



EQUINIX

INTERNET OF THINGS

DIGITAL EDGE PLAYBOOK

Leverage IoT platforms to optimize business operations
and customer experience



ABOUT THIS PLAYBOOK

PURPOSE

This playbook outlines how internet of things (IoT) platforms can be deployed by businesses to enhance operations and the user experience. It shows how placing distributed IoT solutions at the digital edge and interconnecting them to digital technologies—big data analytics, artificial intelligence (AI) and machine learning (ML)—accelerates the production of more accurate insights. It also illustrates how direct and secure interconnection to networks, clouds and industry ecosystems speeds the delivery of innovative IoT solutions to market.

CHALLENGE

As the vast global landscape of distributed IoT devices and data increases, businesses are finding they can't scale centralized IoT gateways fast enough to gain timely insights that meet business or customer needs. Traditional IT infrastructures and high-latency networks make integrating distributed IoT capabilities with business systems, digital technologies, security, networks, clouds and industry ecosystems impossible, resulting in inefficient and insecure data exchange workflows, increased costs and blocked innovation.

NEED








To succeed, business IT infrastructures must be re-architected. Placing IoT platforms at the digital edge allows businesses to capture device data and take timely action against it. Interconnecting IoT systems and processes at the digital edge, using distributed control points closest to users, IoT assets, applications, mobile networks and clouds (for IoT gateways) delivers the performance, security and scalability required to meet business and customer needs, and gain the greatest value as an IoT-enabled digital business.

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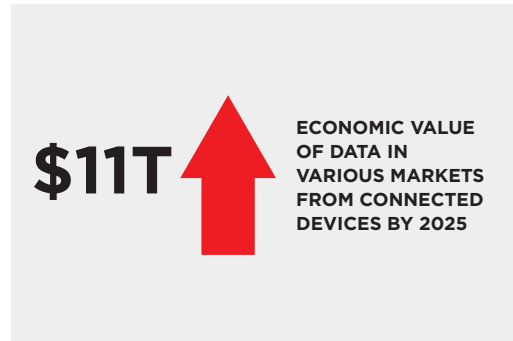
EXECUTIVE SUMMARY

Companies need an optimized IT architecture to realize greater revenue and growth from IoT-driven innovation

TRENDS AND INSIGHTS		CONSTRAINTS AND CAPABILITIES		PLAYBOOK		
TRENDS	INSIGHTS	CONSTRAINTS	CAPABILITIES	STRATEGY	ROADMAP	PLATFORM
 <p>Businesses must leverage IoT platforms to realize greater revenue and growth. Centralized IT infrastructures can't scale or integrate IoT capabilities needed to leverage operational and customer insights.</p>	 <p>Global Interconnection Bandwidth is outpacing IP traffic growth. Direct and secure interconnection between customers, IoT platforms, networks, clouds and industry ecosystems is needed to accelerate delivery of IoT solutions to market.</p>	 <p>Companies deploying IoT capabilities are limited by rigid, centralized IT infrastructures that can't effectively integrate IoT products and services, restricting insights that could optimize business operations and improve customer satisfaction.</p>	 <p>An interconnected, distributed IT infrastructure integrates IoT platforms and assets at the digital edge with big data analytics, AI, networks, clouds and security controls. Access to industry ecosystems helps speed IoT products and services to market.</p>	 <p>The Digital Edge Playbook provides guidelines for businesses in any industry to build a differentiated, proven and distributed interconnection platform that integrates IoT capabilities for greater business value.</p>	 <p>Leverage the Interconnection Oriented Architecture® (IOA®) roadmap customized for interconnecting IoT platforms and assets with data, analytics, networks, clouds, security and industry ecosystems and customers.</p>	 <p>To achieve these benefits, your architecture and platform require three critical elements provided by Platform Equinix®: global coverage, interconnection to ecosystems and a place from which to enable integration and control.</p>

MARKET TRENDS

IoT requires new business models to capture unprecedented value...



McKinsey, Unlocking the Potential of the Internet of Things

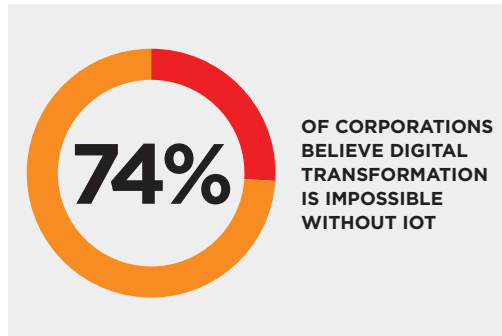
Implications

- Companies across industries must incorporate IoT-based digital insights into their operations to create new competitive advantages.
- IoT requires investment into new business models based on a combination of technologies and providers.

Summary

Companies across industries must incorporate IoT capabilities into their IT infrastructures to gain the intelligence required to compete in an increasingly digital world. The benefits of emerging IoT platforms enhance both internal and external operations and can be integrated with associated digital technologies (data, analytics, AI and cloud), resulting in valuable, actionable insight and greater business profit.

...while enterprises and consumers seek smart, integrated services...

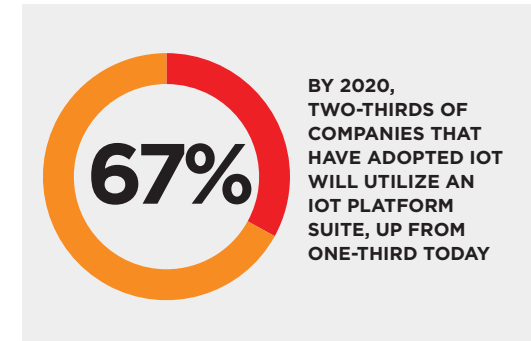


Gartner, What 2018 Holds for IoT: Top Trends and Future Possibilities

Implications

- New, technology-based IoT solutions with integrated data repositories, analytics, AI/ML, networks, clouds (IoT gateways) and security are contributing value in all industries.
- Traditional architectures can't meet internal and external demands for B2B and B2C IoT business capabilities.

...requiring a distributed platform interconnected across ecosystems.



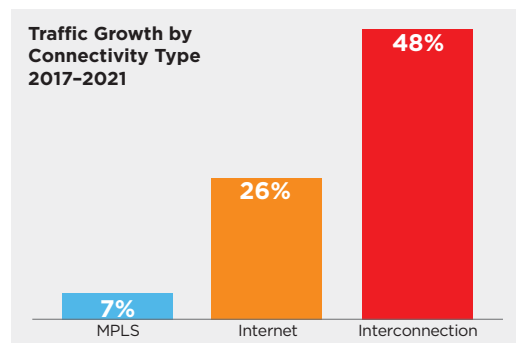
Gartner, 2018 Planning Guide for the Internet of Things

Implications

- Industry leaders who have adopted distributed IoT platforms and interconnection as key transformation strategies are increasing productivity.
- An integrated IoT interconnection strategy enables digital businesses to reap value from IoT product and service insights.

INTERCONNECTION INSIGHTS

Interconnection Bandwidth* is projected to outpace growth of internet and MPLS traffic...



Equinix, The Global Interconnection Index Volume 2

Opportunity

Interconnection** is needed for IoT integration. By distributing private traffic exchange and control points at the digital edge, companies leverage interconnection to deploy IoT capabilities.

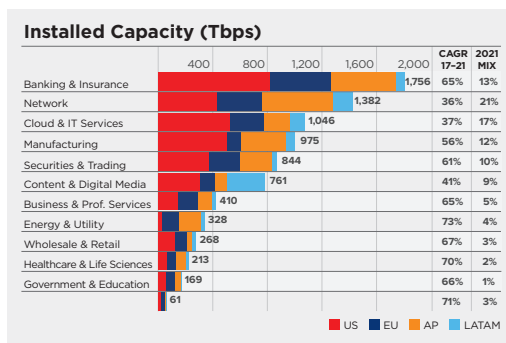
Summary

Global Interconnection Bandwidth capacity is projected to grow 10x larger than IP traffic by 2021. Companies across industries need Interconnection to integrate IoT platforms, especially at the edge, proximate to distributed IoT devices and digital and business ecosystems. Leveraging IoT systems, along with data, analytics, AI/ML, security, and network, cloud and industry ecosystems, provides critical intelligence and insights that can greatly increase digital business value.

*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 inside carrier-neutral colocation data centers.

**Interconnection is direct and private traffic exchange between key business partners.

...with all industries seeing double-digit growth in Interconnection Bandwidth by 2021...

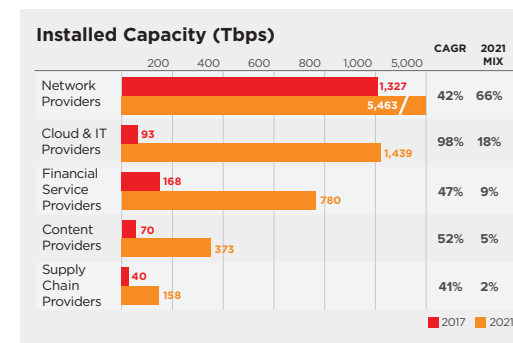


Equinix, The Global Interconnection Index Volume 2

Opportunity

Businesses across industries require Interconnection to benefit from IoT platforms and assets. Integration of IoT and digital technologies (real-time analytics, AI/ML, network, cloud, security) enable faster and more accurate insights from IoT data.

...and interconnection to cloud & IT providers and network providers growing 98% and 42%.



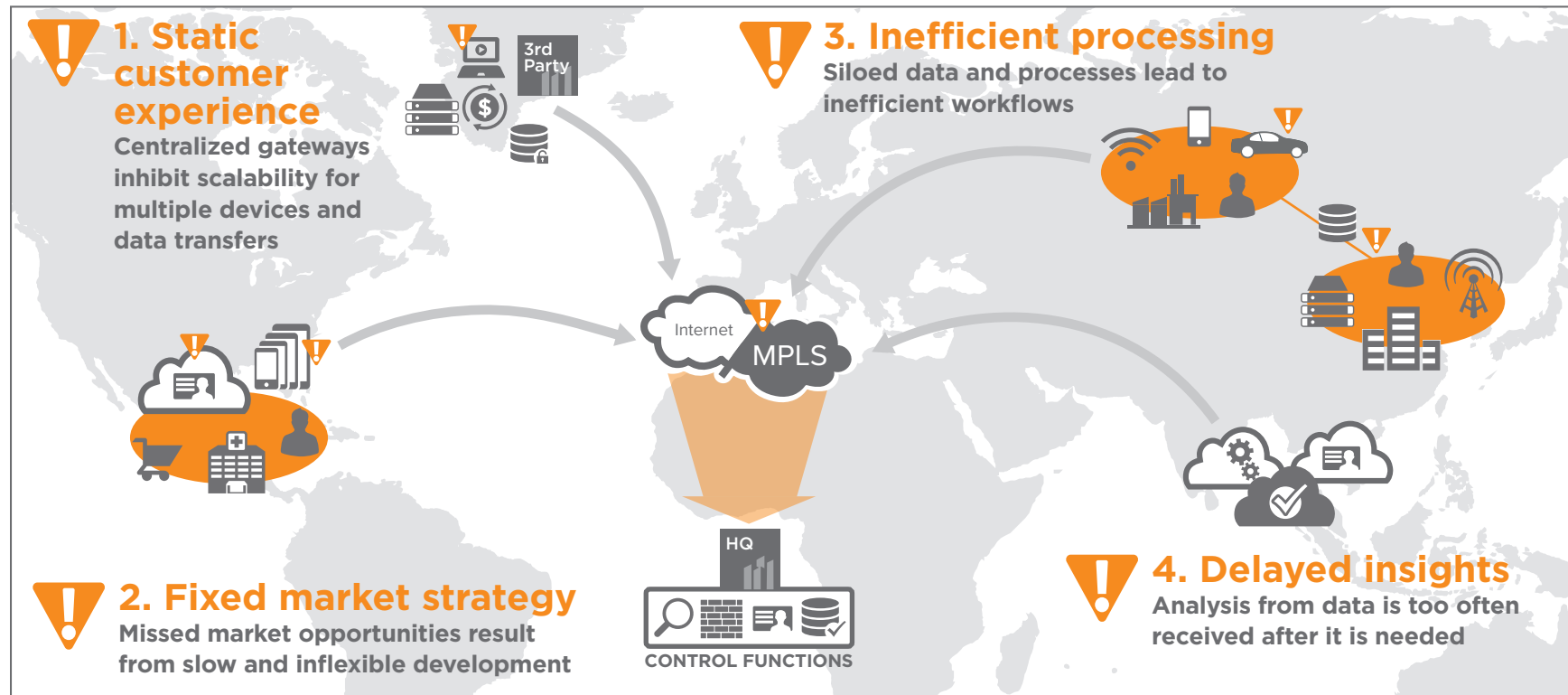
Equinix, The Global Interconnection Index Volume 2

Opportunity

Interconnection enables private access to cloud, IT, network providers and other industry ecosystems, allowing businesses to integrate IoT capabilities and deploy IoT strategies faster. Anytime, anywhere access to IoT solutions at the digital edge drives greater operational and customer value.

CURRENT-STATE CONSTRAINTS

Traditional IT infrastructures can't scale for IoT development, data capture or analytics

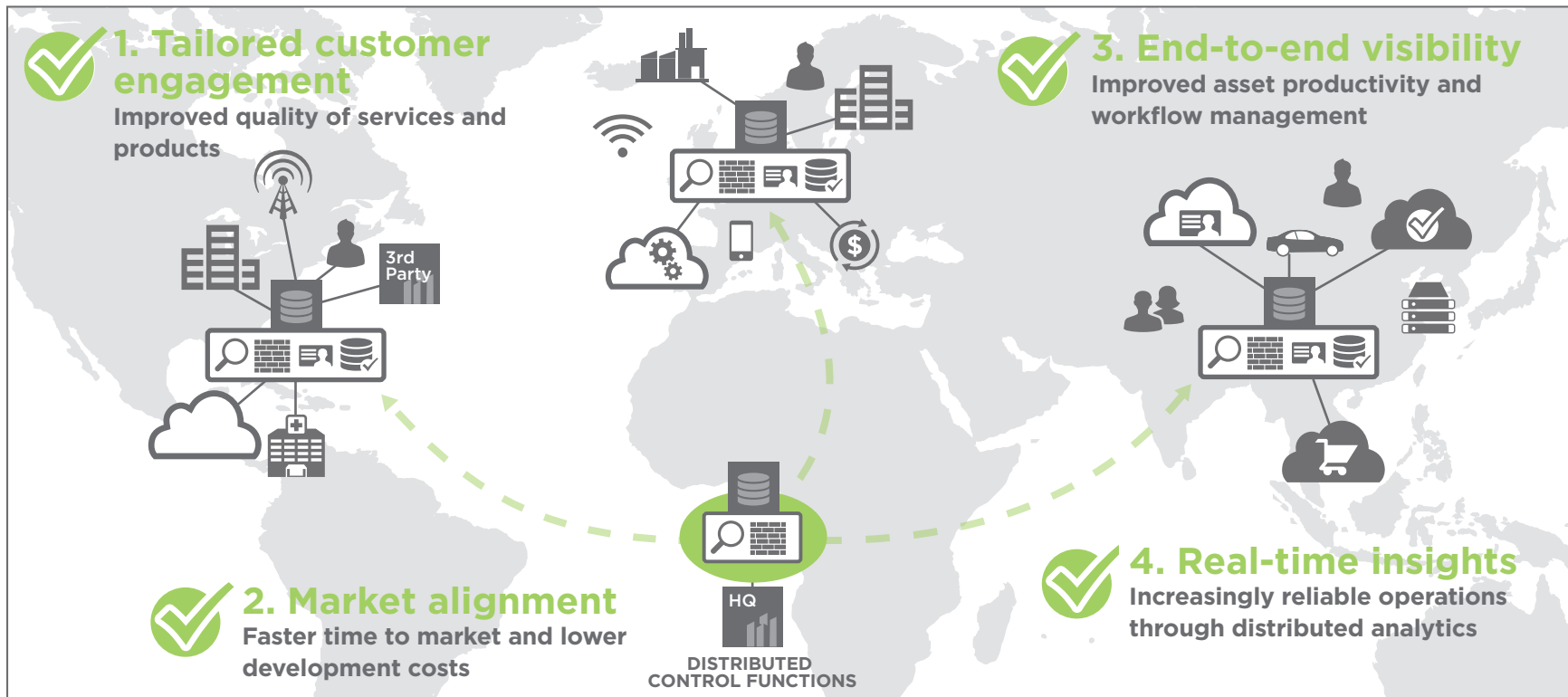


Summary

As the amount of IoT devices and associated data increases, IoT gateways centralized in traditional IT infrastructures can't scale to meet growing business needs. Also, slow and inflexible development of IoT platforms presents missed opportunities for many businesses. The inability to easily integrate IoT data and processes with other digital technologies, business systems and clouds (IoT gateways) leads to inefficient workflows and delays valuable IoT-related insights.

FUTURE-STATE CAPABILITIES

IoT at the edge improves performance, accelerates development, reduces costs and enables valuable, real-time insights



Summary

An interconnected, distributed IT infrastructure at the edge provides a scalable and secure platform for high-performance IoT experiences. Integrated IoT capabilities accelerate product and service development and time to market, while optimizing asset data delivery and workflow processes. The intelligence gathered from distributed IoT devices and analyzed in real time enables greater operational efficiency and customer satisfaction.

STRATEGY

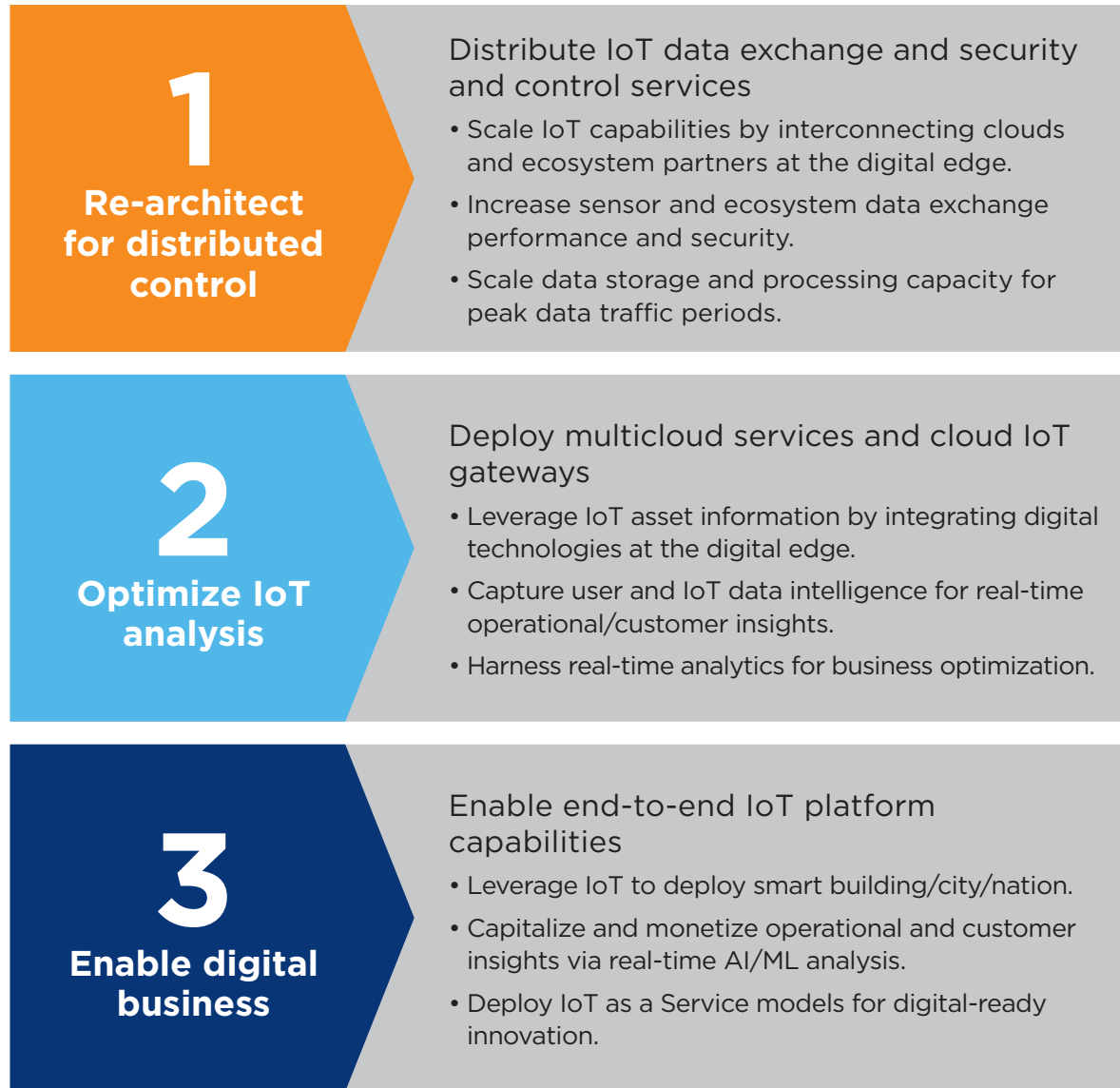
Architecting for the digital edge requires a distributed interconnection platform

Summary

IoT customers need to integrate IoT platforms and assets with existing systems and distribute them out at the digital edge, proximate to users, applications, clouds and IoT assets, for the lowest cost and greatest experience and business insights.

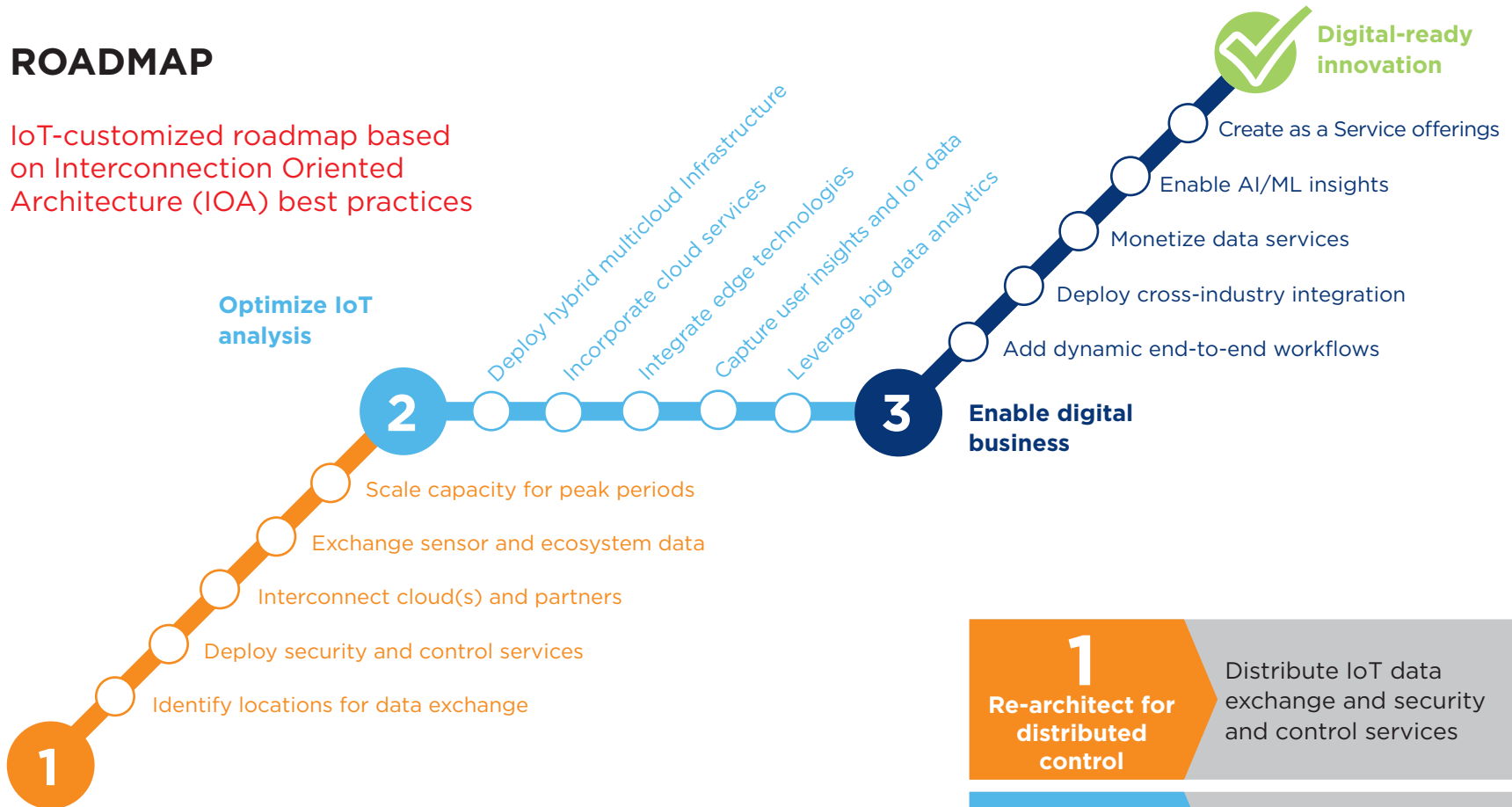
Network, cloud, IoT, SaaS and other service providers must help customers integrate IoT, digital technologies and network, cloud and industry ecosystems to leverage distributed IoT data capture, analysis and security in a fast-delivery, highly scalable, pay-as-you-go model.

Hosting and managed services providers must help customers re-architect IT infrastructures with interconnection to IoT platforms and networks, clouds and industry ecosystems for insights that improve business operational performance and customer satisfaction.



ROADMAP

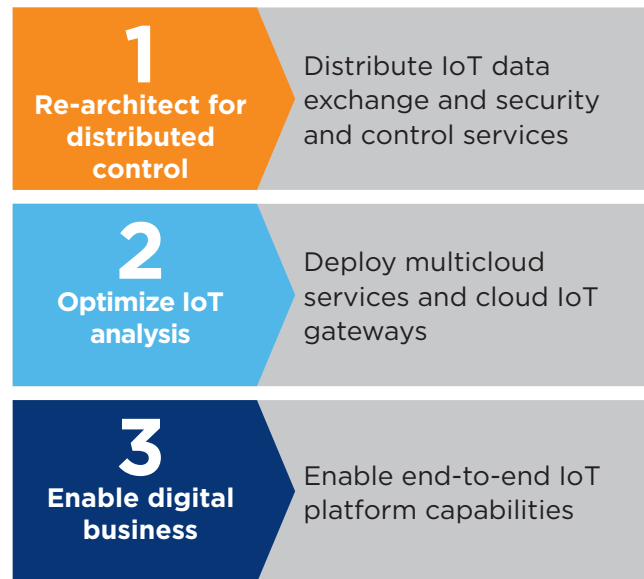
IoT-customized roadmap based on Interconnection Oriented Architecture (IOA) best practices



Re-architect for distributed control

Summary

Leverage the IOA roadmap customized for IoT platforms to implement the Digital Edge Playbook. Design for an enhanced user experience, accelerating workflows, data capture and analysis for faster, more customized IoT solution delivery. Gain greater insights from distributed IoT assets to optimize operations and reduce costs. Integrate IoT systems with digital technologies, security controls, networks, clouds and industry ecosystems at the edge for the greatest business and customer value.



PLATFORM

To achieve the benefits of the strategy and the roadmap steps in this playbook, your architecture and platform require three critical elements: global location coverage, private interconnection with rich digital ecosystems and the capability to integrate, standardize and simplify control.

Global Coverage



Digital edge control point locations where you need them, close to...

Customers

Employees

Partners

Things

Reach Everywhere

- Global, metro cities and markets.
- Geographical compliance and sovereignty.
- Business operations and offices.

Interconnection and Ecosystems



Direct and dynamic private exchange of data across...

Networks

Clouds

Payments

Supply Chain

Interconnect Everyone

- Access network and cloud providers.
- Participate in ecosystems exchange.
- Leverage commoditized services.
- Share and exchange data.
- Transact using digital commerce.

Integration and Control



Integrate digital and physical services to control and optimize...

Security

Data

Applications

Business

Integrate Everything

- Marketplace of control functions.
- Cloud and managed services.
- Private data and distribution repositories.
- Globally standard policies.
- Business continuity and control.
- Digital commerce and payments.

GETTING STARTED

Playbook
Companion
Resources

Request a detailed briefing or strategy workshop with our experts.

Contact your Equinix account executive and learn more at equinix.com

Equinix Americas

Main: +1.650.598.6000
Email: info@equinix.com

Equinix EMEA

Main: +31.20.754.0305
Email: info@eu.equinix.com

Equinix Asia-Pacific

Main: +852.2970.7788
Email: info@ap.equinix.com

The Platform Equinix Vision



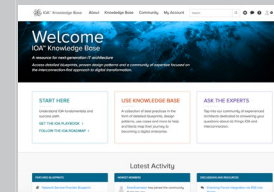
See how an interconnected global platform enables all industries to deliver new IoT capabilities in an increasingly competitive market.
eqix.it/PlatformEquinixVision

Global Interconnection Index



Learn how global growth in Interconnection Bandwidth is shaping new opportunities for businesses deploying IoT solutions and ecosystems that support them.
eqix.it/InterconnectionIndex

IOA Knowledge Base



Download proven architecture blueprints and design patterns based on industry-leading implementations of IOA.
eqix.it/IOAKB

Equinix Marketplace



Discover an entire world of service providers or search for new partners, suppliers or customers on Equinix Marketplace.
eqix.it/marketplacebrochure



Equinix, Inc. (Nasdaq: EQIX) connects the world's leading businesses to their customers, employees and partners inside the most-interconnected data centers. In 52 markets across five continents, Equinix is where companies come together to realize new opportunities and accelerate their business, IT and cloud strategies. In a digital economy where enterprise business models are increasingly interdependent, interconnection is essential to success. Equinix operates the only global interconnection platform, sparking new opportunities that are only possible when companies come together.

Learn more at equinix.com

Equinix Americas

Main: +1.650.598.6000

Email: info@equinix.com

Equinix EMEA

Main: +31.20.754.0305

Email: info@eu.equinix.com

Equinix Asia-Pacific

Main: +852.2970.7788

Email: info@ap.equinix.com

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