

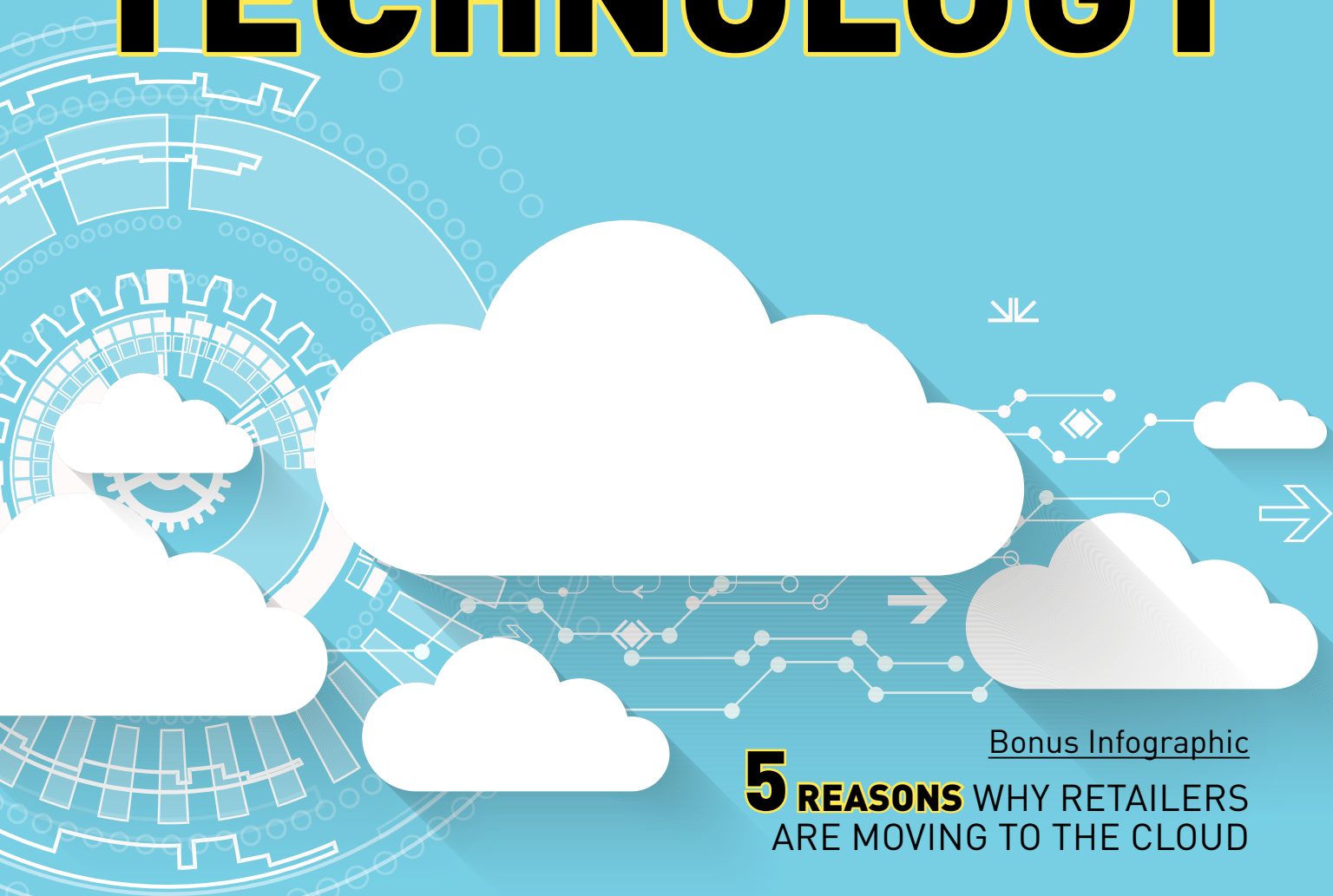
A SPECIAL REPORT FROM THE EDITORS OF

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WHY RETAILERS ARE EMBRACING CLOUD-BASED TECHNOLOGY



Bonus Infographic

5 REASONS WHY RETAILERS
ARE MOVING TO THE CLOUD

WHY THE CLOUD NOW?

THE ANSWER TO THAT QUESTION COMES DOWN TO THE CONVERGENCE OF TWO TRENDS: THE INCREASING COMPLEXITY OF RETAILING AND THE MATURING OF CLOUD-BASED SERVICES.

BY DON DAVIS

RETAILERS TODAY HAVE TO SERVE CONSUMERS as they shop online, in stores, on smartphones and tablets, via social networks and through new channels opening up every day. For example, Facebook is now making it possible to sell through its popular Messenger service, and Amazon.com through its Alexa voice-activated home-shopping device. Pretty soon retailers will have to be able to communicate with refrigerators and cars that will be placing orders as the Internet of Things matures.

For a retailer to gather data from all these customer touchpoints, make them available throughout the company and connect to external data sources and sales channels becomes a daunting task. Technology and consumer preferences are moving too fast for many retailers to keep up.

That's making cloud technology increasingly attractive. What do we mean by "cloud"?

Basically, the cloud is made up of computers connected to the Internet. That doesn't sound like a big deal. It wasn't until 2006 when Amazon Web Services started offering its cloud storage for rent to other

companies. And pretty soon AWS was a big and profitable business.

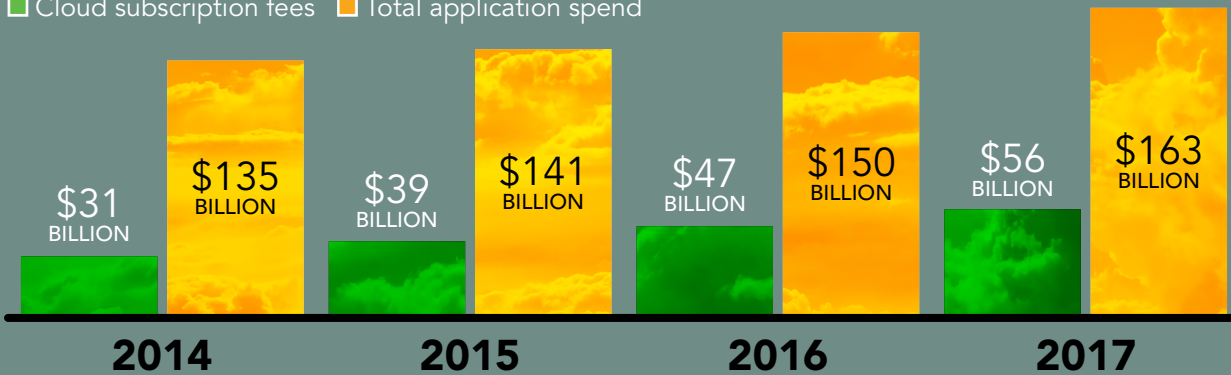
Other technology companies noticed. Big companies, like Google, Microsoft, IBM and Oracle. And the race was on. Amazon remains in the lead in terms of revenue, according to a recent analysis by Forrester Research. But retailers may well also be among the winners, as they gain access to sophisticated technology that few, if any, could afford to build on their own.

What it boils down to is that the cloud provides retailers and other organizations a centralized, secure location where they can store data and use it to analyze trends, craft offers and connect to consumer touchpoints of every description.

A crucial component is the role of cloud providers in developing

CLOUD'S GROWING SHARE OF U.S. BUSINESS APPLICATION SPENDING

■ Cloud subscription fees ■ Total application spend



Source: Forrester Research Inc.

and maintaining links to data sources and sales channels—in the form of application programming interfaces, or APIs.

Those cloud technology companies can afford to keep up with every change, whether it's a new sale feature on Pinterest or a technology advance in the Android mobile operating system. By working through these cloud providers a retailer can be shielded from the complexity of the constant advance

of technology and focus on what it does best: selecting merchandise its customers will want and presenting it to them in an appealing way.

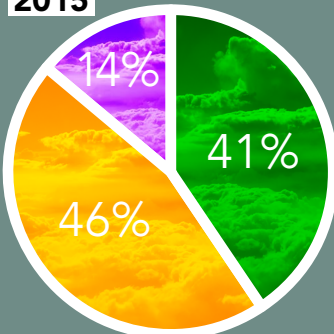
The advance of cloud technology has accelerated in recent years, as the big cloud providers have invested heavily in developing new systems and a growing number of companies have decided they can now put their faith in “public clouds,” these Internet-based services open to all. Even a company as estimable as General Electric has declared its intent to move most of its applications to the public cloud, recognizing that operating a global computer network is not its core competency.

Nor is it for many retailers. All indications are they will increasingly take advantage of the impressive advances in cloud technology to get out of the IT business so they can focus on the considerable challenges of modern retailing. ●

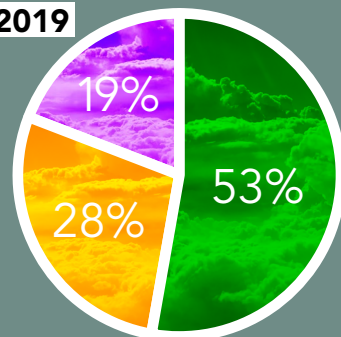
MORE OF THE WORK MIGRATES TO PUBLIC CLOUDS

■ Public cloud
■ Private cloud
■ Traditional

2015



2019



Source: Cisco Global Cloud Index, October 2015

Consider your options before going to the cloud

BUILDING AND MANAGING THE TECHNOLOGY required to run an e-commerce business is a challenging and complex undertaking. First, there's hardware, such as the servers that host the site and run the software it needs to run. There are also the myriad software programs needed to run the back-office applications that support the consumer-facing website and other business areas.

Even if a retailer has the financial resources to build its technology infrastructure wholly in-house, it may lack the personnel resources to maintain it.

To overcome such obstacles, some retailers are turning to cloud technology providers for the infrastructure, knowledge and services they need to support their businesses and satisfy customers' online shopping expectations. Cloud technology refers to computing power, storage and software applications delivered via the internet.

"Most retailers are not technologists, so for them it's a matter of determining their core competencies, focusing on doing what they do best and outsourcing their IT infrastructure," says Adam Roozen, a former e-commerce executive in Wal-Mart Stores Inc.'s SamsClub.com division who is now CEO of the e-commerce-focused digital agency Echidna Inc. Echidna provides technology, visual design, digital marketing and strategy consulting services to merchants.

As a cloud-based technology provider and systems integrator, Echidna has a software engineering staff that maintains e-commerce software for a variety of retailers. By servicing a broad customer base, Echidna's engineers have experience troubleshooting problems that a retailer running its software in-house may not see.

"The more exposure software engineers have to other e-commerce platforms, the better equipped they are to fix problems quickly and take proactive measures to prevent additional potential problems," Roozen says. "Working on a single platform in-house can limit a retailer's knowledge of problems that can occur, prohibiting it from preventing and resolving issues."

Echidna supports such cloud-based e-commerce platforms as Mozu, which Kibo Software Inc. recently acquired from Volusion LLC, Oracle Commerce Cloud, Four51 Inc.'s OrderCloud and Magento Cloud. Echidna also provides user experience design and platform integration and implementation services.

"Our staff's knowledge base extends across all cloud-based platforms we support, so they are not just

specialists on one platform," Roozen says. Before moving to internet-hosted technology Roozen recommends that retailers research the options available, weigh the differences among those options and determine which type of web-delivered service best suits their needs.

The three most common cloud-based technology formats are software-as-a-service (SaaS), platform-as-a-service (PaaS) and infrastructure-as-a-service (IaaS). SaaS-based platforms use the web to deliver applications developed by a vendor to a retailer. This eliminates the

need for retailers to create, install and run applications on in-house servers. Retailers typically pay a monthly fee for the software and the applications are accessed online.

A PaaS-based platform provides retailers access to a provider's application programming interfaces to customize their website. The vendor manages the software and the hardware needed to run the platform



ADAM ROOZEN
CEO for e-commerce-focused
digital agency Echidna Inc.

while the retailer uses the vendor's APIs to create consumer-facing digital features.

Retailers using an IaaS platform simply rent server space from a host. Vendors manage the facilities where the servers are located and are responsible for hardware upgrades, maintenance, performance, uptime, troubleshooting and disaster recovery. Retailers provide the applications they run on the servers.

"Understanding the differences between the various types of cloud-based services is important, because most retailers think they can do more on the IT side than they really can," Roozen says.

Finally, retailers selecting a cloud service provider should ask the vendor about the experience level of its engineering staff, its plan for fixing performance issues, what its upgrade schedule is, how it came into existence and how closely it works with clients.

"The more closely a retailer and an e-commerce agency work together, the better the outcome," Roozen says. "What retailers want in a cloud platform is an outsourced infrastructure they are confident will operate as expected." ■

“There has to be a better way to do eCommerce.”

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Partnered with these cloud-based eCommerce leaders:



*There are so many data sources that could **impact retail sales** that few retailers have the **in-house resources** to maintain relations with all of them. Merchants that rely on **cloud-based providers** to maintain online capacity will be able to focus on using the **rich, up-to-the second data** cloud systems can provide to **perfectly target consumers**.*

Many retailers are making the decision to move to the cloud.

HERE ARE 5 REASONS WHY:

1 It makes it easier to focus on your business

Cloud services let retailers concentrate on winning and retaining customers, not technology.

2 Cloud costs aren't fixed.

Most cloud providers charge based on what a retailer uses. Cloud services typically reduce their price per minute or hour as a client uses more capacity.

'Being cloud-oriented allows us to focus our bandwidth and investments in the places that matter the most.'

—Guatam Gupta,
Chief Executive Officer, NatureBox

3 Capacity when you need it

Companies the size of Amazon, Microsoft and Google have massive computing capacity, and their public clouds allow a retailer to quickly handle big spikes in web traffic during peak periods.

4 Take advantage of the latest technology

Fierce competition among cloud providers makes them add to their cloud-based services, and that enables retailers to access cutting-edge technology they could never afford to build themselves.

'The ability for a retailer to quickly and easily get new features to consumers, that's the benefit of this combination of cloud and APIs.'

—Neil Patil, President, Fluid

5 Data flows wherever it needs to go

Retailers are moving to the cloud to more effectively serve consumers in a world in which they shop in many ways.