



EQUINIX

NETWORK OPTIMIZATION

DIGITAL TRANSFORMATION PLAYBOOK

Transform IT architecture by removing the distance between users, IT services and ecosystems at the edge.

ABOUT THIS PLAYBOOK

PURPOSE

This playbook outlines how industry leaders are re-architecting for digital business. A modern strategy supported by physical and virtual infrastructure designed for the digital edge reduces costs and latency while dramatically improving speed, user experience and capacity. Distributing network hubs in locations at the edge offers direct access to customers, partners and other ecosystem participants. Establishing a presence where the digital world connects with the physical guarantees a fast, secure, low-latency exchange of information—a requirement to deliver great service.

CHALLENGE

Traditional enterprise architectures are centralized, complex, rigid and expensive to maintain. These monolithic, on-premises environments are ill-equipped to support today's rapidly evolving digital business models. In the coming years, the challenges will only compound. The rollout of 5G networks will generate even greater volumes of data, as new healthcare, insurance, automotive and media applications and IoT devices emerge. To remain relevant, companies of all sizes must embrace the digital opportunity.

NEED








The first step toward digital advantage is to rethink the way network infrastructure and services are architected, deployed and managed. Digital leaders are using an Interconnection Oriented Architecture® (IOA®) to reduce cloud connectivity and network traffic costs by 60% to 70% and latency by at least 30%—and reinvesting the savings into continuing transformation. Enterprises that wish to achieve these benefits need to adopt a distributed architecture that leverages direct interconnection to rich ecosystems.

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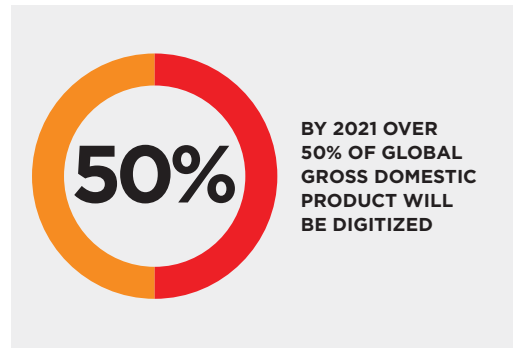
EXECUTIVE SUMMARY

Enterprises need digital-ready architectures to capture market opportunities around the world

TRENDS & INSIGHTS		STRATEGY		PLATFORM EQUINIX		
TRENDS	INSIGHTS	STRATEGY	TRANSFORMATION	CONSTRAINTS	CAPABILITIES	PLATFORM
						
Digital business, urbanization and the rise of business ecosystems are forcing commerce to the edge, where data can be processed closer to its source.	To scale business and meet customer expectations, companies must support real-time interactions by interconnecting workflows across business ecosystems.	Achieve digital transformation with an Interconnection Oriented Architecture to support the demands of a growing digital ecosystem.	A digital-ready state is achieved through four essential transformation steps that solve performance, cloud, security and data challenges.	Traditional, centralized IT infrastructures are unable to leverage the partnerships and technologies required to scale for digital business.	An IT network distributed in proximity to target populations provides optimal bandwidth and low latency essential for capturing new opportunities.	Start your journey to a digital-ready state on Platform Equinix®, leveraging access to rich industry ecosystems, leading network service providers and a global footprint.

MARKET TRENDS

Digital business is accelerating, driven by digitally enhanced offerings and relationships



BY 2021 OVER
50% OF GLOBAL
GROSS DOMESTIC
PRODUCT WILL
BE DIGITIZED

IDC FutureScape: Worldwide IT Industry 2018 Predictions

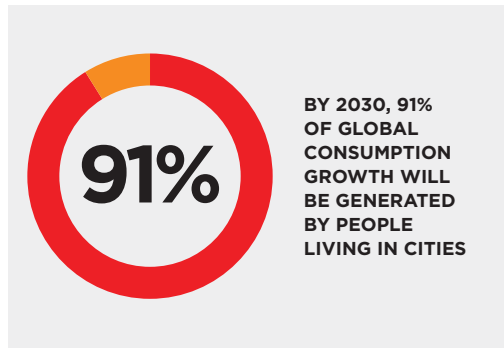
Implications

- Digital business forces the need to reduce latency in support of real-time interactions.
- The speed of this business shift is outpacing many firms' ability to adapt.

Summary

Macro trends including digital business, urbanization and the rise of business ecosystems are converging and forcing commerce to the edge, where data can be processed closer to its source. The rate and impact of this shift is outpacing many businesses' ability to adapt. To compete, they must address latency, complexity, risk and integration. Transforming the network is the first step to achieving a digital-ready state that solves these challenges.

Most of the world's population now lives in megacities with requirements for connectivity



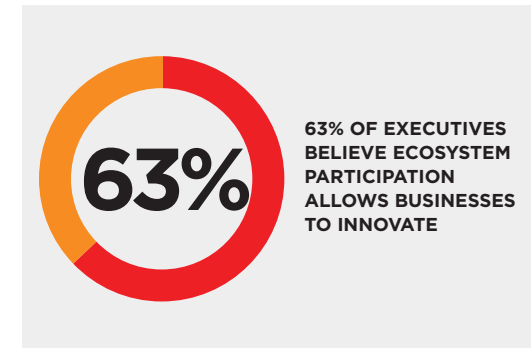
BY 2030, 91%
OF GLOBAL
CONSUMPTION
GROWTH WILL
BE GENERATED
BY PEOPLE
LIVING IN CITIES

Georgetown Magazine: Ten Questions with Global Strategist Parag Khanna

Implications

- Rapid urbanization is transforming global demographics and demand origins, creating a need for proximate digital services.
- Supporting urban density requires applications, data, content and networking to be in proximity to high user concentrations.

The future of business innovation will depend on digital ecosystem participation



63% OF EXECUTIVES
BELIEVE ECOSYSTEM
PARTICIPATION
ALLOWS BUSINESSES
TO INNOVATE

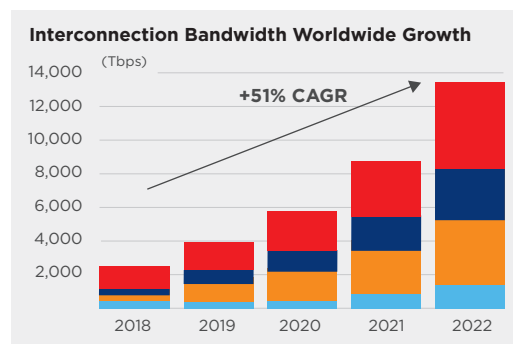
Accenture: Cornerstone of Future Growth: Ecosystems

Implications

- Global business is being driven by new value chains supported by a growing mix of producers, consumers and partners.
- To scale, organizations need to build a presence at strategic locations with the shortest distance to the largest number of participants.

INTERCONNECTION INSIGHTS

Interconnection bandwidth* is projected to grow globally at a 51% compound annual growth rate (CAGR)



Equinix, The Global Interconnection Index Volume 3

Opportunity

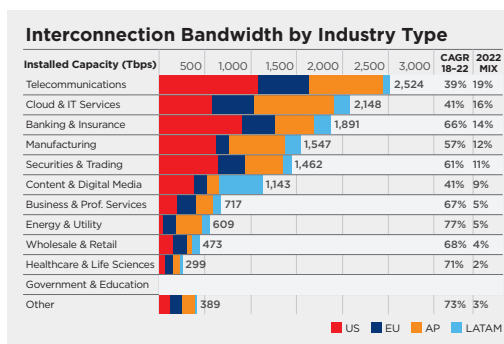
Interconnection, or direct and private traffic exchange between key business partners, is required for digital businesses to scale. Organizations are leveraging this trend by distributing private exchange points near supply chains, ecosystems and customers.

Summary

To scale business and create value for customers, companies will need to support real-time interactions by strategically interconnecting workflows across people, things, locations, clouds and data. Enterprises can begin by optimizing the network to shorten the distance between users and services applications. This is crucial for efficient capture, analysis and distribution of data from many disparate sources. Digital leaders are using Interconnection Oriented Architecture—a proven and repeatable, best-practice framework—to directly and securely connect all components of their digital supply chains in markets around the world.

*Interconnection bandwidth is the total capacity provisioned to privately and directly exchange traffic with a diverse set of counterparties and providers at distributed IT exchange points.

Digital interconnection has become the standard for companies in all industries to operate in today's digital world

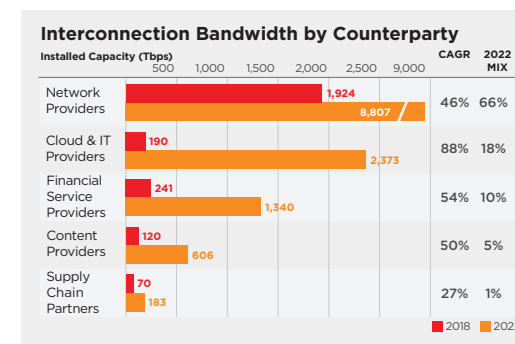


Equinix, The Global Interconnection Index Volume 3

Opportunity

Leaders across all industries understand that interconnection bandwidth capacity growth is needed to handle the massive volumes of traffic resulting from new forms of digital engagement.

Dynamic, interconnected digital ecosystems of customers, partners, applications and data are compounding



Equinix, based on data from The Global Interconnection Index Volume 3

Opportunity

Participation in multiple digital ecosystems has become a requirement to scale digital business. As value chains expand and consumer demand for latency-sensitive, real-time transactions rises, it becomes imperative to shorten the distance data needs to travel.

INTERCONNECTION STRATEGY

Develop a self-funding digital transformation model with Interconnection Oriented Architecture (IOA) on Platform Equinix

Summary

Digital transformation can be achieved with the right connectivity model in place to support the demands of a growing digital ecosystem. IOA provides the roadmap to success.

What is IOA? IOA is a proven and repeatable architectural framework to directly and securely connect components of a digital supply chain in markets around the world.

What are the benefits of IOA? IOA best practices enable organizations to move from traditional, centralized infrastructures to a network of interconnected hubs of third-party services located at the edge—in proximity to the users of these services.

What is the potential ROI of this approach?

An IOA allows businesses to maximize bandwidth while reducing costs. These benefits in turn support future digital use cases, offering more than 300% ROI.*

*Source: The Total Economic Impact of Equinix, Forrester, April 2019.

IDC Architecting Hybrid IT and Edge for Digital Advantage

Configure the edge for optimal compute, storage and network resources.

- Regain control over networking with colocation and interconnection to rich ecosystems.
- Reach markets globally while interacting locally.

eqix.it/3bVX1mv

IDC Equinix Network Edge Leverages SDN and NFV to Enhance Edge Networking

Simplify by centralizing and virtualizing the networking infrastructure.

- Reduce CAPEX while improving performance and agility.
- Select, configure and connect network and security devices from an ecosystem of providers.

eqix.it/2V1Gt6e

Forrester Total Economic Impact of Equinix

Enable cost savings and business benefits by interconnecting with Equinix.

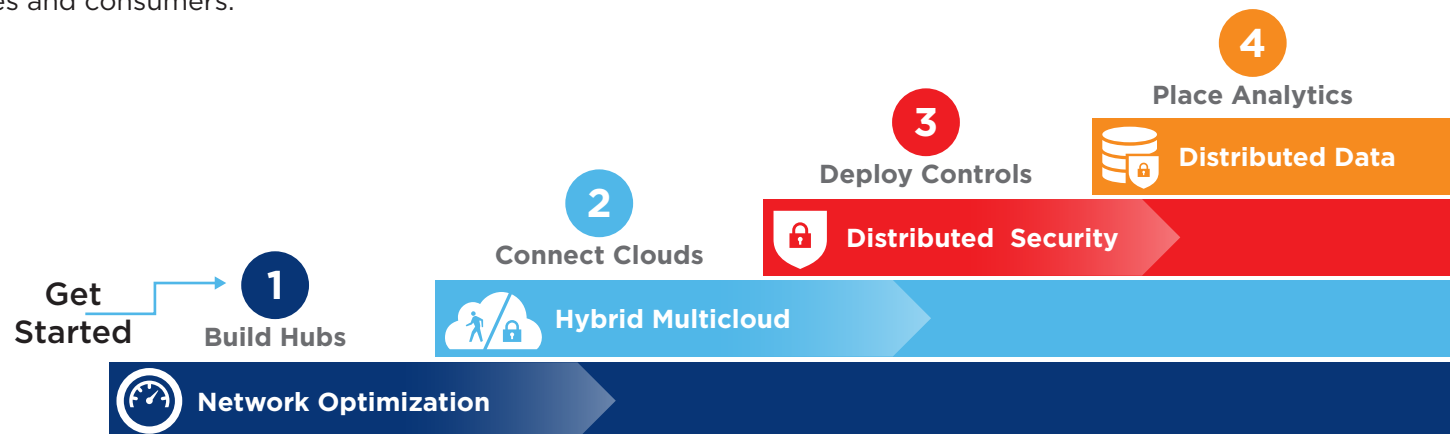
- Reduce network traffic and cloud connectivity by 60% to 70%.
- Reduce latency by a minimum of 30%.

eqix.it/31SGZHs

TRANSFORMATION STEPS

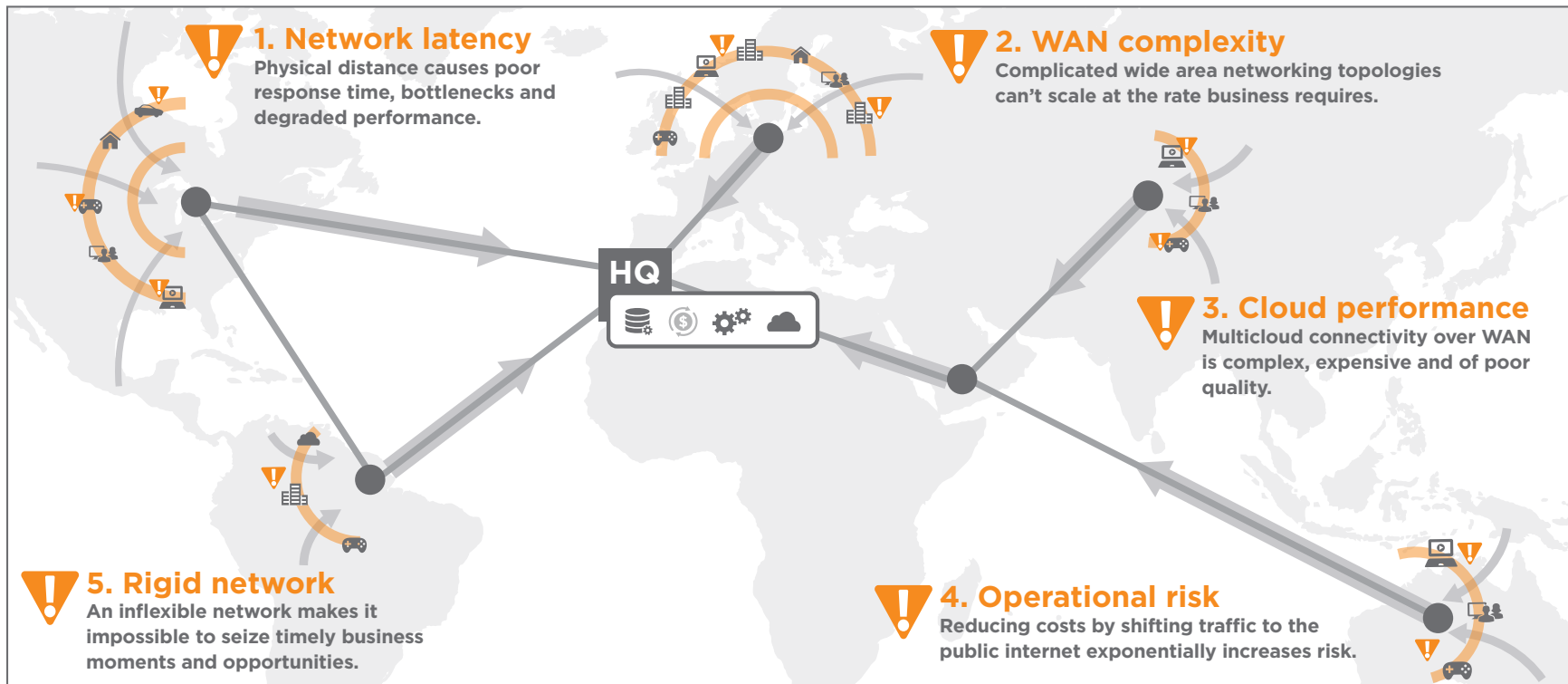
Leading organizations developing their digital edge strategies follow four essential steps that, when combined, accelerate digital transformation and remove performance, cloud, security and data challenges at the edge

- 1. Build network hubs for network optimization.** Meet expectations for real-time interactions via a streamlined network topology that reduces latency by shortening the distance between users and IT services. By building IT traffic exchange points (network hubs) at the digital edge, proximate to users and IT services, businesses can deliver superior performance and quality of service (QoS) for less cost.
- 2. Connect clouds for hybrid multicloud.** Gain access to vital cloud ecosystems for best-in-class providers and services that meet business needs for private, public and hybrid infrastructures. An interconnected fabric of network and cloud hubs at the digital edge simplifies hybrid IT and provides the choice, scale and agility needed for digital business success.
- 3. Deploy controls for distributed security.** Reduce security risk and compliance issues by deploying security controls and third-party security services adjacent to network and cloud hubs. In addition, when security services are overlaid where cyber-attacks are most likely to originate, they can be more easily mitigated.
- 4. Place analytics next to distributed data.** Data gravity is increasing at the edge, as information attracts increasing numbers of users, systems, applications and clouds that need access to the data. To efficiently and cost-effectively scale and manage data exchange globally, businesses must integrate data lakes, analytics and controls in hubs at the digital edge, proximate to data sources and consumers.



CURRENT-STATE CONSTRAINTS

Traditional infrastructure is rigid and inflexible, limiting customer engagement and restricting innovation

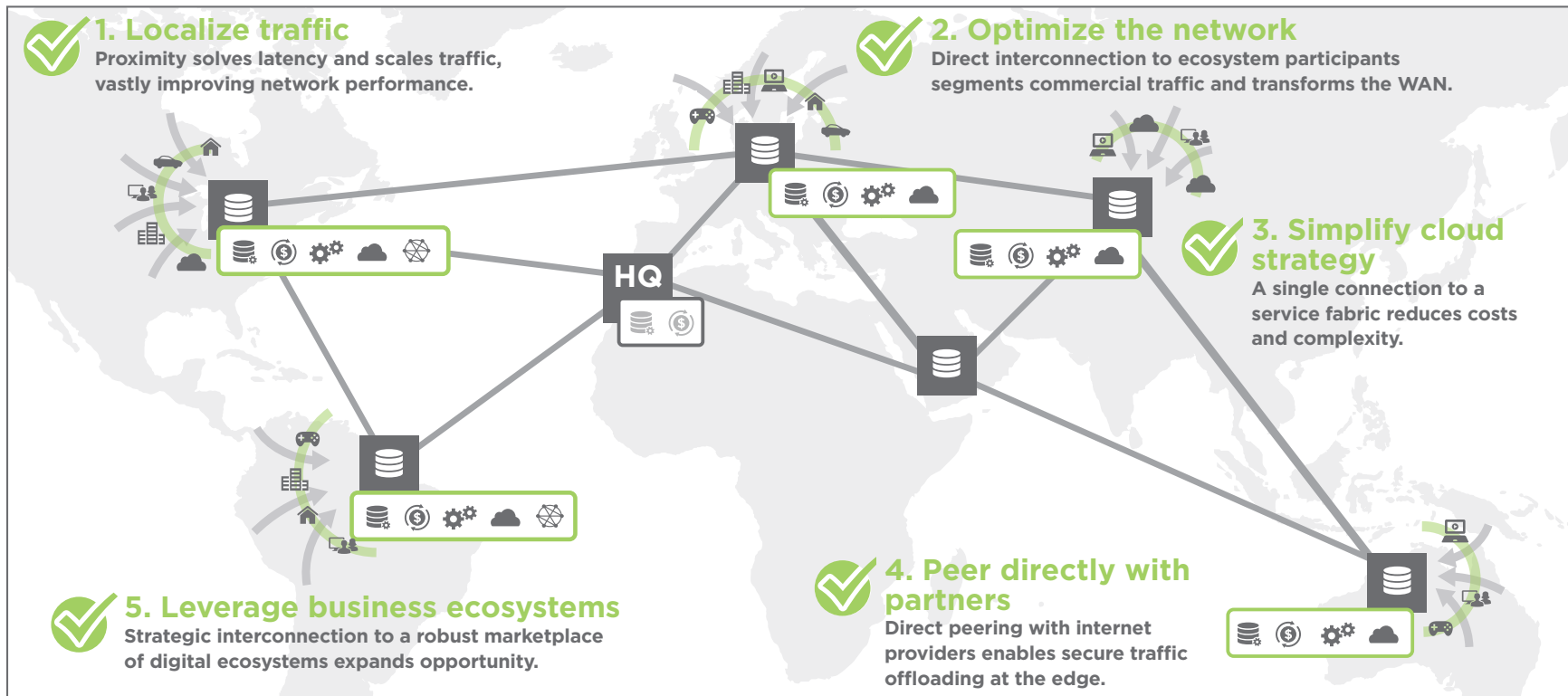


Summary

Traditional IT built on a centralized model can't meet the demands of digital business. Real-time applications at the edge tend to fail over long-distance, high-latency network connections. As business exchange increases across a growing number of counterparties, traditional WAN topologies cannot scale or adapt at the required rate. In addition, as cloud connectivity costs climb, organizations must balance the risk of shifting traffic to lower-cost internet options. Without solving the fundamental constraints created by physical distance, businesses can't take advantage of the partnerships and technologies required to scale.

FUTURE-STATE CAPABILITIES

Embrace a self-funding strategy
to optimize the network for digital
opportunity



Summary

An IT network distributed in proximity to target populations provides optimal bandwidth and low latency. The reconfiguration allows organizations to maximize flexible, agile and scalable interconnectivity to capture new opportunities. Even more compelling, the benefits of network optimization very quickly compound to fund the next steps of a digital strategy.

BEGIN YOUR TRANSFORMATION ON PLATFORM EQUINIX

Optimize the network on Platform Equinix to gain access to the world's richest industry ecosystems

1,800+
Networks

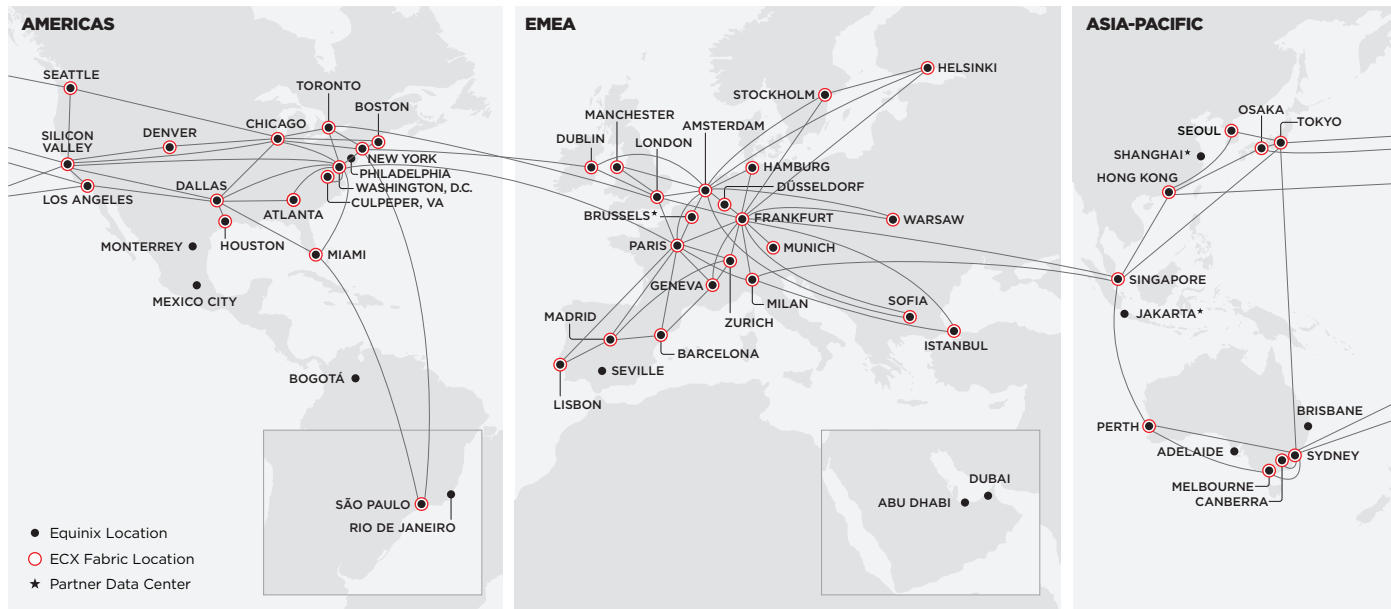
650+
Content & digital media

1,250+
Financial services

2,900+
Cloud & IT services

3,000+
Enterprises

265+
Fortune 500



**LOCALIZE
& OPTIMIZE
TRAFFIC**



**SEGMENT
TRAFFIC
FLOWS**



**MULTICLOUD
CONNECTIVITY**



**OFFLOAD
INTERNET AT
THE EDGE**



**CONNECT
TO DIGITAL
ECOSYSTEMS**

GETTING STARTED

Playbook
Companion
Resources

Request a digital edge strategy briefing with our experts.

Contact your Equinix account executive and learn more at [Equinix.com](https://equinix.com)

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TEI Forrester Report



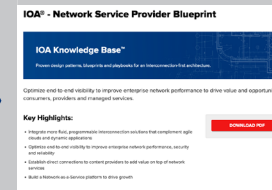
Read Forrester's Total Economic Impact Report to learn how Platform Equinix was found to provide a 328% ROI.
eqix.it/ForresterTEI

Global Interconnection Index



Get digital ready with insights from the Global Interconnection Index (GXI) Volume 3 measuring the growth of the digital economy.
eqix.it/InterconnectionIndex

Network Service Provider Blueprint



Read the blueprint to learn how to improve network performance to drive value and opportunity for consumers, providers and managed services.
eqix.it/2ZqZnKO

Network Edge



Set up a free, 14-day trial to access the ECX Fabric portal and create a new virtual device from multiple vendors.
eqix.it/31vT9WL



Equinix, Inc. (Nasdaq: EQIX) connects the world's leading businesses to their customers, employees and partners inside the most-interconnected data centers. On this global platform for digital business, companies come together across more than 55 markets on five continents to reach everywhere, interconnect everyone and integrate everything they need to create their digital futures.

Learn more at [Equinix.com](https://www.equinix.com)

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