
FUTURE OF OMNICHANNEL PRESENCE



Introducing the Future of Omnichannel Presence

VSP Global Innovation Center and CB Insights' Futurist Report series highlights the ideas and technologies shaping our future.

This third installment explores the **Future of Omnichannel Presence**. As consumers move between digital platforms and real-life settings, “omnichannel” experiences are accessible, seamless, and consistent regardless of where users engage.

While consumer-facing businesses have long aspired to this level of cross-platform connection, **the pandemic has accelerated consumers' shift online and has amplified their need to toggle between channels.**

When it comes to shopping, optimizing an omnichannel experience means offering the same images and messaging and connecting inventories in store, on a computer, or on a mobile phone. This is crucial as online shopping penetration remains 30% higher than pre-pandemic, and 60%-70% of consumers are shopping and researching in person as well as online.

Retailers and other consumer-facing businesses stand to benefit immensely from these connected experiences.

Walmart, for example, estimates that customers who shop with them across digital and store platforms spend twice as much as those who only engage with one.

This report highlights the technology and solutions enabling businesses across relevant industries – including healthcare, retail, and hospitality – **to be available and responsive to their customers across a variety of channels.**

VSP Global Innovation Center and CB Insights

The future of omnichannel presence

Connecting consumer data across key dimensions to make interactions targeted and efficient



**RESPONSIVE
CONSUMER
ENGAGEMENT**



**ANTICIPATORY
AND FLUID
CUSTOMER CARE**



**SIMPLIFYING
THE PURCHASE
PROCESS**



**RIGHT PLACE,
RIGHT TIME
FULFILLMENT**



Outline of transformative trends in this report

Responsive consumer engagement	Anticipatory and fluid customer care	Simplifying the purchase process	Right place, right time fulfillment
<ul style="list-style-type: none">• Provider-matching platforms begin to personalize an office visit before a patient even arrives.• Virtual screening can expand vision care access and encourage members for in-person ECP appointments.• Virtual benefit fairs offer opportunities to gather consumer data and drive awareness of key services.• AI is powering recommendation engines that offer context-oriented customization.	<ul style="list-style-type: none">• Automated chatbots make customer service faster and less costly, and they are available 24/7.• “Digital front door” platforms streamline office visits by ensuring that all tasks are connected.• AI tools sense customer characteristics and tailor product suggestions, cutting through thousands of products.• On-shelf tech educates the consumer, prompts interaction, and gathers customer data.• Video service platforms add another engagement avenue, particularly following in-person visits.	<ul style="list-style-type: none">• Healthcare cost estimators provide price transparency via AI-driven prediction and other tools.• Cross-channel payment tools, like digital wallets, enable faster and more flexible payment.• Cashierless checkout systems give retailers another tool to track customer behavior throughout the shopping experience.	<ul style="list-style-type: none">• Demand forecasting integrates more data sources to track consumer needs and reduce costs and waste.• Delivery tracking, including direct communication with drivers, boosts transparency for customers.• Recycling programs help brands save on costly returns and support sustainability initiatives.

TRANSFORMATIVE TREND #1

Responsive consumer engagement



What is responsive consumer engagement?

Consumers' lives are increasingly online. Tools that make complex and dynamic data connections are helping businesses, including healthcare providers, reach consumers with the right messages at the right time and on the right channel.

Tools such as online **healthcare provider matching** will make the data collected functional for the consumer and **help build loyalty** throughout the customer journey.

Meanwhile, **virtual screenings** and tests serve a specific role in healthcare to **point patients in the right direction for care**. They also provide healthcare organizations another opportunity to gather data on **consumers' evolving needs**.

Finally, given the wide range of sources of information online, content delivered to individuals must not only be a function of traditional markers, like demographics, but also external factors, like time or location.

Data-driven marketing is nothing new. But with consumers' increasing willingness to share data, there is also an increased expectation that their data is being used to enhance their consumer experiences through hyper-personalization, customization, and dynamic delivery.

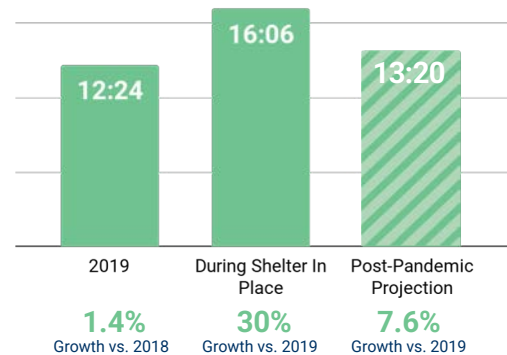
Wendy Hauteman
Chief Marketing Officer, VSP Global

Where is the momentum now?

Consumers are spending more time online, and healthcare research has moved online as well. To reach increasingly digitally oriented consumers, investment in tech that enables targeted marketing is growing.

Experts project **daily technology and media attention will remain nearly 8% higher** post-pandemic¹:

Hours:minutes per day

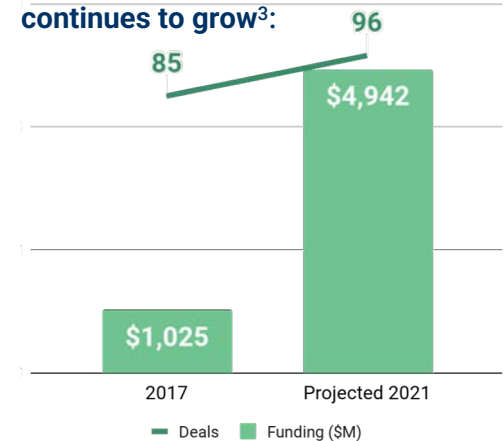


In a survey, **57%** of consumers had researched providers online. They **started their research with general internet searches**²:

- 33%*** Internet (e.g., Google)
- 24%** Insurance website
- 17%** Health system website
- 9%** Content website (e.g., WebMD)
- 6%** Non-healthcare review site (e.g., Yelp)

*Resource consumers consulted first when gathering provider information

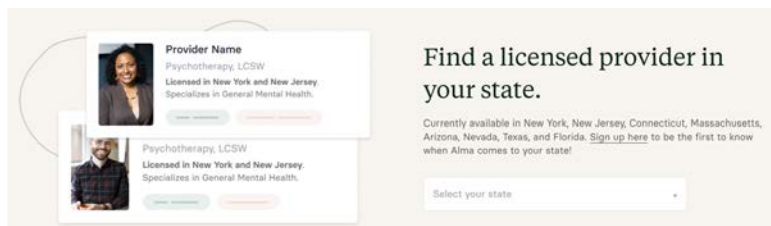
Annual **funding to targeted marketing tech companies (\$M)** continues to grow³:



Personalizing the provider search

Matching patients to the right providers builds trust ahead of the appointment.

Alma

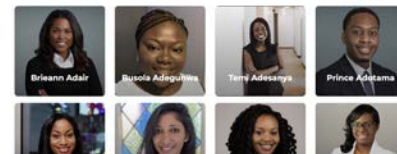
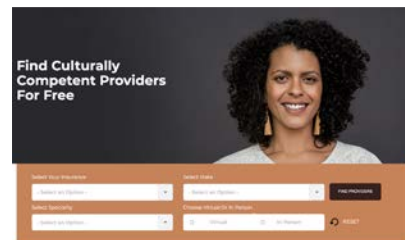


Total disclosed funding: \$42M

Latest round: Series B, February 2021

- **Alma** matches customers to therapists. Patients can sort by types of service and insurance, and a client matching team can create a personalized list of providers.
- For providers, Alma increases high-quality client referrals and boosts payback rates.

hued



Total disclosed funding: \$1.6M

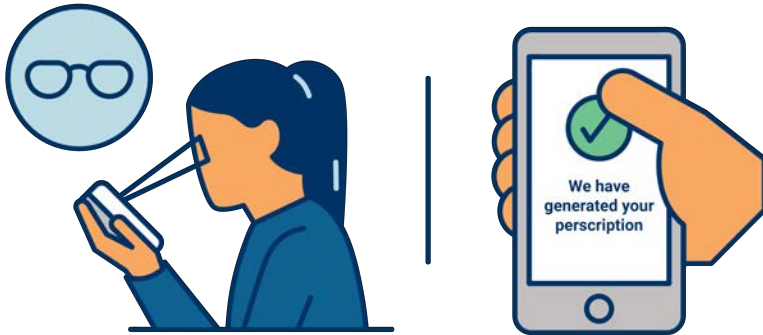
Latest round:

Seed VC, August 2021

- **Hued** aims to improve health outcomes for patients of color: per the company, African Americans and Latinos experience 30%-40% poorer health outcomes, in part because of a lack of access and dismissal by health providers.
- Its platform helps patients find providers of color who understand their cultural as well as their physical and mental needs.

Emerging omnichannel path for vision care

Virtual screening tools will soon offer an option to begin the vision care journey remotely.



VIRTUAL TECHNOLOGY TOOLS



VIRTUAL TECHNOLOGY PLATFORMS

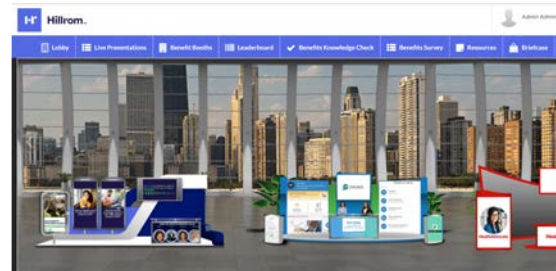


Virtual benefit fairs engage members ahead of need

Even as fairs shift virtual, engagement at the events can create connections before patients come to the office.



- HR consulting firm **Mercer** has introduced a virtual benefits fair program to help companies communicate benefits information with dispersed workforces.
- The fairs feature virtual booths and tools to reach vendors directly in real time. Companies can also embed media like videos and webinars directly onto the platform.

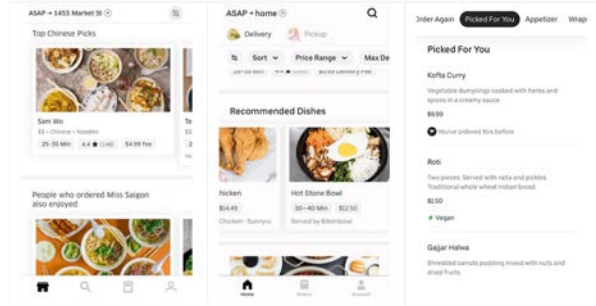


- **vFairs** is a virtual events producer that includes virtual benefits fair hosting tools on its platform. Its interfaces include 3D visual designs and animations, as well as the ability to host surveys and incentivize employees.
- Medical device company Hillrom used vFairs to host its second virtual benefits fair in early 2021. The system accommodated 22 benefits partners and gave employees wellness program incentives for participating.

AI powers targeted recommendations

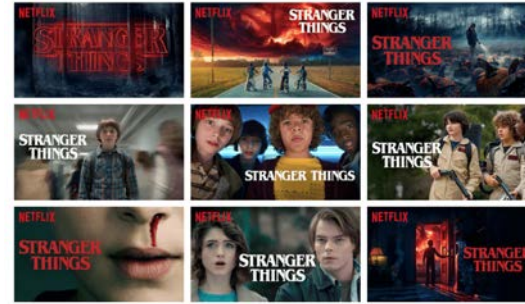
Tech companies use AI to customize recommendations. In healthcare, AI tools could dynamically adapt digital content and messaging based on individuals' current conditions, needs, or preferences.

Uber Eats



- **Uber Eats** uses an AI-powered recommendation tech known as graph neural networks (GNNs) to suggest dishes and restaurants to users based on past orders and user preferences. It has reported “significant improvements” in the quality and relevance of recommendations.
- GNNs are a form of machine learning technique for graph databases, a new type of database on the rise.

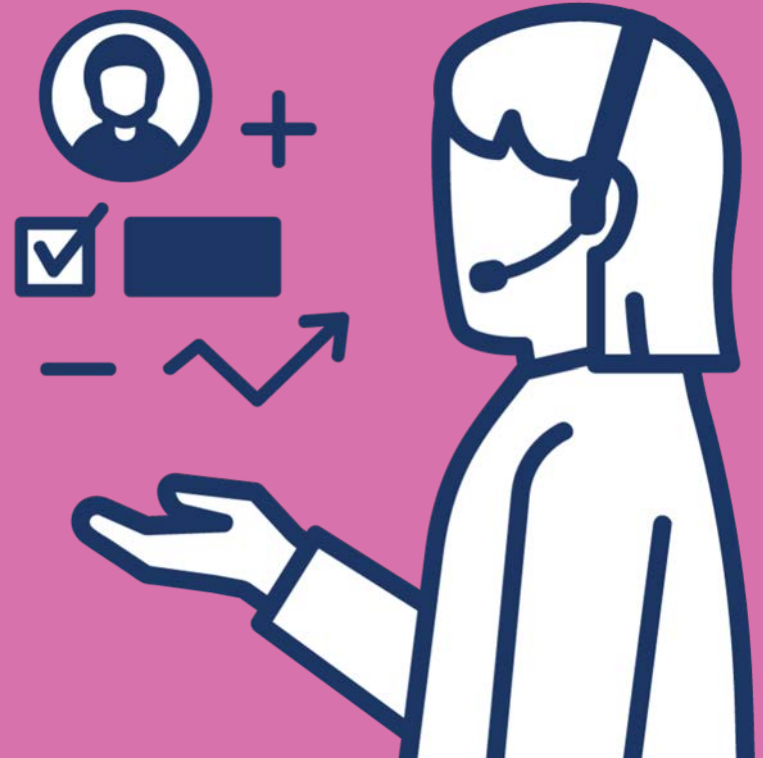
NETFLIX



- **Netflix** uses contextual bandits to change a movie's artwork for different viewers on the platform.
- Contextual bandits use AI to take the context of individual users, such as location, preferences, or other data points, into account.
- The dynamic personalization that this tech engenders helps boost engagement with Netflix's content.

TRANSFORMATIVE TREND #2

Anticipatory and fluid customer care



What is anticipatory and fluid customer care?

Healthcare consumers want personalized and interconnected care — before, during, and after their office visits.

Automation and machine learning are key technologies driving tailored and consistent service.

- **Pre-visit**, AI-driven communication and curation **saves time** and begins to **personalize the experience**.
- **During the visit**, digital tools **build a foundation** to ensure connection at the point of entry, then **tech at the shelf** attunes education and interaction to **consumers' characteristics and needs**.
- **Post-visit**, tech-enabled support **bolsters engagement** after consumers leave the office. Live service and personal connection can happen even **remotely via video platforms**.

“

We have an incredible opportunity to advance our current work leveraging AI and data to create more personalized healthcare and retail experiences while elevating the value of our providers to our patients.

Alan Cordell

Senior Director, Enterprise Analytics & Information Management, VSP Global

Where is the momentum now?

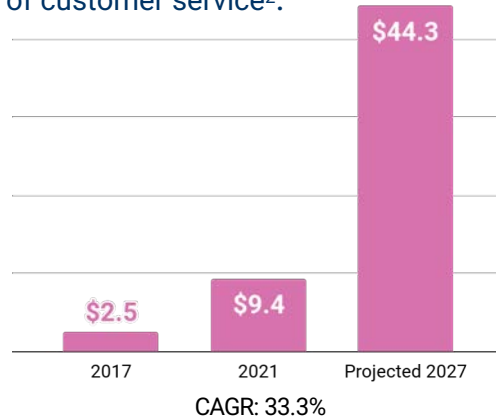
The market for automated customer service is growing across consumer-facing businesses. Funding to tech-enabled customer service continues to grow as consumers seek out digital engagement.

Consumers are **nearly as likely to opt in to text message communications for healthcare as they are for retail**¹:

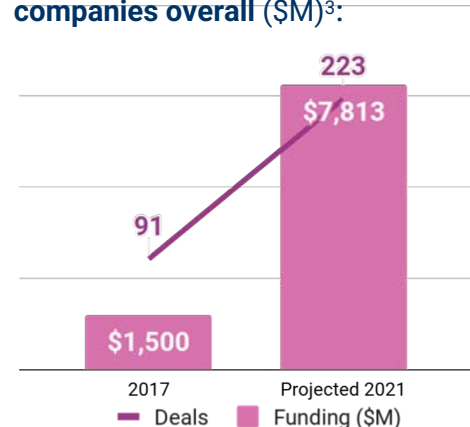
Percentage of customers who are likely to opt into text messages:



The global market size (\$B) for **intelligent virtual assistants will expand as businesses automate parts of customer service**²:

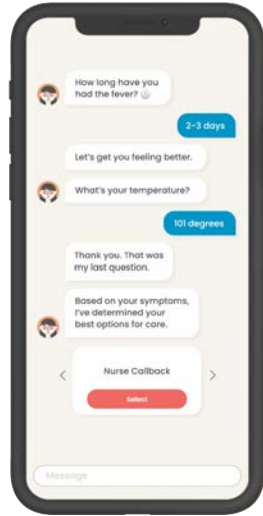


Demand for tech-enabled customer service has **propelled growth in annual funding to customer service tech companies overall** (\$M)³:



Chatbots make customer service more efficient

Conversational AI reduces waiting time, provides off-hours support, and answers common questions.



HEALTHCARE ENGAGEMENT AND SELF-TRIAGE



CHAT COMMERCE



AUTOMATED VOICE



Features text and voice



Features text and voice



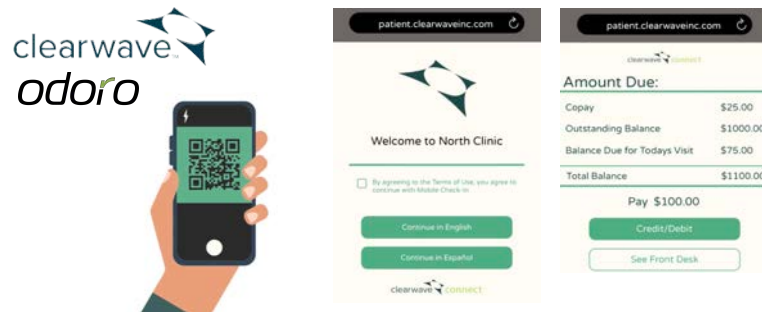
“Digital front door” platforms streamline the visit

Patient engagement and communication platforms are adding key capabilities to boost productivity and profitability before and during the visit.



In September 2020, CloudMD acquired iMD.

- CloudMD integrated iMD's digital patient education platform. CloudMD serves providers with cloud-based electronic medical records and billing software as well as an online patient portal.



In October 2020, Clearwave bought Odoro.

- Clearwave added Odoro's digital scheduling and check-in capabilities to its suite of patient engagement tools, which already included communications, a physician finder, and insurance eligibility checks across specialties.
- In case studies, Clearwave's check-in tools reduced check-in times by 74%-90%.

Using AI to tailor product selection

Engaging patients with platforms like these ahead of an office visit can personalize and speed up in-person interactions. These tools are especially useful in narrowing down otherwise overwhelming assortments.

PERFECT



Total disclosed funding: \$75M

Latest round: Series C, January 2021

- **Perfect Corp** is a leader in augmented reality for virtual beauty try-on. Its AI Skin Diagnostic tool offers tailored skincare recommendations by analyzing a customer's skin across 8 conditions in 2 seconds.
- One brand generated 120,000 trial users and 500,000 new followers online as a result of deploying the diagnostic tool.



Total disclosed funding: \$12.5M

Latest round:

Series A, January 2020

- **Lily AI** tracks the emotional states of customers while they shop online and offers product suggestions based on their needs. It uses shopper behavioral data to assess emotional "context" and connects that to the product traits that matter most to them at a given time.
- Online resale platform ThredUp reported a 4%–15% increase in conversion rate as a result of using Lily's product tagging and consumer profiles.

Digital screens enhance service at the shelf

Smart digital screens highlight product information and tailor the experience to shoppers in real time. In healthcare, similar tools enhance patient education and improve how providers track patient needs.

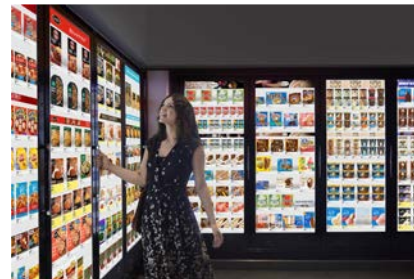
TOPOLOGY



Total disclosed funding: \$18M

Latest round: Unattributed, March 2021

- **Topology's** platform performs 3D scans of patients' faces using 20,000 points of measurement to custom-tailor frames. Eyewear retailers deploy the app on tablets for a touchless in-office experience. Patients can also use the app from home for virtual appointments.
- Topology promises increased capture rates and the ability to serve more patients at a higher lifetime value.



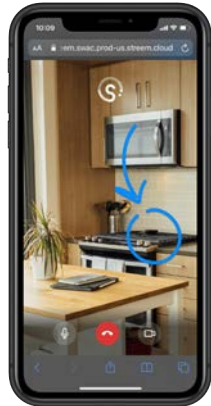
Total disclosed funding: \$81M

Latest round: Series C, October 2020

- **Cooler Screens'** digital refrigerator doors use cameras and sensors to collect data on consumers' responses to ads and product displays on the doors. The screens then display targeted advertisements in real time.
- Walgreens began rolling the screens out to 2,500 stores in 2020. In tests, sales of featured products grew 2-10x faster than others in the same stores.

Post-purchase, video support bolsters relationships

Live support tools can help healthcare providers maintain engagement with patients outside of in-person interactions. The in-depth service also reduces costs related to repairs, warranties, and other services.



Acquired: May 2019, Frontdoor

- **Stroom's** remote video support platform uses augmented reality (AR) to provide live service.
- Home grill maker Traeger used Stroom's platform and reported a 51% reduction in warranty spend because Stroom video allowed for more accurate diagnosis of problems.



LIFE SCIENCES & MEDICAL DEVICES
Apria Healthcare



LIFE SCIENCES & MEDICAL DEVICES
GE Healthcare



LIFE SCIENCES & MEDICAL DEVICES
B.Braun

Total disclosed funding: \$50M

Latest round: Incubator/Accelerator, May 2021

- **SightCall's** technology integrates into existing call centers and uses AR to provide visual assistance.
- Its clients include beauty brands, insurance firms, manufacturing businesses, and telehealth and medical device solutions providers.

TRANSFORMATIVE TREND #3

Simplifying the purchase process



What is simplifying the purchase process?

Enhancing purchase process transparency, flexibility, and speed will help healthcare businesses and providers reach a broader set of customers.

Simplifying the process starts with **instituting price visibility** – a feature that is particularly **crucial in healthcare**. That said, once businesses share that information, they must be prepared to offer consumers a **variety of payment options**.

The range of payment modes is expanding, from digital wallets that users tap to pay to buy now, pay later systems. **Offering more payment options** helps businesses meet the **needs and preferences** of different consumer groups.

Finally, contactless platforms help retailers **track how consumers shop**, what they buy, and even how they react after the transaction. Synthesizing this data helps businesses **customize the experience in real time** and beyond.



We're seeing many new companies focused on the seamlessness of checkout because that's where over 50% of consumers typically drop off.

Kevin Parakkattu
Principal, Plug & Play Ventures

Where is the momentum now?

A lack of visibility into healthcare costs leads more than 50% of patients to avoid care. As digital payment and checkout technology advance, new tools will improve transparency and payment speed.

The **majority of healthcare consumers are either flying blind on costs or have avoided seeking care** because of a lack of information¹:

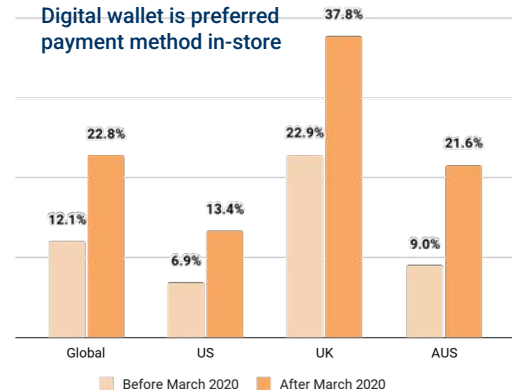
68%

Say they often **don't know how much a medical treatment or appointment costs** until months after the fact

53%

Have avoided seeking care because they weren't sure what the cost would be

Digital wallets, which make it possible for consumers to pay with their phones, **are growing in popularity²**:



Innovation in checkout technology continues³:

216%

Increase in number of patents filed for checkout technology between 2012 – 2021* vs. the previous decade

Predictive models give rise to cost transparency

Clarity about price and payment can make appointments move faster and help patients feel confident about their decisions.



Promises
accuracy within
90%
of final cost

- nThrive's payment estimator, called CarePricer, allows providers as well as patients to generate estimates of patients' financial liabilities ahead of receiving services.
- The company offers health payment and revenue management solutions for providers and patients. Its analytics platform helps providers measure performance.



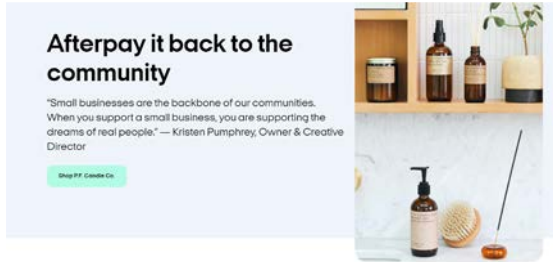
PATIENT ESTIMATION BY THE NUMBERS



- Waystar's patient cost estimation tools use Hubble, the company's AI and robotic process automation platform, to calculate accurate estimates. Providers can generate their own estimates, while a self-serve feature also enables patients to calculate their own costs.
- Its clients include a wide range of healthcare systems and billing software platforms.
- Waystar has acquired 7 companies over the past 3 years. In July 2021, it bought Patientco, a patient payment platform.

New forms of payment acceptance add flexibility

Accepting a variety of payment options may help healthcare providers reach a wider range of patients.



- In August 2021, payments and financial services provider **Square** acquired the buy now, pay later platform **Afterpay** for \$29B.
- Afterpay has already branched out from its roots online to offer its installment payments services in physical stores. With the acquisition, Square will further expand Afterpay's reach by integrating the platform into its digital wallet, Cash App.



- In June 2020, **Capital One** applied for a patent that uses voice recognition technology to quickly authenticate electronic transactions at the point of sale. According to the patent, Capital One's server would authorize transactions by comparing a customer's voice with a stored sample.
- The use of biometric technology has the potential to create an even more seamless digital wallet experience.

Checkout-free tech tracks shopper habits

Deploying tech that caters to in-office patients could help providers gather on-site data and further customize the experience in real time.

amazon



- **Amazon's** various forms of cashierless checkout – including its computer vision-powered stores, its smart shopping cart, and its palm payment platform – offer convenience, but also give the retailer a variety of tools to understand how customers move through their stores.

instacart
Caper



- In October 2021, online grocery platform **Instacart** acquired smart cart maker **Caper AI**. Using Caper's object recognition system, shoppers can place items into a cart without having to scan or weigh them, then can check out at the cart.
- The companies will be able to integrate their shopper data across Instacart's platform and the touchscreens on Caper's carts to further personalize the shopping experience. Caper reports that use of its technology leads to 18% bigger shopping baskets.

TRANSFORMATIVE TREND #4

Right place, right time fulfillment



What is fulfillment at the right place and the right time?

Consumers expect to get what they want, when they want it – and healthcare businesses need to be able to deliver.

Demand forecasting tools are **integrating data from more sources** to ensure that the right items are in stock and to **help reduce waste**. Deploying these tools can **streamline inventory management and boost revenue**, but also requires upgrading supply chains and fulfillment operations to be more responsive.

Consumers now also expect **visibility across the supply chain**. Tech that aids live tracking and optimizes delivery routes, allowing consumers to watch their items travel from the manufacturer to their homes, will help businesses **build long-term loyalty and trust**.

The complexity and cost of enabling online as well as in-person product returns is prompting **sustainable solutions**. Brands with their own **circular commerce programs** can benefit from **keeping consumers**, and any sustainability rewards they receive, in-house.

“At Visionworks, once a patient purchases their eyewear or contact lenses, they can track their purchase – from the start of the manufacturing process through delivery to store – allowing them complete order status visibility.

As we perfect our processes, I imagine a future where our patients place their orders and choose how and where their eyewear is delivered – a remote location, drone delivery, etc. The possibilities are endless!

Jason Prodouz
Chief Product Officer, Visionworks

Where is the momentum now?

Consumers are prioritizing ease, immediacy, and flexibility across all stages of the fulfillment chain, including returns. Advances in automation could help retailers make fulfillment and delivery faster and less costly.

Even as retailers ramp up delivery speed, a significant share of consumers want **even faster and more efficient experiences**¹:

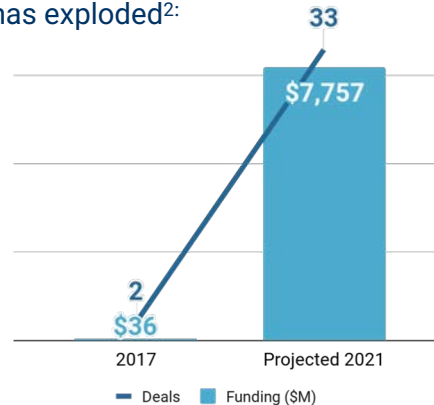
36%

Say immediacy (i.e., the ability to find and buy items quickly, at any time) is more important than a year ago

41%

Say ease of returns and post-purchase service is more important than a year ago

Annual funding to ultra-fast grocery delivery companies, which **promise fulfillment in 30 minutes or less**, has exploded²:

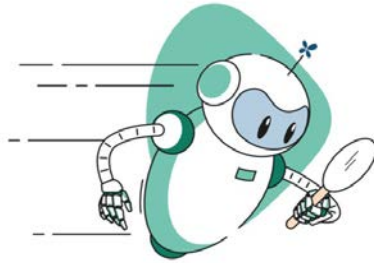


276

patents related to fulfillment and warehouse automation have been filed in the last 5 years*, **more than the last 15 years combined**³

Better data fuels more accurate inventory forecasts

AI-enabled inventory forecasting reduces cost and prevents waste by integrating external data.



Total disclosed funding: \$224M

Latest round: Growth Equity - III, February 2019

- **Relex's** demand forecasting and inventory planning analytics integrate external factors like the weather as well as current retail sales data.
- In a deployment for Franprix convenience stores in France, Relex reported a 67% reduction of out of stocks and a 2 percentage point increase in profit margins.



Total disclosed funding: \$19M

Latest round: Incubator/Accelerator, February 2019

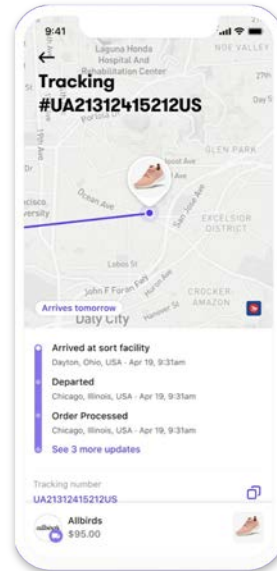
- **Vekia's** demand forecasting platform monitors alternative data sources – such as social media channels – to make supply chain forecasts.
- France-based Engie Home Services used Vekia's tool to optimize its spare parts stock for its service providers. Inventory decreased by 10% and parts availability increased by 5%.

Delivery tracking keeps customers in the loop

In eye care, the adoption of delivery tracking tools could help keep patients connected post-office visit.



- E-commerce platform **Shopify's** consumer-facing Shop app gives users access to their favorite small businesses and brands in one place.
- Package tracking is one of the app's key services. The app offers a live map view and notifications as an order's status changes. It's also easy for businesses to answer customers' questions via the app.



Total disclosed funding: \$144M

Latest round: Growth Equity, May 2020

- **DispatchTrack** uses AI to optimize routes, track delivery fleets, manage billing, and ultimately, enhance last-mile fulfillment.
- Its platform includes a suite of customer communication tools that allow customers to track orders in real time and schedule their deliveries via text, email, and phone.

Brands reward consumers who recycle

Eye care providers and manufacturers could benefit from programs that reward patients' sustainable practices.



- UK drugstore **Boots** rewards shoppers who recycle beauty products like mascara tubes and shampoo bottles in its stores. For every 5 products, customers receive 500 Boots Advantage Card points, worth £5.
- From September to December 2020, the retailer collected a metric ton of plastic.
- 50 stores feature the drop-off points, which use “Scan2Recycle” technology. For the drop-off points, Boots partnered with **ReWorked**, which turns difficult-to-recycle items into furniture.



If everybody bought one used item this year, instead of buying new, it would save 449 million pounds of waste.* With Levi's SecondHand, we're inviting you to join us in a more sustainable future.



- **Levi's'** resale program promotes reuse and rewards consumers for recycling. The brand says buying a used pair of its jeans saves 80% of the CO2 emissions and 1.5 pounds of waste vs. buying a new pair.
- The brand's SecondHand platform, launched in October 2020, allows consumers to return worn Levi's jeans in exchange for \$15-\$25 in store credit. The SecondHand marketplace then resells the jeans.

A stylized white line-art illustration of a person climbing a mountain peak. The person is on the left, facing right, and is holding a flag on a pole that reaches the top of the mountain. The mountain is a simple white shape with a cloud-like base. The background is a solid purple color.

Our call to innovators

This report highlights the trends driving more connected experiences across consumer journeys. The technologies highlighted are just the beginning: continued innovation will raise consumers' expectations for seamless engagement across marketing, customer service, payment, fulfillment, and beyond.

VSP Global is constantly reimagining the way eye care and eyewear are delivered to the world. To fulfill this promise, the VSP Global Innovation Center is actively looking to work with external partners to pioneer and provide life-improving products, experiences, and services.

If you are actively working on solutions that impact the future, we'd love to talk.

Get in touch with us at globalinnovationcenter@vsp.com

About the producers



VSP Global Innovation Center

At VSP Global, our purpose is to empower human potential through sight. As the first and only national not-for-profit vision benefits company, VSP has been the leader in health-focused vision care, providing affordable access to eye care and eyewear for more than 80 million members through a network of more than 39,000 doctors.

The VSP **Global Innovation Center** is developing products, services, and experiences to bring value to our stakeholders and help advance the eye care and eyewear industries.

To learn more, please visit www.vspglobal.com/innovation



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GLOBAL
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December 2021

