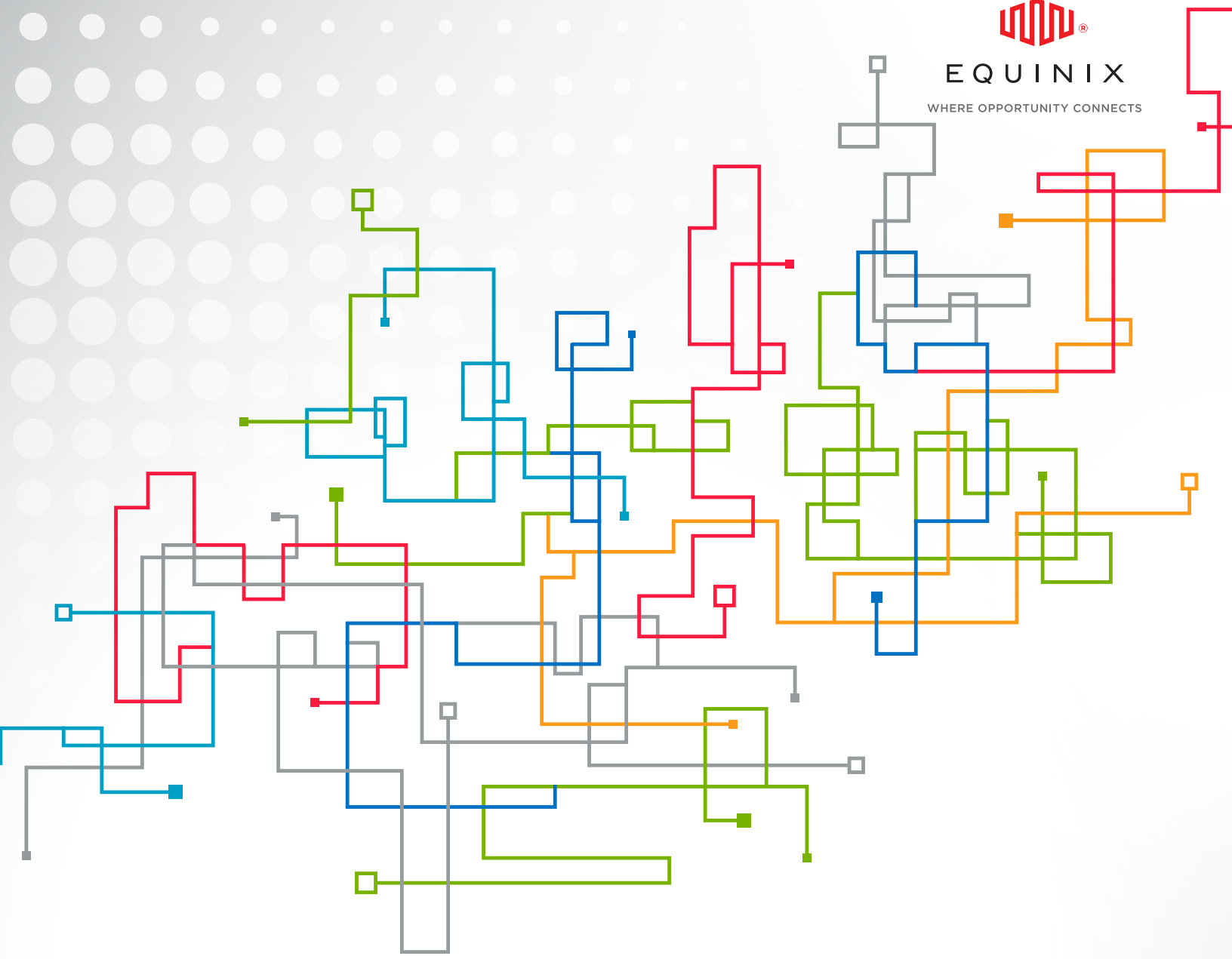
EQUINIX

WHERE OPPORTUNITY CONNECTS

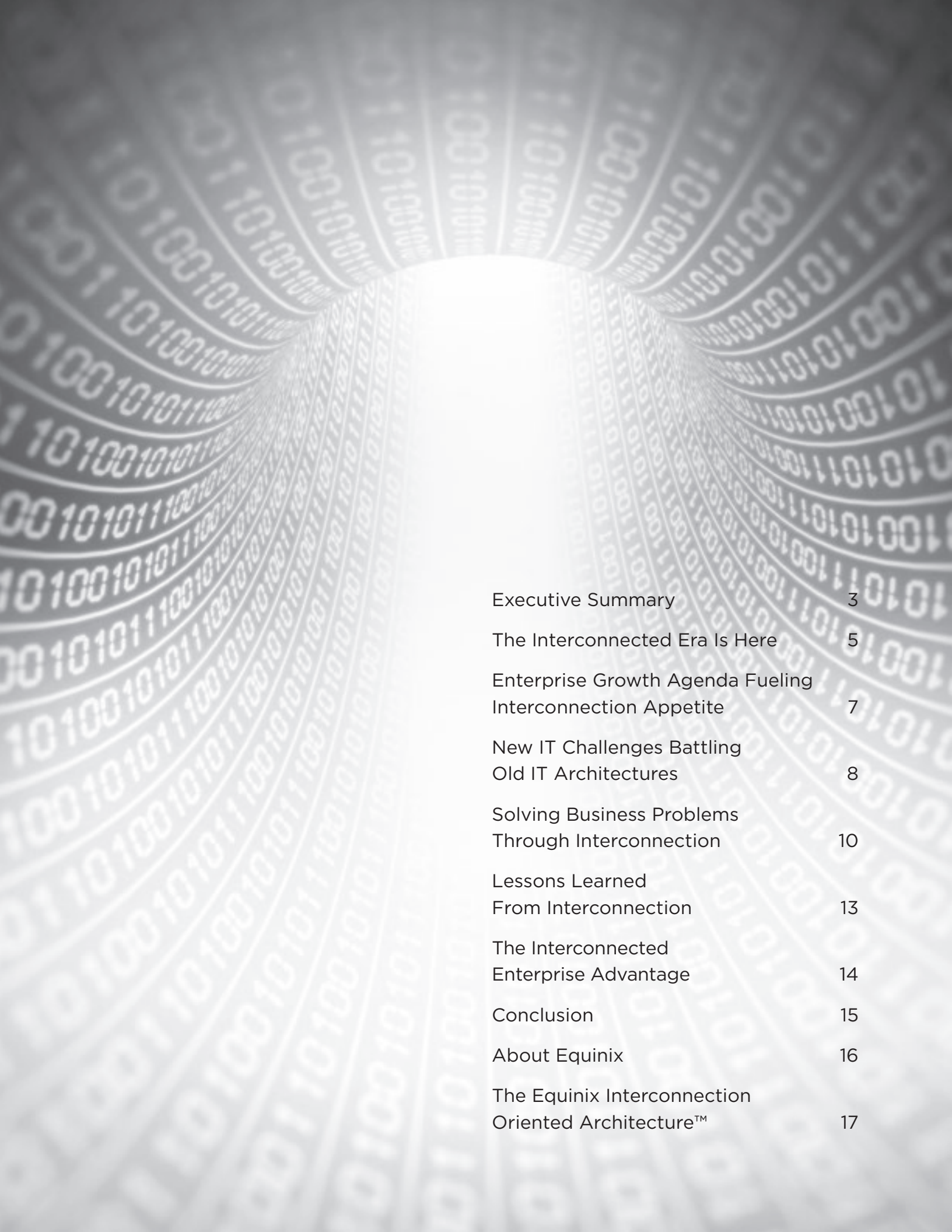


THE ENTERPRISE OF THE FUTURE:

UNLEASHING THE INTERCONNECTED ENTERPRISE

OCTOBER 13, 2015

Equinix.com



Executive Summary

IN AN ERA OF RAPID CHANGE, THE MOST RADICAL REINVENTION OF INFORMATION TECHNOLOGY IS IMMINENT AS THE NUMBER OF INTERCONNECTED ENTERPRISES IS SET TO MORE THAN DOUBLE TO 84% BY 2017. MORE THAN A THIRD OF ENTERPRISES SURVEYED HAVE REALIZED OVER $10 MILLION IN VALUE.

Our world is increasingly interconnected.

By 2020, the digital universe will reach 44 zettabytes, meaning there will be nearly as many digital bits as there are stars in the universe.[1] In this new social and mobile-enabled landscape, we are in a constant state of cloud-fueled collaboration and communication. Whether born-digital millennials or reinvented baby boomers, we are now all "omnichannel" consumers who consider anytime, anywhere, any device connectivity the norm.

This sweeping change is radically reinventing the face of the enterprise, altering how work gets done, how competitive advantage is forged and how revenue is generated.

In this new interconnected era, organizations can't go it alone when it comes to creating value. They must rely on each other – and interconnection – to succeed. And they need an interconnected IT strategy to position their enterprises for growth.

Today's enterprise-grade interconnection is much different from the connectivity of yesterday. Modern interconnection establishes direct and secure, physical or virtual connections between an enterprise and its partners, customers and employees. This new level of interconnection has become essential to market differentiation and growth, and a recent Enterprise of the Future survey of 1,000 IT decision-makers by Equinix revealed that businesses worldwide have developed a vast and accelerating business appetite for it.

Report Snapshot

- With revenue growth emerging as a top IT priority, 3-in-5 businesses believe establishing direct and secure interconnections with their employees, partners and customers is "very important" to their ability to compete.
- The number of interconnected enterprises is set to more than double from 38% to 84% globally by 2017.
- The benefits of interconnection are real and quantifiable – more than 1/3 of survey respondents report greater than $10M in value created.

1. EMC, Digital Universe, 2014

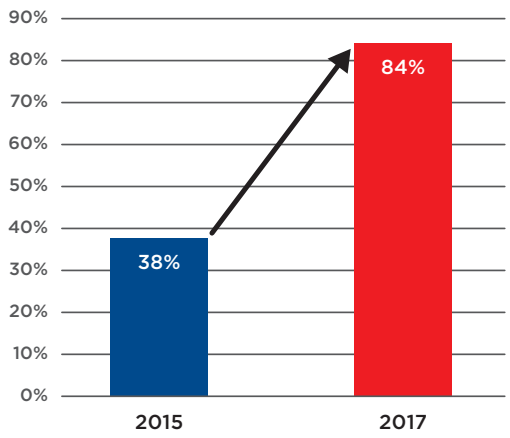
Among the key survey findings:

- Revenue growth is the enterprise's top priority, and the top IT strategies to drive growth are all heavily interconnection-dependent.
- 3-in-5 businesses believe interconnection is "very important" to their ability to compete.
- The number of interconnected enterprises worldwide is set to more than double by 2017 – increasing from 38% to 84%.
- The benefits of interconnection are real and quantifiable – more than 1/3 of survey respondents who have already deployed interconnection solutions report greater than $10M in value created, with 58% reporting this value came from increased revenue opportunities.

The survey results demonstrate that not only do enterprises understand the value of an interconnected IT strategy, they are aggressively pursuing it.

In the following Enterprise of the Future report, we examine the market trends, customer desires and capabilities that are combining to lead to a profound transformation in enterprise IT.

The Global Interconnection Surge



The number of interconnected enterprises will double globally by 2017.

The Interconnected Era Is Here

Don Tapscott's landmark 1995 book, "The Digital Economy: Promise and Peril in the Age of Networked Intelligence," described an economy built on digital technologies that was "not simply about the networking of technology, but about the networking of humans through technology."

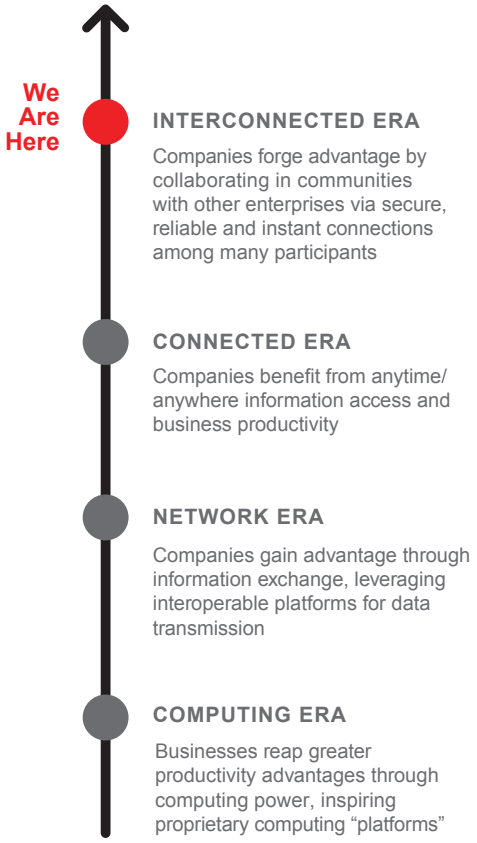
Today, humans are more networked than ever. In the past 30 years, the digital economy that Tapscott defined in those early days has since moved through four distinct eras, propelled and accelerated at each stage by advances in connectivity. We are now in **the interconnected era**. This period is dominated by the need for a level of interconnection that delivers instant collaboration between and within dense industry ecosystems consisting of partners, employees, customers and data sources. This direct and secure interconnection spans geographies to accelerate business performance and create growth.

The challenge – and opportunity – of the interconnected era is that businesses now have the ability to electronically collaborate at a speed, depth and geographic range that's never before been possible. But only an "interconnected enterprise" can truly gain the commercial advantages this delivers.

An interconnected enterprise puts interconnection at the center of its IT strategy. It can directly and securely connect its employees, partners and customers to what they need, in the right context, using whatever devices, channels or services they prefer. The interconnected enterprise can react in real time, adapt quickly to change, and discover new ways to grow within the network of digital ecosystems with which it continuously interacts.

An interconnected enterprise sees the promise of the interconnected era and implements an IT architecture that's agile, flexible, secure and robust enough to take advantage of it.

DIGITAL ECONOMY



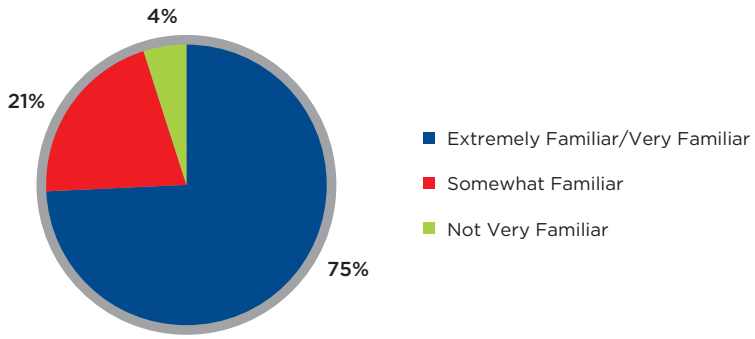
The Enterprise of the Future survey explored the priorities and perspectives of the IT leaders who are shaping the interconnected era, including CIOs, CTOs, chief architects and network and application vice presidents across 14 countries.

Global awareness of interconnection, as defined above, was strong across the board among survey respondents, with 75% of global businesses "extremely" or "very" familiar with it.

In the 451 Research report "Interconnection 101," analyst Jim Davis said the demand for interconnection is only increasing worldwide.

> "With the rise of services that depend on network speed and reliability, we believe the demand for interconnection facilities will continue to grow, particularly globally and in markets outside the top 10 in the U.S. as content pushes further to the edge of the Internet," Davis said.

Interconnection Familiarity

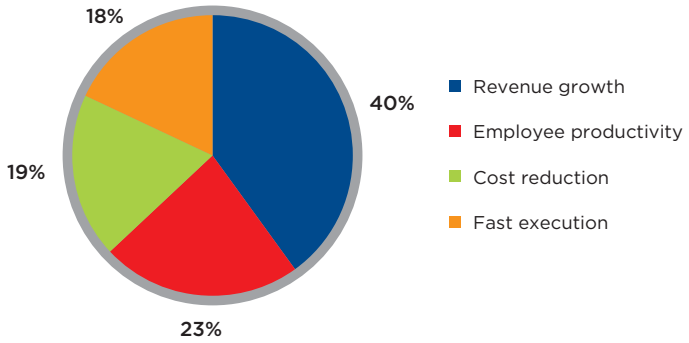


75% of the global businesses surveyed were "extremely" or "very" familiar with interconnection.

Enterprise Growth Agenda Fueling Interconnection Appetite

The survey uncovered a diversity of views, but there was no doubt about the top strategic goal of enterprises worldwide. Respondents in 12 of the 14 regions surveyed ranked revenue growth as their most important IT priority, with employee productivity a distant though significant second at 23%. The findings underscore a broader shift in attitudes about IT's increasing role in driving revenue growth. In a McKinsey & Company survey of executives, 29% of respondents said they expected IT-enabled business innovation to account for more than half of their company's earnings growth from 2012-2017, up from 18% two years earlier.[2]

IT Strategy Priorities



40% of enterprises say revenue growth is their top IT strategy priority, with 3-in-5 companies citing interconnection as "very important" to their ability to compete.

When IT leaders were asked how they were planning to spur revenue growth, their top strategies were all dependent on interconnection.

- The No. 1 strategy for revenue growth, according to nearly 69% of respondents, is deploying infrastructures to support new product offerings.
- The second-most essential strategy, as indicated by 68% of respondents, is creating new channels or systems of engagement between the enterprise and its customers, partners and employees.
- Deploying infrastructures in new geographies was the third-highest ranked revenue-generating strategy, as identified by 55% of respondents.
- Another key strategy – cited by 54% of the respondents – is embedding or distributing intelligence (analytics, data, content) across business processes, regions or office locations to gain greater customer insights and make faster, more accurate business decisions.

With these interconnection-reliant growth strategies topping the enterprise "to do" list, it's no surprise that 3-in-5 businesses surveyed believe interconnection is "very important" to their company's ability to compete.

As interconnection becomes a prerequisite for success, businesses are mobilizing to become more interconnected. The survey indicates that interconnection-driven enterprise transformation is imminent, with the number of interconnected enterprises set to more than double from 38% to 84% globally by 2017.

2. McKinsey & Company, 2013

New IT Challenges Battling Old IT Architectures

Even as companies increasingly turn toward direct and secure interconnection, they face significant obstacles adapting old systems to a new world. Today, there are more users, more devices, more locations and more data than ever, and everyone needs everything in real time. The following statistics illustrate how the digital enterprise is more dispersed, connected and cloud-dependent than ever:

- 75% of enterprise employees reside in locations other than the corporate headquarters.[3]
- 82% of enterprises report a multi-cloud strategy.[4]

The problem is that existing, highly centralized IT architectures, which are often contained in on-premise enterprise data centers, are struggling to scale to meet the growing numbers of dispersed users with which they interact. These complications were widely acknowledged by survey respondents, with 51% calling siloed business and IT architectures a “very important” barrier to their company’s IT agenda.

But even as high-quality connectivity becomes harder to deliver, it’s no less of a business imperative. A positive user experience is considered “very important” to 53% of survey respondents, while connecting more locations with more speed is very important to 51% of respondents. The challenge of delivering all this is compounded by the crumbling of old IT perimeters as the cloud pulls enterprise IT service delivery off-premise, out to the edge of the corporate network, and blurs organizational boundaries.

3. Virtela, 2014
4. RightScale, State of the Cloud Report, 2015

As we approach a tipping point where business workloads will exceed IT's capacity to support them, the Enterprise of the Future survey revealed that many of the infrastructure obstacles identified as "most important" by IT leaders are interconnection-centric:

- **Systems uptime (20% of the respondents)**
  Centralized IT can mean a single point of failure, increasing the risk that corporate data center downtime can have broader network effects and decrease systems uptime.
- **Cost to scale (17% of the respondents)**
  Centralized IT increases cost to scale because all communications must be backhauled through the corporate data center, robbing the enterprise of the ability to get closer to the edge where there are high concentrations of users, data and applications. Proximate connectivity lowers the cost of directly connecting users to each other and the data and applications they require, especially if they are locally accessing those resources and services via the cloud.
- **High latency (9% of the respondents)**
  Physics dictates that the only sure way to decrease latency is to shorten the distance between enterprise and end user, but a network infrastructure that's centered on-premise is relatively immobile.

The more these trends take hold, the more direct and secure interconnection will become a necessity, not an option. Unfortunately, interconnection via the public Internet isn't good enough.

Speaking to the growing need for interconnection, GE's Cloud CTO Lance Weaver commented, "Applications, employees and data are rapidly moving outside the traditional borders of the data center, but the expectations for a secure, frictionless and high-performance experience are higher than ever. You can't meet those expectations without a level of interconnection that's just not available over the public Internet alone."

Today's enterprise-grade interconnection must be fast and distributed to the edge, and close to high concentrations of users to meet increasing performance, security and compliance demands. It must be agile enough to scale up or down as workloads change. It must remove the security risks that get in the way of exceptional performance and on-demand responsiveness. At the same time, interconnection must encompass multiple network and cloud services while expanding computing, application and analytics capabilities.

Only private and distributed interconnection can deliver all that. The Internet simply can't.

Solving Business Problems Through Interconnection

A Forrester study, "The Total Economic Impact (TEI)™ of Equinix Interconnection Solutions,"[5] offered evidence of the benefits of direct interconnection.

- Greater interconnection enabled higher systems uptime (supporting 99.9999% on average), with 15% fewer network incidents and outages, leading to reduced labor costs.
- Major cost reductions were realized by migrating to a multi-cloud interconnection strategy to deploy and scale applications with lower-cost cloud service providers, versus running them internally.
- Increased interconnection contributed to a 42% average reduction in latency and 40% reduction in bandwidth costs, due to more proximate interconnectivity between the organization and its employees, partners and customers.

5. Forrester Research, The Total Economic Impact (TM) of Equinix Interconnection Solutions, 2015.

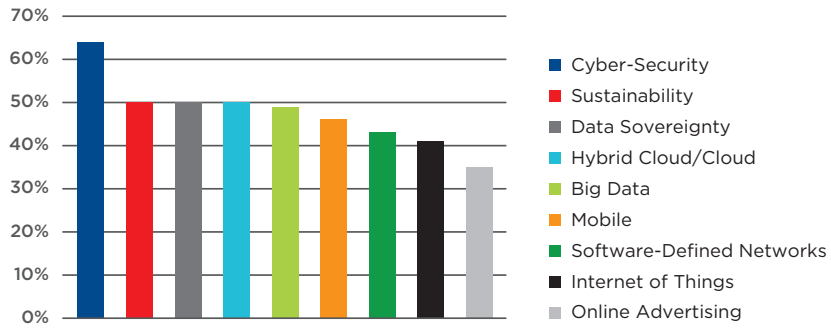
As Forrester pointed out in its report, being able to locally peer with cloud providers through secure, direct interconnections and get out at the edge capabilities to access and integrate multiple clouds enables organizations to provision cloud services quickly and provide an improved end-user experience. The Enterprise of the Future survey findings validated the importance of accessing multiple cloud services in today's enterprises, with the vast majority seeing this as a critical need to address within five years. The survey showed that nearly half of the respondents are currently pursuing a multi-cloud strategy and by 2020, 86% of those companies will have deployed multiple clouds across multiple locations.

Direct and secure interconnection also significantly eases cyber-security concerns, which 64% of Enterprise of the Future survey respondents reported could drive them to consider re-architecting their IT infrastructure over the next 12 months. Cyber-security was by far the biggest disruptive trend cited.

Reducing risk, in general, was a major priority of survey respondents, with 3-in-5 saying that minimizing exposure and improving security was a "very important" business challenge and 1-in-4 calling it the single most important. They cited vulnerabilities in cloud and mobile architectures as areas of particular concern, with 55% considering this a "very important" barrier to their IT agenda. Maintaining data sovereignty was also a source of apprehension, with 50% of respondents citing it as a key barrier to achieving their IT priorities.

Direct interconnection is more secure than the public Internet and lowers a company's risk profile in ways that meet the specific concerns expressed in the survey. It shrinks the "attack surface," reducing the number of hops required to interconnect locations and closing off attack points. Direct interconnections also bypass the public Internet, eliminating vulnerabilities between cloud and mobile providers and their partners. And direct interconnection allows enterprises to maintain data within geographic borders near their partners and users, keeping it compliant, safe and under control.

Importance of Industry/Technology Trends in Considering IT Infrastructure Transformation



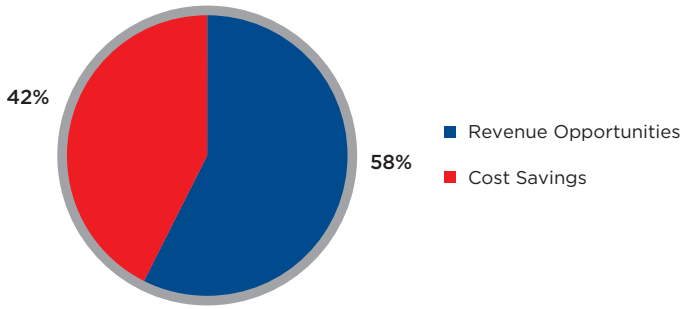
Cyber-security could drive 64% of organizations to consider re-architecting their IT infrastructures over the next 12 months.

The Economics of Interconnection

Direct and secure Interconnection also has a significant positive financial impact on the enterprise. The Enterprise of the Future survey showed that more than a third (37%) of businesses that have deployed interconnection solutions reported at least $10 million in value created. Revenue opportunities accounted for the bulk of the value creation at 58%, while the other 42% of respondents attributed the value of interconnection to cost savings.

The Forrester TEI study backed up the bottom-line value of interconnection. It found that interconnection delivers a 300% return on investment based on the accumulated benefits of interconnection solutions.

Interconnection Value in Revenue Opportunities and Cost Savings

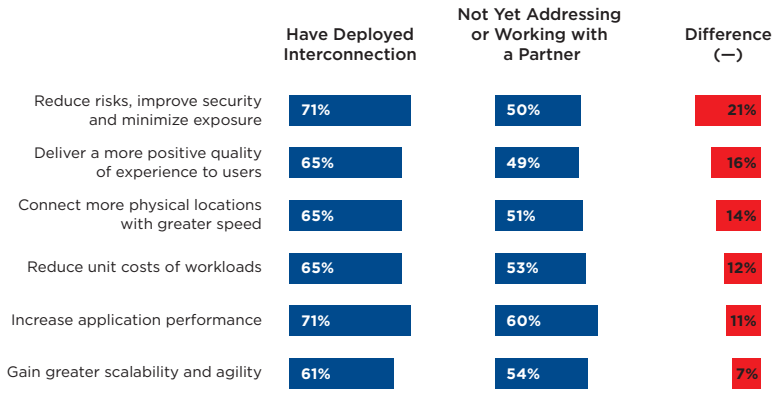


37% of companies with interconnection solutions report $10M+ in value created.

Lessons Learned From Interconnection

As enterprises develop their ability to connect, communicate and collaborate with customers, partners and employees, their challenges, opportunities and perspectives change. This is evident in the Enterprise of the Future survey results, which showed a striking difference between the impact traditional enterprises anticipate interconnection can have on their top business priorities, versus the impact interconnected enterprises expect based on their experiences.

The Importance of Business Challenges and Opportunities



The chart to the right shows the importance that the enterprises surveyed put on various business challenges/opportunities. Across every single one of them, companies who have not yet deployed interconnection solutions have much lower expectations for the strategic role interconnection can play in achieving their highest priority business goals, versus interconnected enterprises that are already experiencing the benefits firsthand.

The greatest difference can be seen on the issue enterprises identified as their biggest concern: security. For those companies who had yet to deploy interconnection, only 50% ranked “reduce risks, improve security and minimize exposure” as a reason to explore interconnection, whereas 71% of the interconnected enterprises ranked security as a key interconnection driver. These differences indicate that enterprises that have yet to become interconnected may be underestimating the true value interconnection can provide in addressing risk and security concerns, compared to interconnected enterprises, where the security of direct interconnection is better understood.

“Both near-term and long-term trends point toward the use of interconnection as a networking strategy that helps address the security and performance problems of today’s enterprise network while opening up new possibilities for architecting the digital enterprise of the future,” said Jim Davis of 451 Research.[6]

Delivering a more positive quality of experience to users was another key area where there was a significant difference in perceived importance by interconnected and non-interconnected enterprises. Once again, this indicates that interconnected enterprises have a stronger appreciation for what is possible when interconnection is deployed for strategic advantage.

6. 451 Research, Meet Me, Meet Me Not: What Enterprises Need to Know about Datacenter Networking to Make the most of Their Cloud Strategy, 2015.

The Interconnected Enterprise Advantage

There are numerous examples of how businesses have benefited from becoming interconnected enterprises:

Interconnecting People: A global consulting, engineering, construction and operations firm wanted to collaborate with partners in remote time zones to continue project work 24 hours a day. The company was able to connect to nine strategically located sites throughout EMEA, the Americas and Asia-Pacific and harness the hybrid cloud to achieve access to multi-cloud services. This upgrade from its previous network and enterprise infrastructure allowed it to deliver a superior user experience across its partner and employee applications and ramp up and scale new office locations quickly and securely. The company also expects to save more than $500,000 annually.

Interconnecting Locations: A Fortune 500 financial services firm with a nationwide network of employees, partners and customers needed to deliver its end users to its applications as quickly and securely as possible. But legacy enterprise IT was inhibiting the anywhere, anytime, any device connectivity its end users expected, and the Internet and private network bandwidth needed to meet its customers' demands was expensive and difficult to sustain. The firm began to deploy its IT closer to end users in distributed interconnection hubs that delivered direct and secure connectivity. The result: major improvements in network efficiency, performance and costs, including decreases of up to 45% in Internet access costs and up to 30% in MPLS bandwidth costs.

Interconnecting Clouds: In a move to better focus on its core business and more efficiently scale the analytics essential to its offering, a global, multimedia weather-related news and data network wanted to migrate as many IT services as possible to the cloud. The network accessed multiple cloud providers via high-quality interconnections within globally distributed colocations to quickly deliver business-critical IT services to users and real-time analytics services to customers worldwide. Scaling analytics became faster, easier and more cost-effective, while IT unit costs dropped significantly. The company has now moved 80% of its computing infrastructure into the public cloud space.

Interconnecting Data: With a goal to provide more efficient, quality patient care, a major healthcare software provider needed to connect hospitals and clinics to its hosted applications quickly and reliably so it could uncover better insights from patient data. The organization deployed its applications in multiple global data centers, reducing latency to its dispersed clinics and improving application performance – and ultimately patient knowledge – for thousands of doctors, nurses and other healthcare providers.

Conclusion

Traditional enterprise IT is not built to compete in the interconnected era. Existing architectures are highly centralized and can't scale to meet the increasingly mobile enterprise end user. Without fundamental change, businesses will not be able to compete. This reality is forcing a broad IT rethink as enterprises move direct and secure interconnection into their strategic center.

The Enterprise of the Future survey revealed that businesses worldwide are moving quickly to become interconnected enterprises, and they are seeing bottom-line benefits. More than a third of those companies reported at least $10 million in combined revenue growth and cost savings. With 84% of enterprises intending to be interconnected by 2017, more than double the number of interconnected enterprises today, we are on the precipice of a massive interconnection-led reinvention of enterprise IT.

About Equinix

Equinix, Inc. (Nasdaq: EQIX) connects the world's leading businesses to their customers, employees and partners inside the most interconnected data centers. In 33 markets across five continents, Equinix is where companies come together to realize new opportunities and accelerate their business, IT and cloud strategies. As the global interconnection platform for the world's leading businesses, Equinix speeds the path to the interconnected enterprise.

An interconnected enterprise directly and securely connects its employees, partners and customers to what they need, in the right context, using the devices, channels and services they prefer. This powerful level of direct interconnection empowers enterprises to react in real time, adapt quickly to change and leverage digital ecosystems to create new value and growth.

Equinix enables the interconnected enterprise by bringing together buyers and sellers, suppliers and manufacturers, and clouds and enterprises so they can meet under one roof at Equinix. More than 6,250 customers are inside Equinix's 100+ global data centers on five continents in 33 metro markets, including 1,100+ networks and 1,250+ cloud, IT service providers and systems integrators. The level of direct and secure connectivity interconnected enterprises require is readily available inside Equinix, whether a company needs to connect across the aisle or across the world.

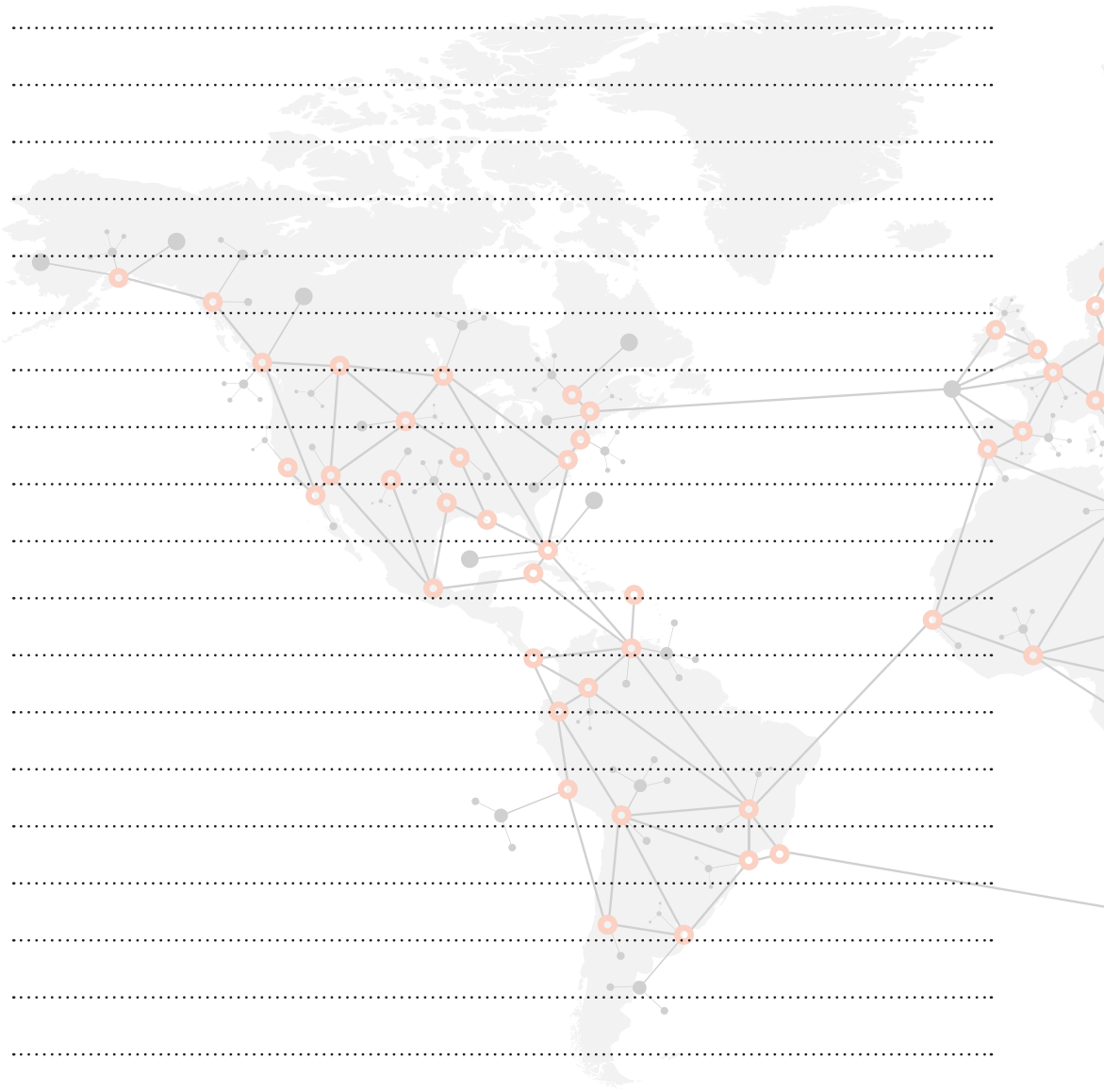
The Equinix Interconnection Oriented Architecture™

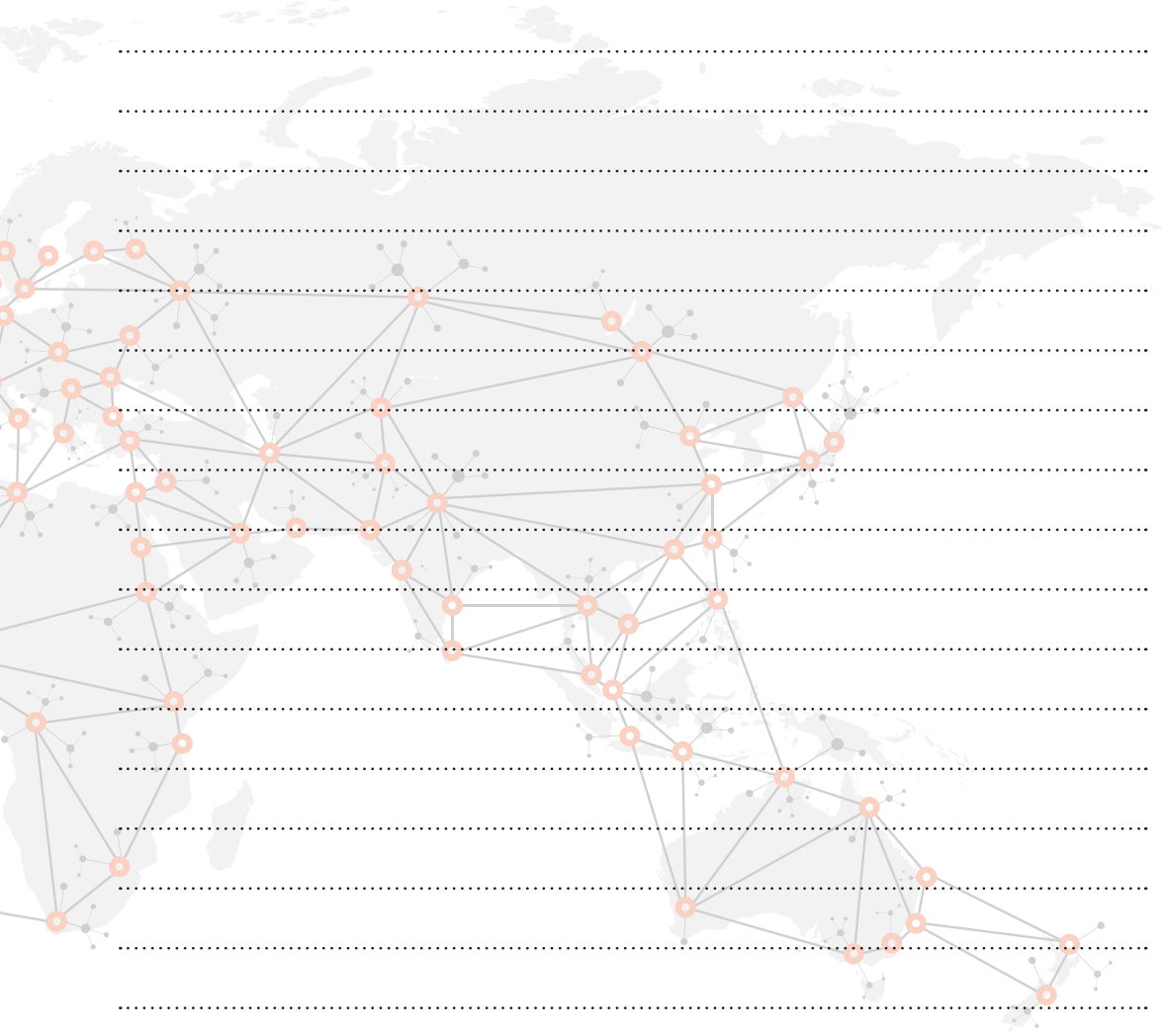
Business expansion, ubiquitous user access and the sourcing of external business and IT services are forcing enterprises to have more points of engagement with more end users across an ever-widening physical and logical footprint. Existing IT architectures were not built to support this level of dynamic engagement and distributed coverage. In this new world, implementing an enterprise interconnection strategy is critical, and it has real impact. A Forrester study on the enterprise value of interconnection estimated a 300% return on investment, payback of that investment within 4.2 months and a 40% average reduction in latency.

Executing an interconnection strategy requires an Interconnection Oriented Architecture™. An Interconnection Oriented Architecture integrates the physical and virtual worlds where they meet, shifting the fundamental delivery architecture of IT from siloed and centralized to internetworked and colocated. Equinix's interconnection platform provides the critical building blocks needed to implement an Interconnection Oriented Architecture across a global infrastructure with unmatched ecosystem density and vendor neutrality.

A transformative approach to interconnecting people, locations, clouds and data, Equinix's Interconnection Oriented Architecture equips enterprises to meet the ever-growing need to increase speed, scale, performance, choice and security while lowering costs. It is a critical foundation for the interconnected enterprise as it enables businesses to be as dispersed, flexible and adaptable as their end users. This dramatically increases an organization's capacity to grow, engage important audiences, exploit a market of innovative partners and create new value more quickly. Leading enterprises worldwide have implemented Equinix's Interconnection Oriented Architecture and achieved significant value in both revenue growth and cost savings.

NOTES





WHERE DO YOU NEED TO BE INTERCONNECTED?

Worldwide Corporate HQ

Equinix, Inc.
One Lagoon Drive
Redwood City, CA 94065
USA

Main: +1.650.598.6000
Fax: +1.650.598.6900

Email: info@equinix.com

EMEA

Equinix (EMEA) BV
7th Floor Rembrandt Tower
Amstelplein 1
1096 HA Amsterdam
The Netherlands

Main: +31.20.754.0305
Fax: +31.20.753.7951

Email: info@eu.equinix.com

Asia-Pacific

Equinix Hong Kong Limited
Suite 6504-07,
65/F Central Plaza
18 Harbour Road
Wanchai, Hong Kong

Main: +852.2970.7788
Fax: +852.2511.3309

Email: info@ap.equinix.com

EQUINIX

Enteprise of the Future Report v1015 RP-EN JM-PS 1015 Q215

Equinix.com