



EQUINIX

U.S. FEDERAL GOVERNMENT

DIGITAL EDGE PLAYBOOK

Enabling digital transformation to
meet mission needs

ABOUT THIS PLAYBOOK

PURPOSE

The U.S. Federal Government Digital Edge Playbook outlines how government agency leaders are solving mission scale and interoperability challenges using interconnection and colocation control points. By following the playbook steps, government agencies can place new command and control capabilities at the digital edge, where population centers (citizens, employees and partners) and digital ecosystems (clouds, mobile, social networks, B2B partners) meet.

CHALLENGE

Today's government information security and exchange between agencies requires new capabilities and scale. Digital transformation is the path to those capabilities, and optimization is needed to support new and existing agency missions.

It's a fast-paced digital arms race with ever-growing numbers of networks and participants, which increases complexity by expanding the cyber terrain. The result is a fragmentation of controls and a breakdown of top-down governance. Conventional thinking and traditional infrastructures simply can't cost-effectively meet the required performance, scalability and latency.

NEED

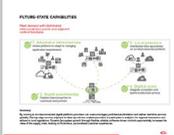
People expect government to be responsive. Government relies on the right technology and architecture to meet those expectations. Agency professionals need to be policy enablers, empowering innovation and change at speed, yet ensuring the right guardrails are in place to balance risk, protect information and deserve trust. This requires a re-architecture to a colocated platform approach based on interconnection, defined as private data exchange between organizations.

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EXECUTIVE SUMMARY

Agencies must re-architect aging infrastructures for information exchange, user performance and security demands at the digital edge

| TRENDS AND INSIGHTS | | CONSTRAINTS AND CAPABILITIES | | PLAYBOOK | | |
|--|---|---|--|---|---|--|
| TRENDS | INSIGHTS | CONSTRAINTS | CAPABILITIES | STRATEGY | ROADMAP | PLATFORM |
|  <p>Shifting workloads to clouds and emphasis on digital is reshaping the needs of agency IT architectures.</p> |  <p>Cloud growth and mobile traffic is projected to rapidly grow, burdening current architectures.</p> |  <p>Traditional agency architectures, some of which are 40+ years old, are incapable of handling new distributed data and security requirements.</p> |  <p>To adapt, agencies are leveraging inherent cloud capabilities, API-based platforms and distributed security at the digital edge.</p> |  <p>The Digital Edge Playbook provides agencies a differentiated strategy to accelerate their digital initiatives and better achieve their missions.</p> |  <p>Leverage the Interconnection Oriented Architecture® (IOA®) roadmap customized for U.S. Federal Government requirements to implement the Digital Edge Playbook.</p> |  <p>To achieve these benefits, your architecture and platform require three critical elements, provided by Platform Equinix®.</p> |

MARKET TRENDS

Risk of not fulfilling changing agency mission is reshaping priorities...



Forbes, Digital Transformation Trends in Government

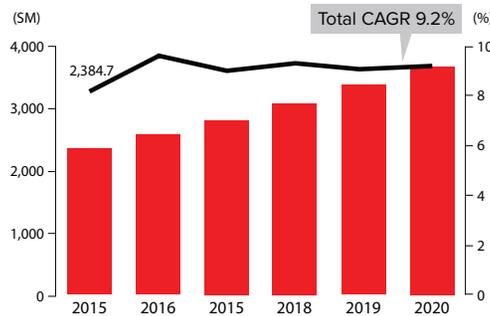
Implications

- Workloads shifting to clouds are creating new security and data distribution challenges
- A better digital experience is required to meet employee and constituent service expectations

Summary

Agencies must update aging architectures to handle the performance and security demands accompanying information sharing needs. They need interconnection—private data exchange between organizations—to connect to clouds, partners and providers and keep pace as innovation transforms government’s role in delivering services to employees and constituents.

...while data distribution and security approaches are shifting...



IDC, U.S. Federal Government IT Spending

Implications

- Spend on security and data storage is projected to increase
- Agencies will need to rewire networks and upgrade infrastructure to accommodate user experience while maintaining security requirements

...requiring an interconnection-first architecture for a digitally transformed government.

It's government reimaged through digital



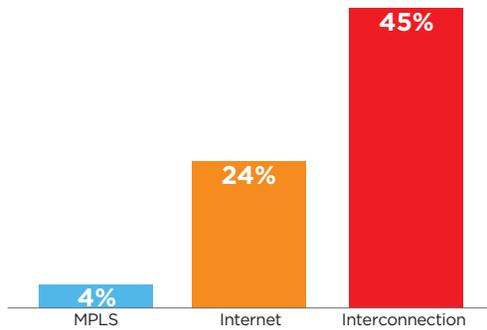
Deloitte, The Journey to Government's Digital Transformation

Implications

- An interconnection-first digital strategy enables U.S. government agencies to cost-effectively and quickly meet their missions
- Heterogeneous, end-to-end data sharing models interconnect people, locations, clouds, data and things locally and globally

INTERCONNECTION INSIGHTS

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



Equinix, The Global Interconnection Index

Opportunity

U.S. federal agencies and their supporting ecosystem partners can capitalize on increasing demand for interconnection to integrate digital services.**

Summary

Interconnection Bandwidth is forecasted to outpace the internet at twice the speed of growth and 6x the volume of traffic. As agencies scale to complete their missions at the digital edge, interconnection enables direct distribution capabilities with greater speed at reduced cost.

• 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. Results shown are projected for 2020.
 ** Interconnection is the private exchange of data with a diverse set of counterparties.

...with government experiencing 62% compounding growth year-over-year...

| Industry | Installed Capacity (Tbps) 1000 | CAGR |
|----------------------------|--------------------------------|------|
| Banking & Insurance | ~1000 | 61% |
| Telecommunications | ~1000 | 27% |
| Cloud & IT Services | ~1000 | 39% |
| Manufacturing | ~1000 | 54% |
| Securities & Trading | ~1000 | 41% |
| Content & Digital Media | ~1000 | 36% |
| Business & Prof. Services | ~1000 | 64% |
| Energy & Utility | ~1000 | 73% |
| Wholesale & Retail | ~1000 | 62% |
| Healthcare & Life Sciences | ~1000 | 68% |
| Government & Education | ~1000 | 62% |
| Other | ~1000 | 68% |

Equinix, The Global Interconnection Index

Opportunity

Strategically plan global coverage and target markets with the supporting ecosystem to take advantage of increasing demand for interconnected digital services.

...and interconnection to network and cloud service providers expected to rise the most.

| Category | Installed Capacity (Tbps) | CAGR |
|-----------------------------|---------------------------|------|
| Network Providers | 372 | 52% |
| Cloud & IT Providers | 12 | 160% |
| Financial Service Providers | 88 | 38% |
| Supply Chain Providers | 5 | 73% |
| Content Providers | 6 | 48% |

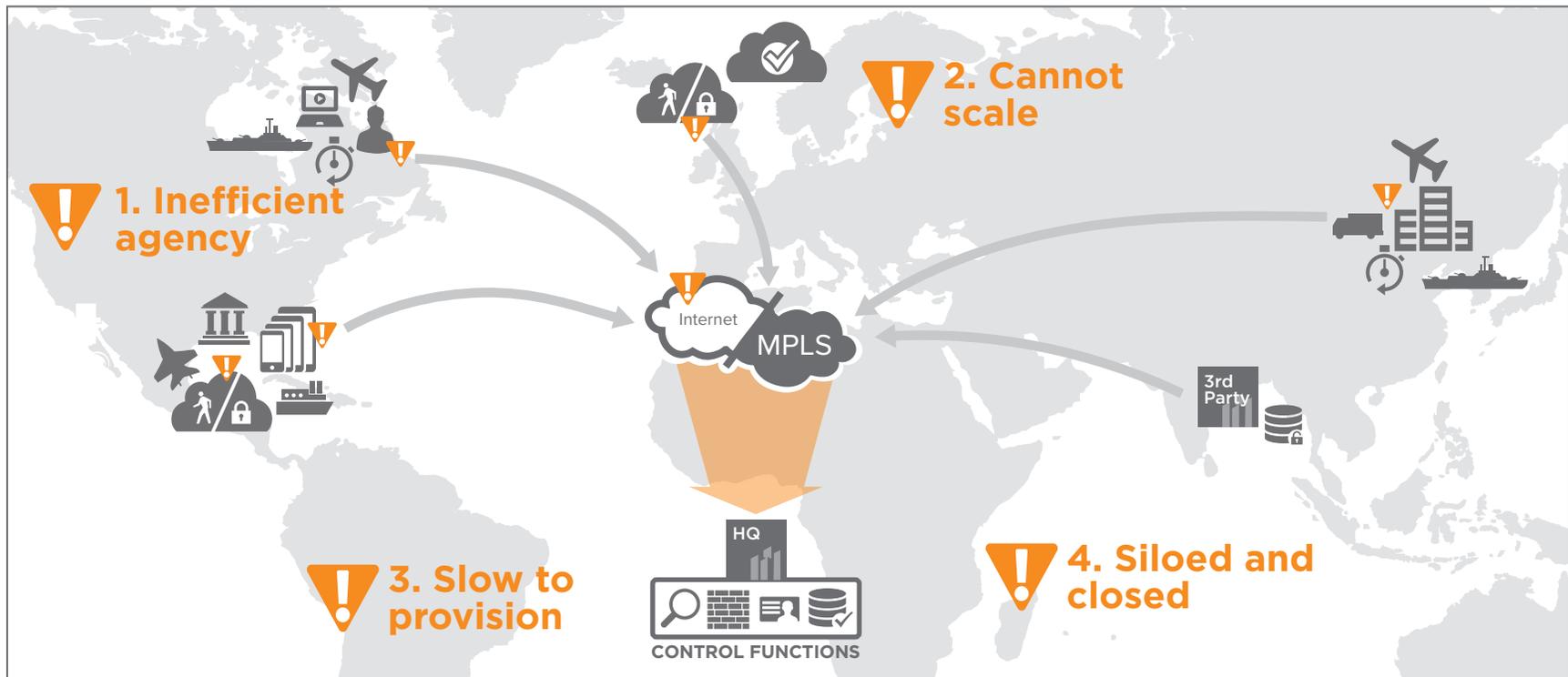
Equinix, The Global Interconnection Index

Opportunity

Share information and increase interoperability and resilience through an interconnected digital edge platform.

CURRENT-STATE CONSTRAINTS

Government missions are limited by architectures designed for a different time.

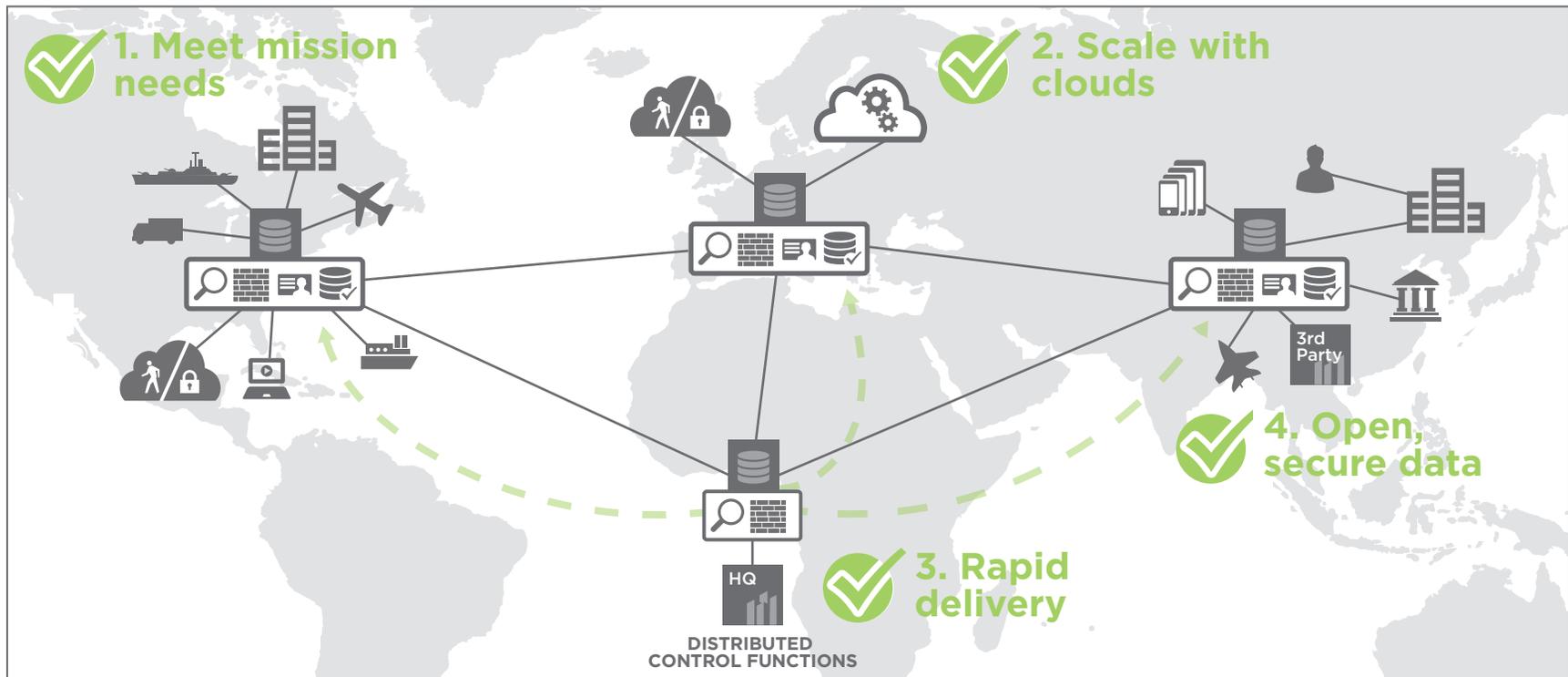


Summary

Agencies must update aging architectures to handle the performance and security demands accompanying huge spikes in information sharing. Today, their IT platforms are architected around outdated technology and networks, creating constraints that must be addressed to enable efficient digital government.

FUTURE-STATE CAPABILITIES

A highly interconnected IT platform delivers the scale and security needed to unlock the promise of digital government.



Summary

By focusing on highly interconnected, metro-based network control points, agencies can scale seamlessly with pay-as-you-go models. New markets can be accessed remotely and new services can be rapidly provisioned. The result is a more open, secure, data-driven government that meets mission needs via a modern IT platform optimal for launching new services.

STRATEGY

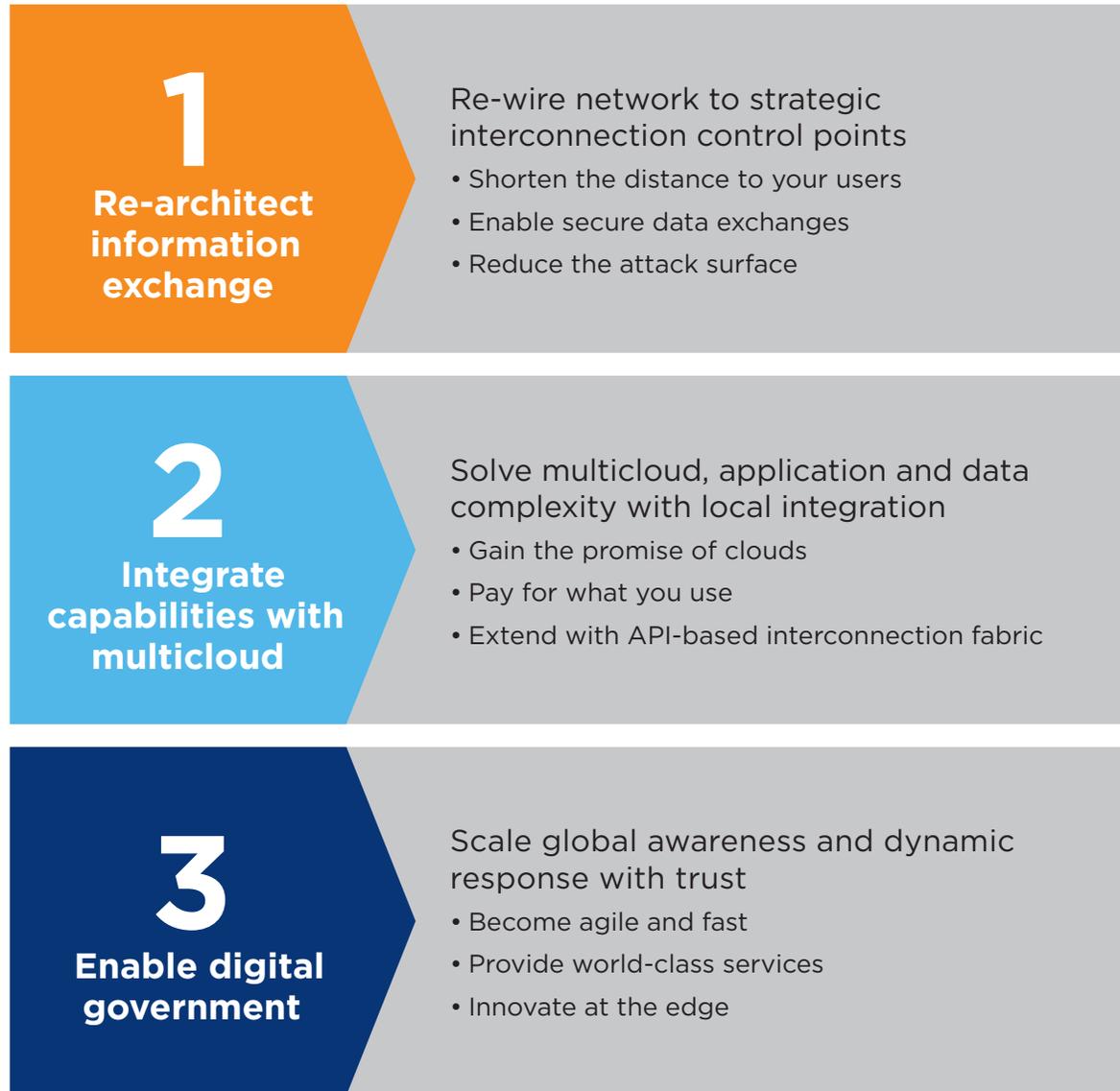
Architecting for the digital edge requires an interconnection-first approach.

Summary

Agencies must update aging architectures to handle the performance and security demands. Adopt an interconnection-first approach to shorten the distance to users, maximize cloud and deliver superior services.

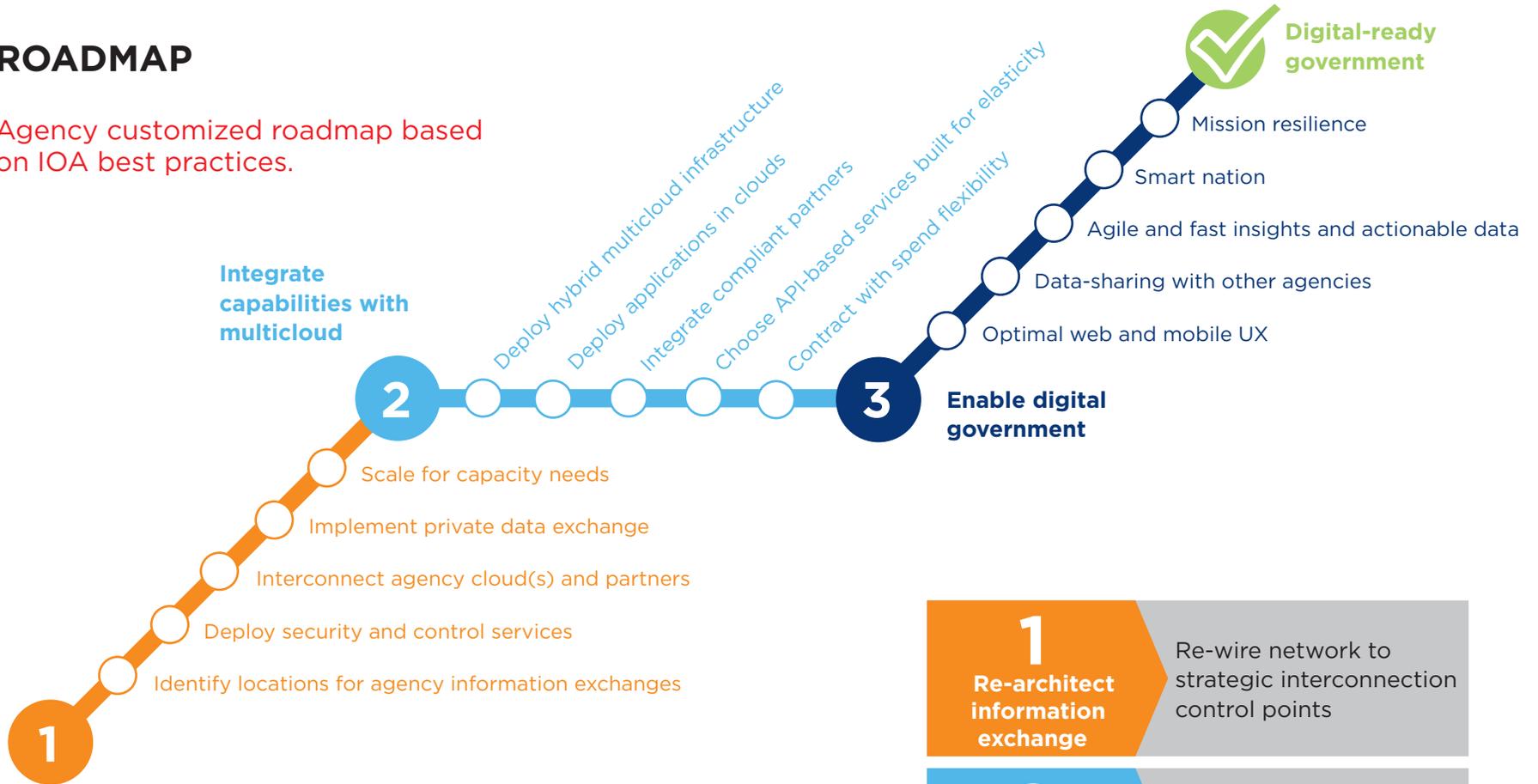
Network, cloud, SaaS, content and other agency service providers must enable these newly forming platforms and information exchanges by deploying services at the digital edge in a fast-delivery, highly scalable, pay-as-you-go model.

Managed services providers will be key in enabling agencies to re-architect applications, enable artificial intelligence and accelerate other desired outcomes within a marketplace of world-class partners.



ROADMAP

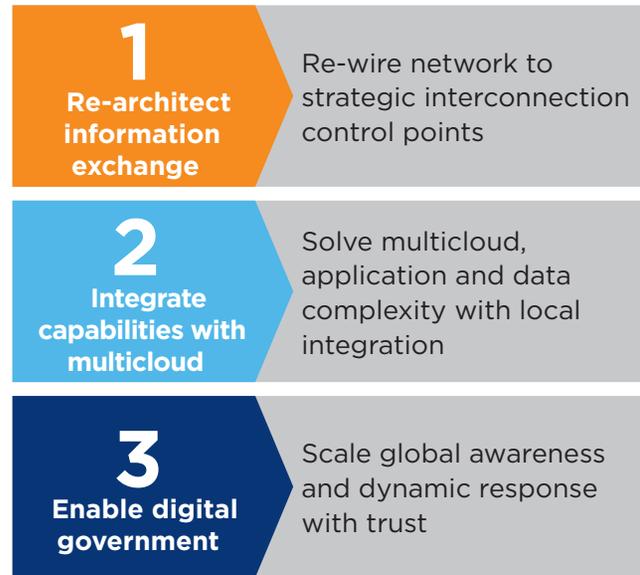
Agency customized roadmap based on IOA best practices.



1 Re-architect information exchange

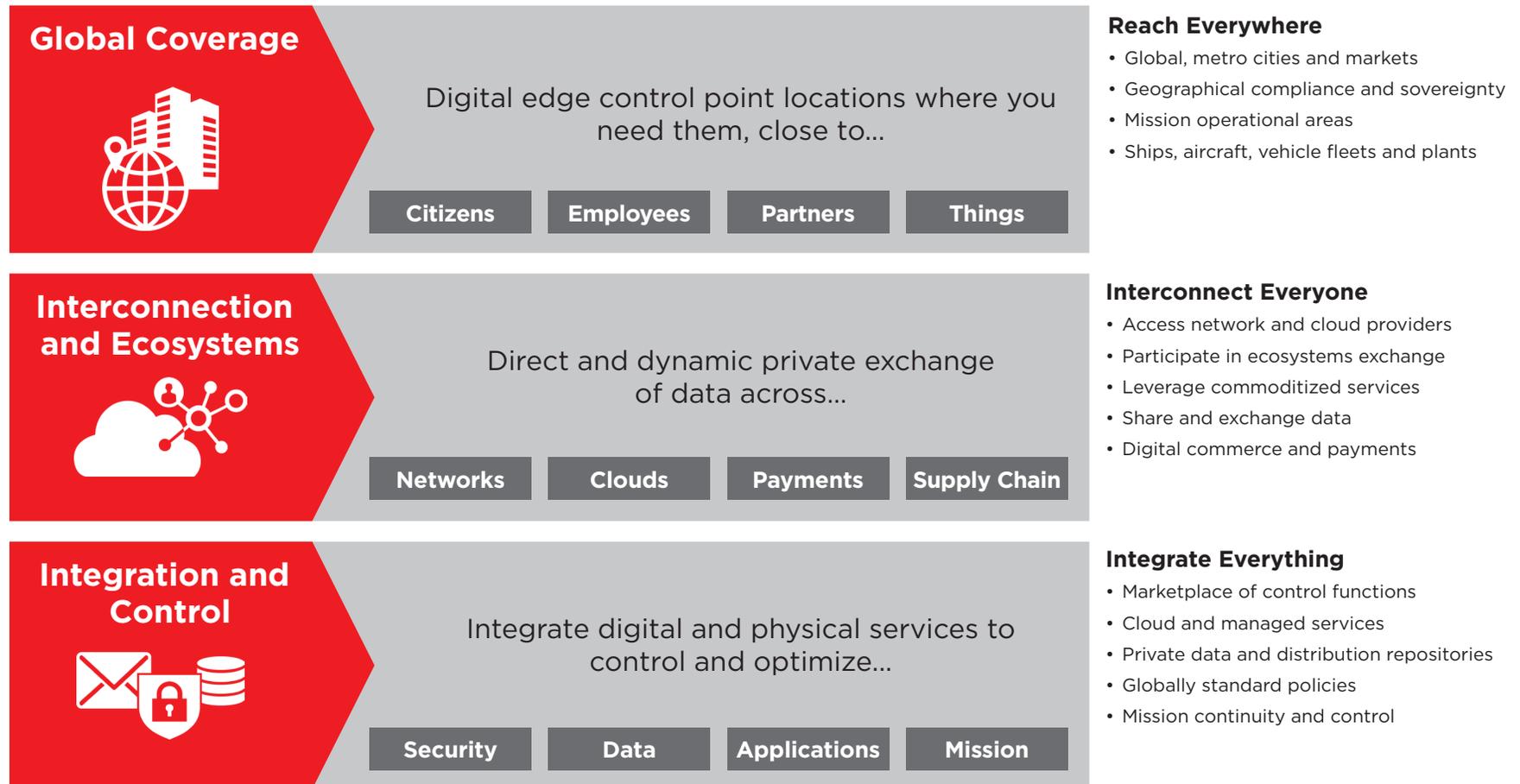
Summary

Leverage the IOA roadmap customized for U.S. federal agencies to implement the Digital Edge Playbook. Gain the omnichannel capabilities required by your users by integrating SDN, NFV and cloud access into adjacent metro network control points. Re-architect IT from centralized to distributed to gain the needed security and add elasticity, while enabling interaction between all network points. Your agency becomes digital-ready, built for agility to meet mission needs.



PLATFORM

To achieve the benefits of the strategy and the roadmap steps outlined 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.



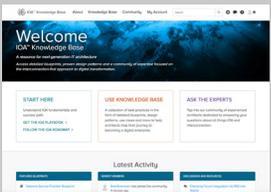
GETTING STARTED

Playbook
Companion
Resources

Request a more detailed briefing or strategy workshop with our experts.

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

Learn more at
equinix.com/industries/government/

| | | |
|---------------------------------------|---|---|
| <h2>The Platform Equinix Vision</h2> |  | <p>See how platform coverage, dynamic connectivity and ecosystem access enable new capabilities. eqix.it/PlatformEquinixVision</p> |
| <h2>Global Interconnection Index</h2> |  | <p>Bandwidth growth is shaping digital opportunities for agencies. eqix.it/InterconnectionIndex</p> |
| <h2>IOA Playbook and Blueprints</h2> |  | <p>Download proven network architecture blueprints and design patterns based on industry-leading implementations of IOA. eqix.it/IOAKB</p> |
| <h2>Equinix Marketplace</h2> |  | <p>Discover agency availability and interconnection. eqix.it/marketplacebrochure</p> |



EQUINIX

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/industries/government/

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