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Autonomous Governance Best Practices for Resilient Digital Healthcare Delivery

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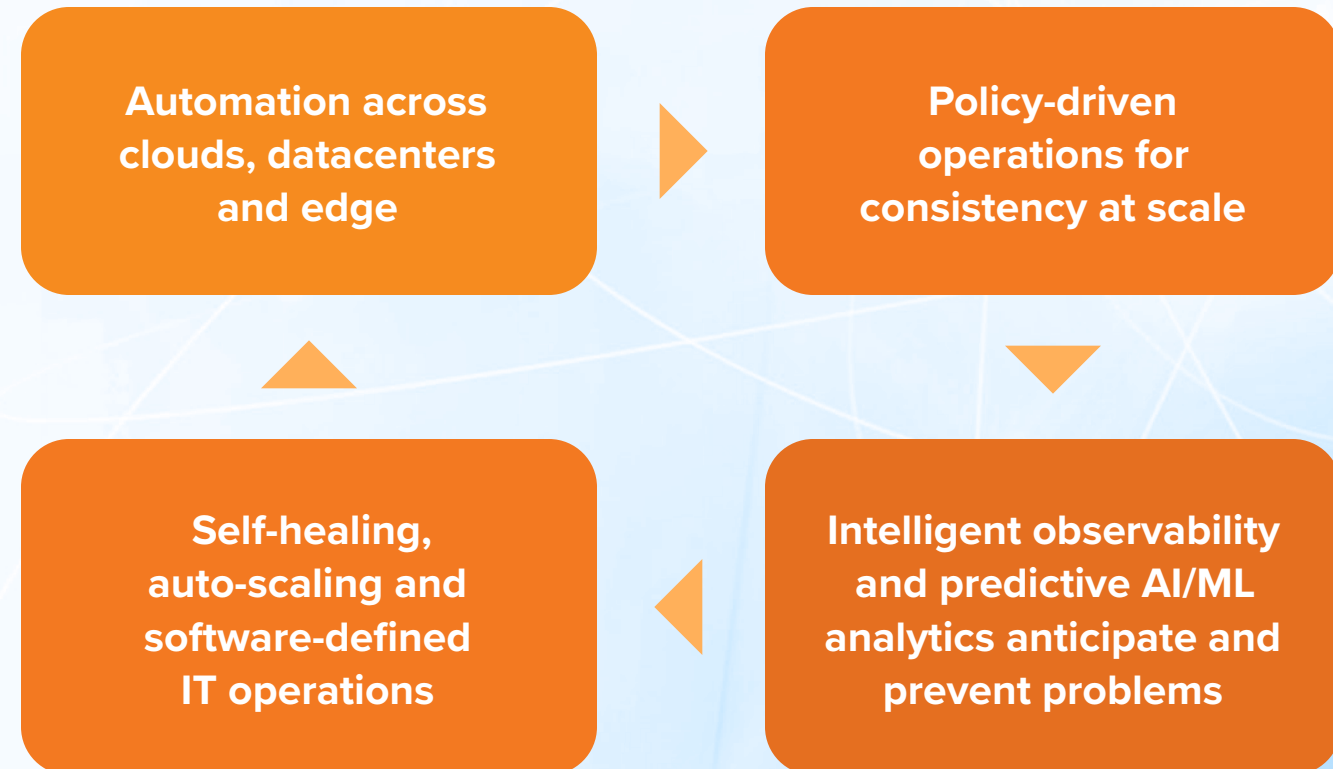IT Transformation Strategies, IDC

Navigating this InfoBrief

Click on titles or page numbers to navigate to each section.

Autonomous Governance Overcomes Digital Healthcare Service Delivery Risks & Complexity

The pressure for healthcare organizations to meet the demands of consumers, clinicians and regulators has never been greater. A unified, autonomous approach to infrastructure, application and data governance is needed to achieve top priority healthcare business outcomes.

BREAK DOWN THE SILOS

Automation across clouds, datacenters and edge

Policy-driven operations for consistency at scale

Self-healing, auto-scaling and software-defined IT operations

Intelligent observability and predictive AI/ML analytics anticipate and prevent problems

Resilient Digital Infrastructure for Today's Digital Healthcare Businesses

Resilient digital infrastructure allows business to react and adapt to unexpected circumstances without missing a beat. Self-healing, autoscaling digital infrastructure ensures business can adjust to unexpected downtime, changes to application behavior, unexpected customer demands and more.

By 2022:

Level of business digitization is rising:

65%
of global GDP will be digitalized.

By 2023:

70%
of healthcare organizations' attempts to scale value-based care models **will fail unless they invest in data-driven governance, operations and organizational infrastructure.**

Source: *IDC FutureScape: Worldwide Healthcare Industry 2022 Predictions*, October 2021

76% of healthcare organizations worldwide **identify digital infrastructure resiliency as a business priority.**

Note: Data weighted by country GDP (500+ emp size)
n = 832, Source: IDC's *Future Enterprise Resiliency & Spending Survey Wave 4*, May 2021

Growth of Cloud-Centric Apps and Infrastructure Increases Need for AI/ML-Driven Automation

Autonomous governance applies modern AI/ML insight, decision support and automation across the application and infrastructure lifecycle to tame complexity.

By 2024:

Nearly
60%
of organizations' new custom-developed applications will be built and managed using microservices and containers.

75%
of enterprises will prioritize infrastructure agility and operational efficiency, leading to a
5x increase
in the adoption of cloud-native architectures for core business applications.

Complexity is on the Rise

Due to:

- Faster development
- More frequent updates
- Continuous deployment
- More variance in resource use
- Increased workload portability
- More dependencies across legacy and modern apps and data

The faster that applications change and the more modular and distributed application and microservice dependencies become, the more difficult it is to keep up with business demands using traditional, manual approaches to infrastructure security, patching, provisioning and capacity optimization.

Source: IDC's *FutureScape: Worldwide Digital Transformation 2021 Predictions*, October 2021
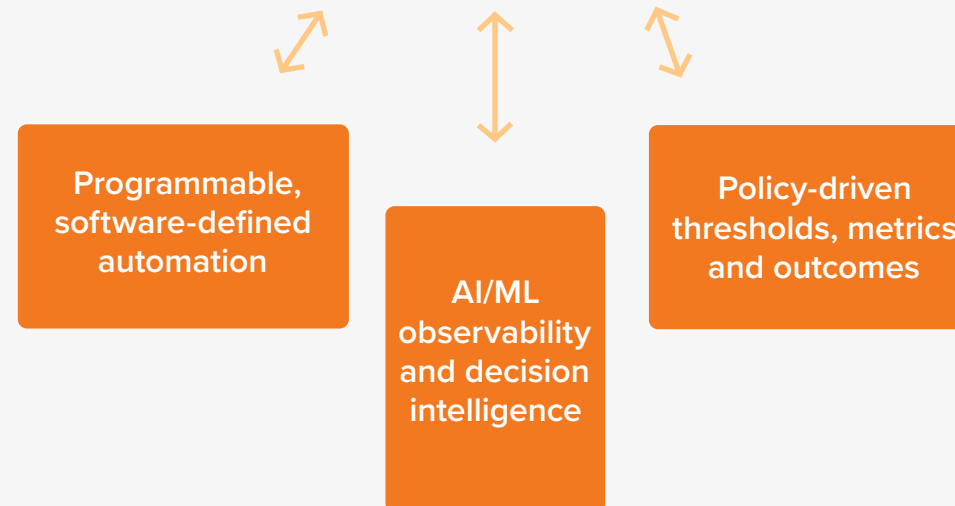
Consistent Security, Performance and Control Across All Infrastructure Resources Is Required

By 2022:

75%

of enterprises will deploy a unified management system for their clouds, networks, and datacenters to counter business resiliency threats from rising infrastructure costs and operational complexity.

Unified autonomous governance enables digital infrastructure resiliency

Programmable, software-defined automation

AI/ML observability and decision intelligence

Policy-driven thresholds, metrics and outcomes

Keeping the business running requires the full IT stack to:

▷ Perform as expected end-to-end

▷ Scale on demand

▷ Remain secure, compliant and cost effective

▷ Adapt on demand to unexpected conditions using AI/ML and automation for autonomous governance

Source: IDC's *FutureScape: Worldwide Digital Transformation 2021 Predictions*, October 2021

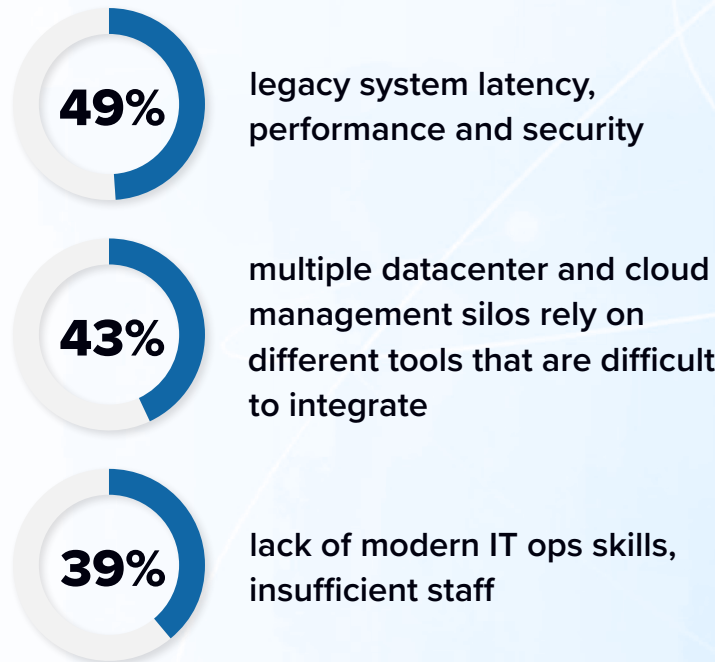# IT, DevOps and Hybrid Cloud Ops Teams Need New Ways to Work

IT & Cloud Ops Headcount Can't Keep Up

65%

of enterprises expect IT staff hiring to decline or remain flat relative to the number of new applications.

Top Barriers to Achieving Digital Infrastructure Resiliency Goals for Healthcare

49% legacy system latency, performance and security

43% multiple datacenter and cloud management silos rely on different tools that are difficult to integrate

39% lack of modern IT ops skills, insufficient staff

Application innovation

Infrastructure modernization

Skill and tools updates

Compliance

Security

Data

Legacy systems

Edge: IoT

n = 832 Global IT and LOB Decision Makers, Source: IDC's *Future Enterprise Resiliency & Spending Survey Wave 4*, May 2021
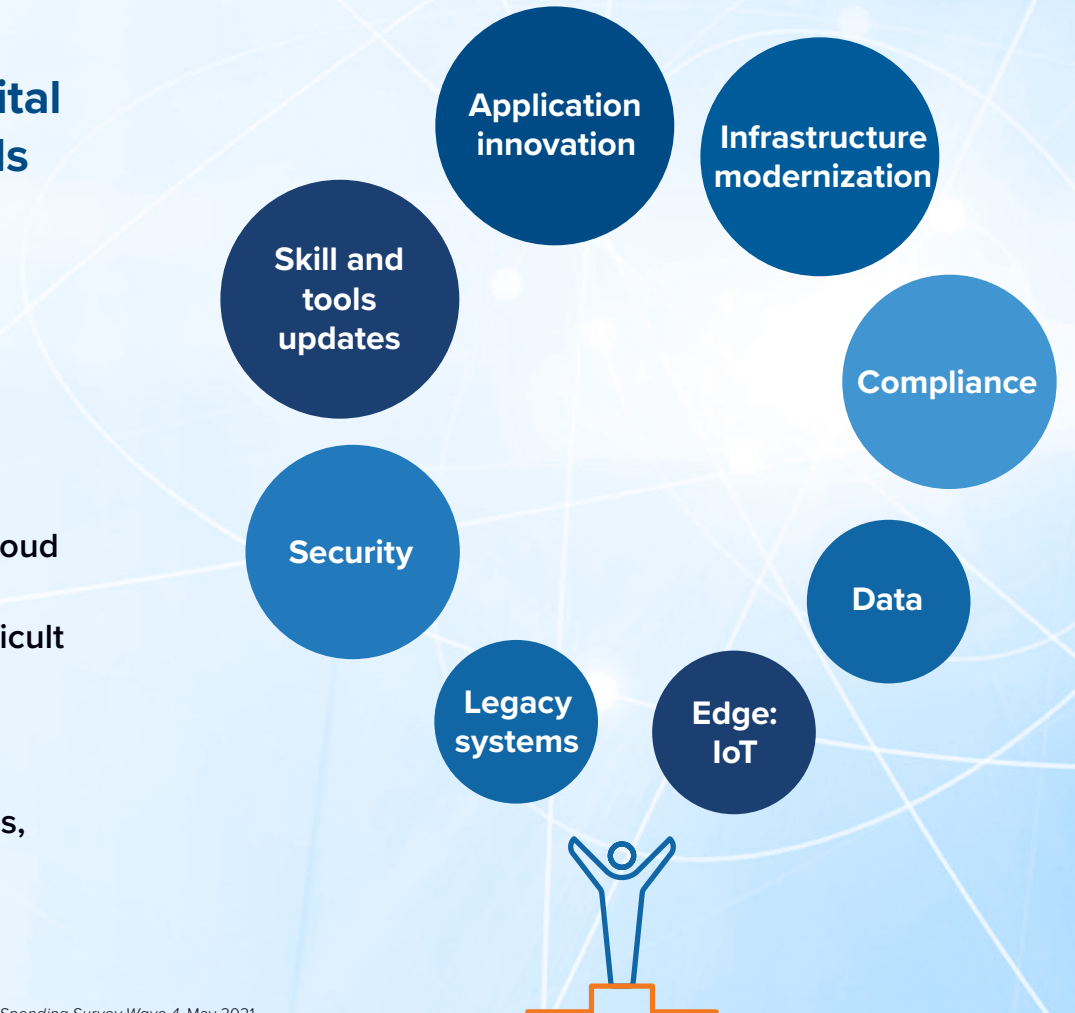
Digital Infrastructure Resiliency Required to Power Healthcare Transformation

Ubiquitous, secure and consistent infrastructure operations will underpin effective digital healthcare delivery

Lack of digital resilience in healthcare results in:

▷ Delay in care due to insufficient infrastructure to deploy virtual care during the pandemic

▷ Inability to manage key resources (e.g., ventilators, ICU beds, etc.)

▷ Inadequate outreach to individuals at risk of poor outcomes

▷ Fragmented, inconvenient care resulting in redundant testing and incomplete information with which to render an accurate diagnosis and treatment

Effective hybrid work, online customer engagement, business workflow automation, business analytics, and innovation agility all depend on resilient digital infrastructure for networks, data management, computing services, edge and cloud.
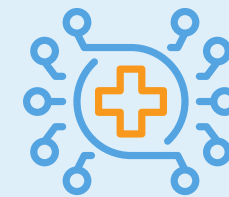
The digital mission in healthcare is to create a value-based health system that is focused on shifting from sick care to healthcare, with an emphasis on preventive care and population health management.

Source: IDC's *Worldwide Digital Transformation Use Case Taxonomy, 2021: Value-Based Health*, June 2021

Optimizing Productivity, Performance and Security

Server → **Storage** → **Network** → **DevOps** → **Cloud** → **Security** → **Endpoints**
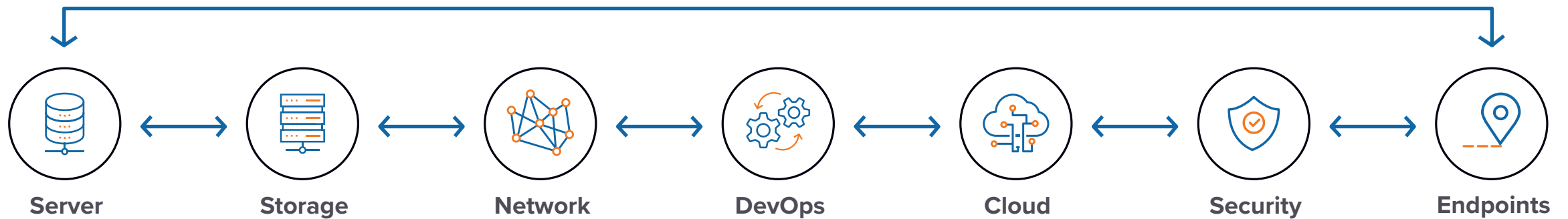
Getting started with automation helps individual teams:

- ▷ **Reduce** human error
- ▷ **Speed** configuration and deployment
- ▷ **Ensure** compliance and audit control
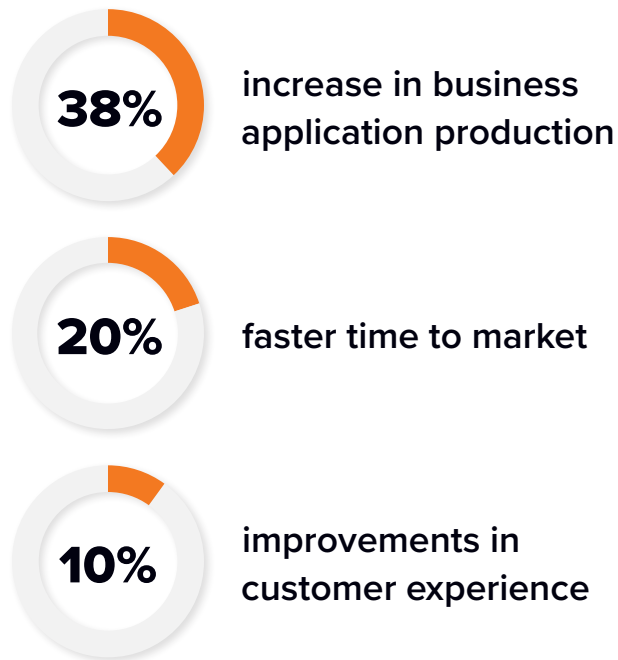- ▷ **Save** money and time

Connected automation multiples benefits enabling IT to:

- ▷ **Scale** efficiency by standardizing and reusing best practices
- ▷ **Integrate** workflows across multiple application dependencies
- ▷ **Promote** portability and cost optimization
- ▷ **Improve** help desk and end-user agility
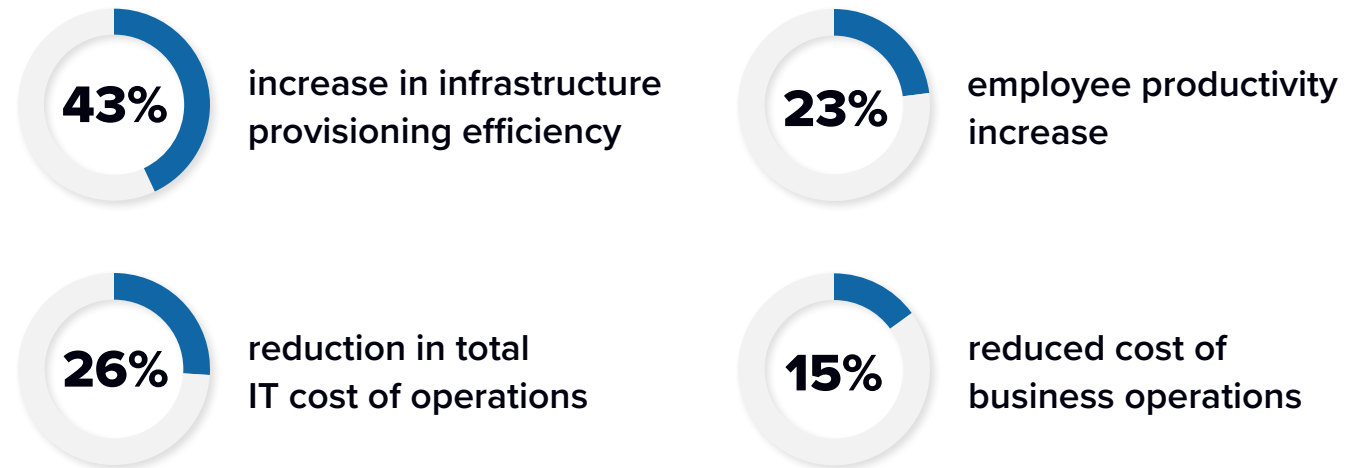
Automation Improves Business Agility and Saves Money

Red Hat Ansible Automation Platform Examples

BUSINESS AGILITY IMPROVEMENTS

38% increase in business application production

20% faster time to market

10% improvements in customer experience

PRODUCTIVITY AND COST SAVINGS

624% 5-year ROI

43% increase in infrastructure provisioning efficiency

23% employee productivity increase

26% reduction in total IT cost of operations

15% reduced cost of business operations

Source: IDC's *Multidomain Red Hat Ansible Automation Platform Assessment*, 2020

Autonomous Governance Is Critical to the Future of Healthcare

As patients seek uncoordinated care across various healthcare settings, there is an increased risk of discontinuity of care, data fragmentation, more data silos and inaccurate quality reporting.

- ▶ The need for data governance and management will escalate as data flow will need to be monitored for quality and compliance.

- ▶ IT will face increased pressure to invest in interoperability and health information exchange capabilities, connected health technologies and reporting on challenging quality metrics.

- ▶ Focus on improving interoperability, data integration, care coordination and handoffs between teams and team members to mitigate the risks of adverse medical events.

Autonomous governance fills critical care gaps:

- ▶ Enforcement of policies and regulations for access, configuration and change

- ▶ Validation of reusable best practices via automation as code

- ▶ Automation of decision support-based on policies and business priorities

Source: *IDC FutureScape: Worldwide Healthcare Industry 2022 Predictions*, October 2021
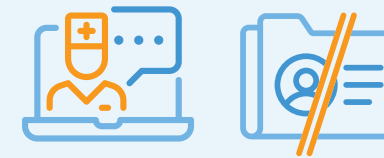
Through 2024, growth in "care anywhere" programs will increase discontinuity of care and data fragmentation, resulting in a doubling of a patient's risk for adverse medical events.
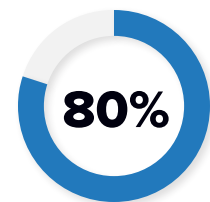
Avoiding Lock-In

Having the consistent set of policies, analytics and reusable, standardized automation, the organization can deliver required application level services without getting locked into a single infrastructure platform.

CONSISTENT POLICIES AND DECISION ANALYTICS

INTELLIGENT AUTOMATION

PUBLIC CLOUDS

DATACENTER

EDGE RESOURCE
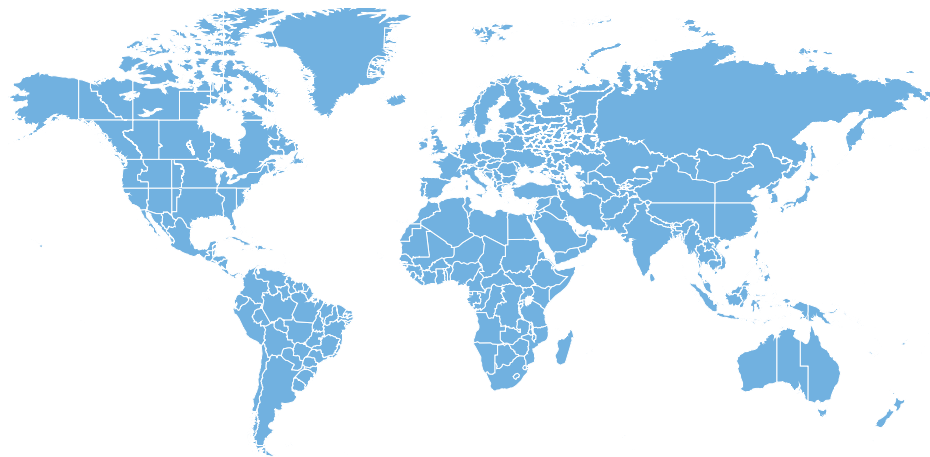
OVERALL
Worldwide

80%

of healthcare organizations agree/strongly agree with the statement: **It is critical that your organization invest in vendor-neutral digital infrastructure that guarantees workload and data portability to help avoid vendor lock-in.**

Note: Data weighted by country GDP (500+ emp size)
n = 832, Source: IDC's *Future Enterprise Resiliency & Spending Survey Wave 4*, May 2021

Reducing Human Error, Downtime and Business Risk

Avoid These Critical Business Risks

▷ **Failed business workflows and system downtime** resulting in reduced customer satisfaction

▷ **Lost revenue and penalties from downtime,** data loss and missed deadlines

▷ **Ransomware and cyber threats that steal data** or freeze critical business operations

▷ **Suboptimal application and workload performance** due to fragmented systems

▷ **Unsuccessful application deployments** requiring rollbacks

▷ **Reputational risk** from unexpected downtime or security failures

Autonomous Governance Benefits

▷ **Eliminate human error** and ensure consistent operations at scale

▷ **Detect anomalies** and react in real time

▷ **Capture and document change control audit trails**

▷ **Validate and distribute authenticated updates** rapidly

▷ **Standardize and integrate from edge to datacenter to cloud**

Red Hat Ansible Automation Platform customers experience up to 68% reduction in business risk from downtime.

Source: IDC's *Multidomain Red Hat Ansible Automation Platform Assessment*, 2020

Essential Guidance for Success

Leverage software engineering best practices to solve business problems.

Move beyond simple task automation to orchestrated integrated policy-driven operations

Build intelligent operations using AI/ML decision insight and workflow optimization

Maintain consistent security, compliance, configurations, and cost controls wherever workloads are deployed

Optimize for data location, latency, and network constraints

Embed autonomous governance in the full lifecycle of digital infrastructure and business operations:

Automate using curated, validated, reusable infrastructure as code

Tie automated workflows to policies, rules and metrics based on business outcomes

Instrument for auto-scaling and self-healing

Leverage open source innovation

Getting Started With Autonomous Governance

Analyze
current operational challenges and opportunities for intelligent automation

Collaborate
across IT, dev and LOB to set goals and policies

Leverage
open source for vendor neutral portability and integration

Invest
in observability, AI/ML and programmable automation for scale

Link
to business outcomes

About the Analysts

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Mary Johnston Turner is Research Vice President Future of Digital Infrastructure, part of IDC's Future Enterprise research team. She analyzes how Enterprise IT and business strategies are taking advantage of ubiquitous, autonomous cloud infrastructure solutions deployed across dedicated data centers and shared public service environments. Her practice emphasizes the voice of the Enterprise customer, based on surveys and in-depth analysis of best practices related to how Enterprises are changing the ways they source, secure, and optimize digital infrastructure solutions. Her research emphasizes consideration of how pay-as-you-go consumption-based subscriptions, cross-cloud control planes, and collaborative enterprise infrastructure governance models are enabling Enterprises to better align infrastructure investments with critical business outcomes and innovation priorities.

More about Mary Johnston Turner

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Cynthia is responsible for the value-based healthcare practice. A key focus of her research includes the use of cognitive/AI technologies to advance digital transformation in healthcare. Areas of research include analytics, population health workflow, proactive patient engagement including patient personal assistants.

Message from the Sponsor

Red Hat's open approach to governance is helping healthcare customers to:

▶ React to security and compliance events in real-time

▶ Shift the business focus to consumerization

▶ Leverage a single, automated governance platform on premise and in the cloud

Learn more about Red Hat's solutions for healthcare.

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