

Retail Practice

# How tech will revolutionize retail

The retailer of the future will harness the power of data, quantum computing, artificial intelligence, and augmented reality, says serial entrepreneur and technology expert John Straw.



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**The future of retail**, according to John Straw, belongs to retailers that boldly invest in “cutting-edge technology—not worrying about how it affects the P&L but about how it’s going to affect the value of the business to the consumer.” In this episode of the *McKinsey on Consumer and Retail* podcast, Straw, a senior adviser to McKinsey, spoke with executive editor Monica Toriello about the lessons he’s learned as a business builder and the most promising new retail technologies. An edited transcript of their conversation follows.

**Monica Toriello:** In the past 18 months or so, you’ve probably bought something online, paid for something with your smartphone, or used a retail app. All of those are examples of just how crucial technology is becoming in the retail and consumer sector. For years, McKinsey has been talking and writing about retailers and consumer companies needing to evolve into technology companies, but the COVID-19 pandemic has truly brought technology front and center. E-commerce, online customer service, contactless solutions—these have been lifelines, especially for retailers that have had to close their stores during pandemic-related lockdowns.

Today we’re excited to speak with an expert on disruptive technology who has worked with some of the world’s leading companies to turn technology into competitive advantage. John Straw, a senior adviser to McKinsey, has himself started and sold four technology businesses and has written a book about disruptive technology, *iDisrupted* (New Generation, 2014). Thanks for being with us today, John. Start by telling us what it means to be a senior adviser to McKinsey. What is it that you do?

**John Straw:** Up until COVID-19, I spent most of my time on a plane, going to places like Australia for lunch. I ran around the world talking to clients across all industries, mostly about AI and the Internet of Things. And it’s just been fascinating. I’ve done four start-ups in the past 37 years, and that’s been uplifting as well, but I would have rather spent more time with the firm 25 years ago because the range

and breadth of knowledge that I’ve acquired by being a senior adviser has been quite eye-opening. I’ve got this lovely balance between start-up, venture capitalist, and McKinsey, and I’d just like to have done more of it. But I can’t now because I’m in my 60s, so there are some limitations there.

## Investing in disruptive technology

**Monica Toriello:** You wrote a book seven years ago. A lot has happened since then, including a global pandemic. Looking back at what you said in your book, what did you get wrong? Is there anything that’s played out differently from what you expected?

**John Straw:** Yes. Let me be specific about that. I was an enthusiast of scaled-up 3-D printing. I really thought that we’d see a whole slew of new products coming into the marketplace, and material science was going to change what we could actually do with these 3-D printers. It hasn’t happened in the way that I expected it to, so that was a miss.

The critical omission that I made was quantum computing, which will take about another 20 years to unfurl—but in 20 years, stuff will definitely have happened. I’m sort of glad that I won’t be around. It’s exciting but terrifying at the same time because we are about to walk through a door with no view of anything that’s on the other side.

**Monica Toriello:** I don’t know about you not being around in 20 years. They say 80 is the new 40.

**John Straw:** That’s fabulous. I feel so much better now.

**Monica Toriello:** I’ve heard you describe yourself as a “technonomist”—a technologist and economist—which, to me, sounds like you help companies think not just about disruptive technology but also how to make the economics work, how to make it scalable and profitable.

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It’s a tremendous challenge for the consumer sector right now because there are so many compelling use cases for disruptive technology, whether it’s using AI to improve customer service or advanced robotics to make operations more efficient in stores and in warehouses. It can be hard to know where to invest and what will pay off. What’s the biggest mistake that you see retailers and consumer companies making when it comes to investment decisions about disruptive technology?

**John Straw:** I think that the first mistake is the misconception that just because a piece of AI technology isn’t generating a huge amount of profit means that you shouldn’t buy it. I was on the board of a British bank about five or six years ago and I was talking to the CEO regularly about credit scoring, which is something AI can really help with. I said, “I found a company we should buy.” And he said, “How much is it?” I said, “It’s likely to be about \$250 million.” He said, “What’s the revenue?” I said, “I can’t imagine it’s much more than half a million.” He said, “You want me to go to my shareholders and say that I’ve just spent quarter of a billion dollars on something that adds nothing to my P&L? It’s just not going to happen.”

I think the majority of the problems come from the unwillingness, perhaps the fear, of investing in something that doesn’t automatically bring a load of cash onto your balance sheet. I believe that the tech is there now. It’s now about the willingness to make the investment necessary to implement it.

**Monica Toriello:** In evaluating tech investments, are there certain metrics that companies or business leaders typically overemphasize—or, on the flip side, that they overlook?

**John Straw:** I’m gonna take my McKinsey hat off and put my venture-capitalist hat on. I heard a fantastic expression from Silicon Valley about four or five years ago. I was talking to an investor who said, “You know what I’d really like from one of my start-ups? I’d like a dollar in revenue with a hundred users engaging a thousand times a day with a product, rather than a thousand dollars in revenue with a hundred users engaging once. Because that’s where I’m going to place my bets—that level of engagement.”

If the engagement level is that high, you know you’ve got the product right—whereas in the latter case, you know that you’ve got your marketing right. Well, the marketing doesn’t scale. So that’s the way that I’ve been making lucky investment decisions.

You might want to try and apply the same rules at the corporate level, but obviously there are a few more considerations you have to take into account. McKinsey has been a major proponent of agile working and prototyping, and I’ve done quite a lot of prototyping myself, which is when you get a product into the hands of the consumer and the consumer’s engagement with it becomes really high, really quickly. That’s where you know how to place your bets.

## ‘Ferocious innovation’

**Monica Toriello:** I asked you earlier about the biggest mistakes that companies are making. What are companies doing right? Do you have a favorite recent story about a retail or consumer company that made the right bet or that illustrates the potential or serves as a shining example for other companies to follow?

**John Straw:** It has to be IKEA because they are so ferocious in their innovation. I remember when the iPhone 8 came out. I think it came out with AR, augmented reality, built into the phone for the very first time. Within what felt like a minute, IKEA had announced that they had an app that uses it.

One of the big problems in high-ticket retail is the fact that you can't try before you buy. This particular app allowed you to point your phone at any portion of the room and then overlay furniture from the IKEA catalog, recolor it, position it, switch it around, and so on, so you could solve that problem of trying before you buy. Then, they went a little bit further: they found an AI start-up that was able to measure a room. They start to do positioning exercises with other rooms that it measured, and other rooms that it had seen, to inspire the consumer to imagine what a whole room might look like, rather than just an individual piece of furniture. So they went and bought that company. That's another example of taking on cutting-edge technology—not worrying about how it affects the P&L but about how it's going to affect the value of the business to the consumer over a relatively short period of time.

By the way, on the subject of extended reality, or XR, augmented reality hasn't really done much—but a couple of things are happening. First, Snap bought a company that's manufacturing its new range of augmented XR glasses, so they will come into the mainstream. But the really big news is that next year, Apple is going to launch its XR glasses. It being Apple, it will be a category creator. All of a sudden, retailers will start to pile into this one, because you will be able to try virtually before you buy across a massive range of products. That, I think, is going to be huge for retail.

## Business building

**Monica Toriello:** Let's talk about business building. Recently we published an interview with the McDonald's CEO, who said that he could imagine that, as McDonald's builds out its digital capabilities, it could eventually build a platform that other companies could use. So here's a fast-food chain that could soon be operating a digital business.

Indeed, recent McKinsey research has shown that business building has become a top priority for many CEOs across industries. Plus, it's effective. Here's a statistic from a McKinsey article: "Some 74 percent of companies that chose business building as their main strategy grew at rates above the average of their industries." So it's effective—but it's also hard to sustain that success. Here's another statistic: "Only 24 percent of the new businesses of big corporations become viable large-scale enterprises."

You've had lots of experience helping incumbent companies build new businesses. What are the two to three most important pieces of advice you have for CEOs about business building?

**John Straw:** Building a business is hard. It's really hard.

The first lesson that I would draw, having been involved in a number of business-building projects, is to make sure that in the early days you've got something tangible to show. That show-and-tell is very important in the early days before you get any form of financial traction. Show, tell, engage.

There's a really big consideration for me—this applies to new business, new products, new customer service, whatever you're building—and that's data. Let me not bang on about it too much, but the first thing I think any organization should do is know what data it's got. In what format is it? And what external data could augment it? Because data is a major, major failing for most organizations.

First, I am continually surprised by how organizations are not even 80 percent close to knowing what data they've actually got. Second, you've got the formatting facility. In other words, can I put all of my aggregated data into one data lake so that I can use machine-learning techniques and learn stuff from it? And then the third part is, what data could I bring in externally? It's about knowing what your data looks like, but then knowing what other data externally could augment that data to make it even more valuable than it currently is.

So, you've really got to show and tell. And you have to really understand your data sets.

**Monica Toriello:** Why is data a problem? Is it that retailers in consumer companies don't have enough data scientists and data engineers? Is it that they don't have the right people? Is it that they have legacy systems that have been around forever and don't talk to each other? Is it a combination of all of those things? And what should they do about it?

**John Straw:** It's a hybrid, depending on the individual company. Legacy IT just terrifies me in terms of what it won't let companies do or innovate. To me, however, the biggest battleground is the acquisition of data scientists. By the way, on that subject, we need many more women data engineers.

With the disruption being caused by COVID-19, a lot of data engineers want the excitement of working on something new and shiny, but they also want the security of working for a major organization with very deep pockets. That's a really good combination to start selling into your prospective engineering base.

**Monica Toriello:** How can the retail and consumer-goods industry attract data scientists and engineers, when it's competing against pretty much every other industry?

**John Straw:** You've got to have a vision. When your HR people are sitting in front of your prospective data scientist, they've got to be able to take a vision that's come down from the CEO and extol that vision and make it believable. Now, it's really easy for me to sit here and say that, but a shoe retailer might find it slightly difficult to have a vision that will attract your next-level data scientist. However, I can guarantee you there's a start-up out there somewhere with that vision. The question is, should you copy it? Could you copy it? And then could you start to scale it? To me, if you're going to compete in that moment, you've got to have a vision.

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## Excellence in execution

**Monica Toriello:** Another thing I've heard you say is that you won't invest in a company led by someone who's under 50. I have a couple of questions about that. First, why 50? It seems to be such an arbitrary number.

**John Straw:** Yeah, it's just a notional number.

**Monica Toriello:** Shouldn't you be looking at character traits rather than a specific age?

**John Straw:** Yes, a very fair point. But I'm sticking to this one. My two most successful investments are run by individuals over 50. They've both been there, seen it, done it, watched the video, ironed the T-shirt, that sort of thing. If you work on the principle, which I do, that there's no such thing as a good idea but just better execution, then the executional side of it—looping back to the “thousand times engagement” piece I was talking about earlier—is what it's all about.

In terms of other traits besides experience and age, there was a study that looked at the personality traits of very successful entrepreneurs. I can't remember the criteria they used for successful entrepreneurs, but I think it was something like an exit north of \$100 million. And what they found was that about 30 percent of that group were dyslexic. Interestingly, the really successful ones had attention deficit disorder. And then the really, really, really successful ones had attention deficit disorder and dyslexia at the same time.

Now, I have dyslexia, right? I had to have my book written for me because I struggle with looking at words. And I get it: dyslexic people are on a mission, and we're not going to listen to anything that anybody tells us. We just go for it. And the ADHD brings that level of energy in there that winds the whole “visionary” thing up: “I'm gonna get on with this thing. I'm not gonna listen to people who tell me it can't be done, I'm just gonna do it.” So I do think those are certain personality indicators of very successful entrepreneurs. But for me, I like to invest not necessarily in good ideas; I just like to invest in better execution.

## Robots and virtual assistants

**Monica Toriello:** I'm going to ask you to be a futurist now. Paint a picture for us: What does the tech-enabled retail customer experience look like in 2030? Somebody walks into a store in 2030. What does it feel like? What is different? What are some of the ways that consumers are interacting with technology in stores?

**John Straw:** For retail, the opportunities are immense for showcasing, for XR capability, for digitally enhanced shopping baskets, et cetera. There will be robots in shops. It's gonna take us quite a bit of time to get used to that particular idea—enhanced “robo serving”—but that's gonna be with us, and the technology will just get better and better going forward.

Holograms will be quite big by 2030. Therefore, your virtual assistants are going to be quite interactive then. I don't think that they'll be brilliant by 2030. By 2035, I think they will be quite substantial. You'll have conversations with virtual assistants who have no limits to their knowledge and experience.

I remember walking into one shop in Liverpool and there was a lady working there who was probably in her early 60s. I sat down and I talked to her, and she told me that she'd been to Benidorm, a popular tourist destination in Spain. She'd been there 27 times in 30 years, and she knew where the best ladies' toilet was in Benidorm. She knew where the best Chinese restaurant was in Benidorm. Immediately, I sat there and thought, “I wonder if I can capture that knowledge before you retire.”

So one of the things that retailers perhaps ought to be thinking about and doing better now is capturing that knowledge and then transferring it to their virtual assistants. My challenge for every retailer would be that, when you take your best assistants, ask yourself, what do they do that can be translated into a virtual assistant at some point going forward?

I am surprised how relatively little chatbot technology seems to have found its way—or not found its way—into many consumer interactions. I'm not expecting to have perfect conversations with a



bot, but I am expecting to have a smart bot that is very reactive and that can triage what my problem is. The technology is there. A lot of organizations struggle with it because they don't have the data for the machine-learning algorithms to learn from. So it comes back to that data-compatibility issue all over again.

I want to emphasize to senior execs: What data have you got that you can read and use? What are the use

cases for that particular data? And then what data could you bring in externally to add to it? Because data is going to become product. Data turns into product. And I've seen so many organizations that think they've got great amounts of data and then realize they can't format that data and extract it to put it into a data lake where it becomes usable. For me, that's where investment should be going right now. Because then you're building the organization of the future, which is a data organization.

**John Straw**, a senior adviser to McKinsey, is based in London. **Monica Toriello** is an executive editor in McKinsey's New York office.

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