



EQUINIX

ENERGY, OIL AND GAS

DIGITAL EDGE PLAYBOOK

Transforming digital presence for operational insight and
dynamic customer engagement

ABOUT THIS PLAYBOOK

PURPOSE

This playbook outlines how the energy industry, comprised of energy, oil and gas firms, can more efficiently deliver products from traditional and new energy sources to their customers, while reducing risk and cost. It teaches them how to leverage distributed interconnection and colocation to globally integrate the Internet of Things (IoT), robotic process automation (RPA) and artificial intelligence (AI), along with cloud/SaaS services and analytics. Finally, it explains how digital collaboration with supply chain partners and customers accelerates product delivery and enhances growth.

CHALLENGE

Increasing performance and user experience demands are forcing energy firms to optimize their networks. They must exploit new digital production techniques and energy alternatives, along with integrated analytics, to achieve greater efficiencies and minimize risks. They must also integrate distributed data exchange with partners to achieve end-to-end visibility. By re-architecting network and business application topologies for physical proximity to users, including ensuring IoT sensors are adjacent to supply chain and ecosystem partners (IoT, cloud, network, etc.), they can achieve the lowest possible latency and highest performance.

NEED



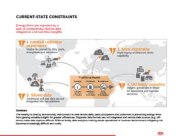




Faster data capture and analytics give stakeholders timely and actionable insights into business and customer requirements and warn of potential risks. Production efficiency gains, based on real-time supply chain, inventory and maintenance data, optimize the end-to-end monitoring and control of assets. Re-architecting IT infrastructure on a globally distributed interconnection platform enables energy firms to integrate digital technology and engage in dynamic partner and customer ecosystems for increased collaboration, optimization and productivity at reduced risk and cost.

TABLE OF CONTENTS

2	About
3	Executive Summary
4	Market Trends
5	Interconnection Insights
6	Current-State Constraints
7	Future-State Capabilities
8	Strategy
9	Roadmap
10	Platform
11	Getting Started

EXECUTIVE SUMMARY

Energy firms need a distributed business infrastructure for real-time data capture and analytics to increase efficiency and productivity

TRENDS AND INSIGHTS		CONSTRAINTS AND CAPABILITIES		PLAYBOOK		
TRENDS	INSIGHTS	CONSTRAINTS	CAPABILITIES	STRATEGY	ROADMAP	PLATFORM
						
Digital is transforming risk management strategies, driving energy leaders to adopt a distributed business architecture to meet the demand for operational insight and a differentiated user experience.	Global Interconnection Bandwidth is growing at a compound rate, creating an opportunity for energy firms to optimize the supply chain for dynamic collaboration and real-time insights.	Traditional energy production and distribution processes are based on centralized infrastructure, inhibiting actionable insights, limiting user collaboration and slowing innovation.	A distributed platform streamlines digital engagement processes, enabling the real-time insights required for operational visibility and rapid response to business demands.	Energy firms are distributing points for business exchange in proximity to users to tailor operational workflows, standardize governance, and harvest production, distribution and customer data for timely insights.	The roadmap offers a step-by-step approach to transforming digital business by interconnecting partners and ecosystems using best practices from an Interconnection Oriented Architecture® (IOA®).	Achieving these digital transformation goals requires a platform that can support three critical elements provided by Platform Equinix®.

MARKET TRENDS

Digital trends are disrupting all aspects of operational and risk management strategy...

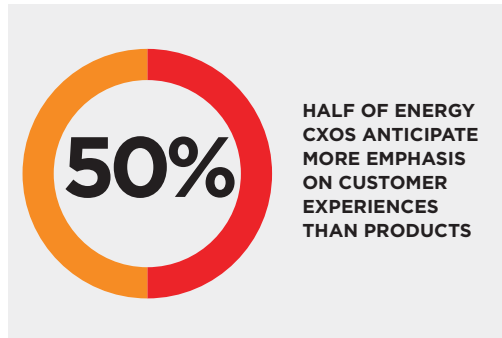


Source: PWC, Drilling for data: Digitizing upstream oil and gas

Implications

- To compete and reduce risk, energy firms must aggregate new and existing data sources for rich insights.
- Energy firms must also optimize workflows across exploration, production and distribution, while enhancing customer experience.

...while demand rises for new market channels and customer engagement models...

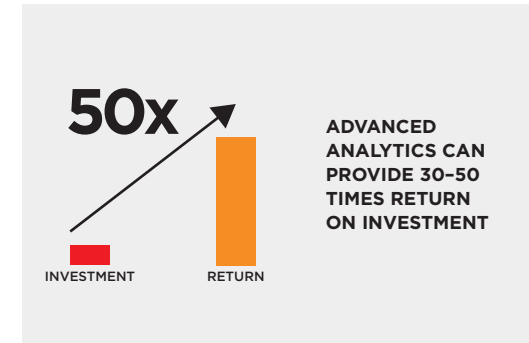


Source: IBM, Incumbents Strike Back

Implications

- Industry leaders are abandoning siloed business processes for greater collaboration with energy partners and marketplaces.
- Centralized business architectures must be re-architected and distributed for scale and agility.

...requiring a business architecture that supports integrated ecosystems and distributed analytics.



Source: McKinsey, Why oil and gas companies must act on analytics

Implications

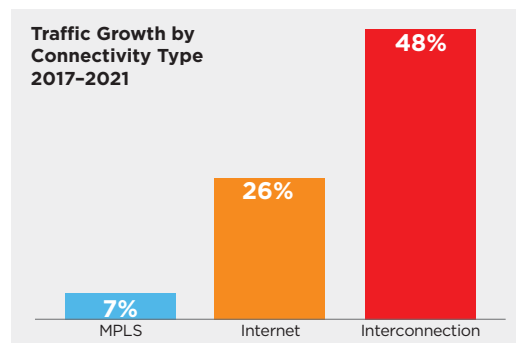
- Integrating advanced analytics via interconnection allows for superior ecosystem insights.
- Advanced analytics require a distributed presence with proximity to edge data sources across the value chain.

Summary

Energy firms must leverage new digital and connected services to tap into both distributed energy and data sources. Workflows handling volumes of data from remote regions must be optimized, but centralized infrastructures cannot deliver the partner connectivity or user experience required. As a result, product delivery is impeded and growth is restricted. Integrating ecosystems and real-time data capture and analytics via interconnection at the digital edge increases efficiency and reduces risk.

INTERCONNECTION INSIGHTS

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



Equinix, Global Interconnection Index Volume 2

Opportunity

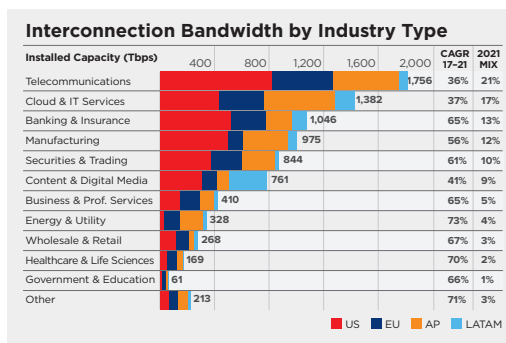
Interconnection, the direct and private traffic exchange between key business partners, allows businesses to scale. Energy firms are leveraging this by establishing distributed, private traffic exchange and control points at the edge, near data sources, supply chain partners, ecosystems and customers.

Summary

Global Interconnection Bandwidth is projected to grow at 2x the rate of internet traffic, as enterprises shift to Interconnection as the standard for direct, secure business exchange. Energy firms are building distributed, private traffic exchange and control points close to data sources, partners, ecosystems and customers. This strategy optimizes operations and lowers costs and risks. Growing Interconnection among energy firms, ecosystems and partners enables ecosystem participants to leverage usage-based digital services and supply chain resources, accelerating product time to market.

*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.

...with the energy and utility sector projected to grow at 73% CAGR...

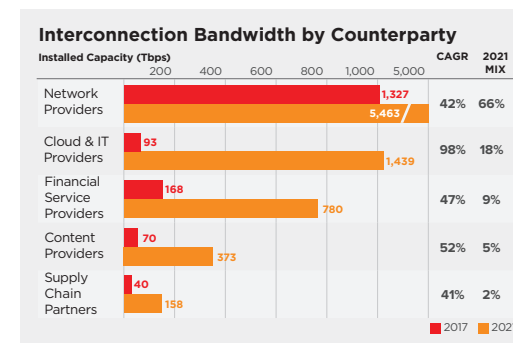


Equinix, Global Interconnection Index Volume 2

Opportunity

Interconnection in globally distributed colocation facilities enables energy firms to leverage real-time data capture and analytics for greater business value and customer insights, optimizing productivity, lowering costs and reducing risks.

...and Interconnection to cloud and supply chain ecosystems growing over 41% year-over-year.



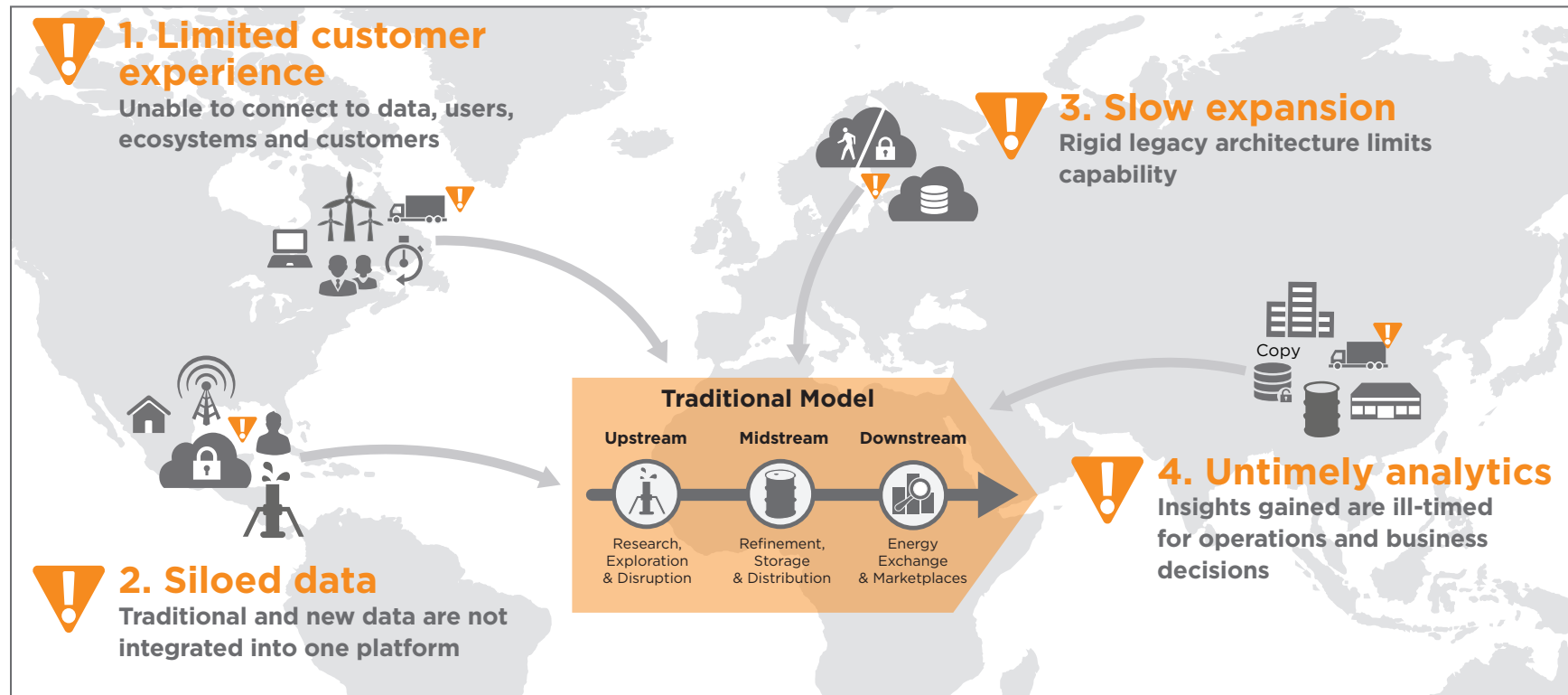
Equinix, Global Interconnection Index Volume 2

Opportunity

Interconnection to cloud and IT providers and supply chain partners enables greater real-time information capture and analytics and access to valuable ecosystem resources, resulting in the rapid delivery of data-driven products to market.

CURRENT-STATE CONSTRAINTS

Energy firms are impeded by a lack of connectivity, remote data integration and real-time insights

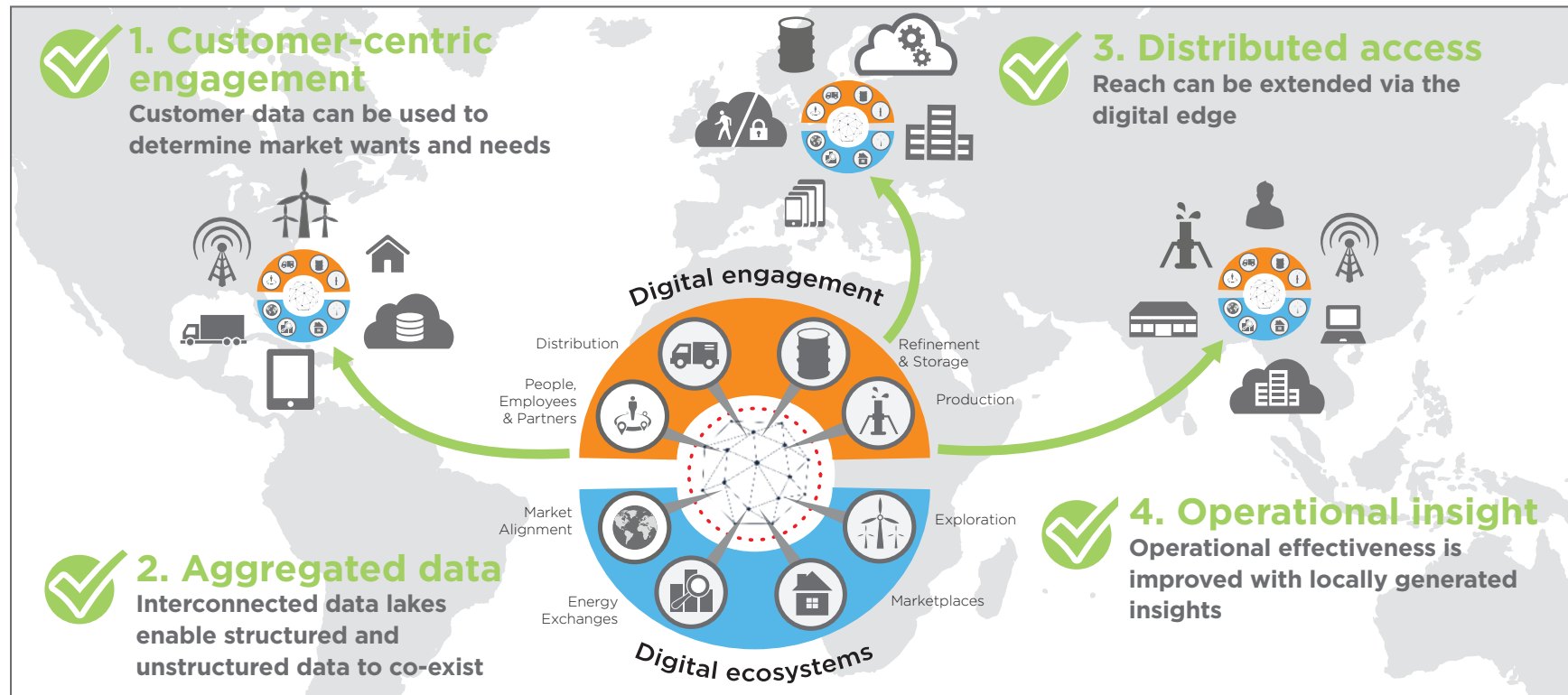


Summary

The inability to directly and securely interconnect to vital remote data, users, ecosystems and customers is preventing energy firms from gaining valuable insights for greater efficiencies. Disparate data formats are not integrated and remote data sources (e.g., off-shore) make data capture difficult. Without timely data analytics, making astute operational or business decisions and mitigating risk becomes increasingly difficult and costly.

FUTURE-STATE CAPABILITIES

A distributed business architecture enables real-time customer and operational insights for greater efficiency



Summary

A distributed business architecture enables energy firms to capture and aggregate real-time customer and operational data from disparate and remote data sources, and leverage local data analytics for timely insights and optimal product development and delivery. Real-time global collaboration with customers, employees, supply chain partners and ecosystems streamlines operations and delivers products to market faster.

STRATEGY

Architecting for digital business requires an interconnection-first approach

Summary

Energy firms need to deliver products quickly, efficiently and cost-effectively. By accessing data and collaborating with users and partners on a distributed interconnection business platform, they gain the business and operational insights they need for greater productivity, optimization and risk mitigation.

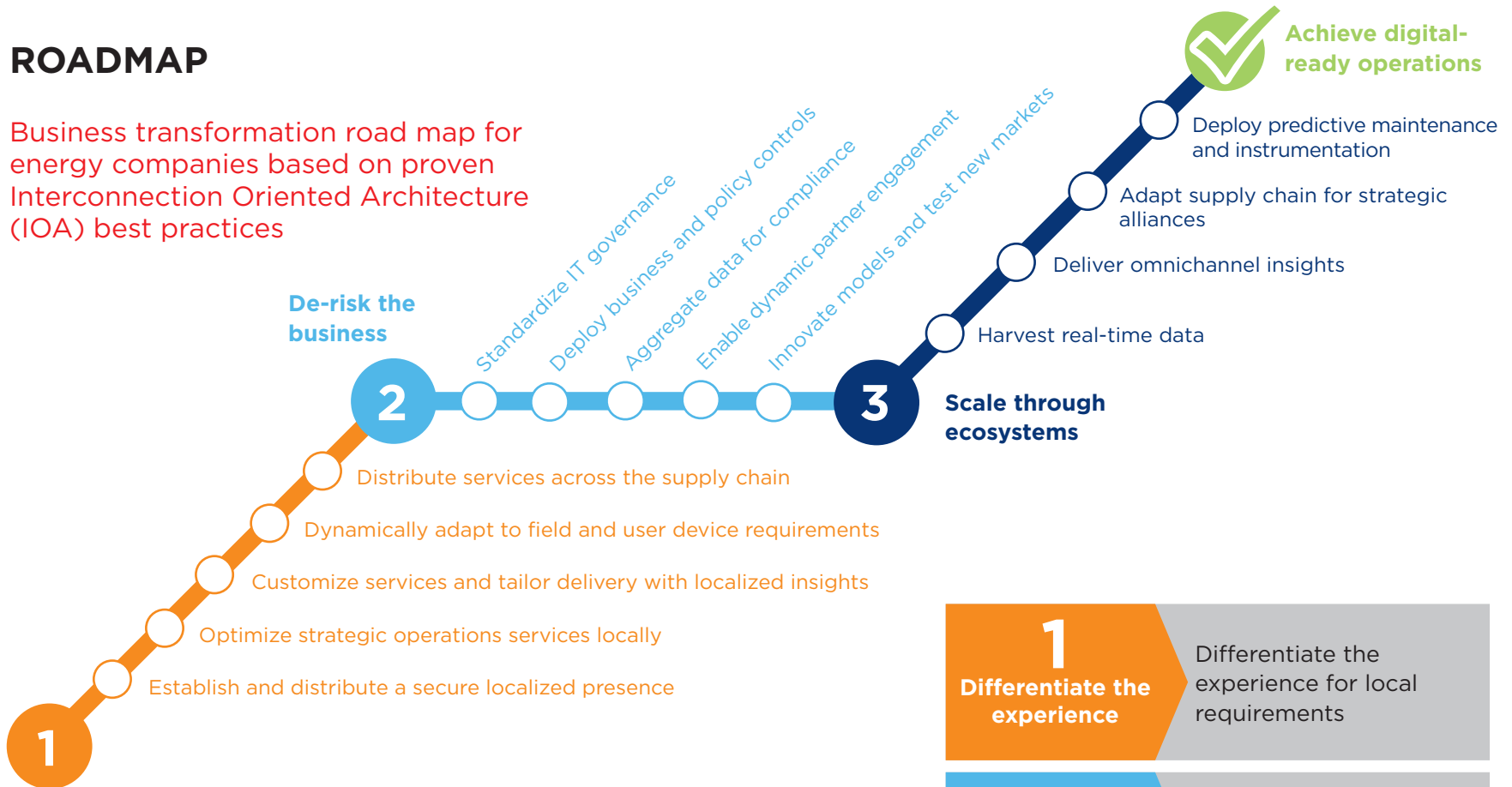
Network, cloud, SaaS, content and other service providers enable and integrate data, cloud platforms, ecosystems and customers by deploying services for energy firms at the digital edge in a highly scalable, pay-as-you-go model.

Hosting and managed services providers help energy firms re-architect interconnection options and integrate IoT, AI and RPA capabilities, while partner and ecosystem collaboration tools enable quick delivery of products with reduced cost and risk.



ROADMAP

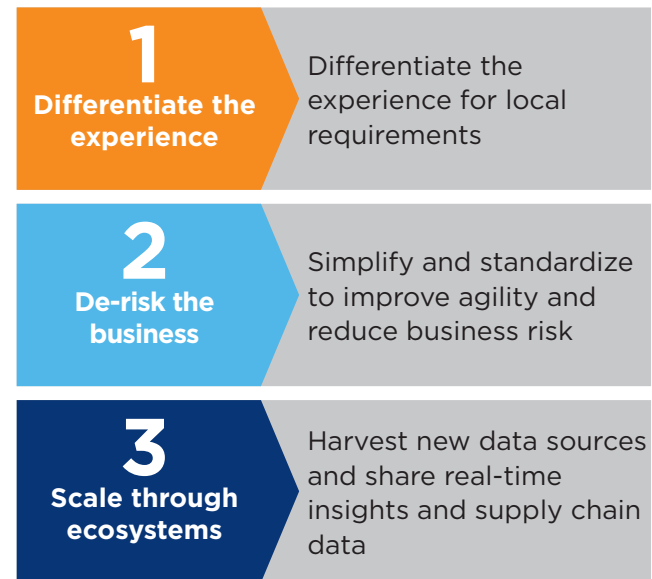
Business transformation road map for energy companies based on proven Interconnection Oriented Architecture (IOA) best practices



Differentiate the experience

Summary

The business transformation road map offers energy companies steps toward achieving digital-ready, optimized operations and improving customer experiences. Follow the three-step plan to differentiate the experience for customers and employees, minimize business risk and enable scaling through ecosystems. The result is an integrated interconnection platform from which to leverage global insights for new business models with omnichannel capabilities for greater revenue.



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



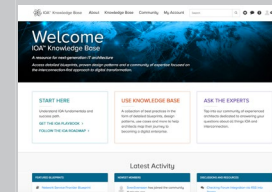
Develop greater operational efficiencies and harvest insights by leveraging an interconnected platform and service provider ecosystem.
eqix.it/PlatformEquinixVision

Global Interconnection Index



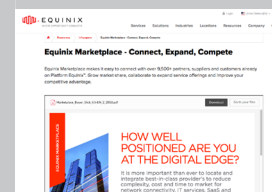
Learn how global growth in Interconnection Bandwidth is shaping new opportunities for the energy and utility sectors.
eqix.it/InterconnectionIndex

IOA Knowledge Base



Download proven network 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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