Three Ways to Make Cloud Your Institution's Business

Building future ready, strategic technology operations in higher education

The Changing Role of
IT in Education

Three Key Responsibilities
for Educational IT Leaders

Three Opportunities,
One Solution

Make Cloud Your Institution's
Business with vRealize

The Changing Role of IT in Education

The tactical aspects of IT have never been considered particularly glamorous, and until recently there was little expectation that IT infrastructure and operations would ever be more than a cost center. With software gaining in importance, IT teams play a critical role beyond keeping the lights on and the servers running. Today, educational institutions of all sizes and types look to their IT teams for strategic leadership.

Higher education IT teams are on the front lines of ensuring continuity through IT reliability, stability, and security in the face of tremendous change. In short, doing heroes' work to ensure digital resources support on-the-ground realities and changing models of how institutions function and deliver education. Now more than ever, IT organizations must adopt future ready solutions to maximize existing technology investments and prepare for tomorrow, starting today.

IT professionals in education are working harder than ever to meet new and different demands:

- Burst capacity and flex infrastructure to keep operations humming

- Accelerate moves to new, multi-cloud environments while adding responsibilities for the application services platform

- Provide infrastructure and solutions to enable remote work, remote learning, and on-demand delivery of services

And more responsibilities are now regularly being added to their already long to-do lists as institutional leaders look to IT professionals to serve their organizations even more:

- Make the business case for new technology investments

- Manage hybrid and multi-cloud environments efficiently while reducing operating complexity and silos

- Transform existing infrastructure to support modern, cloud-native apps in the digital world

- Minimize organizational impacts and the need to re-skill or retrain employees when adopting new tools and processes

How can your institution's IT leaders focus on strategic responsibilities without compromising current activities? This ebook offers insights and a path to making cloud your business by adopting an intelligent hybrid cloud management solution.

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Turning Infrastructure Operations into Advantage

Moving IT infrastructure and operations to the cloud creates critical performance advantages across services, agility, efficiency, and scalability metrics, according to a recent McKinsey report.

Moving IT Infrastructure to the Cloud Drives Significant Benefits

▶ Service

- **75% reduction** in complexity

- Up to **50% improvement in reliability and availability**

- **Twice as good customer service** for product teams and engineers

▶ Scalability

- **Weekly replenishment of machines,** allowing product teams to scale and grow

- **Start small and grow with demand** to allow new sites to break even in less than one year

▶ Efficiency

- **Efficiency gain of up to 20%** within 18 months of deployment

- Continued focus on efficiency can **help achieve 5% to 10%** year-over-year reduction in overall costs

▶ Speed

- **Up to 50% faster** qualification of new technology

- About **four times faster** capacity deployment

SOURCE: McKinsey, "Transforming Infrastructure Operations for a Hybrid-Cloud World," October 2019.

This added efficiency enables IT teams to focus on more strategic goals and accelerates progress towards meeting your institution's mission.

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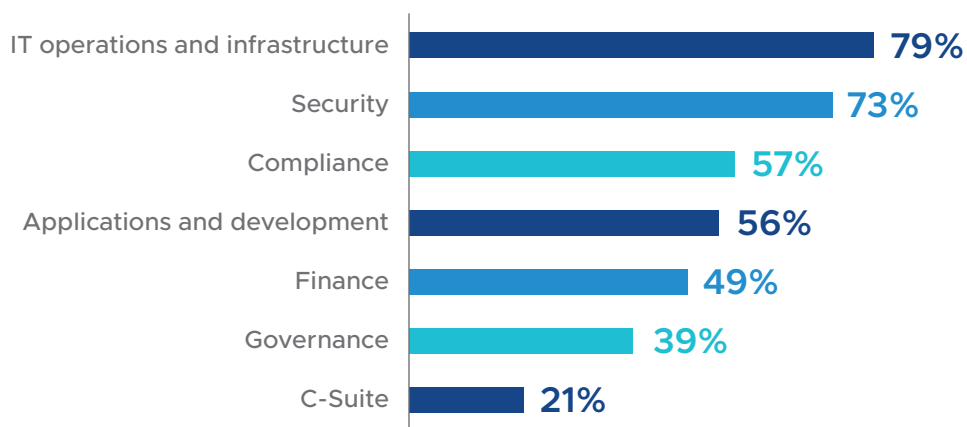Make Cloud Your Institution's
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Why Does a Cloud Management Solution Matter?

Educational institutions face increased demand to deliver services better and faster, often while contending with constrained budgets. Strategy and innovation are necessities, not nice-to-have options. When looking for the fastest, least disruptive way to keep institutions running efficiently and nimbly, many IT operations teams are looking to the cloud.

Recent surveys show IT infrastructure and operations are rising in importance as the move to the cloud accelerates.

Which of the following roles in your organization are involved in the success of your public cloud infrastructure investment?

Role	Percentage
IT operations and infrastructure	79%
Security	73%
Compliance	57%
Applications and development	56%
Finance	49%
Governance	39%
C-Suite	21%

SOURCE: CloudCheckr, "The Cloud Infrastructure Report," 2020.

Intelligent hybrid cloud management solutions offer your institution important advantages.

- Accelerate innovation with quick and easy access to services
- Gain efficiency by improving visibility and automation
- Improve control and mitigate risk through unified operations and governance

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Three Key Responsibilities for Educational IT Leaders

Today's IT operations leaders have to accept new responsibilities while managing the old ones. Three of the top responsibilities today include:

1. **Modernizing IT:** an ongoing—but still challenging—responsibility

2. **Accelerating cloud evolution:** existing terrain, yet of increasing importance

3. **Assuring developer productivity:** evolving territory to explore

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"2020's Top 10 IT issues focus on digital transformation as the engine to accelerate higher education's ability to address student success, affordability, enrollment, and the other challenges and opportunities we're facing. An 'integrative CIO' can help the institution develop its digital strategy."

-Susan Grajek, Vice President, Communities and Research, EDUCAUSE

SOURCE: EDUCAUSE, "The Drive to Digital Transformation Begins: EDUCAUSE Review Special Report," January 27, 2020

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1 Modernize IT

Although IT operations leaders have been mandated to modernize IT for some time, a modern IT environment means something quite different than even two years ago. Beyond keeping compute, storage, and networking refreshed and current with industry standards, as well as compliant with government mandates, it now means considering those traditionally hardware-based IT components in software as hyperconverged infrastructure (HCI). It also includes deploying hybrid and multi-cloud environments as well as embracing emerging technologies, and ensuring all components are managed with a consistent, intelligent hybrid cloud platform.

VMware Cloud Foundation™ is the hybrid cloud platform for managing VMs and orchestrating containers on full-stack hyperconverged infrastructure technology.

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Public and Hybrid Cloud Adoption Accelerates

IT professionals in education are not evolving infrastructure these days as much as they are completely reimagining it. The goal: for the organization to operate seamlessly across any combination of onsite, public, and private cloud infrastructure. Institutions are looking to the cloud to cut costs, support remote education, and empower academic research efforts.

Four Things to Consider When Migrating to the Cloud

Educational IT experts provided the following advice during an EDUCAUSE panel in 2019:

#1 Give **ROI potential** a thorough review

#2 **Be transparent** in communications to keep all teams working towards a common goal

#3 Get **leadership buy-in** early

#4 **Educate IT staff** on the process to aid change management efforts

SOURCE: EdTech, "EDUCAUSE 2019: Tips for a Cloud Implementation in Higher Education," October 21, 2019.

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How to Modernize IT

Successfully operating in a cloud environment is tricky for higher education institutions, given changing mandates and data security needs. Building a software-defined data center (SDDC), on a platform such as VMware Cloud Foundation, delivers virtualized compute, storage, and networking, and these essential cloud management capabilities:

- **Speed service delivery and reduce errors** — Enable self-service provisioning, automated performance, and responsive capacity management, boosting efficiency.

- **Reduce downtime** — Predict, prevent, and troubleshoot across multiple clouds with app-aware monitoring and intelligent remediation.

- **Continuously optimize app performance** — Use artificial intelligence (AI)-driven automated workload optimization and placement capabilities to keep your infrastructure reliably available.

- **Improve time to value** — Streamline operations by automating capacity and cost management as well as provide optimization recommendations, cost visibility, and guided onboarding for faster decision-making.

- **Manage risk** — Leverage integrated configuration and compliance controls. Built-in Intrinsic Security delivers network-level micro-segmentation, distributed firewalls and VPN, and compute-level encryption for added assurance that school and student data remains safe.

- **Dynamically self-tune infrastructure** — Use the latest advances in AI and ML to optimize configured KPIs for the virtual infrastructure.

With VMware Cloud Foundation, educational institutions can modernize without refactoring apps or re-skilling employees.

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2 Accelerate Cloud Evolution

Today, the question isn't whether to move to the cloud. It's how fast you can get it done, and how many different clouds you need. Educational IT leaders are under increasing pressure to accelerate the move to the cloud while managing budgetary, compliance, and cybersecurity demands.

But how? A single cloud delivery solution with consistent, secure infrastructure and operations across all environments is a best practices approach. It also helps standardize automation and robust governance.

Four Ways Remote Operations Could Influence Cloud Evolution

#1 Remote work and learning are highlighting the advantages of cloud operations

#2 Cloud deployment is being considered as a cost-cutting measure

#3 Remote instruction requires planning for capacity issues

#4 Academic research is benefiting from cloud-based tools

SOURCE: EdTech, "Higher Education Will See a Jump in Cloud Adoption," June 23, 2020.

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How to Accelerate Cloud Evolution

The benefits of accelerating cloud adoption with the right cloud management solution are many:

- **Gain unified visibility** — You have complete visibility across all critical apps, no matter where they live.

- **Consistently deploy applications to any endpoint** — Cloud-agnostic provisioning means you can have as many clouds from as many vendors as you need.

- **Choose the most cost-effective deployment environment** — You get to decide what works for your institution across private and public clouds.

- **Confidently migrate applications** — You enjoy a full view of component dependencies, network requirements, and your security posture, so migrating applications is simpler.

- **Ensure ongoing compliance** — You can be confident that your security policies are being followed by having total network visibility across multiple clouds and branches.

Indeed, the more cloud-agnostic the solution, the better the experience. A proven cloud management solution provides intelligence and consistency to help with all of this. With the use of a leading cloud management solution, you can address this second responsibility with great confidence of success.

But as if you didn't have enough to think about, you're now facing a third, evolving responsibility. You must become true partners with both developers and program managers so you can ensure that applications are delivered in a way that helps your institution meet its mission.

**Digital Transformation
Challenges in
Higher Education**

- Short-term, tactical plans
- Lack of digital integration
- Siloed initiatives or structure

SOURCE: IDC, "The Future of Higher Education: Digital Transformation is Critical to Learner and Institution Success," October 1, 2020.

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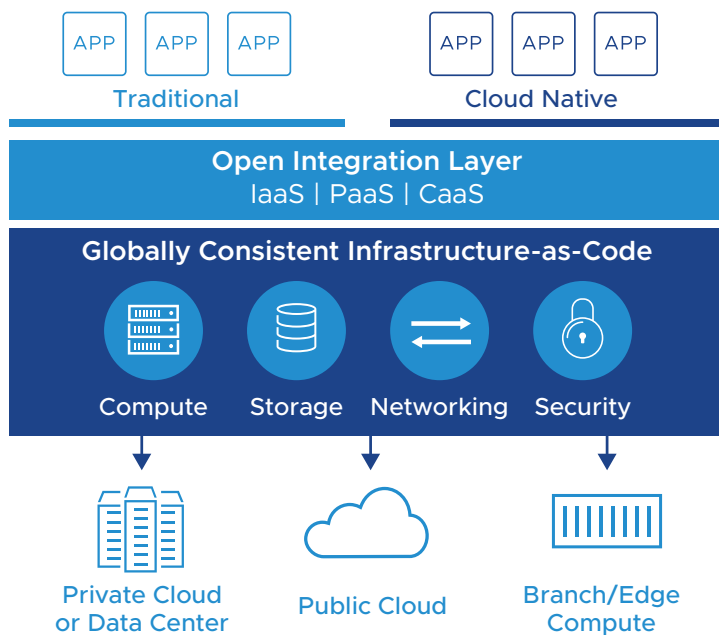
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3 Assure Developer Productivity

How much does the IT operations team have to do with the productivity of the development team? Considering the increasing dependency on rapid prototyping and code delivery, plenty.

Closer partnership with developers means providing the right development environment to support modern app-development paradigms. These include creating containerized workloads and using microservices to build cloud-native apps under the umbrella of fast-moving development principles. This all requires a whole new suite of IT management solutions.

APP APP APP
Traditional

APP APP APP
Cloud Native

Open Integration Layer
IaaS | PaaS | CaaS

Globally Consistent Infrastructure-as-Code

Compute   Storage   Networking   Security

Private Cloud
or Data Center

Public Cloud

Branch/Edge
Compute

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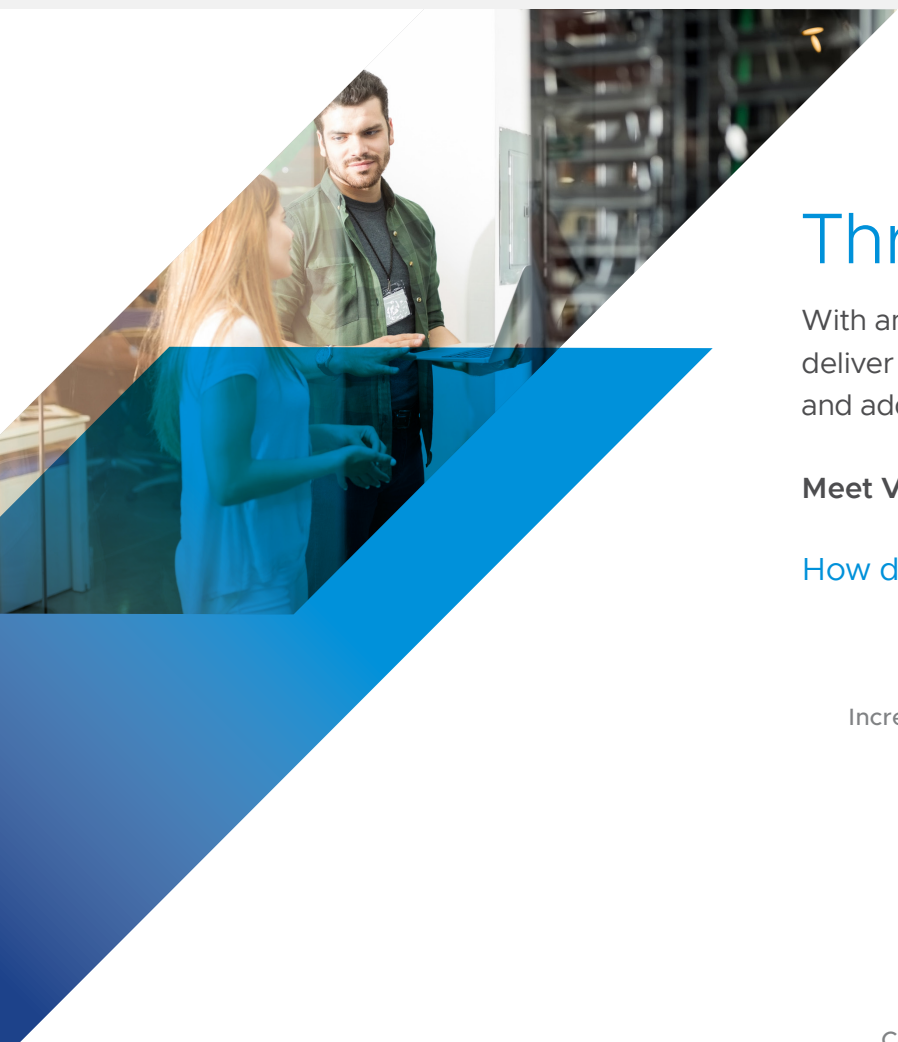Make Cloud Your Institution's
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How to Assure Developer Productivity

Key cloud delivery solution capabilities for accelerating the delivery of developer-ready infrastructure help educational IT teams to:

- **Streamline the developer experience** — Speed time to deployment with Infrastructure as Code. Automatically provision and manage the application technology stack with software, rather than having to manually configure every hardware device and operating system individually, for dramatically reduced deployment time.

- **Match developers' agility and ability to scale quickly** — Incorporate best practices from the development world into traditional infrastructure and operations processes with a cloud delivery solution. That way, your infrastructure will be agile and always aligned with the rapid-fire pace of your modern development team.

- **Provide developer platform services** — Provide the tools to assure availability and high performance with embedded Kubernetes so developers can easily automate and manage containerized apps.

- **Maintain control and visibility over VM- and container-based infrastructure** — Assure developer productivity with policy-based optimization of costs, tiers, location, availability, security, compliance, and service level agreements (SLAs) with an intelligent cloud delivery solution.

By providing an engine of enablement, you can ensure developers do what they're good at—building code—without worrying about where the infrastructure is coming from, whether on-premises or in the cloud. They can simply code to Kubernetes APIs or continuous integration and continuous delivery (CI/CD) principles while you easily take care of the rest.
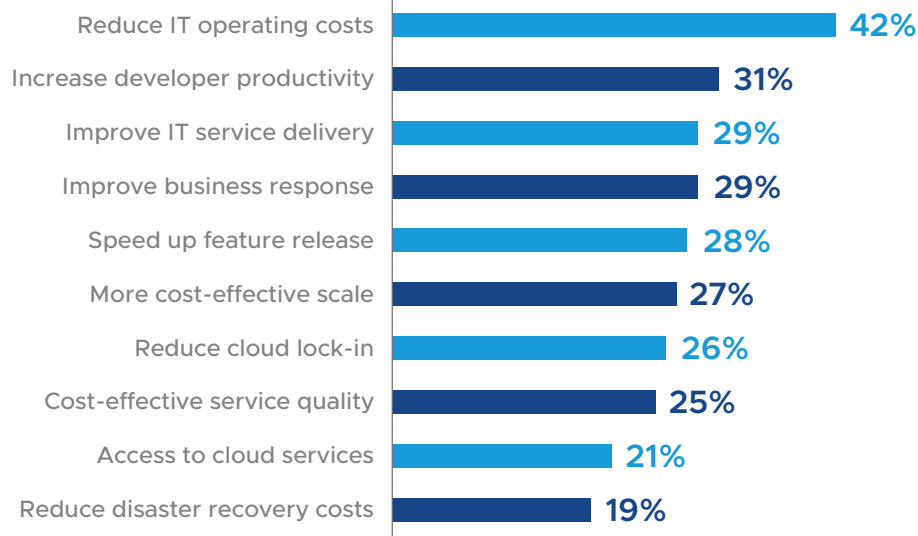
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With an intelligent hybrid cloud management solution, your institution's IT teams can deliver on existing goals—modernizing infrastructure while accelerating cloud adoption—and address the evolving responsibility of managing modern development environments.

Meet VMware Cloud Foundation with VMware vRealize® Cloud Management.

How does a single operating model help?

Reduce IT operating costs	42%
Increase developer productivity	31%
Improve IT service delivery	29%
Improve business response	29%
Speed up feature release	28%
More cost-effective scale	27%
Reduce cloud lock-in	26%
Cost-effective service quality	25%
Access to cloud services	21%
Reduce disaster recovery costs	19%

SOURCE: Management Insight Technologies, commissioned by VMware, "The State of Application Modernization and Hybrid Cloud Computing," February 2020.

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What Is VMware vRealize Cloud Management?

VMware vRealize Cloud Management is the intelligent hybrid cloud management solution empowering you to successfully take on all three responsibilities simultaneously. Consistently deploy and operate your apps, infrastructure, and platform services, from the data center to the cloud to the edge. You can accelerate innovation with quick and easy access to services, gain efficiency by improving visibility and automation, and improve control and mitigate risk through unified operations and governance. This helps you modernize IT, promote cloud evolution, and assure developer productivity.

Ranked as the industry leader by IDC,[1] vRealize Cloud Management offers the most comprehensive capabilities for programmable automation based on development best practices and self-driving operations based on AI, uniquely available both on-premises and as software-as-a-service (SaaS).

Higher education IT leaders use vRealize Cloud Management to successfully fulfill IT modernization, cloud evolution, and developer productivity responsibilities.

Because vRealize Cloud Management is available as a suite on-premises and as SaaS, you get to both move faster to the cloud and keep your on-premises environment in production as a safety net.

[1] IDC. "Worldwide Cloud System and Service Management Software Market Shares, 2019: SaaS and ITOM Drive Growth," 2019.

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The role of infrastructure and operations teams within institutions of higher learning is becoming more visible and strategic as IT teams take on more complex responsibilities.

With VMware Cloud Foundation and vRealize Cloud Management, you'll be well prepared to take on these increasing responsibilities while maximizing your school's existing and new IT investments. VMware has long-standing experience partnering with colleges and universities to meet their missions by modernizing infrastructure, accelerating cloud strategy, and streamlining development processes.

As recent events have shown, cloud truly delivers. It's time to make cloud your institution's business, with the intelligent hybrid cloud management platform from VMware that solves critical challenges while spotlighting the immense capabilities of your IT team.

Take the Next Step

Learn more online about how vRealize Cloud Management enables your institution to meet increasingly complex challenges:

VREALIZE CLOUD MANAGEMENT

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