

The following guest article has been written for InternetRetailing by Jon Nordmark, co-founder and CEO of Iterate.ai. Iterate.ai has indexed 158,000 startups. It helps enterprises discover, curate, choose, and orchestrate emerging technologies. Jon also co-founded eBags.com in 1998, a company which has sold 27 million bags to travellers. He was CEO for 10 years and is now eBags' chairman.



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Is Amazon lighting the path to retail innovation?

To battle Amazon, retailers need to be comfortable working with startups, technology, experimentation, and speed. "It's a matter of life or death," says Jon Nordmark, co-founder and CEO of Iterate.ai. He explains further.

2016 MARKED Amazon's embrace of traditional retail. It launched 100 shopping mall pop-ups. Amazon bookstores are opening in Boston, Seattle, Portland and Chicago and, as The Limited announced probable bankruptcy, Amazon announced plans for 2,000 grocery stores. To supply this ecosystem, Amazon has planted dozens of warehouses within 20 miles of almost half of the US population. That number will likely climb to 75% in 2018.

Experimentation will be the underpinning of Amazon bricks and mortar stores and shopper expectations are likely to change due to friction-free shopping and robotic deliveries.

Physical Amazon stores are just elements in the Amazon Ecosystem. New technologies such as deep learning will be applied to Amazon Stores to drive deeper relationships with shoppers.

"Location, location, location" remains a retail adage, but the definition of 'location' has changed. It's not just Westfield Mall or

an address on High Street. In 1995, Amazon redefined location to include a shopper's IP address. Now, a location includes a Dash Button on the pantry shelf or a space occupied by Echo on their kitchen counter. Location is now embedded, interactive and transformational.

BUSINESS MODEL TRANSFORMATION

Over time, retail may be AirBnB'd. With Amazon Go, Echo, Dash, WagonBots, Drones and ServiceBots combined, business model transformation is underway. Operating costs could plummet with Amazon passing savings on to your customers. Drones and WagonBots from startups like Starship could reduce last-mile delivery costs by 70% to 90%, or from £12 to £1. ServiceBots from startups like Linc and OneReach could cut customer care costs by 50%. Echo and Dash remove marketing costs – another 3% to 13% cost reduction. Add private label to the mix – like Amazon's Basics, Elements, Happy Belly, Lark & Ro, Society New York, North Eleven, or Momma Bear – and the Amazon ecosystem becomes even more transformative. Costs plummet, but delivery times improve to as fast as 30 minutes. Amazon's mission is so Uber-esque, but bigger.

However, it's Amazon's DNA that's dangerous ... more than any single technology or any store format. Amazonians dream, tinker, experiment. Since 2007, when Amazon launched an invite-only beta test of AmazonFresh, Amazon has tinkered with grocery transformation.

It has been patient (as usual). After years of trials, it will roll out 2,000 stores (In the US, Safeway has 1,335, Kroger 2,778, Morrisons 569). Amazon is exploring three, four, maybe more grocery formats: AmazonFresh; Drive-Thru; 1,800sq ft Amazon Gos; 30-40,000sq ft instant-purchase IKEA-type layouts.

Digital experimentation has been a hallmark of Amazon, and concept stores will follow suit. At least one concept – Amazon Go – promises no checkout lanes, no cashiers. Shoppers open the Go app to expose a QR code and they scan it as they enter the store. 'Just Walk Out' technology tracks items as they are removed from shelves. The shopper is auto-charged after exiting. Maybe shelves are restocked with Kiva Robots, mimicking Amazon warehouses.

To accomplish this, Amazon Go will use a cocktail of sensors, computer vision, and deep learning, says Iterate.ai co-founder, Brian Sathianathan, a former Apple Secret Products leader who helped launch the first

“It's Amazon's DNA that's dangerous... more than any single technology or any store format”



iPhone. “Amazon may reshape traditional stores like Google, Amazon, and Facebook have shaped the Web.”

What else will the Amazon grocery formats include though? Drone-ports? WagonBots for last mile delivery? Will they include auto-replenishment with links to Echo and Prime? Will the AI-based “ship it before you buy” patent 2014 (Anticipatory Shipping) be implemented here?

INTENTIONAL INNOVATION

Retailers can’t lean back waiting for Amazon’s 2,000 stores. The era of “Intentional Innovation” has arrived, says Jeff Roster, the IHL VP / Analyst and ex-Gartner VP. Beyond behaving more like a startup, retailers need to seamlessly engage with startups. “Every retailer needs to worry greatly about innovation, but few will be able to match the resource commitment. So where will all the innovation come from? In retail, it will come from software startups,” says Roster. To have a long-term voice at the table and survive budget cuts, innovation efforts like R&D, Experimentation and Banding need to report directly to the CEO.

Culturally, retailers need to behave with urgency, like startups. Amazon considers itself

Amazon Go offers seamless, checkout-free shopping. Just walk in, pick up and walk out

a tech company (not so much a retailer), and (yes) a startup. Before job interviews, Amazon writes, “During the interview, you will need to be able to demonstrate why a start-up environment is right for you.”

Behaving more like a startup will give permission to a retailer to add core competencies and work with talented technical startups and attract intrapreneurs. Working with startups is not beneath any retailer. Amazon, Google, Alibaba and Facebook all embrace them. Despite its £11.92bn (\$15bn) annual R&D investment, Amazon works with startups. It is always on the prowl. When creating Echo in Lab126, Amazon acquired at least three voice startups – Yap, Evi, and Ivona – to speed-up and deepen “voice capabilities”. Amazon searched far and wide. Similar technologies are available to all retailers if efforts are made to find and evaluate them. Tomorrow’s great brands will use technology to form relationships with consumers in new ways. This is why Under Armour invested £564m (\$710m) to acquire MapMyFitness, MyFitnessPal and Endomondo; why Unilever acquired Dollar Shave Club; why Walmart acquired Jet and why Bed Bath & Beyond acquired PersonalizationMall.

Startups are also a way to help tackle the talent war. New technologies excite highly skilled technologists. Going forward, retailers will increasingly have to compete not just with each other for talent, but also with technology companies such as Apple, Facebook and tech startups. Thankfully, retailers have options:

- Create a modular and dynamic culture that attracts top technical talent;
- Acquire startups to use new technologies;
- Acquire startups to embrace and retain their entrepreneurs and cultures.

Some key points when working with startups as you brace for more disruption. Retailers should look everywhere for innovation – from Silicon Valley to Mexico, from London to Kiev. Be aware of where Amazon is headed by digging into Deep Learning, IoT, Blockchain, WagonBots (Autonomous Ground Vehicles), Chatbots and other technologies that are likely to change the playing field.

When seeking technologies, do not rely on VCs alone or you'll miss three quarters of your opportunities; 76% of tech startups acquired in 2013 had no professional funding and most VCs don't profit from 7 out of 10 investments, with only 1 (if they are lucky) being a major win for their portfolio. Many startup technologies are not made for venture investors which require \$1bn wins to make their models work. Do not rely on single accelerators, the world is a big, big place. Be sceptical of hyped companies, too. When a startup gets funded, it often hires a costly sales team and invests as much as £250,000 per year in PR.

To help transform your culture, embed digital innovation into every part of your company. Make sure HR is using new digital tools because they will appeal to young workers and send a message to your entire company that "digital counts".

Start an R&D Lab, either physically or virtually. Integrate the global startup community into your Lab ecosystem. Let the startups bear the burden of long hours for no pay or early-stage investments – retailers can ride on those coattails. Seek out unique new ways to conduct proof of concepts, some exist. And expect your Lab to triple your experimentation output. That should triple your success rates. Go fast and value speed.

Retailers call Amazon a retailer. But Amazon, the biggest threat to retailers, doesn't consider itself a retailer – in hiring

TECHNOLOGIES TO INVESTIGATE

Retailers are saying, "mobile first." That trend is obvious and in isolation, maybe short-sighted. Smartphone conversion rates need to be optimized (like PCs) and many startups can help.

But, like Amazon, retailers need a Mobile-scope that aggressively pursues transformative forces like Always-On (IoT) and Deep Learning.

Always-On IoT: IoT has grown beyond FitBits. In 2015, Amazon acquired Zlemetry, an IoT-platform startup, now integrated as AWS IoT. Amazon describes it as "AWS IoT is a managed cloud platform that lets connected devices easily and securely interact with cloud applications and other devices. AWS IoT can support billions of devices and trillions of messages, and can process and route those messages to AWS endpoints and to other devices reliably and securely. With AWS IoT, your applications can keep track of and communicate with all your devices, all the time, even when they aren't connected."

IoT will feed data lakes, and Zlemetry will facilitate 360 degree views of customers.

Amazon IoT establishes "add-to-cart buttons" inside shoppers' homes. At least 6 experiments including Echo, Dot and Dash are underway. In Amazon's world, IoT allows periphery products to interact with Amazon. Pushing a button, scanning a barcode, or sending a voice command triggers Wi-Fi signals that interact with the Amazon Apps creating an Always-On experience.

Amazon sold three million Echos in year one alone. One million people have initiated orders via Echo. The bigger picture though is Echo's universal usage – initiating web searches, hailing Uber, reporting weather, interacting with Fire/Video and playing music. It's all habit forming. Using Amazon's 200 Dash buttons to reorder cosmetics, detergent and coffee could form habits too with Prime used to motivate usage.

Some Amazon experiments will work and be absorbed into our daily lives. Others won't. That's Amazon's DNA. All retailers need to experiment more like Amazon.

Deep Learning: Amazon Go is powered by unique new technologies such as Deep Learning, a form of AI. Deep Learning will also be instrumental in many places such as shopping personalisation. Don't mistake collaborative filtering, it's much more advanced.

Deep Learning is what powers voice and picture search, too. Today, 35% of Google searches and all of Echo actions are voice-triggered. Retailers need to think about the potential impact of these technologies. If Amazon owns voice search through devices like Echo, whose products will be served first? Echo might replace Google keyword buys and Dash is a replacement for Google search. Product discovery is evolving in ways most marketers didn't imagine 18 months ago.

documents it calls itself a tech company. In running the world's largest cloud it threatens HP, IBM, Google and Dell. Amazon is really a new breed, an ecosystem powered by tech ... and it's not alone. A new class of global companies has emerged as traditional industry boundaries are ignored. Apple becomes a music retailer, Google becomes Alphabet alongside 11 other subsidiaries (self-driving cars to Sidewalk Labs to DeepMind to investment groups to Nest) and Tesla absorbs Solar City. Ecosystems, rather than old-world type companies, are emerging. How will you respond in 2017? 🇺🇸