# HOW THE FUTURE OF THE INTERNET WILL INFLUENCE RETAIL

Expert Predictions on the Internet of Things, Geolocation, Artificial Intelligence, Web Design, and Ecommerce

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# What is the future of the Internet?

The Internet has become a key part of our shopping experience and a major influencer in how and why we make purchases. But what's next for the future of the Internet, and how will these developments impact the retail industry?

## Availability

A prevailing opinion about the future of the Internet is that an 'always on' connection will emerge, as Bradley Shaw of SEO Expert Brad Inc., explains:

"Internet connectivity will be permanent and seamless. We have been 'connecting' to the Internet in numerous ways, from the age-old dialling up process to the seconds-long completion of entering a Wi-Fi password. I expect this will change as we move into the next phase of Internet usage."

"Eventually, connectivity will be constant and streamlined to the point where no individual 'connection' is needed. Universal Internet is slowly coming to fruition, and overlap between systems may establish a layer of redundancy that prevents worries of service outages or connection issues."

Furqan Tafseer, Digital Marketing Strategist, mirrored this prediction:

"Internet connections are going to be automatic and permanent. I wouldn't be surprised if soon it will become a completely free facility for all the common people around the globe."

## Speed

The speed of Internet connections will improve in the future. Since it's conception and popularisation, we've already seen Internet speeds make enormous leaps in terms of performance and efficiency.

For example, did you know that you could conduct a manned mission to the moon in the time it would have taken to download a full Season of Game of Thrones using a dial-up connection (the moon landing took approx. 173 hours and 56 minutes, downloading an HD season would take 244 Hours and 40 Minutes)?

Now, imagine another jump in Internet speed that's just as drastic – changing the way we engage with the web, growing the popularity of the Internet of Things, and altering the way we shop forever.



## How we conducted our research

We spoke to futurologists, Internet experts, and industry commentators to better understand how super connected, ultra-fast Internet will impact retailers. Our research is intended to give a glimpse into some of the exciting ideas and concepts that superfast Internet connections could bring, as well as some of the innovations emerging from this fascinating field of study.

# Geolocation and the Internet of Things

The growth of the Internet of Things (IoT) will certainly be aided by more powerful and accessible Internet connections – with more and more household appliances and 'smart' devices connecting to the Internet at all times.

The IoT is predicted to feature more heavily in retail locations by almost all the experts we spoke to, with geolocation and communications becoming the main way this emerging technology will be utilised.

80% of retailers worldwide agree that the Internet of Things will drastically change the way companies do business in the next three years, with geolocation technology set to thrive in an environment of increased Internet speed, availability, and performance.

Developments in recent years have given rise to 'Beacon' technology, in which businesses send notifications via smartphone about promotions or products depending on the location of the user. A study conducted by beacon platform Swirl found that 73% of shoppers who received one of these messages stated it increased their likelihood of making a purchase during a store visit, and 61% said it would encourage them to visit a store more often. This kind of forward-thinking technology is limited in its current state, but the onset of greater connectivity will mean targeted messaging based on location will become more frequent and sophisticated.

## Smartphones and geolocation

Dinesh Ganesarajah, Chief Executive of corporate R&D lab, Prescouter, explained how smartphones and geolocation technology will work in tandem:

"The computer we all carry around in our pocket, better known as a mobile device, is essentially always connected to the surrounding infrastructure of GPS and indoor Beacons along with social media apps like Facebook, Twitter, etc., that have an acute understanding of our preferences and dislikes. All of this combined, allows marketers to continuously track and message users at key moments to influence change. For example, if there's a user with a mall app running that she or he has logged in through Facebook, there is now a possibility (with the right agreements in place with Facebook), that they could receive a message from a store they're approaching that has a product that they 'liked' on Facebook."



Accurate messaging that combines geolocation with the likes and dislikes of social media profiles is a concept that will either delight or confound consumers, especially with concerns about privacy of personal information growing. 79% of people polled in the ComRes study Online Privacy: Big Brother Watch stated that they had concerns about their privacy online, so this may be a potential barrier to the widespread adoption of this technology.

# "The result is an explosion of new apps that are disrupting conventional ways of doing things"

## Retail destinations

Dan McKone, managing director and partner at L.E.K. Consulting, explains the further possibilities of using geolocation tracking in retail destinations in a Harvard Business Review article, regarding improvement of staff performance:

"One particularly promising, untapped opportunity is pairing a customer's location with 'in-the-moment' feedback to generate more granular performance and satisfaction information that retailers can use in a variety of ways."

"For example, a retailer might ask for customer feedback on interactions with sales associates and then use the results to rate employee performance. Employees would then be able to see how specific activities impact their scores, providing a highly visible incentive to improve. Armed with consumer feedback, the retailer can also create a 'heat map' of its entire enterprise that would help pinpoint problems or opportunity areas at multiple points throughout the customer journey."

## Day-to-day tasks

Chris Wiegand, CEO and Co-Founder of Jibestream, predicts that geolocation technology will also be integrated into day-to-day tasks, such as parking at shopping destinations:

"We are seeing venues like malls and hospitals investing enterprise-wide on Indoor Positioning technology that senses a person or object's exact location in real-time on a map. This, coupled with the trend of most technologies moving to a cloud-based infrastructure, built on a RESTful architecture design, is paving the way for application developers to build new user experiences that leverage location and real-time data."

"The result is an explosion of new apps that are disrupting conventional ways of doing things that have not been possible until now. One example is the ability to show shoppers at a mall what the parking availability will be, sometimes days in advance, based on algorithms that take into account historical data, real-time traffic data, and satellite imagery, combined with finding the spots closest to where the shopper wants to go first in the mall."

## Location based services

Al Allaway, CEO of strategic brand and digital consultancy, CAB Studios supported the claims that location based services will feature heavily as Internet speeds become faster:

"The future of digital and home advertising will be hyper relevant and geofocussed – in the first instance more assistive, in the second it will become part of the world we see personally. Knowing what a customer needs, and when, is where it will go."

# Artificial intelligence and intelligent shopping

Artificial intelligence isn't the stuff of science fiction anymore. Many retailers and tech brands are making great leaps in machine learning technology, which aided by the develop of the Internet, is likely to become commonplace in the coming years.

A recent report, Predictions: Dynamics That Will Shape the Future in the Age of the Customer, by Forrester, predicts that investment in artificial intelligence is set to triple in 2017 alone, with "firms looking to tap into complex systems, advanced analytics, and machine learning technology."

This prediction from Amit Sharma's article, How Predictive AI Will Change Shopping, presents some exciting possibilities:

"Retailers will need to program brick-and-mortar experiences with the same targeting and personalisation they offer online. Think about walking past Nordstrom and receiving a notification for an offer on a new pair of sneakers. Your current pair is worn down from running almost 500 miles — all logged by a chip in the sole that sends data to your fitness app. You swipe the notification to select the styles you want to try on, and an in-store map guides you to an associate waiting with your shoes."

The ambitious prediction of growth of machine learning and intelligent shopping was echoed by our experts, who shed some light on what consumers can look to expect.

## The future of physical shopping

Michael Lewis, founder CEO of retail technology brand RoomSignal, explains how retail stores will adapt to new technologies:

"Stores will be intelligent, able to predict shopping patterns, and control advertising and supply chains simply due to data science and interconnectivity. In fact, while everyone beats the drum of retail's demise, I see a different future. For at least two generations more, teens will be able to go to the malls because self-driving cars can take them there. This means more foot traffic for retailers that are operating more efficiently and squeezing more revenue out of their margins."

Michael elaborated on some of the ways data could be used to offer personalised shopping experiences, including:

"Today's unconscious items, everything from your home or car to your Ray Bans, will become not only 'smart' but gain an ambient awareness of you and I as well as the other things they have access to. We will see the Starbucks at LAX become fully aware of your preferences and a robot will bring you a complimentary Caramel Cafe Costa-Latte 3 seconds after you learn your flight will be delayed."

## Retail destinations

At the other end of the spectrum, automated shopping based an artificial intelligence could make consumers less likely to venture out to a retail store.

Werner Reinartz, Professor of Marketing at the University of Cologne, explains this concept in his Harvard Business Review article In the Future of Retail, We're Never Not Shopping:

"We're increasingly seeing many types of product being purchased automatically — Amazon's Dash button is an obvious move in this direction. The move to 'intelligent' products is another. The latest generation of Whirlpool washing machines, for example, can autonomously order a pre-specified amount of washing detergent after a set number of cycles. Especially for fast-moving consumer goods, this development will also significantly push non-store based sales."

This concept of appliances that make their own buying decisions is likely to be welcome news to many. A survey from the study Making the Digital Connection: Why Physical Retail Stores Need a Reboot by Capgemini revealed that 40% of the 6,000 consumers spoken to viewed visiting a store as a chore, and that around 33% of consumers would rather wash dishes than visit one.

Personalisation based on artificial intelligence will be a key area of growth in the retail sector. According to a study by Forrester Research Inc., 72% of global professionals state 'personalising the customer experience' as a major opportunity to improve in-store experiences, with 68% of retailers stating personalised experiences as a priority for the future. throughout the customer journey."

## Predicting behaviour

Al Allaway, of CAB Studios predicts that data and personalisation will take the front seat to an even greater extent than it already does:

"All of the data about us being recorded into the cloud will be used to make predictions about our behaviours, from the movies we love to the types of food we would like next week. It will be used to drive targeted advertising to us. Think Minority Report, where Tom Cruise's eyes are used to target ads to him."

## Time and speed

Chris Wiegand, CEO and Co-Founder of Jibestream, commented on this innovation:

"Fast Internet speeds allow retailers to take advantage of the ability to deliver timely information to shoppers at key moments of influence. Time and speed (or lack of) can make or break a sales process. Having the ability to quickly load content and message users is critical in a world that has increasingly become impatient with demands of instant gratification. If something takes more than a split second when requested, people today simply move on."

# Ecommerce

It's not just brick and mortar stores that will see wholesale changes, according to our predictions – ecommerce is another sector that will be affected greatly by the development of the Internet, aiding the growth of innovative new ways to shop online.

## Superfast shopping

Al Allaway, CEO of strategic brand and digital consultancy agency CAB Studios, explored some of the exciting ways ecommerce could shift with the onset of superfast Internet:

"Innovation is lacking a little in this area - all ecommerce looks the same on the whole nowadays. VR offers up the opportunity to take that to the next level, where in your house you could try on those trainers and actually look at yourself in them – potentially even download and print a 3D mould to ensure the comfort and shape is to your liking. All this before you press the button, and have it all delivered to your house within the hour."

## Quicker conversions

Ecommerce won't just see innovations in terms of virtual reality and 3D printing. Faster, more easily-accessible Internet connections are likely to improve conversion rates across the board, as Bradley Shaw, Digital Marketing and Online Consulting Expert, explains:

"Speed is a key factor for successful ecommerce. Using Amazon as an example, 100 milliseconds of latency results in 1% reduction in sales. Online consumers are not patient. They leave a site that takes too long to load, resulting in a decrease in the conversion rate and revenue. For each second improved in website loading, the conversion rate improves by over 2%."

## Even quicker conversions

Bob Clary, Director of Marketing for customised learning solutions platform DevelopIntelligence, echoes the sentiments that faster Internet speeds will improve conversion rates for online businesses:

"The Aberdeen Group published a widely-circulated report a while ago that talked about the effects of site speed on conversion rate. It boils down to a 1-second delay in page load time equalling a 7% loss in conversion."

"While this study focuses on the site's speed (load time), I think the same logic can be applied to a user's connection speed.  That is, the worse a user's connection speed is, the less likely they are to convert. So, carrying that thought through, a 'super-fast' Internet would inevitably lead to more orders placed on retail sites purely because it is easier/faster to do so."

## More complexity

Chad Rubin of skubana explained that faster Internet will also affect the score and immersion of retail websites, as consumer's desktops and mobiles are able to cope with added complexity:

"Superfast, always-connected Internet will mean ecommerce business owners will need to invest more in infrastructure, a seamless checkout process, and a great user experience. Since we won't be held back by slow loading times, we can invest more into creating awesome UX with interactive content, high-resolution images, and more that would normally take too long to load if used in too many aspects of a site."

Chad sees the future of ecommerce as an arena for immersion and more feature-rich web design:

"For example, each webpage can react with how shoppers browse an online store. You can incorporate videos and gifs without worrying about them not loading. It'll be a game of who can design a better, more expansive shopping experience on their platform (on top of the foundations of ecommerce: quality product, solid logistics, and shipping)."

## Physical or digital?

Justine Beaumont of Voices, predicts that the line between ecommerce stores and physical stores will continue to blur:

"Reliable, ever-present connectivity is being assumed in some parts of the world. Web design and development work will absorb some tasks that are now considered outside of our scope. Developers will be asked to build sites which allow customers of brick-and-mortar retail outlets to scan products when adding them to their shopping cart themselves, without the help of cashiers. This type of work has been part of line-of-business development for ages, but will become more of a web development task."

# "Ecommerce business owners will need to invest more in infrastructure, a seamless checkout process, and a great user experience"

## Web design

Tom Jeffries of Bizdaq, explained why superfast Internet will have such a noticeable impact on ecommerce web design, in particular:

"As more people gain access to high performance internet, we'll surely see web designers start to incorporate more imagery and videos into sites. Unburdened by not wanting to put off people on slower connections, designers (and the brands that control them) will add more videos every-where – homepages, landing pages, product pages. This isn't just to fill a space or to make the most of the internet; case studies have shown that video is far superior to text for conversions, with online shoppers almost twice as likely to buy a product if they've watched a demo video beforehand. Being able to increase conversion rates with no noticeable impact on loading speeds will result in an influx of videos appearing everywhere."

Tom also supported Al Allaway's predictions about the emergence of virtual reality in ecommerce:

"We might even see web designers incorporating more interactive elements to websites in an attempt to look more interesting and get the upper hand on competitors. VR or AR might become more widely-used, particularly by clothing companies to show what a customer would look like in clothes before they buy them."

Video and imagery is sure to spike within ecommerce websites as Internet connections improve, with Syndacast projecting that "79% of all global consumer web traffic will come from video by 2018."

# Conclusion

The key takeaways from our research into how the future of the Internet will influence retail and ecommerce are as follows:

- Online retailers should prepare to invest in more immersive and ambitious ecommerce websites as consumer's improved Internet connections will extend what's possible.

- Optimising site speed will continue to be a vital consideration for online retailers to ensure rises in conversion rates.

- Visiting retail stores could become less common (or trips to supermarkets less frequent), as 'smart' appliances automate the ordering of household items

- Physical stores should embrace digital innovation to improve the in-store shopping experience and personalise the experience of visiting consumers.

- Consumers will be able to try before they buy with virtual reality, 3D printing, and augmented reality innovation across ecommerce.

- Clothing brands will be some of the first to invest in virtual reality and augmented reality.

- Forward-thinking retailers should invest in artificial intelligence to stay ahead of the curve.

- Retailers will be able to serve personalised promotions to customers based on their likes, dislikes, and geographical location using AI and geolocation technology.

# Sources and Contributors

Thank you to all of our contributors:

- Justine Beaumont, Voices
- Tom Jeffries, Bizdaq
- Chad Rubin, skubana
- Bob Clary, DevelopIntelligence
- Al Allaway, CAB Studios
- Chris Wiegand, Jibestream
- Bradley Shaw, SEO Expert Brad Inc.
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- Dan McKone, L.E.K. Consulting
- Furqan Tafseer, PureVPN

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