixing whether the product is on the shelf, whether the stock in the van is where the system says it is, whether the robot in the warehouse pays for itself. So why is boring a compliment?

The tech entries that earned their place this year have one thing in common. They run in the background. They handle the routine 80% of a task and surface only the exceptions a human should think about, and they do it without a dashboard or a launch event. That is the opposite of the copilot-

and-chatbot wave that has dominated many shortlists, most of which has since gone quiet.

The reason is simple and slightly brutal. Very few of those companies were ever clear on the problem they were solving, and fewer still had the data discipline to solve it. You can bolt the cleverest model in the world onto a broken process and a messy data set, and all you get is a faster version of wrong. Shit in, shit out. The founders who understood that are the ones still standing.

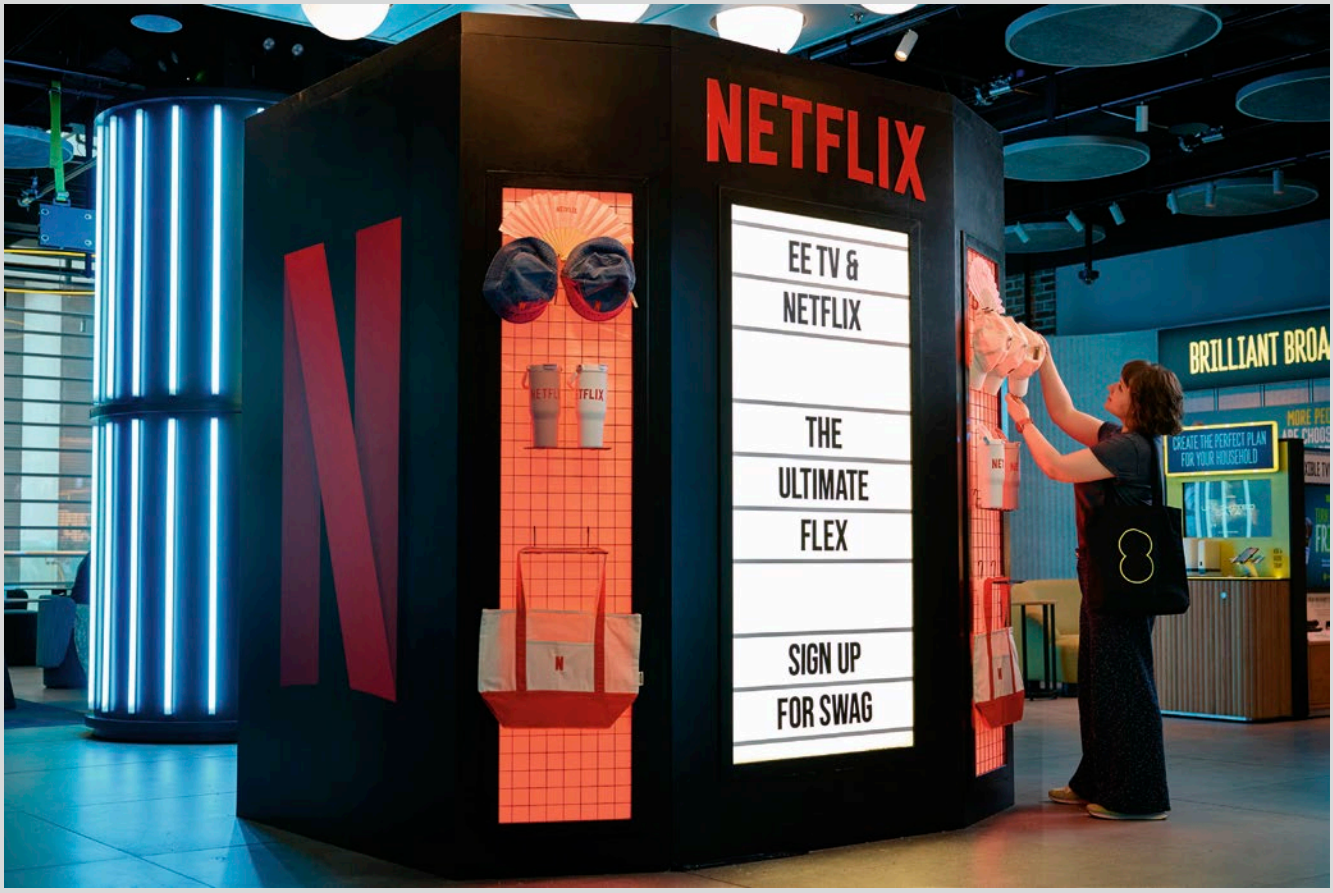
The second shift is that autonomy stopped being a science project. For years the robots, the drones and the computer vision stores on these lists were sold on the wow. You watched the video, you nodded, and then you asked what it cost to run and the room went quiet. That changed this year.

The strongest entries in warehouse robotics, shelf scanning and last mile delivery now lead with the number that matters: cost per pick, cost per drop, hours of manual counting removed.

One of them can tell you it delivers several pounds cheaper than a human courier, which is the difference between last mile being a permanent drain on margin and an actual advantage. I spent a decade around warehouse automation, so I know how rare it is to see this category talk about economics before it talks about hardware. When it does, pay attention, because that is the sound of a technology crossing from interesting to inevitable.

The third theme is the one that most founders get wrong when they pitch me. Everyone now has access to the same frontier models. That means the model is not the moat, and a thin wrapper around someone else's model is not a business. The defensible companies on this shortlist are doing something harder and far less glamorous. They are taking an old, unloved category, workforce

One thing the Hot 100 puts to bed. The store is not dying, its role and job is changing.



management, replenishment, store execution, and rebuilding it from the ground up with AI in the foundations rather than bolted on the side.

Better still, they own a flywheel of real production data that improves with every shift, every pick, every store. That data is the moat, and you cannot buy it or prompt your way to it. It has to be earned in the messy real world, which is exactly why it is worth something.

But of course, everyone will ask about the thing that is starting to sound the most interesting, especially for retailers. Agentic commerce, the AI that discovers and buys on the shopper's behalf is coming or rather, is here! And it will reshape the funnel when it arrives. I judge on production, not on promise, so I kept my enthusiasm in check.

The companies claiming agentic capability today are mostly showing it in a controlled sandbox, not running it across a live estate at peak on a wet Tuesday in November. That's a reminder to tell the difference between a pilot and a business. Ask me again next year and I suspect this becomes the headline, but I don't think it is there yet en masse.

One more thing the shortlist put to bed. The store is not dying, its role and job is changing. The most interesting store technology this year was not trying to replace the shop with a screen. It was making the physical estate work harder, cheaper and smarter, because the people building it understand that a store is still the highest converting, most profitable channel most retailers own.

So here is what this year taught me, and it is the same lesson I apply running multiple global finance functions. One should judge technology by the size of the problem it attacks and whether it can prove that, in the real world, it pays.

The flashy front-end that dazzles in a boardroom is rarely the thing that moves your cost base or your cash. The boring company fixing an expensive, structural problem it can actually measure almost always is. Think like an owner rather than a spectator, and you stop being seduced by the demo and start being interested in the deployment. The most exciting retail technology I saw this year does not look exciting at all. That is precisely why it will win.

A major shift is autonomy no longer being a science project.

So HOT right now

In partnership with 3D Cloud, RTIH is pleased to launch its first ever Retail Technology Hot 100 List.

We're **bringing you the hottest companies whose solutions and systems are helping drive the retail sector forward.**

Our Founder and Editor, Scott Thompson, drew up a list of 150 companies that had consistently been on his radar over the past 12 months whilst bringing our community the latest retail tech news and views that matter. These companies operate across the omnichannel retail landscape (stores, online, mobile, supply chain, payments etc).

Our judging panel, including Vineta Bajaj, Group CFO, Holland & Barrett, Dan McGrath, JD Group Customer Operations, JD Sports, Dr. Astha Purohit, Director of Product Management, Customer Data and Identity, Walmart, and Paula Bobbett, Chief Data and Digital Officer, Boots, provided feedback on those who have the most innovative, forward thinking technology offerings and are also best addressing retailers' current challenges, painpoints, and opportunities.

The judges used the following framework:

1. **Retailer problem fit - how meaningful, strategic, and widely felt the retailer pain being addressed is.**
2. **Production traction in retail (2025–2026) - real named retailer deployments, pilots.**
3. **Innovation and defensibility - genuine technical novelty paired with a defensible competitive position.**

And there was also a public vote, with thousands of members of our community of retail tech enthusiasts getting involved. Thanks to all those who took part! Based on the judging panel's feedback and the public vote, we then drew up our first ever RTIH Retail Technology Hot 100.

So, without further ado, here are the 100 hottest global retail technology ventures right now. Drum roll, please...

TOP 100

1. Everseen

Our judges said: Problem fit is strong, shrink is unambiguously board level. Traction is also strong: 140,000+ checkouts, many of the top 20 global retailers as customers, Kroger across almost 2,000 stores. Nobody else on the Hot 100 List has that depth of proven, renewed production.

2. Hanshow

Our judges said: Leading the way in the ESL enhancements space and impressive innovation with its digital twin capabilities.

3. OpenAI

Our judges said: The problem it addresses, the customer relationship migrating into the chatbot, is the single most consequential shift in retail distribution. Traction scores lower because the named retail deployments (Loblaw, Instacart, DoorDash apps) are live but genuinely early.

There are challenges as Google, Amazon, and Anthropic are all contesting the same layer. On the flip side, it isn't a retail tech vendor. It's the disintermediation threat your board should fear as much as court, since a native commerce layer taking a cut of every conversational sale would invert the economics for everyone below it.

4. Starship Technologies

Our judges said: Starship has done the thing everyone in last mile has promised for a decade and almost nobody has delivered, which is make the economics work. Its pavement robots run the largest autonomous delivery network in the world and come in around three to four pounds cheaper per drop than a human courier. Cracking the unit economics is the hard part, and they have. I also know the founder very well and really rate the tech they have in the background.

5. Vusion

Our judges said: Category leader in electronic shelf labels and 2026 RTIH AI in Retail Awards winner. Foundation infrastructure for real–time pricing, promotion, and dynamic shelf at retail scale.

6. Dexory

Our judges said: Dexory has gone after one of the oldest lies in a warehouse, which is that anyone knows what is really on racking. Its autonomous robots scan the aisles and build a live digital twin that sits on top of the warehouse system you already run, hitting around 99.9% accuracy and taking out 16-plus hours of manual counting a day. What I like is that they fixed inventory truth without asking anyone to rip out their existing systems. This is great for anyone in the supply chain, and also for finance people!

7. Trigo

Our judges said: Trigo is the most interesting story on my list. It built world class computer vision for cashierless stores with Tesco and REWE, watched that market stall, and re-pointed the exact same technology at shrink and loss prevention using the cameras retailers already have on the ceiling. Taking a stalled moonshot and turning it into a boring, high ROI product is a masterclass in following the problem instead of the hype.

8. Stripe

Our judges said: A strong player in the payments space, combining with

Instacart.

agentic. Strong traction, the core payments production is enormous, though the ACP specific deployment is new. Powerful defensibility on the developer moat, network and standard setting position as ACP co-author. The agentic angle is still nascent, it's not retail specialised, and it sits in a knife fight on take rate with Adyen and Checkout.com. Adyen arguably has the cleaner pure payments moat; Stripe wins here only on agentic positioning.

9. Symbotic

Our judges said: The deepest structural cost play. Strong problem resolution, supply chain labour and throughput is the biggest cost lever in the business. Solid traction, Walmart anchor and a multi-billion backlog, docked for lumpy, slow deployment cycles.

Good systems integration depth and near absolute switching costs once installed. Heavy Walmart customer concentration is a genuine single point risk, the model is capital intensive with long paybacks, and its execution/financial reporting history has had wobbles. A moat, but a lumpy one.

10. Foundit!

Our judges said: This intent led commerce platform is rapidly becoming an established player with major retail clients including B&Q, Tradepoint, and John Lewis & Partners. Delivering measurable results with fast deployment and integrating well with retail operations.

11. Simbe

Our judges said: Simbe is solving the fact that no one knows what is on the shelf, and that finding out by hand eats around 30 hours per store every week. Its robots scan shelves for availability, pricing errors, and shrink, and hand people back the time they were spending re-checking the obvious. On-shelf availability looks like an operations problem and is really a data problem, which is exactly why it interests me.

12. Orquest

What they do: Powered by AI, Orquest's in-store workforce scheduling solution and smart planning capabilities simplify store and HR management processes to improve retail interactions at every level of the business. It aims to enhance retail operational efficiency, foster frontline team well-being, and deliver an optimised customer experience.

13. Instacart

What they do: Smart carts, agentic shopping, online platforms (Aldi USA).

14. VoCoVo

What they do: Retail team communication solutions provider, improving business efficiency, and customer experience for businesses.

15. Sitoo

What they do: Unified commerce platform anchored by a Point of Sale (PoS) solution.

16. Quorso

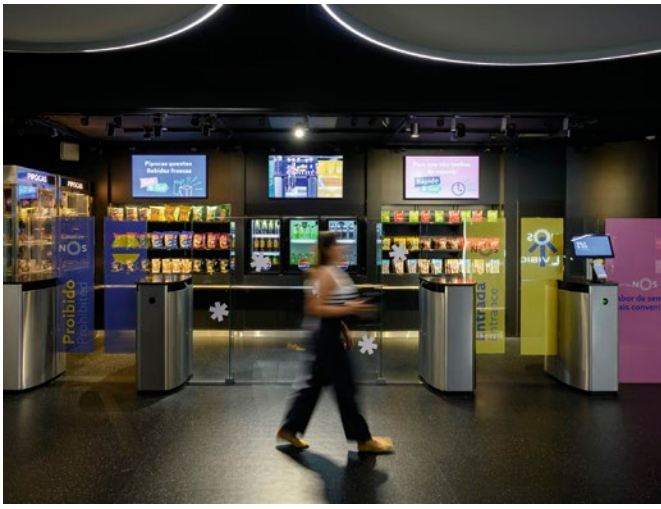
What they do: Connects an entire retail operation in one platform, unifying siloed systems, and turning complex data into daily actions. Driving smarter decisions, faster execution, and better store performance.

17. Shopify

What they do: Global commerce company, providing tools to start, grow, market, and manage a retail business.

18. RELEX Solutions

Our judges said: A strong solution to an overarching retail problem, forecasting, availability, and waste hit the P&L in three places at once. Also strong on implementation base and traction: 700+ implementations and a credible named base (M&S Food, Home Depot, Circle K).



Sensei.

19. Sensei

Our judges said: Heavy, credible AI use for item recognition, analytics, and operational decision support. Customer impact is strong: seamless, queue free shopping, and better availability.

20. Focal Systems

Our judges said: The most balanced scorecard in the field, solid, not spiky. Solid if unglamourous problem fit (on-shelf availability is pure lost sales, but narrower than shrink or forecasting). And solid traction on 300,000+ cameras and Walmart heritage, plus the Pricer integration.

And just as solid on defensibility, on the proprietary camera and two billion image corpus. A single use case, in a lane being squeezed from two sides-vision AI commoditisation above, and shelf–scanning robots (Simbe) plus ESL camera combos beside it. Hardware deployment cost and a low visibility ownership picture are the other watch outs.

21. Exotec

Our judges said: Decathlon multi-site Skyfleet, Stadium Norway live. French robotics unicorn delivering production scale warehouse automation across multiple major retailers - the rare robotics story with real multi-retailer scale.

22. Google Cloud

What they do: AI models and solutions, combined with Google's strengths in data and, consumer experience.

23. Adobe

Our judges said: The customer experience layer, earning its slot on our lens. Personalisation is a strong platform to play in (personalisation and content velocity are universal, but lean closer to vitamins than painkillers).

Enormous install base plus the named Tesco 2026 partnership. Firefly and Experience Cloud are strong from a defensibility view, but GenAI content generation is commoditising fast. It's an expensive, heavy stack whose personalisation ROI is notoriously hard to attribute, and the agentic shift threatens the very MarTech layer it sells, if the agent owns the customer conversation, parts of the CX stack get disintermediated. Salesforce Agentforce is breathing down its neck for this exact slot.

24. Ocado Group

Our judges said: Differentiated IP, difficult economics, been trying for a long time. Always had a good problem fit (online grocery fulfilment, narrower because it's channel specific). Traction has taken time but now solid. Defensibility is high on the genuinely patented automation stack. Capital intensive, lumpy, share price volatile, with real partner concentration risk and an unresolved identity question: is it a retailer or a tech licensor? I'm not sure they even know.

25. InPost

Problem fit: Last mile cost, carbon, failed deliveries. Traction: Millions of parcels daily across Europe. Innovation: Dense locker network and routing optimisation.

26. Deliverect

Our judges said: Clever tech to solve managing more than one quick commerce partner on multiple devices.

Starship Technologies.

27. 3D Cloud

What they do: 3D digital asset management platform for 3D product visualisation, serving kitchen, bath, furniture, and outdoor/decking retailers and manufacturers.

28. Mirakl

Our judges said: Continues to be the leading tech on marketplaces.

29. PervasID

What they do: Designs and supplies next-generation passive RFID tag reading solutions for automating inventory tracking, stock taking and asset management processes.

30. Polytag

Our judges said: Saica Flex and Paragon waste journey traceability partnership, February 2026. RFID + sustainability - the credible specialist in what is now a top three 2026 retailer priority.

31. Zebra Technologies

Our judges said: Practical store staff and shopper in-store solutions that are being implemented by many.

32. AutoStore

What they do: Combines robotics, software, cloud technology, data, and AI to help organisations create fulfilment operations that are more efficient, more resilient, and more adaptable to changing demand.

33. Gander

What they do: Connecting shoppers and expiring food to fight waste problem.

34. TPP Retail

What they do: Technology for frontline workers.

35. StrongPoint

What they do: E-commerce fulfilment, last mile solutions, checkout payment solutions.

Hot 100

Dexory.

36. Ocula Technologies

Our judges said: Great tech for understanding website performance and improving GEO/SEO optimisation.

37. Aptos Retail

What they do: Unified commerce solutions for retailers. Its cloud native PoS and enterprise technologies are used by hundreds of retail brands around the world.

38. Particl

Our judges said: Particl is doing something genuinely clever with data. It reconstructs what competitors are really selling, at what price and what stock levels, from public signals across hundreds of millions of products, and it now plugs straight into tools like LLMs. The honest caveat is that the data is modelled rather than measured, so you treat it as signal and not gospel, but as a way to read the market without paying a research firm a fortune for a stale PDF, it is a smart build.

39. Rokt

Our judges said: Post-purchase monetisation - another way to improve on site margins.

40. Poq

What they do: SaaS company that enables retailers and DTC brands to create fully customised mobile native apps.

41. Wing

Our judges said: Early days but this is an innovative drone solution. Not sure if it can work in the UK but a great solution in the US.

42. Salesforce

Our judges said: Clever pivot to agentic. Has some great solutions in this space and ahead of some of its competitor set.

43. Retail Express

What they do: Merchandising software solutions for the planning and operational aspects of managing, recording and delivering pricing, price optimisation, promotions, advertising, marketing, and assortment. Provides analytics and forecasts for merchandising and the wider supply chain in a single unified product.

44. Commercetools

Our judges said: First European retailer (Frasers Group) deploying its agentic commerce suite. The composable and agentic shift is the architectural story of 2026.

45. Eagle Eye

Our judges said: Wakefern Food Corp running on the AIR platform for real-time loyalty and personalised promotions. One of the largest US grocery cooperatives serving as the top-tier production reference in the category.

46. Constructor

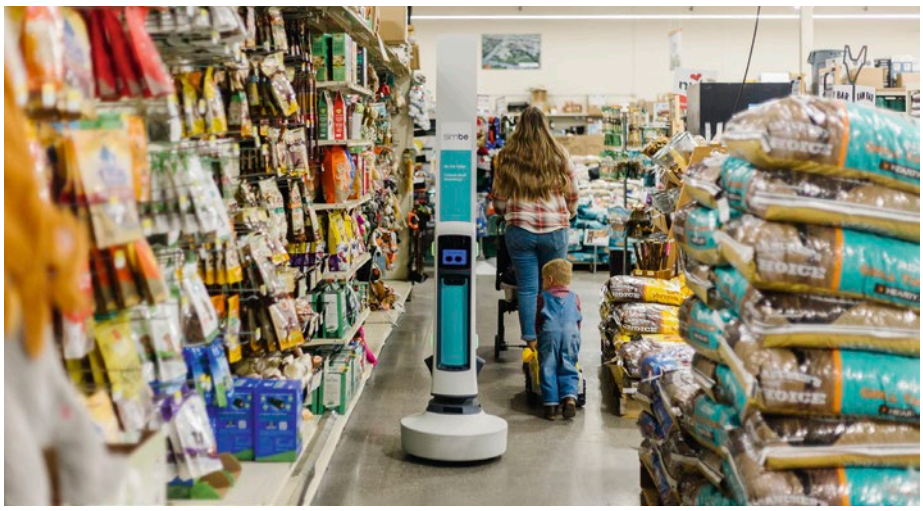
Our judges said: Furniture Village partnership. AI powered search and discovery where the AI is materially integrated, not bolted on, passes the AI substance test that most "AI for retail" claims fail.

47. Manna Air Delivery

What they do: Quietly building out real-world aerial drone delivery solutions.

48. Akeneo

Our judges said: River Island digital transformation. PIM and catalogue category leader; catalogue governance is a universal retailer pain that compounds with assortment scale.



Simbe.

VoCoVo.

49. Satalia AI

Our judges said: Waitrose AI powered delivery route optimisation. Applied AI on a clearly defined retail operations problem with a major grocer deployment - concrete, measurable, replicable.

50. Siena AI

Our judges said: Siena AI is taking on customer service, which is still either scripted bots that everyone hates or expensive outsourcing. Their agent handles up to 80% of interactions across a hundred languages while holding a brand's actual voice. It is agentic AI pointed at a real cost line rather than a demo, and the open question is whether it can hold its edge in what has become a very crowded category.

51. Inspectorio

Our judges said: Gap Inc. AI traceability platform across global supply chain. Supply chain transparency plus AI with a major retailer logo, currently within the last quarter.

52. Made With Intent

Our judges said: Uses behavioural signals and AI to nudge customers to certain behaviours. We're trialling it and the first set of results are impressive, plus it's relative low tech lift. Worth a look!

53. Advertima

What they do: Real-time in-store retail media solution.

54. Bambuser

What they do: Video commerce platform.

55. Auror

What they do: Retail crime intelligence built for retailers and law enforcement to make stores safer and communities stronger.

56. Cleveron

What they do: Parcel lockers and last mile robotics.

57. Datitude

What they do: Unified data platform for omnichannel retail.

58. NCR Voyix

What they do: Checkout solutions and platform-based offering, deployed at likes of Morrisons and Sainsbury's.

59. Afresh

Our judges said: Afresh is attacking the hardest and least glamorous problem in grocery, which is fresh. Software sorted out packaged goods years ago and did almost nothing for produce and meat, where shelf life is measured in days and the data is a mess. Afresh built AI specifically for that, and its customers report up to a quarter less shrink, a few points of sales uplift and materially better inventory turns. Getting fresh demand right pulls shrink, availability and margin in the same direction, which is the whole game.

60. Ecrebo

What they say: Customer engagement platform.

61. Pricer

What they do: In-store communication and digitalisation specialist.

62. Fynd

What they do: AI native unified commerce platform.

63. Goddiva

What they do: Online fashion retailer that develops technology solutions in-house, including an AI powered virtual try-on experience.

64. HyperFinity

What they do: Helps retailers make the most of their data using analytics and AI.

65. Augmodo

Our judges said: Genuinely advanced application of augmented intelligence in retail operations. This is not just for one task (like visual merchandising or workforce efficiency), but a multi-layered AI system that fuses digital simulation, predictive analytics, and human workflow orchestration. It's a technological leap in how retailers visualise, test, and deploy changes in stores.

66. Sereact

Our judges said: Sereact is the one that gets the nerd out in me! Industrial robots have always been rigid and hopeless with messy, unpredictable items. Sereact built a software first robot brain that plugs into almost any hardware and learns from real production, over a billion actual picks with one human intervention in roughly fifty-three thousand. The clever part is that the value sits in the brain and not the robot, and it improves with every shift.

67. Red Ant

What they do: Red Ant's RetailOS is a store associate app for increased

Hot 100

Exotec.

sales and exceptional experiences - an in-store solution that turns every interaction into revenue.

68. Movable Ink

What they do: Helps marketers create more relevant customer experiences across email, mobile, and web through data activation, AI powered decisioning, and personalisation at scale.

69. Vista Technology Support

What they do: Specialises in delivering IT technology deployment and support services in retail, hospitality, healthcare and entertainment sectors.

70. GK Software

What they do: Cloud-based retail solutions powering innovation in omnichannel retail, personalisation, and AI powered pricing.

71. Brarista

Our judges said: Makes a personal service (bra fitting for lingerie retailers) more accessible to customers who might struggle with traditional ways of engaging expertise.

72. Barron McCann and Retail Assist

What they do: Installs, deploys and maintains IT technology for some of the world's largest brands in the retail, hospitality, leisure, and corporate sectors.

73. Uncrowd

What they do: Data business offering experience analytics.

74. Zitcha

What they do: Retail media platform, bringing together onsite, offsite and in-store advertising with planning, and reporting in one dashboard.

75. Toshiba Global Commerce Solutions

What they do: Integrated in-store solutions enhancing customer engagement, improving in-store experiences, and accelerating digital transformation.

76. Snappy Shopper

What they do: Convenience store delivery service provider.

77. Proximity

What they do: Helps store teams to build lasting relationships with customers by bringing everything into one place: clienteling, appointments, events, and transactions.

78. Archive

What they do: Technology platform that enables brands to launch and scale profitable resale businesses.

79. AiFi

What they do: Spatial intelligence specialist powering autonomous deployments that reduce shrink, optimise operations, and enhance CX. Supported by partnerships with Microsoft, HP, and Qualcomm.

80. PMC

What they do: Combines consulting with software engineering and 24x7x365 managed services to deliver technology services and solutions across retail, D2C, and broader commerce.

81. WorkJam

What they do: WorkJam's Frontline Operations Platform provides employees with a single application for deskless work that consolidates task management, communications, employee learning, flexible scheduling, and more on a mobile device, shared tablet, or web browser.

Manna Air Delivery.

Shopopop.

82. Rithum

What they do: Helps brands and retailers list, market, and optimise products to sell across all major commerce channels, enabling fast, cost-effective fulfilment and delivery for every order.

83. 1MRobotics

Our judges said: 1MRobotics is the boldest swing on my list, and I have included it knowing that. It builds lights out robotic fulfilment inside a shipping container that you can drop almost anywhere, and it is now pivoting toward unmanned stores. It was born into the q-commerce boom that then collapsed, so the risk is real and I would not pretend otherwise. The boldest idea is usually the one that disappoints, and I would still rather back one swing this ambitious than ten safe ones.

84. SCALA

What they do: Allows retailers to create audience engagement experiences by connecting networks of digital signs, kiosks, mobile devices, websites, and internet connected devices.

85. Nextail

Our judges said: Plausible AI, big names onboard, amazing forecasting capabilities.

86. Shopopop

What they do: Crowdshipping delivery solution.

87. SymphonyAI

What they do: Builds AI applications that help enterprises tackle their most complex, high value challenges, like stopping financial crime, improving store performance, and boosting manufacturing efficiency.

88. Algolia

What they do: AI search and discovery platform.

89. XY Retail

What they do: Unified commerce platform.

90. SOLUM

What they do: Offers solutions such as ESLs, digital signage, power modules, and IoT platforms.

91. QSIC

What they do: In-store audio for a retail media era.

92. Veloq

What they do: AI native grocery fulfilment platform that was spun out from Rohlik Group.

93. Zippin

Problem fit: Queue friction and labour pressure. Traction: Dozens of named deployments across multiple formats. Innovation: Lightweight, rapid deployment autonomous checkout.

94. Zyntrix

What they do: Unifies Open Banking, loyalty, and digital identity in one experience. Enhance existing loyalty programme, or start from scratch with payments, identity, and rewards built in.

95. Trust Retail

What they do: Provides technology that saves retailers time and enhances customer loyalty through a range of purpose-built products.

96. Xiatech

What they do: AI powered composable platform for system integration, data management, orchestration, analytics and agentic AI.

97. YOOBIC

What they do: Platform for retail communication, training, and task execution.

98. shopreme

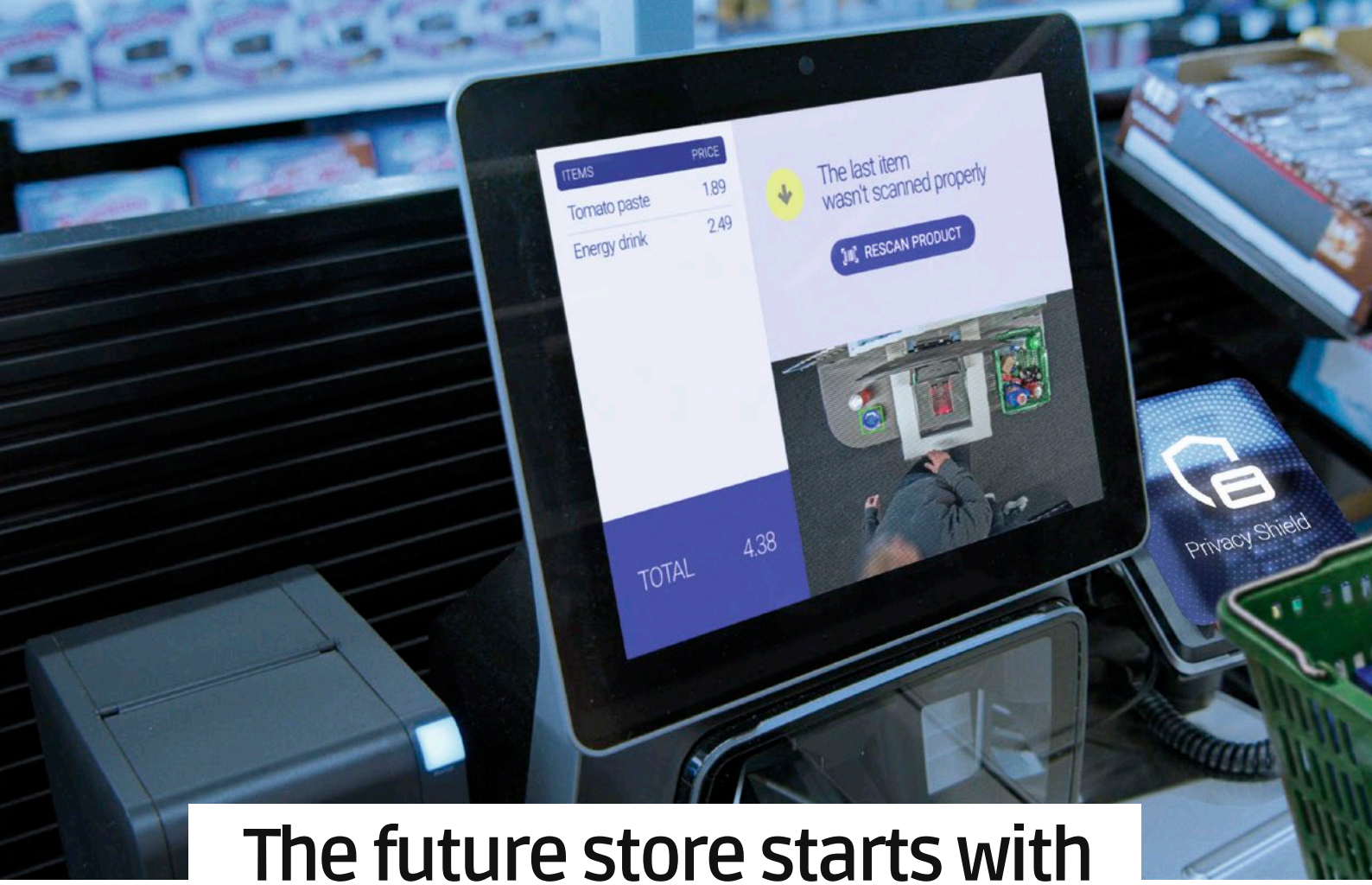
What they do: Scan & Pay on smartphones, handheld scanners, or smart carts, SCOs, AI loss prevention etc, with a single integration, without replacing the PoS.

99. Standard AI

Problem fit: Checkout friction and in-store analytics. Traction: Strong US deployments; acquired by Walmart's Sam's Club. Innovation: Mature computer vision checkout with defensible IP and operational data.

100. Spangle AI

What they do: Building an agentic infrastructure layer that delivers adaptive experiences from discovery to conversion.



The future store starts with CONNECTED INTELLIGENCE

By Joe White, CEO, Everseen

Every minute, a store generates a stream of small signals. An item passes a checkout without a scan. A shelf empties while stock sits in the back room. A queue starts to build. Movement in a high risk aisle goes unnoticed. Each event can affect revenue, service or safety, but stores have often handled them separately and after the opportunity to act has passed.

Each decision involves a pull in three directions. Security asks the store to put stopping losses first. Customer experience asks it to avoid unnecessary delays or accusations. Operational efficiency asks it to involve colleagues only where they can add value. Improving one of these factors at the expense of the others can simply move the problem.

The future store must balance these demands continuously in real-time. It needs to see physical events, understand their context, choose the proportionate responses and learn from the results.

Evercheck, Everseen's checkout revenue recovery solution, combines vision AI with transaction data to see and interpret what's happening before the sale closes.

Everseen

Checkout is a useful place to examine that model because the event and its financial impact can be connected clearly.

Checkout makes the trade-off visible

The latest ECR Retail Loss research found that self-checkout handles 54% of transactions where available. Yet industry estimates of malicious intent behind non-scans vary wildly, ranging from 6% to 80%. The same event may be a mistake, a technical failure, confusion or deliberate action.

Consider a box of chocolates that passes the scanner unregistered, but which is spotted by cameras or other sensors. A hard stop might prevent a loss, but it can also frustrate an honest shopper and cause a queue. Ignoring the event protects shopper flow but allows the sale to be lost.

Calling a colleague every time puts staff under pressure and may provoke entirely unnecessary confrontations. Detection identifies the moment. Getting the call right on the response is an incident-by-incident decision that takes judgement.

The response matters as much as detection

Evercheck is Everseen's checkout revenue recovery solution. It combines vision AI with transaction data to see and interpret what's happening before the sale closes. The system detects dozens of loss and error patterns across self-checkout and staffed lanes, including missed scans, product switching, abandoned transactions and items left in baskets or trolleys.

The operating sequence is simple: detect, nudge, then alert. When the system sees a likely missed scan, it can show the shopper an instant replay and invite a correction. If that resolves the issue, the transaction continues. A colleague is called only when help is still needed.

ECR Retail Loss found that alerts or nudges are generated in roughly 3% to 10% of self-checkout transactions, with shoppers self-correcting in about 80% to 97% of those cases. Most exceptions certainly don't need a confrontation. Revenue is recovered, the shopper avoids an unnecessary challenge, and colleagues can focus on the much smaller number of unresolved events.

That matters when the British Retail Consortium's Crime Report 2026 records around 1,600 incidents of violence and abuse against shopworkers each day. The Crime and Policing Act 2026 the seriousness of the threat. Technology can't remove it, but it can reduce avoidable face-to-face challenges.

Scale turns events into learning

A pilot can prove that a piece of technology works in one controlled setting. The real retail test begins when it has to perform in the real world, across different formats, products, layouts and legacy systems.

Everseen systems review more than 15 million transactions a day across 150,000 checkouts in 10,000 stores. For retailers, that's the difference between a promising demonstration and robust technology proven across multiple live estates.

That volume also makes learning more powerful. Products, promotions and loss patterns change but past experiences can inform future decisions if they are recorded and analysed.

Everseen systems review more than 15 million transactions a day across 150,000 checkouts in 10,000 stores.

Models are refined through transaction data, behavioural analysis and feedback on how events were resolved. Evidence from across the chain exposes patterns that a single trial can't reproduce, while retailer specific feedback tunes the response to each environment.

The return can be proved. A 2024 study conducted by Forrester estimated an average 374% return on investment over three years and break-even in six months. The analytics layer in the software extends this proof to live systems. It lets retailers see their own results through live loss patterns, recovered revenue, colleague involvement and recurring process issues.

The operating model extends across the store

Checkout is only one part of the store where physical activity and historical operational systems fall out of step. An empty shelf may need inventory context. A growing queue may inform workforce decisions. Movement through a high risk aisle may need a security response. The details change, but the operating loop remains the same: observe, interpret, act, measure and learn.

Vision supplies information about what is happening in the physical store. Point of Sale, inventory and workforce systems add commercial and operational context. The intelligence layer turns that combination into a timely action. This approach works with the systems retailers have already built rather than asking them to replace everything before they can start.

Checkout provides a proven starting point for that model. The wider opportunity is a store that can respond to what is happening while the outcome can still be changed, then improve the next decision. Its intelligence will show up in fewer preventable losses, less unnecessary friction, better use of colleagues' time and returns that can be measured across the estate.

Follow us on LinkedIn (linkedin.com/everseen-limited) or visit Everseen.com for more information.

Self-checkout handles 54% of transactions where available. Yet industry estimates of malicious intent behind non-scans vary wildly, ranging from 6% to 80%.

Why most product discovery is driving on four flat tyres

Retailers keep buying separate fixes for search, SEO/agentic, merchandising and product data. Four budgets, one problem. Product discovery is governed by four forces. In this article, Warren Cowan, CEO and Founder, FoundIt!, talks about how to find the flat one and fix it.

Every multi-category retailer I meet has lived a version of the same year. Site search replaced in Q1, because search was the problem. New SEO agency in Q2, because organic was the problem. PIM migration over the summer. A merchandising tool in Q4, because merchandising was the problem.

Four budgets. Four vendors. Four dashboards. Then someone in the January board meeting asks, politely, why revenue looks like it did last January.

I have stopped blaming the tools. They mostly work. The fix never sticks because the retailer bought four answers to one question: can a customer find the right product before they get frustrated and leave?

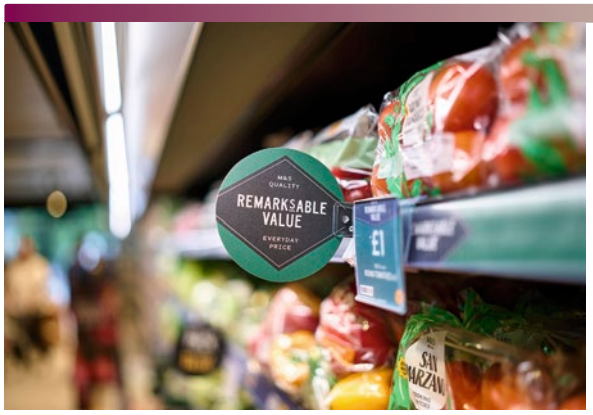
Your customer does not have four problems. They have one. They cannot find what they came for, so they go. Splitting that failure across four teams does not make it four smaller problems. It just means nobody owns the whole of it. So, we stopped selling features. What we sell is a force multiplier.

Four forces, and the order matters

Product discovery is governed by four forces. None works in isolation. Apply all four, in sequence, and they compound, each amplifying the next, in a loop we call the Intent Flywheel. At the centre is the outcome: products found, journeys completed, more revenue. Typically a 4-6% uplift for top-tier multi-category retailers once all four are pulling together. But the centre is not the interesting bit. The compounding is.

FoundIt!

FoundIt!'s customer list includes M&S.



Every example below comes from FoundIt!'s work with some of our customers: Marks and Spencer, John Lewis and Ironmongery Direct.

Force 1: Intent. The understanding layer.

You can sell to a customer whose intent you do not understand. It is just harder, slower and smaller. Most retailers read signals with one eye closed: a keyword here, a click there, behavioral data locked in five tools that do not talk to each other. Intent comes first because everything sits on top of it. Get it wrong and the structure, the product data and the channels are all wrong too.

FoundIt!'s knowledge graph captures intent as structured data: what customers type, what they mean, what they want next, and what they buy. In practice, this is unglamorous and slightly wonderful.

At our customer Marks and Spencer, customers were searching for the "midaxi" dress length before the site had any pages using that word. We caught the demand in the search data and built the pages to match, so the catalogue spoke the customer's language instead of the merchandiser's.

Force 2: Structure. The customer decision tree layer.

Understanding intent is not enough. On its own, it is tacit, not something you can act on at scale. Structure turns it into a map of how customers actually decide in your categories. Not flat tags. Relationships. The hierarchies of attributes people care about, plus the semantic layer connecting them: the links between 'black' and 'sequin' and 'smart'.

My favourite illustration is a cabinet hinge. Our customer Ironmongery Direct carries 20,000+ products, and that hinge could live under hinges or under cabinets. Pick either, and half your customers struggle. Build the decision tree from intent data, and it lives wherever the job takes it, which is how tradespeople think anyway.

Force 3: Product data. The findability layer.

Once intent is structured, you apply that structure to products, so they can be found against any intent a customer expresses. Most catalogues are built for internal teams: SKUs, suppliers, attributes that matter to merchandisers. Customers shop by outcome, occasion, constraint and mood. So, we enrich existing product data at scale. No dark aisles. No inventory that only appears when someone searches the exact keyword a merchandiser happened to think of.

Here is a small one I love. Marks and Spencer had hundreds of long-tail gifting pages no team had hours to optimise by hand. The signal in the "gifts for grandad" data was unambiguous: grandads like whiskey. So, the enriched data filled the page with whiskey. Now multiply that across hundreds of pages.

Force 4: Channels and platforms. The distribution layer.

Understanding, structure and findability mean nothing if they only live on your homepage. Customers research everywhere: Google, Reddit, AI assistants, social, marketplaces. And the part most platforms miss: every channel is also a sensor. Every interaction feeds signal back into Force 1. That is what makes it a flywheel and not a pipeline.

At John Lewis, intent led interlinking delivered an 8.9% lift in organic PLP traffic, validated through SearchPilot's controlled A/B methodology. It reads like an SEO win. It is not. It is validation that the first three forces were already working; pull any one out, and the result goes with it. At Marks and Spencer, moving intent led discovery to the top of the product page cut bounce significantly. Instead of hitting a dead end when a product isn't quite right, the customer is shown a way onward to one that is.

The agentic bit is not a new project

Everyone wants to talk about agents. The next search box is not a box: customers ask a question and accept an answer, or send an agent off to find, compare and buy for them. The instinct is to treat this as a fifth workstream. It is not. Agentic readiness is an output of the four forces, not an addition to them.

An agent needs answer ready product data: is it true to size, what occasion is it for, as machine-readable attributes rather than marketing prose. That is Force 3. It needs substitution and context attributes to reason about what to recommend when the first choice is out of stock. That is Force 2 applied to Force 3. And it rewards catalogues that say the same thing everywhere, because coherence is what these systems trust. That is Force 4 on a single intent layer.

Retailers with four flat tires will buy an "AEO tool" next year. It will not stick either, for exactly the same reason nothing else did.

The framework at a glance

#	FORCE	LAYER	THE QUESTION IT ANSWERS	CORE FOUNDIT! CAPABILITY
1	Intent	Understanding	What does the customer actually want?	Knowledge graph, intent signals, behavioral data
2	Structure	Customer decision tree	How do customers actually make decisions in this category?	Taxonomy, attribute hierarchies, semantic relationships
3	Product data	Findability	Can every product be found by every relevant intent?	Product enrichment, structured data, PDPs
4	Channels + platforms	Distribution	Is our intelligence deployed everywhere customers look?	SEO, AEO, customer journeys and navigation, syndication, feeds

Each rotation on the Intent Flywheel makes the next faster. That is the force multiplier, and it's why our customers keep finding growth year after year. Ironmongery Direct have booked six years of compounding returns, with targeted tests delivering wins at every layer - from a 2.98% uplift in conversion rate to an 8% increase in revenue year-on-year in the most recent Own Brand test (December 2025 - February 2026). It's a flywheel that gathers speed, not a deployment that finished in year one.

Find out which force is holding your flywheel back.

FoundIt! is the intent led commerce platform for multi-category retailers. Get in touch at foundit.com and we will show you where each force sits for your business, and what it would take to get the flywheel turning.

Where are you on the flywheel?

The flywheel cannot compound if any one force is weak. So, the first job is not picking a vendor. It is finding your weakest force. None of this requires a replatform. We do not rip and replace. We make what you already own understand what your customers are trying to do.

Score yourself honestly. Wherever you land on "beginner" is the force holding the other three back, and until it moves, the multiplier never kicks in.

FORCE	BEGINNER	EMERGING	WORKING	COMPOUNDING
1. Intent	Decisions made on gut feel, anecdote or last week's report.	Basic analytics in place, but siloed across tools.	Intent signals captured and structured across the journey.	Knowledge graph actively improves with every interaction.
2. Structure	Tags come from suppliers; no map of how customers actually decide.	Partial taxonomies in a few categories; relationships are patchy.	Decision trees mapped across key categories, with attributes and semantics.	Structure evolves automatically as intent signals change.
3. Product data	Catalogue used as supplied; attributes missing everywhere.	Manual enrichment on hero SKUs only.	Structured, enriched data across the full catalogue.	Product data auto-improves based on intent signals.
4. Channels + platforms	On-site only; SEO treated as a separate workstream.	SEO and feeds are running, but inconsistent and uncoordinated.	Intent led experience across search, SEO, AEO and feeds.	Every channel contributes signals back into the flywheel.

EMPOWERING THE PEOPLE AT THE TILL

How modern Point of Sale (PoS) is transforming the store experience

There is a conversation happening in retail boardrooms and conferences around the globe, and it goes something like this: “We’ve invested heavily in digital. We’ve optimised our supply chain. We’ve consistently delivered a product range that resonates with our customers. So why does the total experience with our brand still feel lacking?”

The answer, more often than not, comes down to one thing: the legacy tools used by many retail store employees today are simply not fit for purpose, resulting in a store experience that falls short of current expectations.

For decades, the PoS has been treated as a glorified cash register - a transaction-processing machine bolted to a counter, running software that looks like it belongs in a 1990s IT department.

Retailers have poured investment into customer-facing digital technologies whilst leaving their store colleagues to wrestle with clunky interfaces, incomplete customer data and siloed systems that cannot talk to each other. The result is a workforce that is perpetually on the back foot, unable to deliver the kind of connected, knowledgeable service that today’s shoppers now see as table stakes.

But the tide is turning. A new generation of PoS solutions – cloud native, mobile first and built with the colleague and customer in mind - is beginning to close the gap between what retailers promise and what their frontline teams can actually deliver.

Perhaps most significant about this shift to modern PoS is the virtuous cycle it creates: when retailers invest in their store staff through better technology, customers benefit almost immediately.

Colleague experience is customer experience

There is a growing recognition across the retail industry that the quality of the customer experience is directly shaped by the experience of the colleagues delivering it, and that technology plays a central role.

Every time a customer asks whether an item is available in a different size at a different store, every time they want to know their loyalty points balance, every time they need a return processed without drama - in that moment, everything hinges on the tools the colleague has in their hands.

When those tools are inadequate, store employees cannot do their jobs well. They make apologetic faces and disappear to the back of the house to check stock. They ask customers to wait whilst they call another store. They say, "The system won't let me do that." None of this is the employee's fault. It is a technology failure that plays out as a people failure, and the customer, rightly or wrongly, blames the brand.

Modern PoS changes this dynamic fundamentally. When a store colleague has a device with real-time inventory visibility across the entire network and detailed product information, including ratings and reviews, they stop being a transaction processor and start being a trusted advisor.

When the PoS surfaces a customer's purchase history, preferences and loyalty rewards at the moment of engagement, the store employee can have a personalised conversation rather than starting from zero. When the checkout process is fast, flexible and frictionless, the colleague can focus on the human side of the interaction rather than battling the technology.

Reducing friction is not a small thing

One of the most significant yet often underestimated benefits of modern PoS is how dramatically it reduces cognitive load for store employees. Legacy systems often require staff to memorise arcane key combinations, navigate menus three or four levels deep, or switch between multiple applications or devices to complete a single transaction. This is not just inefficient - it is genuinely stressful, particularly during peak trading periods when queues are long and every second counts.

Good technology should make hard things easy. Mobile first PoS platforms, designed with intuitive interfaces that mirror the mobile apps colleagues use in their personal lives, can be learned in minutes rather than hours or weeks. This has major implications for onboarding and seasonal staffing - two persistent pain points for retail operations.

> "Perhaps the most transformative capability that modern PoS brings to the shopfloor is unified customer data"

When a new team member can be productive on day one rather than day ten, the entire store benefits. Experienced colleagues are not pulled away to oversee training. Managers can focus on coaching rather than troubleshooting. And importantly, customers do not have to suffer through uncertain, hesitant checkouts from someone still finding their feet.

The shift to mobile first PoS also liberates colleagues from the constraints of the fixed till. Colleagues can approach customers on the shopfloor, assist them and complete the transaction right there, without ever directing them to a queue. This not only improves throughput; it fundamentally changes the nature of the interaction from transactional to relational.

Insight at the point of human connection

Perhaps the most transformative capability that modern PoS brings to the shopfloor is unified customer data - delivered at precisely the right moment, in a format that is actually usable.

Retailers have spent years building rich customer profiles through loyalty programmes, e-commerce platforms and CRM (customer relationship management) systems. Yet historically, this data has not been made available in a way that store colleagues could easily access "in the moment" when serving shoppers.

The employee interacting with a customer in-store had no idea that person had browsed three pairs of trainers online that morning, that they had £45 in unredeemed loyalty rewards, or that they had returned two items in the past month that turned out to be the wrong size. All of that context was invisible, and so the colleague was flying blind.

Modern PoS solutions break down these walls. When customer data flows seamlessly from all touchpoints to the point of sale, colleagues gain a 360-degree view of each shopper. They can acknowledge loyal customers meaningfully.

Aptos

Aptos ONE is more than just a modern Point of Sale.

They can make product recommendations grounded in actual purchase behaviour rather than guesswork. They can resolve issues - "I see you had trouble with sizing recently; let me help you find something that will work." - in ways that feel thoughtful rather than scripted.

This kind of service does not just satisfy customers; it builds genuine loyalty. Research consistently shows that shoppers who receive personalised, knowledgeable service in-store are more likely to return, to spend more and to recommend the brand to others. The return on investment for getting this right is not a rounding error - it is a commercial advantage.

When store employees trust the system, customers trust the brand

There is a subtler benefit to modern PoS that does not always make it into the ROI calculations but deserves to be talked about nonetheless: colleague confidence.

Working with technology that works-that is reliable, fast and does what it promises-changes how employees carry themselves on the shopfloor. When store staff know that the inventory data they are quoting is accurate, they make promises with conviction rather than hedging.

When they know that all transactions, even complicated ones, including mixed cart, endless aisle or in-store returns for online orders - can be handled with ease, they approach it without the anxiety that often creeps in with legacy platforms.

That confidence is palpable to customers. It is the difference between a colleague who says, "We have that in size ten at a nearby store - I can order it for you and have it delivered to your home" and one who says, "I think we might have it, but the system isn't always accurate, so..."

> "When retailers invest in their store staff through better technology, customers benefit almost immediately"

Retailers sometimes underestimate how much colleague confidence shapes customer perception. Shoppers pick up on uncertainty and hesitation. They interpret it, often unconsciously, as a signal about the brand. Building technology that colleagues can genuinely rely on is therefore not just an operational investment; it is a brand investment.

The modern PoS imperative

All of this points to something the retail industry needs to confront more directly: investing in modern store technology is not a cost of doing business - it is a strategic priority.

For too long, the IT budget conversation in retail has centred on the digital domain - the website, the app, digital marketing. The store has been chronically underfunded, with staff routinely handed the technological equivalent of a blunt instrument and expected to perform surgery with it. The consequences show up in staff turnover, in customer satisfaction, and ultimately in revenue.

The good news is that the business case for modern PoS has never been clearer. Frictionless transactions mean higher throughput and lower queue abandonment. Better data served up directly in the PoS UI results in higher conversion rates and larger basket sizes. Improved staff experience means lower turnover and fewer resources spent recruiting and onboarding.

And a genuinely excellent in-store experience means something that no website can replicate: the kind of human connection that keeps customers coming back - not because they have to but because they want to.

Aptos ONE: A modern PoS for modern store experiences

Aptos ONE is more than just a modern point of sale - it's a powerful platform that enhances every aspect of the customer journey by empowering store employees.

Cloud-native and mobile-first, Aptos ONE PoS is trusted by some of the world's most recognised brands, including The North Face, Skechers, and New Balance, to deliver exceptional experiences, streamline operations and future-proof their retail business.

Learn more at www.aptos.com.

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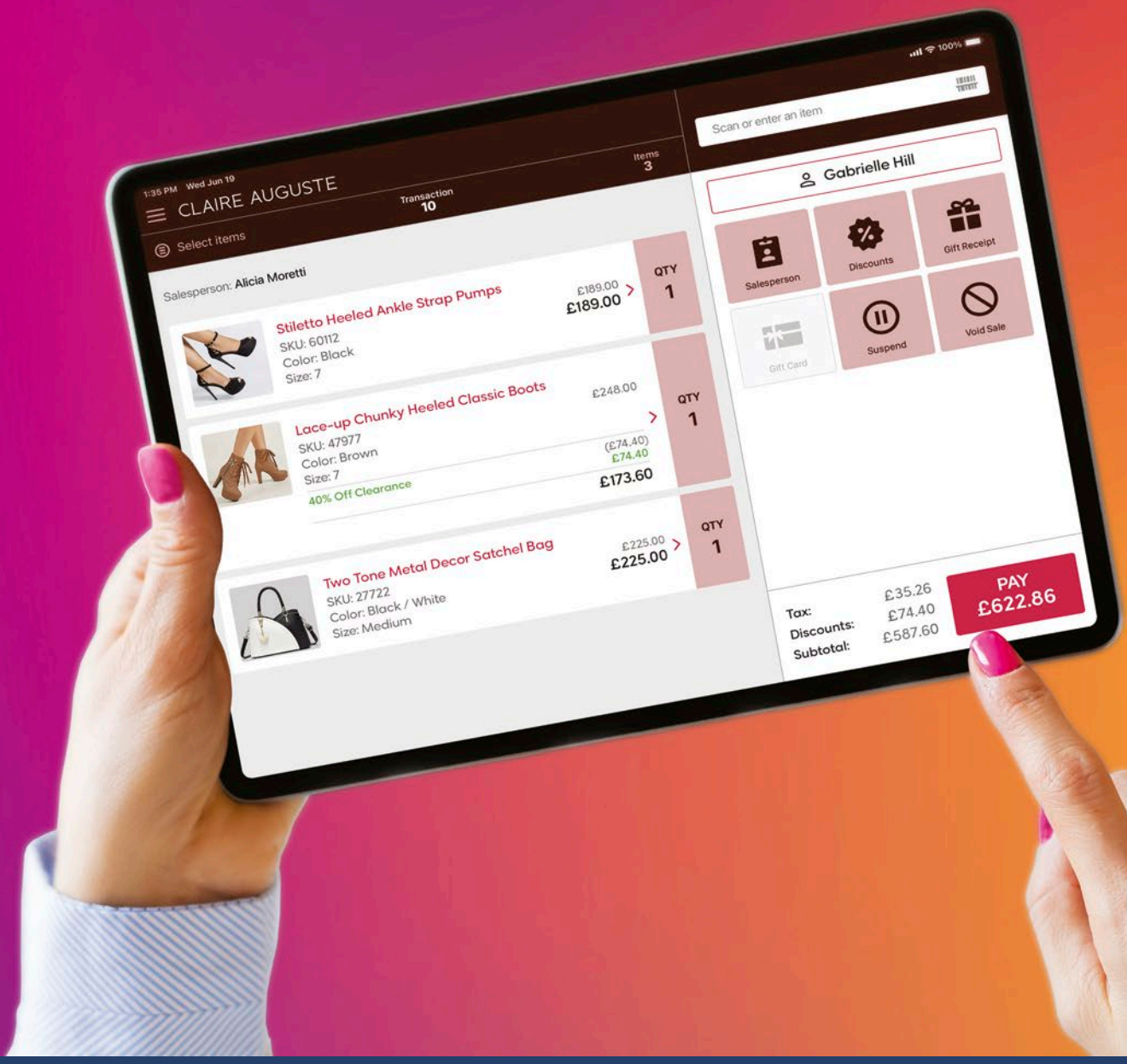

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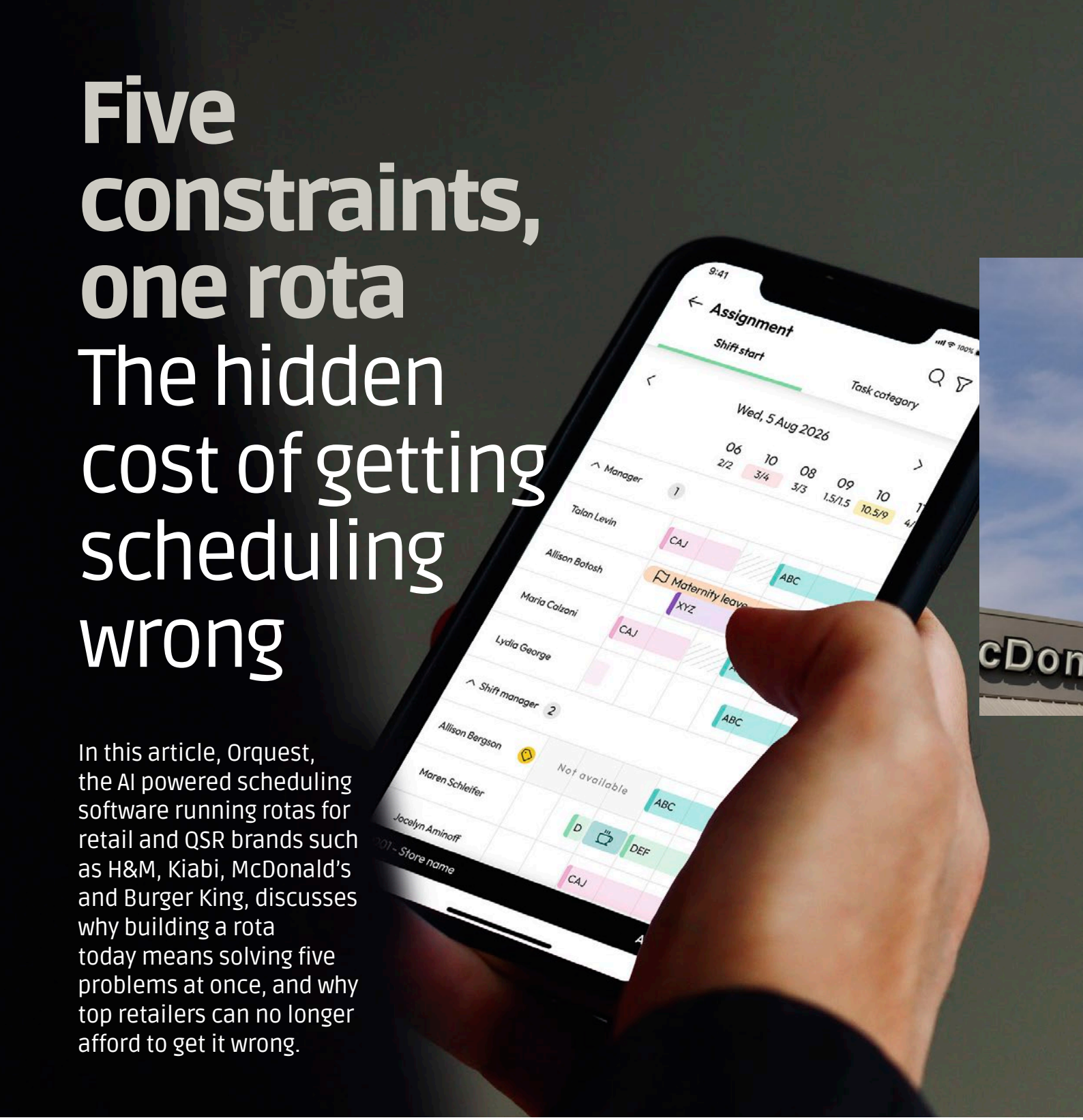
Five constraints, one rota

The hidden cost of getting scheduling wrong

In this article, Orquest, the AI powered scheduling software running rotas for retail and QSR brands such as H&M, Kiabi, McDonald's and Burger King, discusses why building a rota today means solving five problems at once, and why top retailers can no longer afford to get it wrong.



For years, the best scheduling tool was experience: a manager who knew the floor could feel a wet Tuesday coming and build next week's rota from memory. That instinct still matters, but it is no longer enough on its own.

Building a rota today means solving five problems in the same document: matching the team to demand, complying with a legal framework that keeps tightening in every market, holding a wage bill that keeps climbing, keeping people engaged enough to stay, and getting the coverage and skill mix right so customers never notice any of it.

Get one wrong, and it quietly erodes the margin the other four were protecting. That is why Kiabi turned to Orquest. As its Chief Sales Officer, Darío Acuña, puts it: "It's not just an operational solution. It's a strategic lever that allows you to scale, optimise resources, and build an organisation centred around people."

Orquest works with such brands as H&M, Kiabi, McDonald's and Burger King.

Demand

Demand is the hardest of the five to read by experience alone. A quiet morning in-store can hide a surge of Click & Collect orders needing picking, and a single rainy afternoon can undo a plan built on habit rather than data.

Eurostat figures show why the gap matters: peak season activity runs some 68% above the annual average, while headcount rises by only around 11%, leaving existing teams to absorb the rest.

It is precisely this gap that Pablo Sanfélix, former Project Manager and now Head of Franchise at Kiabi, points to when explaining how Orquest made the difference: "The predictive work the algorithm does to know what visitor traffic I'll have on the morning of 15th August in a store in Bilbao: that's the key, the truly differentiating aspect of the tool."

Compliance

The legal side has hardened everywhere at once. In the UK, the Workers Act 2023 gives staff the right to request a predictable working pattern, while the Working Time Regulations 1998 still demand 11 hours' rest between shifts.

France layers its own délai de prévenance on top of the 35-hour threshold set by the Code du Travail, and the EU's Directive 2019/1152 generalises the same principle across the region. A smart scheduling software like Orquest, built to align demand with people while assuring full legal compliance, embeds your regulatory requirements from day one: no compliance fees, no team disengagement.

Cost

Costs are not waiting either. The UK's National Living Wage, set annually by the Low Pay Commission, climbs to £12.71 in April 2026, with the rate for 18 to 20 year olds up 8.5% to £10.85, and the rise is global: every hour scheduled now costs more than it did last year, so cost control and coverage have to be solved together.

Arcos Dorados, McDonald's largest franchisee in Latin America, turned to Orquest as wages rose 20% and inflation climbed alongside. Darío Luksemberg, HR Corporate Director at Arcos Dorados, points to a $2.7 million annual saving in labour cost across its 2,000 restaurants, while managers cut scheduling time by 90%.

People

People are harder to hold onto than any of this. Younger staff want the flexibility to swap shifts from their phones and study around work; a rota too rigid loses them, while one too loose leaves the wrong skill mix on the floor.

Eurostat data shows the scale of the problem: turnover can peak at 40% in high season, in an industry already short of people willing to take frontline roles. This is where Orquest steps in: teams receive their schedules ahead of time through the Orquest app, and can request changes knowing their shifts match workload, skills and contract limits.

Customer experience

Customers absorb every miscalculation before head office ever sees the numbers. Understaffed at rush hour, and queues form. Overstaffed in a quiet patch, and the margin built up all week disappears in an afternoon.

At McDonald's Qatar, since using Orquest's scheduling engine they have lifted coverage precision by 42% while cutting overtime by 94%, proof that cost and coverage can move together. In comparable QSR deployments,

> Orquest AI forecasting builds a demand picture from each store's historical patterns, footfall, online orders and seasonality

waiting times have fallen by up to 26% and guests served per crew hour have risen by up to 23%.

One engine, five constraints

None of this replaces a manager's instinct so much as it empowers it. Orquest AI forecasting builds a demand picture from each store's historical patterns, footfall, online orders and seasonality.

Its scheduling engine then generates the rota from scratch around that forecast, checking every rest period, notice requirement, cost target and skill need. That is why top retail and QSR brands, including H&M, Kiabi, Dior, Burger King, KFC and McDonald's in over 40 countries, trust Orquest to optimise their teams' scheduling, turning it into a lever for operational excellence, employee wellbeing and customer satisfaction.

Recognition

Recognition followed. This year alone, Orquest was named to Deloitte's Technology Fast 500 EMEA, having grown 319% over four years, was Highly Commended as AI Technology Supplier of the Year (Rest of World) at the RTIH Innovation Awards, and picked up two prizes at the Retail Systems Awards 2026: QSR Technology Innovation of the Year and Retail Workforce Innovation Award.

"Being in the room when Orquest was announced winner was a moment I will not forget," says María Torres, EMEA Regional Director. "For those of us working in the field every day, this confirms what our clients already know: this is not another software tool. It genuinely changes how restaurants and stores operate."

About Orquest

Orquest is a workforce scheduling software provider for top retail and quick service restaurant brands operating in 90+ countries, optimising rotas in a few clicks while keeping compliance, costs, teams and customer experience on track.

More at orquest.com.

Orquest is a member of the RTIH Innovation Awards hall of fame.

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STORE DIGITAL TWIN

Why it will become the operating system for future retail.

Introduction: the next frontier of retail AI

As the retail industry prepares for NRF 2026: Retail's Big Show Europe in September, much of the conversation continues to centre on artificial intelligence. From generative AI to emerging agentic commerce, retailers are exploring how AI can improve decision-making, streamline operations and create more responsive shopping experiences.

Yet a fundamental challenge remains. While AI has become increasingly capable of analysing information and generating recommendations, physical retail environments remain highly dynamic and complex. Products move, shelves change, store conditions evolve, and customer behaviour shifts continuously throughout the day. Understanding what is actually happening inside the store, and acting upon it in real-time, remains one of the industry's greatest operational challenges.

As AI moves closer to the heart of store operations, the question is no longer simply how to deploy AI, but how to provide the operational foundation that enables AI to understand, interpret and act within physical retail environments. This is where Store Digital Twin is becoming increasingly important. More than a technology initiative, Store Digital Twin is emerging as the foundational operational platform that enables AI powered retail operations.

From visibility to autonomy: the evolution of retail operations

Store Digital Twin is becoming increasingly important as retailers seek to move beyond traditional approaches to store management. While early digital initiatives focused primarily on visibility, the next stage of retail transformation is about creating the conditions for smarter and more responsive operations.

The journey often begins with understanding what is happening across products, shelves, shoppers and store assets in real-time. Once these signals are connected, retailers can begin identifying patterns, uncovering root causes and understanding why issues occur. This deeper level of insight creates the foundation for AI powered decision-making, enabling organisations to prioritise issues, evaluate business impact and determine the most appropriate actions.

The greatest value emerges when intelligence is connected directly to execution. Insights become operational outcomes through store teams, automated workflows and increasingly intelligent systems capable of

As retailers explore the next generation of AI powered operations, the conversation around Store Digital Twin is only just beginning.

Understanding what is actually happening inside the store, and acting upon it in real-time, remains one of the industry's greatest operational challenges.

coordinating actions across the retail environment. Over time, this creates a path towards greater operational autonomy, where sensing, analysis, decision-making and execution function as a continuous cycle of optimisation.

Viewed through this lens, the significance of Store Digital Twin lies not only in improving visibility, but in providing the platform that connects awareness, intelligence and execution. As AI becomes more deeply embedded within retail operations, the transition from visibility to autonomy is likely to become one of the defining themes of the industry's next phase of transformation.

For technology providers, this also requires a shift in focus. Rather than addressing individual operational challenges in isolation, the goal is increasingly to create an operational foundation where data, intelligence and execution work together within a unified framework. This thinking underpins Hanshow's approach to Store Digital Twin.

Building an AI powered Store Digital Twin ecosystem

At Hanshow, the Store Digital Twin is built through a connected ecosystem that links products, people, assets and operational processes across the store. At its core, a Store Digital Twin provides a real-time digital representation of store operations. More importantly, it creates the foundation that enables information, intelligence and execution to work together within a single operational environment.

At the frontline, Hanshow's solutions such as NexShelf, NexConnect Smart Cart and NexMate robotics help create real-time awareness across the retail environment. Together, they provide visibility into product availability, shelf execution, shopper interactions and operational conditions within the store. By connecting information from multiple touchpoints, retailers gain a more complete understanding of how their stores are performing in real-time.

Building upon this operational awareness, AI powered solutions such as xPilot help transform information into actionable intelligence. By analysing operational conditions, identifying issues and recommending next steps, AI can help store teams focus resources where they create the greatest impact, improving consistency and responsiveness across the store network.

At the same time, Store Digital Twin continues to expand beyond the sales floor itself. Store operations are increasingly influenced by critical infrastructure and energy systems, making operational visibility across these assets equally important. NexGrid and NexOptim solutions bring energy management, in-store systems and other critical store assets into a unified operational environment, helping retailers improve efficiency, resilience and sustainability.

Together, these capabilities contribute to a connected Store Digital Twin ecosystem where people, products, assets and operational processes are linked through a shared operational foundation. This foundation enables AI not only to observe the store, but also to support decision-making, coordinate execution and lay the groundwork for increasingly autonomous operations.

Case study: how Rainbow & Lingzhi built an AI ready operational model

Rainbow's collaboration with Hanshow provides a practical example of how Store Digital Twin can support AI enabled retail operations.

As one of China's leading digital retailers, Rainbow operates in one of the world's most competitive retail markets, where e-commerce, instant delivery and omnichannel competition continue to raise expectations for operational speed, efficiency and execution.

Rainbow has been exploring how to connect real-time operational awareness, intelligent decision-making and execution across its store network. Through the deployment of a Store Digital Twin ecosystem incorporating solutions such as NexShelf, NexConnect and xPilot, Rainbow has established a more connected operational environment capable of supporting data driven store management.

In an award winning joint initiative in merchandise precision management, Rainbow brings Store Digital Twin and AI powered intelligence into operations. One key application focuses on out-of-shelf (OOS) management. Hanshow provides the store-wide sensing hardware that captures real-time shelf images and inventory data, while Lingzhi contributes its self-developed AI analytics engine to interpret that data.

Together, the two capabilities enable continuous, around-the-clock monitoring of shelf availability - automatically identifying out-of-stock SKUs and pinpointing their exact locations. Lingzhi's demand forecasting algorithms then automatically issue replenishment tasks, helping store teams respond faster and more consistently. By connecting detection, analysis and task creation within a single workflow, the project helps reduce response times while improving product availability and operational efficiency.

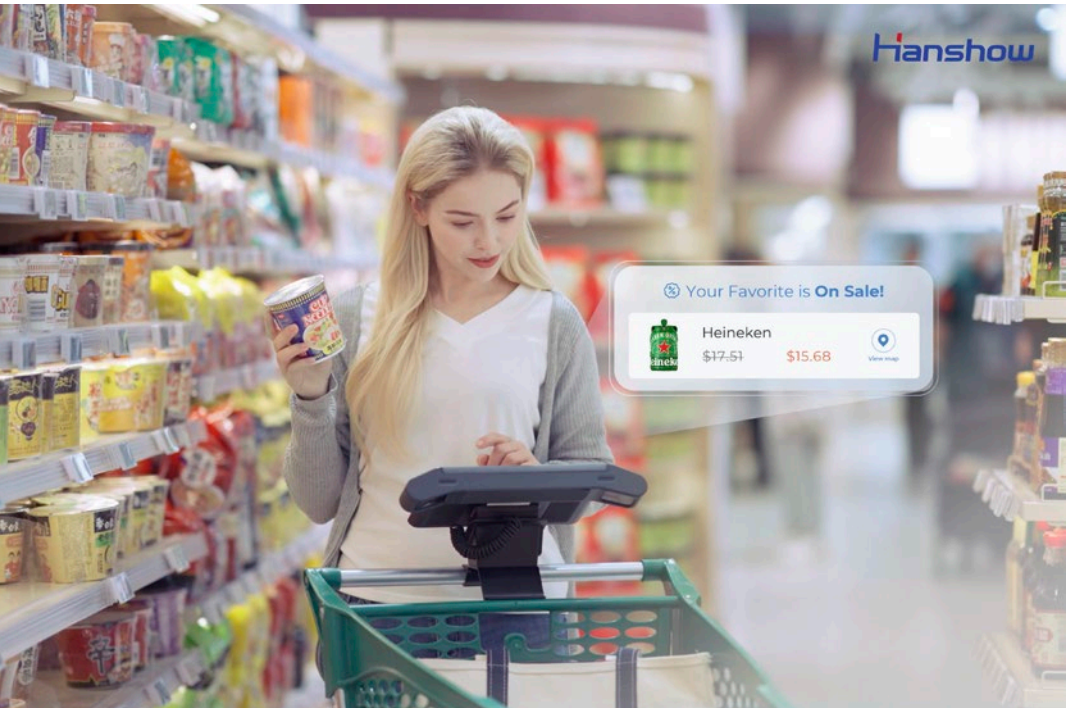
Rainbow is also among the first retailers to deploy xPilot in live store environments. By introducing intelligence driven, automated workflows into daily operations, xPilot helps store teams respond more quickly to merchandising, pricing and inventory issues, reducing reliance on manual inspections and improving execution consistency across the store network.

More importantly, this co-developed operational model pioneered by Rainbow highlights a broader industry direction: the shift from deploying individual technologies to building a unified operational foundation capable of supporting AI powered retail execution.

Conclusion: the operating system for future retail

As retailers explore the next generation of AI powered operations, the conversation around Store Digital Twin is only just beginning. The next chapter of retail transformation will not be defined by visibility alone, but by how effectively retailers connect awareness, intelligence and execution across the physical store. As these capabilities become increasingly integrated, the path towards more autonomous operations becomes clearer.

At NRF 2026: Retail's Big Show Europe, Hanshow will showcase how its AI powered Store Digital Twin ecosystem is helping retailers establish a unified operational foundation for the future, creating the conditions for more intelligent, adaptive and increasingly autonomous store operations. Visit Hanshow at Hall 6, Booth E-020, and follow Hanshow on LinkedIn for the latest insights on retail innovation.



At the frontline, Hanshow's solutions such as NexShelf, NexConnect Smart Cart and NexMate robotics help create real-time awareness across the retail environment.

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