

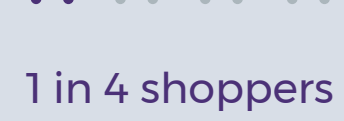
# The Top 3 Emerging Challenges in Application Delivery

And how to solve for them through digital transformation and IT modernization

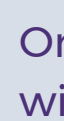
The world is powered by applications, and our dependence on them has only increased during the pandemic. Even as we return to learning, working, shopping, and gathering in person, digital channels will remain critical.

Delivering applications reliably and securely has never been more important to your business objectives, yet it's also growing increasingly challenging to achieve.

Here are 3 reasons why, as well as how to solve for them through digital transformation.



1 in 4 shoppers will abandon a cart if it takes 4 seconds to load.



On mobile, 74% will abandon after just five seconds of waiting for a website to load.<sup>1</sup>

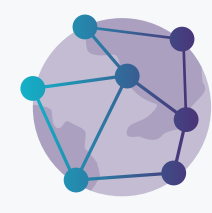
**Over 80%** of businesses now find it challenging to meet application delivery requirements with their existing IT infrastructure<sup>2</sup>

## Challenge #1: Audiences are More Distributed Than Ever, and Won't Tolerate Poor Performance

Application audiences are evolving. They are:



Mobile



Globally Distributed



More Diverse

Customers, employees, supply chain and business partners, to connected devices and services

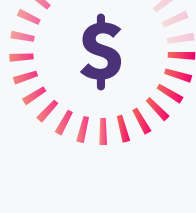


Increasingly Complex

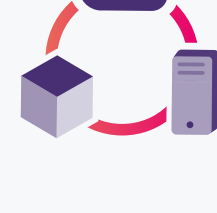
Accessing applications from a wider variety of devices, on a variety of networks (WiFi, 4G, 5G, etc)



For mission-critical applications like medical emergency services and utilities, reliable application delivery is a matter of life and death.

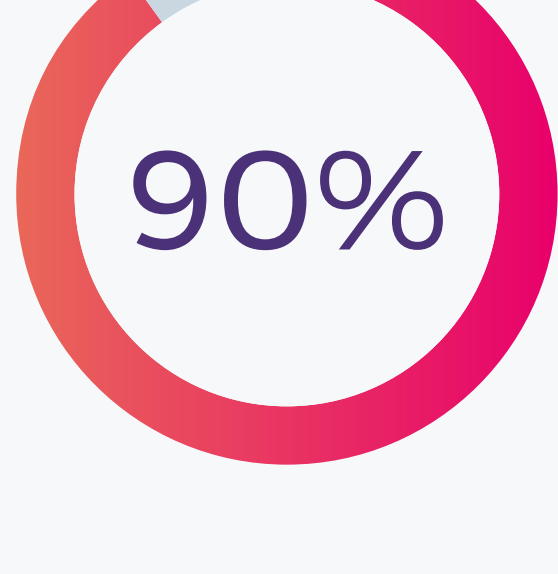


For commercial applications in highly competitive markets, poor application experiences translate directly to revenue loss at a massive scale.



Modern manufacturing companies depend on fleets of connected devices to increase efficiency, manage costs, and boost productivity to meet global demand.

## Challenge #2: Delivery Environments Are Only Growing More Complex



By 2022, over 90% of enterprises worldwide will rely on a mix of on-premises, dedicated private clouds, multiple public clouds, and legacy platforms to meet their infrastructure needs.

Today, organizations use a wide variety of infrastructures to deliver their applications and run their digital businesses. Virtualization and cloud computing technologies have made it more cost-efficient and easier to deploy and scale applications globally.



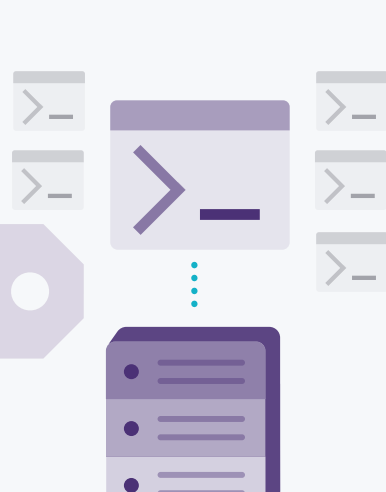
\$25,000

1990s

"Twenty years ago a single application might run on a \$25,000 server. Today, a similar-size application might run on a \$5,000 server shared with ten other applications."<sup>4</sup>

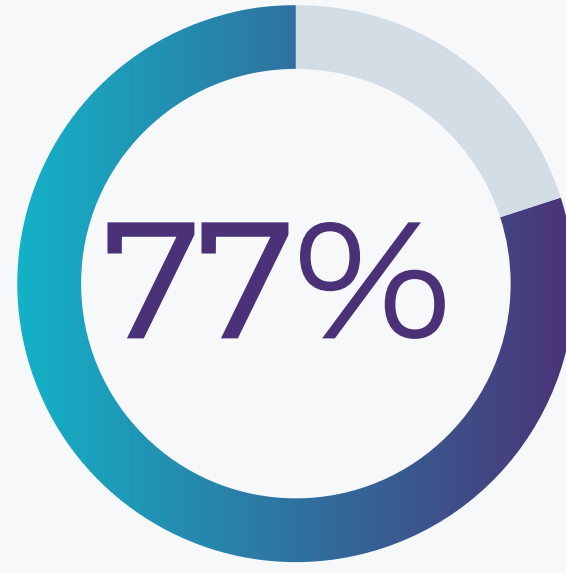
2021

\$5,000



This shift made it possible to move applications out of the data center and adopt new architectures like microservices and leverage distributed delivery models like CDNs.

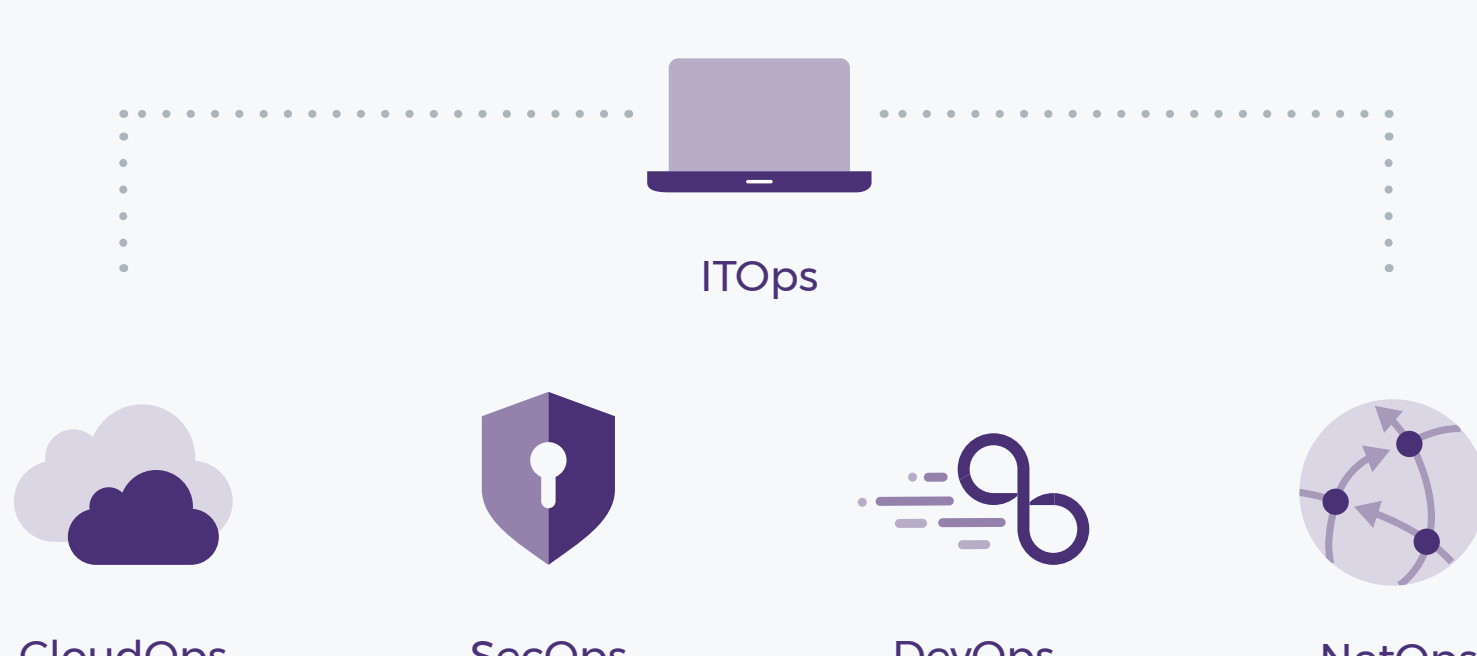
By 2022, CDNs will carry 77% of internet traffic



Diverse application infrastructure helps organizations improve reliability and cost efficiency. However, managing more complex infrastructure requires a new operating model.

## Challenge #3: Operating Models Are Evolving

In the digital economy, things move quickly. Technology organizations are embracing new operating models that focus on accelerating the pace of innovation through automation and orchestration while also improving quality and efficiency. These include:



ITOps models look across application development, delivery, and management to identify ways to eliminate manual handoffs and processes and other inefficiencies that can inhibit progress and invite errors and configuration issues.

They rely on technologies and tools that integrate easily to improve observability, automation, orchestration, and security.

## How to Meet These Challenges Through Digital Transformation

We are at a tipping point where legacy technologies have reached the limits of accommodating these shifts. While transformation is complex, the cost of inaction outweighs the pain of action.

According to Gartner, digital transformation is no longer a means for business growth, but rather business survival.<sup>6</sup>

Organizations that continue to rely on outdated foundational network technologies will continue to run up against significant barriers to innovation across applications, audiences, infrastructure and data.

<sup>1</sup> <https://loadstorm.com/>

<sup>2</sup> <https://resources.ns1.com/offer-wp-meeting-application-and-access-network-modernization-challenges>

<sup>3</sup> <https://www.idc.com/getdoc.jsp?containerId=prMETA46165020>

<sup>4</sup> <https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/how-cios-and-ctos-can-accelerate-digital-transformations-through-cloud-platforms>

<sup>5</sup> <https://www2.deloitte.com/us/en/insights/industry/technology/technology-media-and-telecom-predictions/2020/content-delivery-networks-video-streaming.html>

<sup>6</sup> <https://www.gartner.com/en/newsroom/press-releases/2020-10-20-gartner-says-worldwide-it-spending-to-grow-4-percent-in-2021>