

Retail Tech Innovations Report

INTRODUCING THE RTIH RETAIL TECHNOLOGY INNOVATIONS REPORT

RTIH is pleased to announce the launch of its first ever Retail Technology Innovations Report, sponsored by Metapack.

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This highlights the top 50 retail tech plays of 2022 as decided by myself and an independent advisory panel. We were looking for groundbreaking technology deployments, launches, and pilots from across the omnichannel retail landscape, be they payments, supply chain, online, mobile, physical store etc related.

I produced a longlist which went to the judging panel, consisting of:

Mike Cadden, Technology and Business Transformation Director, Start-Rite Shoes

Matt Taylor, Technology Transformation Leader at EY, Retail and Consumer Products

Brittain Ladd, Supply Chain, Logistics, Operations, and Strategy Executive

Imran Ansari, Head of Retail Edge Solutions and Ecosystems, Dell Technologies

Christine Russo, Retail Industry Analyst

Gary Newbury, Supply Chain Advisor and Delivery Executive

Toby Pickard, Global Insight Leader, IGD

They picked their stand out retail technology plays of 2022, put forward their own favourite innovations, and, based on this, I drew up the final 50.

Innovation and technology play a critical role in the success of the retail sector, and it is great to celebrate this with the 2022 Retail Technology Innovations Report.

Many thanks to Metapack, a leading provider of e-commerce delivery management technology to enterprise retailers and brands, for sponsoring it.

Scott Thompson - Editor and Founder, RTIH

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3D technology

Our judging panel said: "This category is an area absolutely ripe for innovation and will bring benefits across retail. With returns being such a hot topic, and the perfect storm of ESG, rising returns costs and yet the cost-of-living crisis meaning that retail costs have to come down, mechanisms to reduce cost, help ESG programmes and lower returns rates are currently massively in demand.

With the recent upgrades to mobile technology this space is going to become even bigger. Unfortunately, though, in fashion retail fit is only one element and there will naturally be, and rightly, a scepticism around whether the fit applications will thoroughly

work. Beyond fit, and especially with regards to the likes of Victoria's Secret, style, design and materials will play into this and continue to be as big an issue. Across apparel this will be an issue.

For large purchases, such as where the Kingfisher concept comes in, then the ability to visualise large purchases in-situ whilst being able to touch and feel product in-store will be the large winner in the 3D category for now. Here there is a real customer centric win."

Coach

In November, Coach went live with a 3D technology powered extension of its Courage to Be Real campaign on the Piccadilly Lights in Piccadilly Circus,

London.

Piccadilly Lights, the largest advertising display in Europe, ran this for 24 hours a day, from 7th - 13th November, with an hourly 3D full screen takeover featuring Coach brand ambassador, Lil Nas X.

This saw the rapper move through doors that represent the struggles he has faced in life, from fear, self-doubt, to judgment from others. The sequence concluded with Lil Nas X looking over Piccadilly Circus whilst performing.



Tech enabled in-store shopping solutions provide visitors with seamless payment options, personalised styling recommendations, faster checkout, and upgraded delivery/return options.



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Victoria's Secret and NetVirta

Victoria's Secret & Co. is rolling out new technology to help customers find the right size when shopping on the brand's app for Victoria's Secret and Victoria's Secret Pink bras.

In partnership with NetVirta, the creator of Verifit, customers will be able to leverage 3D scan technology to receive personalised bra size recommendations.

Kingfisher

3D Cloud by Marxent is partnering with Kingfisher to roll-out new 3D visualisation, planning, and design tech across a number of its banners.

The initiative includes a 3D kitchen, bathroom, and storage planner with virtual reality capabilities in addition to a series of mobile 3D product configurators. Kingfisher's B&Q and Brico Depot Romania have already launched the system in the UK, Republic of Ireland and Romania. B&Q UK has also rolled out a line-up of intuitive, mobile first 3D product configurators for fireplaces and for the Kingfisher exclusive Atomia and Alara product lines.

Using the aforementioned tools, shoppers are able to explore, design, visualise and checkout in a single app. More sophisticated design features are available for experienced designers.

Volumental

Volumental's 3D foot scanners help consumers find the perfect fitting shoes in the styles they want, going beyond length and

width measurements by using computer vision, purchase data and AI that has "learned" from some 34 million 3D foot scans to recommend the optimal sizes, brands and styles for each customer.

The tech matches an individual's foot scans to those of others with the same foot shape who have successfully purchased a particular size and style in the past.

More than 80 brands, including Under Armour, Hoka, New Balance, and Red Wing Shoes, have implemented Volumental's technology in 3,000 stores.

A.S. Watson

A.S. Watson has taken the wraps off Skinfie Lab, a tool that creates personalised skincare product recommendations based on customers' selfies.

This is making its debut at Watsons Hong Kong and will be rolled out to Thailand, Taiwan, the Philippines, Singapore, Malaysia, and Indonesia by early 2023. It builds on the launch of an AI powered skincare advisor at Superdrug in the UK.

Metaverse

Our judging panel said: "The metaverse is a long-term play. With the cost-of-living crisis and many retailers having excess stock and having to focus on pure cash generation as well as massive transformation, the metaverse will continue to be a niche play in 2023 for most.

That is reflected in many of the highlighted tech plays. In the main, the metaverse will continue to be a tool to build

long-term communities, to build loyalty through accessing unique, interactive content that would not be available in the real world – certainly without expensive VIP access.

The Forever 21 technology is very interesting; younger game players will see nothing unusual about spending large amounts on clothing for their online avatars in a way that the older generations will not understand. Trialling product in the metaverse, such as on Roblox for the consumer to wear then releasing the popular products, is a brilliant way of building engagement, loyalty and also trialling product in a live environment. This will be a new world for most merch teams but will become far more common."

Carrefour and Procter & Gamble

Carrefour has partnered with Procter & Gamble for what is pitched as "the first joint retail/FMCG brand experience in the metaverse".

This involves the latter's Mr. Clean brand. In a LinkedIn post, Elodie Perthuisot, Chief E Commerce, Digital Transformation and Data Officer & EXCOM member at Carrefour, said: "Thanks to their Lab, we are both offering Carrefour customers a marketing activation of a new style, between



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gamification, immersion, Web3, all with a Mr. Clean as you have never seen it before.”

She added: “This is a test to renew the classic advertisements and activations, create a link between the metaverse and e-commerce, and especially receive feedback from our customers to evolve this experience.”

Charlotte Tilbury and Obsess

Obsess has launched Branded Avatars, technology enabling brands to customise the look and feel and character style of shopper avatars to create branded metaverse experiences on their e-commerce sites.

This then lets shoppers personalise all aspects of their branded avatar, including skin tone, facial features, body shape, clothing and makeup.

Charlotte Tilbury is the first brand to partner with Obsess to offer the new functionality, introducing it as part of its Charlotte’s Beauty Realm holiday wonderland.

Selfridges

As part of Metaverse Fashion Week, Selfridges unveiled a virtual department store in Decentraland, joining more than 70 brands, artists and designers in creating “a new experience at the intersection of fashion and technology”

In a LinkedIn post, Selfridges said: “For the first time, you’ll be able to view the exclusive UNIVERSE NFTs by Paco Rabanne and Fondation Vasarely in-situ in our flagship metaverse store.”

It added: “This is the first meta department store in the history of Web3 and anybody can visit. Interact as a guest or attach your crypto wallet to access all features, while keeping your in-world progress and digital assets safe.”

Forever 21

Forever 21 has launched the F21 Metaverse Collection, the retailer’s first metaverse inspired fashion collection, to mark its first year on Roblox.

Currys invested over £250,000 in a fleet of robotic exoskeleton suits to help colleagues from logistics partner, GXO, work safely and efficiently through the festive period.



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This is available in stores and online and features hoodies and T-shirts, designed with elements from the brand's virtual offerings and includes the real-life version of the Forever Beanie, the number one selling item in Forever 21 Shop City on Roblox.

Alibaba Group

In September, Alibaba Group's Tmall Luxury Pavilion platform hosted an augmented reality fashion show and introduced a Meta Pass, which confers priority digital access to brands' products.

In recent years, the platform has deployed 3D shopping, augmented reality and virtual reality try-ons for products, digital

avatars and digital collectibles.

Also during September in Shanghai, luxury executives attended an awards ceremony and explored an exhibition on extended reality.

"Before metaverse became a buzzword, we had already transformed this buzzword into a commercial reality," said Janet Wang, Head of Alibaba's luxury division.

Green retail

Our judging panel said: "The storms affecting retail over the last few years will drive significant innovation within the green tech world. Few of these innovations are really, at a

technology level, all that exciting, but for me anyway, the use of standard, normal technology to solve real human, real societal problems is highly exciting.

There are a number of food waste apps, with a number of local community distribution mechanisms now popping up. Apps like OLIO have allowed individuals to setup community "foodbanks" that deliver to the food poor. In this space we are

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The storms affecting retail over the last few years will drive significant innovation within the green tech world.

⬇ The Jisp money saving and rewards app works in-store, in-app and socially to connect shoppers to brands at local convenience stores in the UK.



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seeing where the technology becomes secondary and the community wins by making use of it in an innovative way.

What is exciting and more innovative about some of these solutions is the amount of work that has been done in the background to create real-time capabilities. Many retailers, especially the larger legacy retailers, will have batch systems so the hidden work to deliver real-time will have been difficult.

The circular economy piece is also very interesting, but becoming somewhat saturated, with Vinted leading the way but all major e-commerce providers getting in on the

idea. This will continue to grow but will be interesting to see it combine with retailers building communities and also loyalty programmes around returns."

Co-op and Microsoft

The Co-op and Microsoft Caboodle platform is now live in all of the former's 2,600 food stores across the UK.

Created with technology consultancy BJSS and Team ITG, the not-for-profit digital solution enables UK supermarkets, cafés and restaurants to connect with community groups and volunteers to redistribute surplus food.

It is built on Microsoft's Power Platform technology.

PrettyLittleThing

PrettyLittleThing has announced the launch of PrettyLittleThing Marketplace, an app which allows people to sell on clothes they no longer wear, or shop for something new to them.

PLT Marketing Director, Nicki Capstick, says: "We know now more than ever that our customers are more conscious of how they shop."

"Therefore, we wanted to be the first fashion brand to launch a resale site with the ability to integrate the customers'

Emperia announced the launch of Lacoste's first ever virtual store ahead of the 2022 holiday season.



Retail Tech Innovations Report

previous PLT purchases into their wardrobe as well as creating new listings and selling items from other brands. We're encouraging our customers to recycle and resell unwanted garments whilst making money in return."

Web3 technology

Our judging panel said: "This is a category I'm really unsure about at the moment. What I do know is that it will boom at some point, but right now it's a solution without a problem to fix.

Take the Starbucks solution. Do people really care enough about Starbucks to want to spend loyalty points on digital NFTs? To purchase/swap for digital experiences, Starbucks is a coffee shop and a very good one. Maybe this is a US focused consumer thing and doesn't translate to the UK."

Lacoste

Emperia announced the launch of Lacoste's first ever virtual store ahead of the 2022 holiday season.

Upon entering the experience, customers were taken through a crocodile's mouth, where they found themselves in a showroom featuring five seasonal products, all shoppable viewed in 360°.

As users continued their journey into the second

room, Emperia developed a gamification feature that enabled them to interact with more products in the Christmas range. A third and final token gated room was nestled at the end of the store, exclusive to VIP customers in UNDW3 (Lacoste's Web3 community) that are in possession of a Lacoste NFT.

Throughout December, 'loot' boxes were dropped within this room for UNDW3 customers to collect, and five users were selected at random daily, to win a prize. Created in partnership, using Arianee's token gated technology to bring this room to life, customers were encouraged to keep coming back for new surprises.

Starbucks

Starbucks has officially announced Starbucks Odyssey, the coffee chain's first shot at building with Web3 technology.

It combines the Starbucks Rewards loyalty programme with an NFT platform, allowing its customers to both earn and purchase digital assets that unlock exclusive experiences and rewards.

Starbucks brought in Adam Brotman, the architect of its Mobile Order & Pay system and the Starbucks app, to serve as a special advisor.

Now the co-founder of Forum3, a Web3 loyalty startup, Brotman's team worked on Starbucks Odyssey alongside the retailer's own marketing, loyalty, and technology teams.

Supply chain

Our judging panel said: "Reducing cost per pick and

cost to deliver, whilst improving customer satisfaction (for e-commerce retailers the delivery touchpoint can often be the only actual interaction with the customer and therefore will colour the entire experience) is critical.

Front end marketplace technology is now well established but more innovative organisations are extending to provide full end to end brand services as well as full logistics. In the way that Amazon have been doing for years."

H-E-B and AutoStore

Supply chain consultant and former Amazon executive, Brittain Ladd, recently provided a first look at an AutoStore micro fulfilment centre (MFC) installed in a H-E-B store in Plano, Texas, USA.

In a LinkedIn post, Ladd said: "I can state with no hesitation that the installed MFC is the most incredible AutoStore MFC I've ever seen."

"H-E-B can legitimately claim to operate the most sophisticated and advanced grocery store in the world. Carrefour, Tesco, Majid Al Futtaim, Hy-Vee, and Amazon, need to pay close attention to what HEB is doing; especially Hy-Vee and Amazon."

Fashinza

Fashinza provides an end-to-end platform for fashion brands, allowing clients to meet manufacturers virtually, analyse trending designs, place bulk orders, monitor production, manage communication and more.

Customers report a 25% reduction of costs in inventory



Web3 technology will boom at some point, but right now it's a solution without a problem to fix.

Retail Tech Innovations Report

and a 20% increase in topline growth, reducing the need for sourcing managers to leave the office, the dependency on multiple middlemen, and unannounced delays. New innovations include an AI app for real-time factory floor tracking right down to quality checks and as far reaching as sourcing raw materials, and a trends tool that uses Big Data to ensure dedicated followers of fashion stay on the pulse with seasonal and style changes.

Attabotics

In 2022, Attabotics raised \$71.7 million in Series C-1 funding.

The round, which brings total funding to \$165.1 million, was led by Export Development Canada with participation from Ontario Teachers' Pension Plan Board.

The company intends to use the funds to accelerate the commercialisation of its 3D robotics warehousing solution.

Walgreens Boots Alliance

Walgreens Boots Alliance plans to open 22 robot powered micro-fulfilment centres across the US to fill customers' prescriptions.

By 2025, as much as half of the retailer's total prescription volume could be filled at the automated hubs, says Rex Swords, Walgreens' Group President of Centralised Services, Operations and Planning.

Walmart Canada/ GreyOrange

Robotic technology from GreyOrange will be used at

Walmart Canada's new \$118 million sortable fulfilment centre in Rocky View County, Alberta, located just outside of Calgary.

The facility will be capable of: shipping 20 million items annually from the facility to Walmart customers; storing 500,000 items to fulfil direct to home and in-store pickup orders; and designed to optimise packaging, minimise waste and reduce transportation costs.

It opened in September and is part of Walmart Canada's \$3.5 billion investment to make the online and in-store shopping experience simpler, faster and more convenient for its customers.

Currys

Currys invested over £250,000 in a fleet of robotic exoskeleton suits to help colleagues from logistics partner, GXO, work safely and efficiently through the festive period.

The suits, which are being used at Currys' facility in Newark, will help people carry out their physical day to day tasks, with the aim of putting less pressure on their joints and muscles while lifting heavy loads.

Payments

Our judging panel said: "Amazon is a good proven example being done at scale to ease checkout friction. The interesting test is will people trust it, with the palm scan data being stored by Amazon centrally? This is unlike a smartphone where biometrics are not apparently shared from a device.

I also like Alimentation Couche-Tard - being done at

scale and, according to Mashgin, it is 400x quicker than PoS, drives efficiencies, accurate and frictionless. Easily deployed in convenience stores, rather than requiring significant fit-out.

Tech such as Amazon Go needs significant investment in store tech to make it work. Imagr answers the frictionless checkout question without potentially needing the same level of investment (although retailers will need to invest in the smart cart).

Compass and AiFi – reportedly first in food services market in UK/Europe. Innovative use of avatar to support privacy.

Amazon

Amazon One palm scanner payment technology has launched at over 65 Whole Foods stores in California.

This is the biggest roll-out to date, with stores in Malibu, Montana Avenue, Santa Monica, Los Angeles, Orange County, Sacramento, the San Francisco Bay Area, and Santa Cruz included in the initiative.

Alimentation Couche-Tard

Alimentation Couche-Tard is set to deploy more than 10,000 Mashgin AI powered touchless checkout systems, branded as Smart Checkout, to over 7,000 of its Circle K and Couche-Tard stores during the next three years.

The agreement launches the global deployment of the solution, and is claimed to be one of the largest scale expansions of computer vision powered checkout technology to date.

It builds upon the deployment of Mashgin across nearly 500



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Zabka Group's Zabka Nano pop-up autonomous store is now a part of the Microsoft Industry Experience Center in Washington, USA.

Circle K locations in the US and Sweden since 2020, as well as at Couche-Tard's retail innovation lab store on the campus of McGill University in Montreal.

Compass Group UK&I and AiFi

Compass Group has introduced Europe's first ever frictionless store in a workplace using AI powered computer vision technology so staff can buy items without waiting in line or stopping to scan and pay.

Using tech from AiFi, customers 'check in' then

wander through the store and select food. They leave with their purchases and a receipt delivered to their phone.

Computer vision cameras convert the shopper into an avatar to anonymously track, adding selected items to the virtual shopping cart. No facial recognition or biometrics are used, ensuring privacy.

Imagr

Netto has been testing out a shopping cart from Imagr that scans items and handles payment, enabling shoppers to skip checkout queues.

This went live at Kirkegårdsvej in Copenhagen, and could also be found at Kongelundsvej in Copenhagen, Runevej in Aarhus, Bybuen in

Skovlunde and Virum.

The shopper's smartphone is connected to the shopping cart via the Netto+ app. When the cart is filled with goods, these are automatically registered with the user receiving a digital receipt.

Delivery solutions

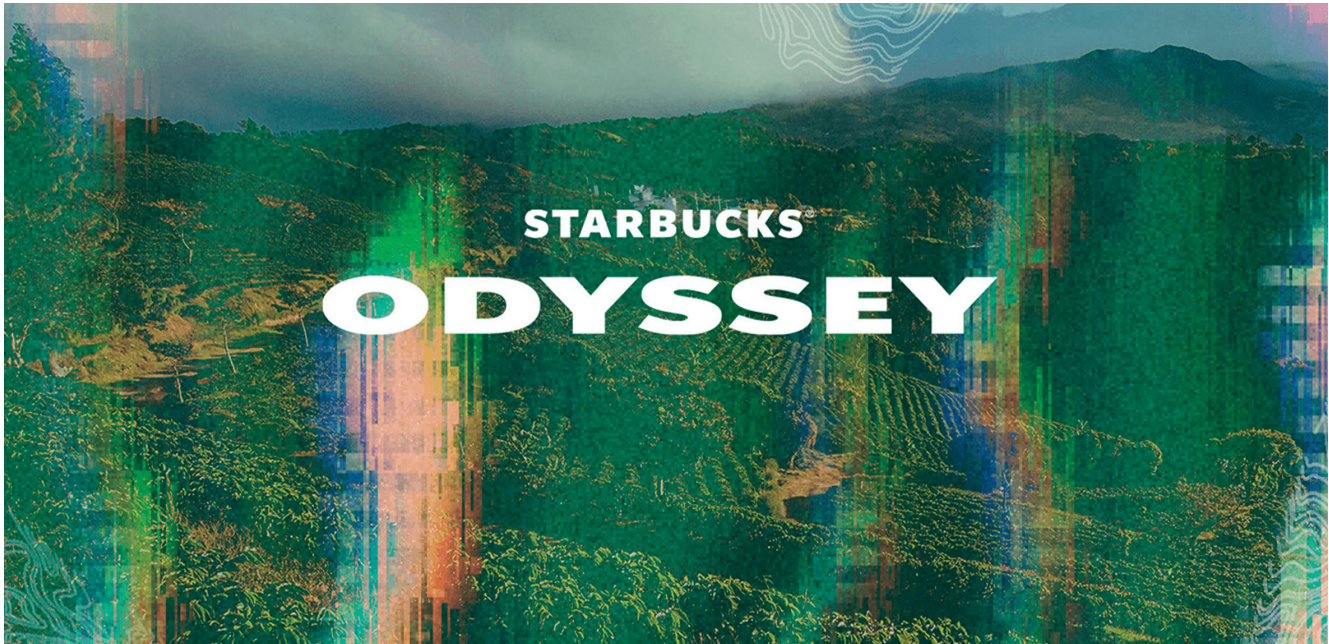
Our judging panel said: "The challenge I see with drone delivery is scaling the tech. It makes a great story, but drones will be limited in what they can realistically carry and also number of drops etc.

Obviously drone technology is improving and certainly as part of the whole convenience instant delivery space will have a place, and with the focus again on ESG, the carbon free drones will have a huge appeal."



The challenge I see with drone delivery is scaling the tech.

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Starship Technologies and Grubhub

Starship Technologies and Grubhub are expanding their delivery service to Baylor University and East Carolina University (ECU) in the USA.

Baylor's 20,000 students can order delivery from more than seven eateries on campus.

Starship's fleet of 20 robots will deliver to the majority of buildings on campus, typically within minutes, and work in conjunction with student meal plan Dining Dollars through the Grubhub app.

At ECU, another fleet of 20 robots are providing deliveries anywhere on the main campus, including College Hill.

The deliveries to ECU's 27,000 students are made possible through Grubhub and Starship's partnership with ECU's food service provider, and the service can be used in conjunction with students' meal plan that integrates with their Grubhub account.

Uber Eats, Serve Robotics and Motional

Uber Eats has launched two autonomous delivery pilots in Los Angeles with Serve Robotics and Motional.

Both of the pilots will initially deliver food from only a few merchants. Serve's part of the initiative will focus on shorter trips in West Hollywood. Motional's will handle longer distance deliveries in Santa Monica.

Coles Group

Off the back of a pilot in Canberra, Australia, Coles Group is expanding its drone delivery programme with operator Wing to its Gold Coast customers.

It says that it is the first major supermarket to launch a store to door drone delivery concept in Australia.

Customers in the Gold Coast suburbs of Ormeau, Ormeau Hills, and Yatala will be able

to try out the new model, directly from the Coles store at Ormeau Village Shopping Centre.

The service will gradually expand to include other nearby suburbs, delivering 500 of the most popular Coles grocery items including bread, fresh produce, convenience meals, snacks, health care items, and household essentials.

These will be delivered to customers' home within 10 minutes on average. Coles team members will process and pack orders, and Wing staff will load the drones and oversee operation of the delivery service.

Posten Norge/Ottonomy

Ottonomy has announced a collaboration with Posten Norge and Holo which will see trials involving first mile delivery automation.

Posten Norge will be leveraging Ottonomy's Ottobots for pick-ups, receiving and delivering goods for the digital



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marketplace AMOI from the Aker Brygge metropolitan area in Oslo.

Store innovations

Our judging panel said: "Autonomous stores have now been around for a few years (I feel we've been judging these in the RTIH Innovation Awards forever) and yet actually live in the high street we're not really seeing the penetration that the investors and the retailer trialling the technology will want.

"What I'm hearing is that the price point is too high and

therefore limiting the adoption. Until both consumer demand drives it and the ROI shows a real win, then it will continue to be a wonderful technology but of limited value in the high street.

The key win is to eliminate queuing at the checkout and that's where the consumer will see massive advantages. But given that this year the focus is on cost consciousness, then without the ability to drive down costs this space will be a year or two away from full utilisation."

Lawson

Lawson has opened its first store staffed by on-screen avatars remotely controlled by employees.

Situated in Tokyo, it is also the retailer's first Green Lawson store, which promotes an environmentally friendly lifestyle.

It shows shoppers an avatar on a screen, backed by a remote worker to answer queries or to process those few transactions, such as purchases of tickets, that can't be done with self-service tech.

Jigsaw and Mercaux

Jigsaw has introduced Mercaux's Assisted Selling and Digital Styling solutions in a bid to connect its online and offline worlds.

The result is that store staff have been handed the digital tools to instantly check prices and stock levels while dealing with customers one-to-one and offer styling ideas in real-time for the items they're browsing.

A planned second phase of the project will introduce a next-gen checkout giving customers the flexibility and



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fluidity to use any payment method wherever and however they wish, be it in-store, online or remotely.

Everseen

Everseen has announced an expanded suite of products to address the retail industry's shrink problem.

This delivers end-to-end computer vision AI for retailers from the checkout at the front of the store, through the shopfloor, to the back of the store and beyond.

The company also announced that it has doubled its store installations, with growth driven by expansion with grocery retailers in the US, Europe, and Australia. Everseen is tapped by over half of the world's top 15 retailers to prevent losses and its

solutions are now in use in over 6,000 major retail stores (over 80,000 PoS).

Deep North

Deep North is a specialist in intelligent video analytics providing insights for physical retail comparable to data that e-commerce sellers enjoy online.

The tech gives retailers the opportunity to understand shopping behaviour, supported by cloud-based dashboards and mobile apps that provide real-time insights. What sets Deep North apart from its competitors is the ability to use existing CCTV cameras.

It helps companies improve real-time decision-making to enhance profitability, streamline operations and

increase safety, including valuable insights that improve the overall customer journey.

Spacee

Spacee has launched a new version of its Deming shelf mounted robots with live video feed capabilities, allowing retail store managers to see shelves and get real-time inventory snapshots remotely.

Skip Howard, Founder and CEO at Spacee, says: "There is a huge gap between what data retailers can collect in their e-commerce operations and what they can get from physical stores."

"Spacee helps fill that gap with critical in-store customer and supply chain data. Our latest Deming robots now take it to the next level with live and

A.S. Watson has taken the wraps off Skinfie Lab, a tool that creates personalised skincare product recommendations based on customers' selfies.



SKINFIE LAB!

AI SKIN ANALYZER

Discover your personalised beauty routine in a selfie

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recorded video feeds.”

The robots roam across shelves capturing inventory data. Spacee says that, while it can take several days for staff to capture inventory manually and a full day for a floor robot, Deming can provide an accurate inventory accounting of an entire facility in under a minute.

H&M Group

H&M Group is rolling out a pilot in COS stores, US, where “tech enabled in-store shopping solutions provide visitors with seamless payment options, personalised styling recommendations, faster checkout, and upgraded delivery/return options”.

The first pilot store in Beverly Hills, California includes fitting rooms equipped with smart mirrors that recognise products brought into the room (e.g. item, size, and colour) with the possibility to offer personalised product and styling recommendations.

On the store floor, other types of smart mirrors can be used for virtual try-on and styling.

Woolworths

Woolworths, in partnership with Tilitier, is introducing new artificial intelligence powered scales in produce aisles at stores across Australia.

Shoppers place their loose produce on the scales which display the weight of the product on the screen - instead of waiting until they're at the checkout for an accurate reading.

Lowe's

Lowe's is tapping NVIDIA Omniverse Enterprise to create interactive store digital twins in Mill Creek, Wash., and Charlotte, N.C.

“We are always looking for ways to reimagine store operations and remove friction for our customers,” says Seemantini Godbole, Executive Vice President and Chief Digital and Information Officer at Lowe's.

“With NVIDIA Omniverse, we're pulling data together in ways that have never been possible, giving our associates superpowers.”

Sam's Club

Sam's Club, a division of Walmart, has announced the completion of a US, chain wide roll-out of Inventory Scan towers that have been added to its existing fleet of robotic scrubbers in partnership with Brain Corp.

The deployment was initiated in late January 2022 and has resulted in Brain Corp claiming the title of world's leading supplier of robotic inventory scanners.

Sook

A 2022 RTIH Innovation Awards winner, Sook takes vacant retail spaces and fits them out with a modular, digital fit-out which can be rented by any occupier

by the hour.

The screens allow anyone to rapidly create a bespoke environment to showcase a product or service using digital content.

Sook maximises the utility of empty spaces with a platform that drives access for everyone (retail, amenity, community, wellness, art, meetup, education) at the same time as creating sustainable revenue for landlords.

The company gathers analytics for all its occupiers which allows them to best understand how to use physical space as efficiently and effectively as possible.

Žabka Nano

Žabka Group's Žabka Nano pop-up autonomous store is now a part of the Microsoft Industry Experience Center in Washington, USA.

Stores operate in several formats, such as standalone container vending machines, traditional bricks and mortar outlets, or store-in-the-store. Each uses technology developed in cooperation with AiFi and leverages Microsoft Azure.

The first Žabka Nano location was established in June 2021 in Poznań. Currently, Žabka Group manages the largest chain of autonomous stores in Europe with more than 50 outlets.

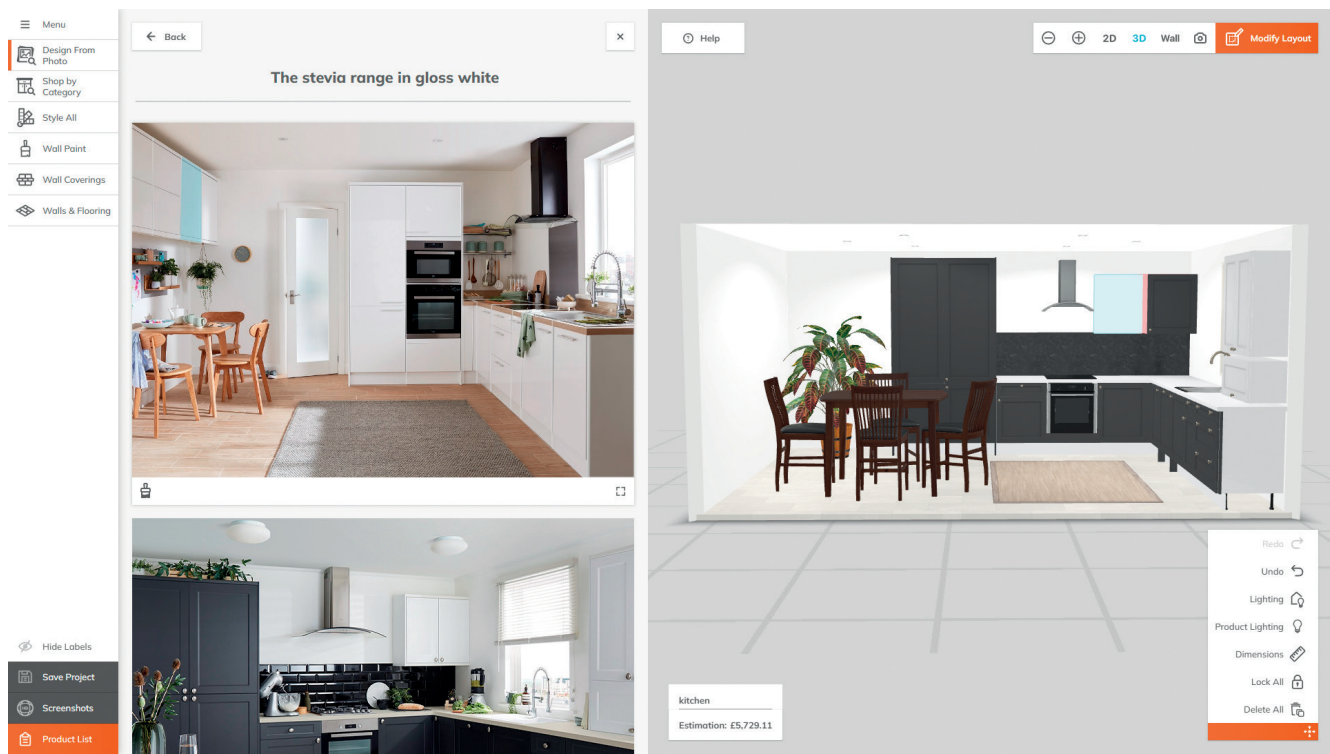
Cheeseade

Tech startup Cheeseade has launched Price Lab, its first unmanned convenience store with hourly price changes in Seoul, South Korea.



We are always looking for ways to reimagine store operations and remove friction for our customers.

Retail Tech Innovations Report



The store's artificial algorithm collects data on information that affects a product's value, such as expiration date, remaining stock and local demand. It employs visible light communication to communicate with lights in the store, which receive hourly codified data from Cheeseade headquarters, on updates prices based on the data inputs.

Being an unmanned store, shoppers make purchases through scanning with product's bar code with a smartphone and making the digital transaction with the phone.

Carrefour Poland and PepsiCo

Carrefour Poland, together with PepsiCo, has launched a pilot promotional programme using self-driving eRobots.

Currently, there are two

robots selling Pepsi beverages and Lay's chips in Carrefour stores located in the Westfield Arkadia and Galeria Wileńska shopping centres in Warsaw.

The aim is to support sales and to make shoppers curious and encourage them to interact with the robots.

Muffato

Sensei reports that Muffato has adopted its AI platform for what is pitched as Brazil's first autonomous supermarket.

The Muffato Go store, which is situated in Curitiba, Paraná, comes without queues, self-scanning or any form of physical checkout, and is the first deployment of Portugal-based Sensei's technology outside of Europe.

Shoppers download Muffato's app, which generates a QR code

that enables them to enter the store, pick up their items and leave. A network of sensors provides the input Sensei's AI needs to keep track of the items each customer selects and returns throughout the 250 square metre location.

Jisp

This money saving and rewards app works in-store, in-app and socially to connect shoppers to brands at local convenience stores in the UK.

In just one year, Jisp has seen thousands of shoppers make over 500,000 scans in-store, with 330,000 money saving vouchers issued and 292,000 redemptions made. Customers have saved over £345,000 and won a total of £10,000 in prize money.

Jisp's in-built store-specific loyalty means retailers can

 **3D Cloud by Marxent is partnering with Kingfisher to roll-out new 3D visualisation, planning, and design tech across a number of its banners.**



Retail Tech Innovations Report



Really liked what Invrision are doing. Many use cases. Innovative, with strong potential in varied aspects of retail operations.

reward shoppers to drive stronger engagement and sales from their store. Once a shopper redeems 25 products they receive a £2.50 voucher to spend only in that store - regardless of the value of redeemed products.

AR voucher tech enables shoppers to access the best deals in-store through personalised deals and Jisp has seen an 88% conversion rate from scan to redemption. The brand uses social channels like TikTok to attract local communities to 200+ stores nationwide.

Walmart Canada and Focal Systems

Retail automation specialist, Focal Systems, entered the UK market in 2022, having joined the British Retail Consortium (BRC) in August and opened its first office in Europe. The US-based firm, which has developed the Self Driving Store Operating System (FocalOS) and raised more than \$40 million in VC funding to date, says it will use its AI technology to help UK retailers improve margins, increase sustainability, and better serve customers.

Focal Systems was among the nominees in the Supply Chain category at the 2022 RTIH Innovation Awards. It was

shortlisted for its work with the likes of Walmart Canada.

Following a 70-store pilot, a computer vision AI solution from Focal Systems that uses cameras to automate out-of-stock detection, is rolling out to all stores.

The technology, which is integrated with the retailer's existing inventory systems, automatically detects real-time availability concerns (out-of-stock or low-stock) and directs store teams to replenish in popular departments like grocery, pets, health and beauty, frozen, dairy and so on.

Walmart is one of the first retailers in Canada to deploy an AI solution for on-shelf availability.

Wakefern Food Corp. and Trigo

Wakefern Food Corp. has opened The Pantry, a checkout-free convenience store for the workers at its Edison, New Jersey campus that features Trigo technology.

This uses computer vision with a series of cameras and shelf sensors to identify products picked up by people.

Wakefern is the first US company to test Trigo's technology, which has been deployed by several retailers in Europe and the UK, including REWE and Tesco.

Yochananof and Cust2Mate

Yochananof, an Israeli supermarket chain, recently placed a follow on order for an aggregate of 1,000 Cust2Mate smart carts, after an initial roll-out in stores.

Augmented and virtual reality

Our judging panel said: "Really liked what Invrision are doing. Many use cases. Innovative, with strong potential in varied aspects of retail operations. Potential to bridge a key gap in sharing data between retailers and consumer goods companies."

Invrision

With its proprietary software, SHELFZONE, Invrision enables retailers to simulate hyper-realistic immersive spaces in virtual reality.

In 2022, it launched the beta version using pixel streaming technology, providing a real-time rendered retail simulation accessible anywhere on a laptop with a unique link. The full launch will take place in Q1 2023. Pilot clients include Diageo and Ipsos. Applications of the company's software and immersive technology range from category management to trade marketing and consumer insights.

Reza and Perfect Corp.

Reza, a Parisian jewellery brand, has launched a website powered by Perfect Corp.'s AgileHand technology.

This offers an immersive AI and AR shopping journey, allowing consumers to experience Reza's rings, earrings, and bracelets through interactive virtual try-on technology.

3D hand mapping technology uses physically based rendering to aid in precision 3D objects with true to life finishes, mimicking the light scattering

Retail Tech Innovations Report

effects of different materials to ensure Reza pieces are accurately recreated as digital renderings.

Online retail

Our judging panel said: "The True Fit solution delivers impressive results at scale for a wide range of brands. As well as driving personalisation and engagement with shoppers, it also tackles the major issue of returns in the fashion industry with associated cost and environmental benefits."

FatFace

FatFace is partnering with True Fit to deliver size and fit

guidance to digital shoppers.

This was implemented on to the company's site by Astound Commerce, FatFace's strategic integration partner, as part of its digital transformation journey.

The partnership will leverage True Fit's Fashion Genome, which brings together data from 80 million active members and 17,000+ brands, to unlock insights and serve fit personalisation to shoppers.

TalkShopLive and JLo Beauty

Live commerce platform TalkShopLive and JLo Beauty have launched their first ever shoppable video in partnership with Vogue's Beauty Secrets

video series.

This is hosted by Vogue's December cover star Jennifer Lopez who shares her beauty regimen featuring JLo Beauty, and also exclusively debuts two new JLo Body products which are available for purchase within the TalkShopLive video player.

The True Fit solution delivers impressive results at scale for a wide range of brands.



Starship Technologies and Grubhub are expanding their food and drinks delivery service to Baylor University and East Carolina University (ECU) in the USA.