



EQUINIX

MANUFACTURING

DIGITAL EDGE PLAYBOOK

Streamlining manufacturing supply chains
for customization and innovation



ABOUT THIS PLAYBOOK

PURPOSE

This playbook outlines how manufacturing industry leaders can optimize supply chains, lower costs and deliver greater customization and servitization using distributed interconnection. By securely exchanging traffic at the digital edge, manufacturers can gain valuable product, customer and compliance insights, improve operational automation, and collaborate with ecosystem participants in the industrial internet of things (IIoT).

CHALLENGE

Complex supply chains increase costs and slow product time to market. A lack of visibility into manufacturing component management and product distribution increases operational errors and makes it hard to locate products in a timely fashion. Traditional IT infrastructures pose barriers to real-time collaboration and data sharing, limiting data capture and analysis for customer, product and regulatory insight. As a result, product and service innovation, preventative maintenance, and risk management approaches are constrained.

NEED








To remain competitive, manufacturers must leverage data and automation to optimize processes across the product life cycle. New data sources must be captured and local analytics applied for actionable insights. Re-architecting IT infrastructure on a globally distributed interconnection platform enables private data exchange among key digital manufacturing ecosystems (including network, cloud and IoT). The result is real-time collaboration with customers and supply chain partners for effective customization and servitization.

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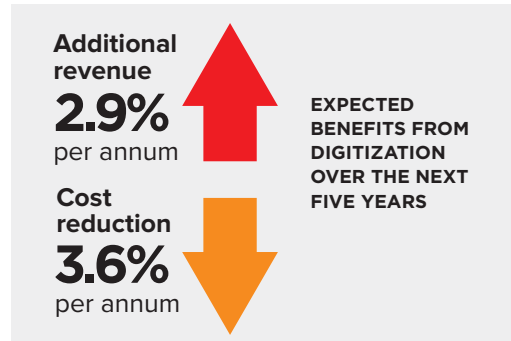
EXECUTIVE SUMMARY

Manufacturers need new digital strategies and IT architectures to streamline their supply chains, increase collaboration and share data

TRENDS AND INSIGHTS		CONSTRAINTS AND CAPABILITIES		PLAYBOOK		
TRENDS	INSIGHTS	CONSTRAINTS	CAPABILITIES	STRATEGY	ROADMAP	PLATFORM
						
Inefficient operations and the desire to anticipate customer needs are forcing manufacturing leaders to adopt a distributed architecture that will enable them to adopt a servitized manufacturing model.	Interconnection Bandwidth is growing at a compound rate, creating an opportunity for manufacturing companies to integrate ecosystem, cloud, device and analytic capabilities to deliver high-value solutions that anticipate customer needs.	Traditional manufacturing processes are based on centralized infrastructure, resulting in costly inefficiencies, limited innovation and collaboration, and poor insight into customer needs.	Streamlining processes through digital technologies such as real-time data analytics drives greater customization, preventive maintenance, and reduced cost and risk.	The Digital Edge Playbook shows how distributing business exchange points proximate to ecosystem participants and devices allows them to tailor experiences, reduce business risk, and scale via ecosystems.	The roadmap offers a step-by-step approach to transforming digital business by interconnecting partners, ecosystems, customers and devices 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

Manufacturing digitization is boosting revenues and reducing costs...



PWC, Industry 4.0: Building the Digital Enterprise

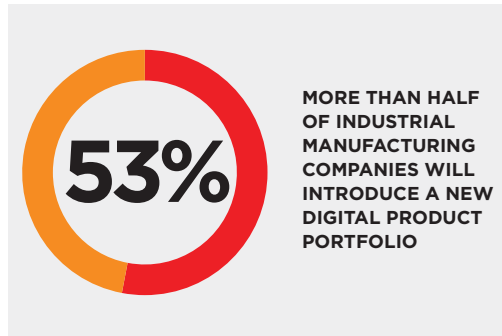
Implications

- Industry leaders ahead of the curve on cost savings initiatives are reinvesting those savings into additional innovations.
- Digital technologies such as IoT, 3D printing and AI/ML are being used to streamline operations and reduce costs.

Summary

Leading manufacturers are embracing digital transformation to reduce costs, servitize offerings and grow revenue. Data allows these companies to anticipate customer needs and meet them with differentiated offerings that go beyond product delivery. A dynamic IT infrastructure that leverages global interconnection allows them to integrate the requisite digital capabilities, streamline supply chains, and leverage ecosystems, devices and customers for mutual benefit.

...while the need to anticipate demand and meet it with servitized offerings is rising...



PWC, Industry 4.0: Building the Digital Enterprise

Implications

- Traditional IT architectures do not provide the analysis required for predictive insights into customer needs.
- Competitors that can analyze data and gain insights to anticipate customer demands will win market share.

...requiring a new, distributed architecture that integrates supply chains and ecosystems.



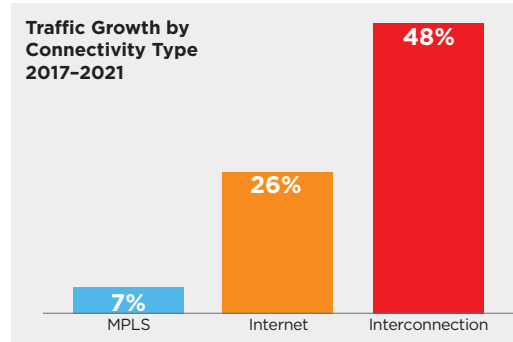
PWC, Manufacturing Trends

Implications

- Traditional competitors are now partnering via interconnection to provide higher-value solutions.
- A new way of architecting IT infrastructure is emerging that provides the interconnection to distributed analytics for critical insights to predict future customer requirements and enable servitization.

INTERCONNECTION INSIGHTS

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



Equinix, The Global Interconnection Index Volume 2

Opportunity

Interconnection** is required to scale digital business. Manufacturing companies are leveraging this trend by establishing distributed, private traffic exchange and control points near supply chains, ecosystems and customers.

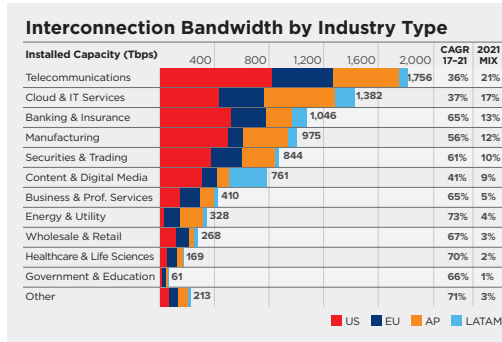
Summary

Global Interconnection Bandwidth is expected to grow at 2x the rate of internet traffic as enterprises adopt interconnection as the standard for direct, secure business exchange. Compounding growth in Interconnection Bandwidth for the manufacturing industry creates an opportunity for manufacturing leaders to distribute business exchange points on an interconnection platform proximate to customers, devices, partners and ecosystems.

*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.

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

...with manufacturing Interconnection Bandwidth growing 56% year-over-year...

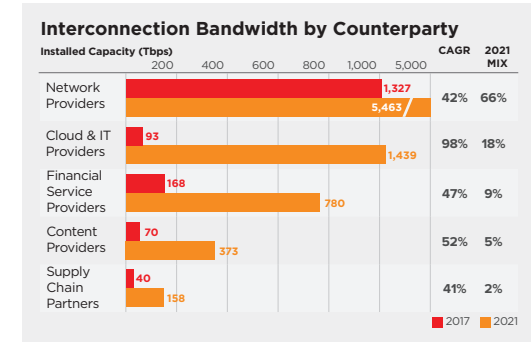


Equinix, The Global Interconnection Index Volume 2

Opportunity

Interconnection in globally distributed colocation facilities enables manufacturing companies to quickly serve a variety of customer needs with high-value solutions, while accelerating the integration of crucial digital technologies into IT infrastructures.

...as enterprises connect to cloud and IT providers at a 98% CAGR.



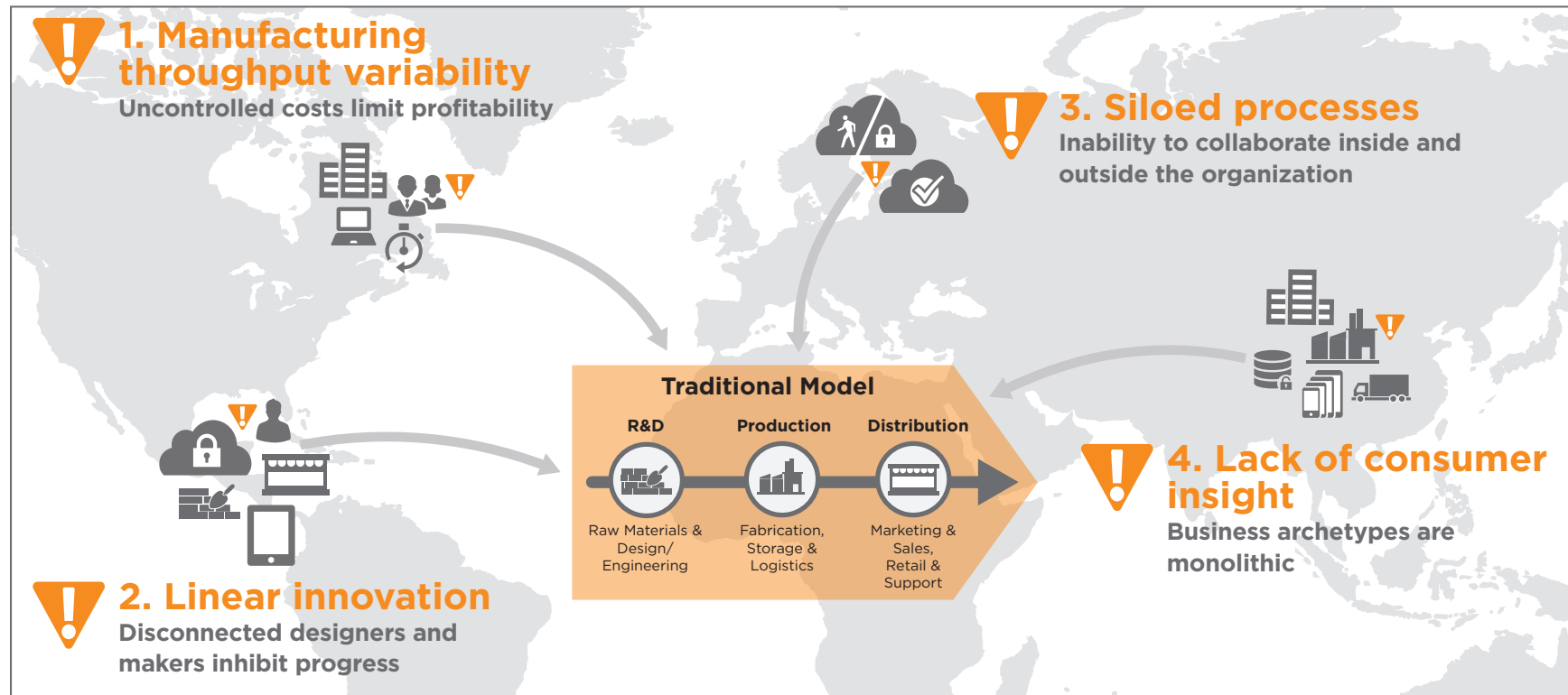
Equinix, The Global Interconnection Index Volume 2

Opportunity

Enterprise interconnection to cloud and IT providers is expected to grow at a 98% CAGR between 2017-2021. Manufacturing companies can leverage these service provider interconnections to deliver high-performance, value-added solutions and services to customers.

CURRENT-STATE CONSTRAINTS

Manufacturers struggle to control costs, increase innovation, collaborate with partners and gather relevant data insights

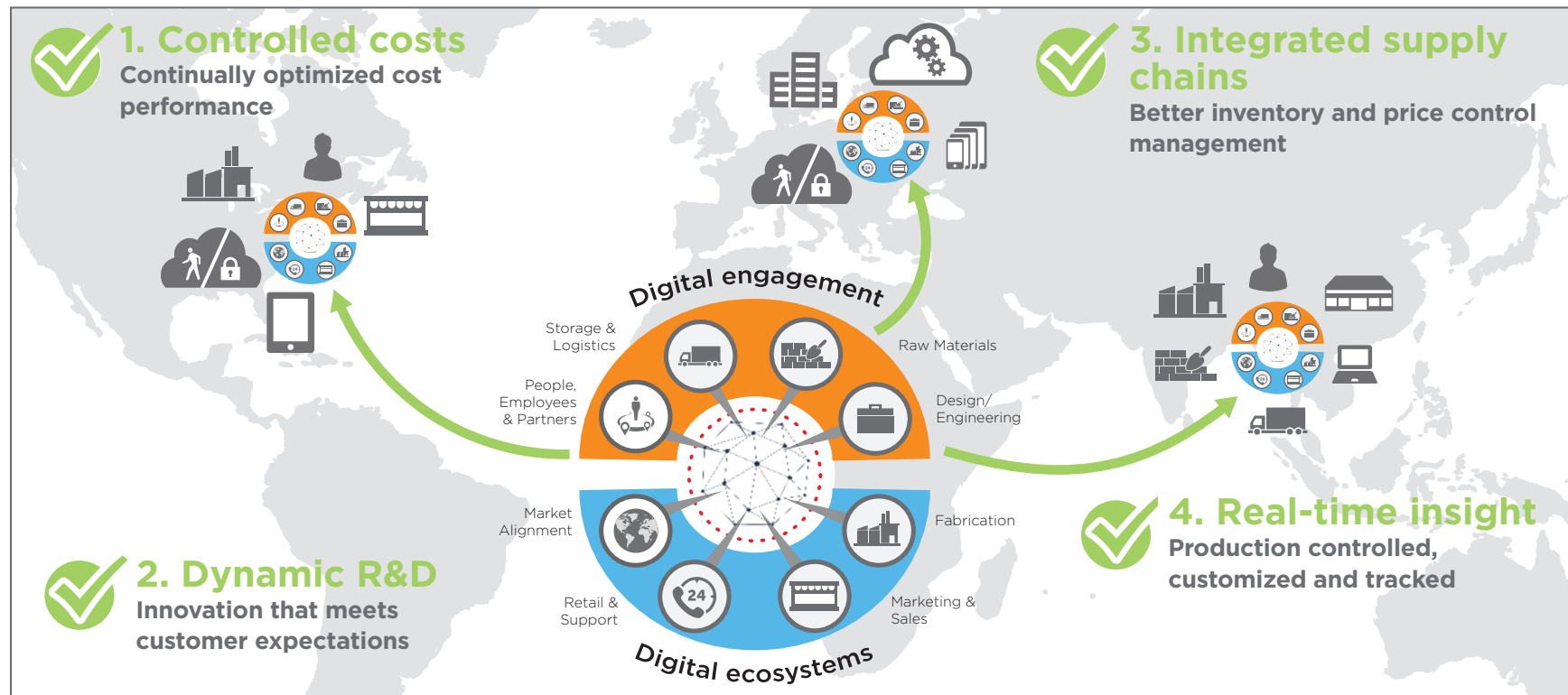


Summary

Complex supply chains result in higher costs and slower product time to market. Siloed processes and lack of integration among designers, developers and producers limit product innovation and quality. Legacy data systems that transport data from dispersed products, consumers, partners and regulators to a central repository are unsuited for real-time data collection, sharing, analysis and insights for greater customer customization and product quality.

FUTURE-STATE CAPABILITIES

Optimized IT infrastructures enable innovation, reduce costs and integrate supply chains using real-time insight



Summary

Supply chain efficiencies and automation accelerate time to market, reduce costs and free up resources for innovation. Re-architecting IT infrastructure with distributed business exchange points for real-time data collection and analysis enables product customization and servitization. Integrated consumer and supply chain insights yield new offerings, while real-time analytics improve preventative maintenance and reduce risk.

STRATEGY

Architecting for the digital edge requires a distributed interconnection platform

Summary

Manufacturers can optimize the end-to-end product life cycle to meet customization and servitization goals. They can deliver a differentiated experience, reduce business risk on a single global platform and scale via diverse interconnected ecosystems.

Network, cloud, SaaS, content and other service providers enable new platform capabilities and information exchanges by deploying solutions for manufacturing companies that support highly scalable, self-service business models.

Managed services providers help manufacturing companies transform their businesses by integrating third-party solutions that enable rapid delivery of tailored solutions to meet customer needs.



ROADMAP

Business transformation roadmap
for manufacturing companies based
on proven Interconnection Oriented
Architecture (IOA) best practices



Differentiate the experience

Summary

The business transformation roadmap offers manufacturing companies a strategy for achieving a digital-ready business model that streamlines operations and captures new revenue. Follow the three-step plan to differentiate the experience for customers, partners and employees, reduce business risk, and identify breakthrough business opportunities through rich ecosystems.



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

The Platform Equinix Vision



Develop data-driven revenue streams and new automation leveraging an interconnected platform and service provider ecosystem.

eqix.it/PlatformEquinixVision

Request a detailed briefing or strategy workshop with our experts.

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

Global Interconnection Index



Learn how global growth in Interconnection Bandwidth is shaping new opportunities for the manufacturing industry.

eqix.it/InterconnectionIndex

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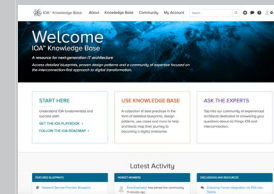
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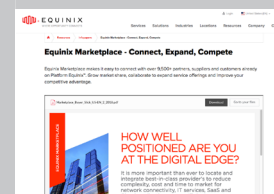
IOA Knowledge Base



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

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