

# Intelligent Transformation

Unlock true business value for **Sony Corporation**  
from the datacenter

**NUTANIX**<sup>TM</sup>

# FOREWORD

It is becoming clear that in the near future, the ability to be competitive on the global market will be directly tied to the intelligent decisions made within an organization's datacenter and its use of smart, hyperconverged infrastructure. Unlocking the true value of digital transformation means thinking beyond changes in the datacenter. Organizations must consider a fundamental mindset shift in order to truly benefit from technology.

This eBook introduces the concept of intelligent transformation and how Sony can capitalize on Nutanix next-generation cloud infrastructure to discover new opportunities and cost benefits from hyperconvergence.

To date, we have partnered with Sony Pictures Entertainment US to replace aging infrastructure, which was becoming difficult to maintain. Nutanix now runs all of its general server virtualization and continues to support its growing virtual desktop infrastructure (VDI) expansion. With this production use case in place, Sony is now at a pivotal point to continue its intelligent transformation journey.

Sony has entered an exciting new growth phase. In the fiscal year end 2019, following the corporate strategy of 'getting closer to people', Sony's operating income and net income hit record levels for the second consecutive year.

To continue this growth trajectory and thrive in today's digital, cloud-based environment, it is imperative that Sony does not rely on the competitive strengths of the past. In a world where the only constant is constant change, re-engineering an organization's technology function to deliver against the promise of emerging technology is essential for growth.

We believe that continual transformation will be necessary to achieve Sony's goals in the Imaging & Sensing Solutions (I&SS) and Game & Network Services (G&NS) businesses in particular. Extending the I&SS business beyond mobile and into the field of automotive applications and delivering immersive and seamless experiences for gaming and video requires next-generation cloud-based services.

Sony's leaders have a strong desire to enhance people's lives through the power of technology. Through the implementation of seamless enterprise cloud services, Nutanix can help Sony continue to achieve that vision, today and into the future.

Best wishes,

Chiemi Saito



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READY FOR

# Transformation?

At Nutanix, we believe in tailoring solutions for your specific needs. The following six chapters outline how Nutanix can fit into your strategy to be the winning corporation of tomorrow.







## Chapter 1

# INTELLIGENT TRANSFORMATION

As a forward-thinking manufacturing company, it's imperative to continually transform your business intelligently. But let's firstly consider: what is intelligent transformation? And more importantly, what does it mean for Sony?

To put it simply, intelligent transformation happens when devices and datacenter infrastructure work together to create end-to-end solutions. Transformation takes place by leveraging big data analytics, machine learning, cloud computing, edge computing, and artificial intelligence (AI).

Intelligent transformation typically involves two capabilities. On the front end, smart devices or sensors generate the information to be analyzed using IoT. On the back-end, datacenter infrastructure processes the information, and through algorithms, it generates patterns and business insights. This is called smart infrastructure.

## Intelligent transformation and the cloud

**Cloud technology underpins intelligent transformation and is transforming every aspect of modern manufacturing. Industry leaders are turning to cloud technology to increase operational efficiency, improve supply chain management, and change how products are designed, produced, and distributed.**

Because the cloud has near-infinite storage capabilities and processing power, cloud solutions are scalable by design. This makes it very easy to scale from a single manufacturing plant to an entire enterprise, or even scale down when necessary. Cloud solutions also increase access to information by breaking down silos and making it possible to access valuable process design data from anywhere in the plant.

From a business perspective, cloud flexibility means manufacturers using cloud solutions can configure the exact solutions they need and when they need it, creating a level of efficiency that is hard to achieve with traditional on-premises solutions. Finally, cloud solutions do not require on-premises software installations or an extensive IT staff, reducing Total Cost of Ownership (TCO).

A recent study from Cloud Technology Partners found that the cloud can reduce TCO for manufacturers by as much as 42%.

Because of regulatory and other concerns, manufacturing companies often favor on-premises infrastructure, hosted IT, or private cloud. However, many firms now recognize the need to add resources from public clouds and cloud service providers to increase agility and accelerate digital transformation.

Therein hybrid cloud is a potential solution – it combines on-premises IT (traditional infrastructure and private cloud) with off-premises resources or services from a public cloud, Cloud Service Provider (CSP), or SaaS provider.

Hybrid cloud is growing in popularity. The [2019 Enterprise Cloud Index Report](#) suggests that 85% of surveyed enterprises rank hybrid cloud as the “ideal” IT operating model, whereas 49% cited hybrid cloud as the operating model that meets all of their needs.

## Top business goals driving cloud investments:

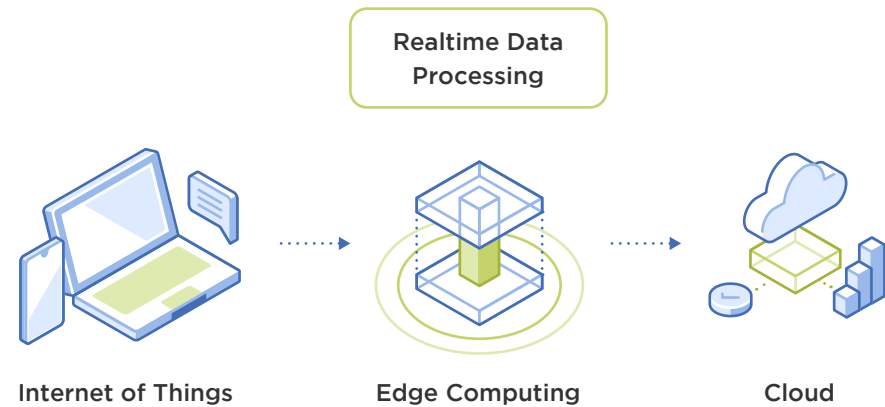
- 1 Improving the speed of IT service delivery
- 2 Greater flexibility to react to changing market conditions
- 3 Enabling business continuity
- 4 Speed of development
- 5 Improving customer support or services

*Source: 2018 IDG Cloud Computing Survey*

## Cloud computing and the Edge

While cloud computing has been transformational in connecting internet-enabled devices, the continuous rise of IoT and mobile computing has created the demand for increased speed and reliability. Edge computing technology has emerged to meet these demands.

It involves placing computing resources closer to where data originates (i.e. sensors, gaming consoles, generators) — at the “edge” of the cloud network.



*Figure 1 Indicative diagram only*

Edge computing is already having an impact in the streaming industry, as gaming and video traffic continue to grow. The market for IoT medical applications is also experiencing record growth, from wearable IoT edge devices that gather valuable patient data to sensor-enabled diagnostic devices designed to operate remotely. These innovations have the potential to revolutionize healthcare delivery and expand services to millions of people.





## Intelligent datacenter transformation

Cloud is one part of the datacenter puzzle. Another is infrastructure. If the traditional infrastructure at the core of your datacenter operations is too complex and operational expenses are too high, it may be difficult or impossible to move applications from one cloud to another.

Intelligent datacenters have the following features as a minimum:

### Software-defined



Servers, storage, and networking that must be physically configured are a thing of the past.

### Hyperconverged



Based on a web-scale architecture that combines servers, storage, and networking. The right HCI implementation can handle any type of workload an organization is required to support.

### Easy to manage



A single management interface should control everything from infrastructure to application deployment.



## Bringing it all together with Enterprise Cloud

### How can you leverage the latest innovations as you intelligently transform your datacenter?

A growing number of manufacturing organizations have discovered that an enterprise cloud that offers the agility of public cloud without sacrificing control over critical resources is the answer.

A hybrid cloud service is built using a combination of different clouds that could include cloud service providers, internet service providers, and private and public clouds. On the other hand, an enterprise cloud solution connects all other clouds and can easily run different workloads in the cloud they're best suited for.

Enterprise cloud is designed specifically to address enterprise needs and tailored to meet requirements for a wide range of workloads. These include:



**Traditional applications**



**Cloud-native applications**



**End-user computing**

A well engineered enterprise cloud transcends previous conceptions of the cloud, delivering the benefits of private, hybrid, multi-cloud, and edge computing models in a way that can more closely match manufacturers' business needs.

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82% of enterprises expect to use three or more clouds by 2020.”

- IDC Multi-cloud Architectures report



## Chapter 2

### SONY: GETTING CLOSER TO PEOPLE

Now that we understand the concepts of intelligent transformation and the enterprise cloud, how can this be applied to achieving Sony's business vision?

The 2019 Sony Corporate strategy outlines three key business goals:

1. Reinforce Sony's user-oriented, direct to consumer (DTC) services and creator-oriented content IP.
2. Generate a sustainably high level of cash flow from Sony's branded hardware business.
3. Maintain Sony's number one position in imaging and become the global leader in sensing, both in the CMOS image sensor area.

Two other key Sony initiatives are Environmental Sustainability and One Sony.

Sony has made clear that their existence depends on a healthy environment and society, which requires environmental initiatives throughout the supply chain.

Meanwhile, the One Sony initiative aims to drive collaboration across all business units, using success from one product area to drive wins in another.

## Understanding the market

**Achieving these goals requires a deep understanding of market forces shaping consumer behavior, technological innovation, and manufacturing potential.**

Consumers have never had more access to content in all forms – music, movies, television, and gaming. At the same time, there is an increasing demand for never-before-seen content and a desire to connect with other creators and players. Hence, ensuring a seamless and reliable streaming service is essential for Sony's gaming and entertainment businesses.

The amount of data we have about consumers is growing exponentially, as are the new ways to interpret data and apply it using machine learning and AI. This requires networked cloud services, which combine the security of on-prem cloud and applications with the real-time agility of public and multicloud environments.

For the I&SS business, there is intensifying competition and a reorganization of major players. Use cases have expanded in the semiconductor industry, and operations are

shifting toward automation. The future of the I&SS industry will require integration with advanced recognition technology, built on AI and IoT frameworks.

For Sony's branded hardware business, creating efficiencies in manufacturing is where margins may be improved. Industry leaders are taking notice of the potential of artificial intelligence, automation, and the Internet of Things (IoT) to transform manufacturing, particularly with edge computing. These technologies, which have yet to realize their full potential, increase productivity, minimize manual errors, gather large amounts of data, and reduce costs.

Powering sizeable AI workloads and processing data in many locations simultaneously pushes the performance and scalability limits of traditional infrastructures, requiring a new approach.

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Our mission is to seamlessly evolve the PlayStation platform as one that continues to deliver the best and most immersive entertainment experience together with a cloud environment that ensures the best possible experience anytime, anywhere.



**Kenichiro Yoshida**

*President and CEO, Sony*





## Chapter 3

# INTRODUCING NUTANIX ENTERPRISE CLOUD

Nutanix Enterprise Cloud is a modern, software-defined solution that provides consumer-grade management of datacenter infrastructure, applications, and clouds through a single pane of glass.

Nutanix web-scale solutions can help Sony simplify its existing operations, accelerate the delivery of new services, and streamline database and VDI deployments.

Nutanix lays the foundation for a hybrid IT environment that extends your datacenter both into the cloud and to the edges of your corporate network, giving you the resources you need to support the new IoT, AI, and automation initiatives you have identified as vital to your organization, while providing seamless cloud-based services to run your existing and greenfield apps.

Nutanix Enterprise Cloud works by building on a foundation of hyperconvergence to create a flexible platform capable of solving manufacturing challenges and adapting more readily to changing market trends. The architecture converges servers, storage, security, data protection, virtualization, and networking with one-click operations, full application automation, and multi-cloud management, creating a solution that is ideally suited for datacenters, production, distribution centers, and other edge locations.





## Improving efficiency and maximizing cash flow

Nutanix Enterprise Cloud eliminates the guesswork and removes the constraints of conventional infrastructure, allowing you to get up and running quickly and scale without disruption. Nutanix can help you eliminate silos, increase utilization, and dramatically improve scaling and availability — all while reducing costs. All infrastructure and applications across your entire operation can be managed from a single interface, Nutanix Prism.

As management tasks are reduced or eliminated, your IT team has more time to devote to IoT, AI, and automation initiatives.

## Transforming manufacturing

As Sony adopts IoT, AI, and advanced automation, its manufacturing centers need a different approach to IT infrastructure from ones in the past. You may need powerful infrastructure on-site to aggregate data from multiple sensors and process that data in real-time using advanced analytics or AI algorithms to continuously optimize critical processes and maximize yields.

With a compact footprint and centralized management, Nutanix Enterprise Cloud is the ideal solution for production and distribution facilities and other remote locations. Data and applications at the digital edge require datacenter-level performance and availability, while the proliferation of decentralized, intelligent devices require decentralized IT services delivery.





## Bringing AI to life

The key to successful AI is the ability to manage data and deliver performance where and when you need it. Nutanix Enterprise Cloud gives you more flexibility to architect a solution to address AI requirements, both on-premises and in the cloud.

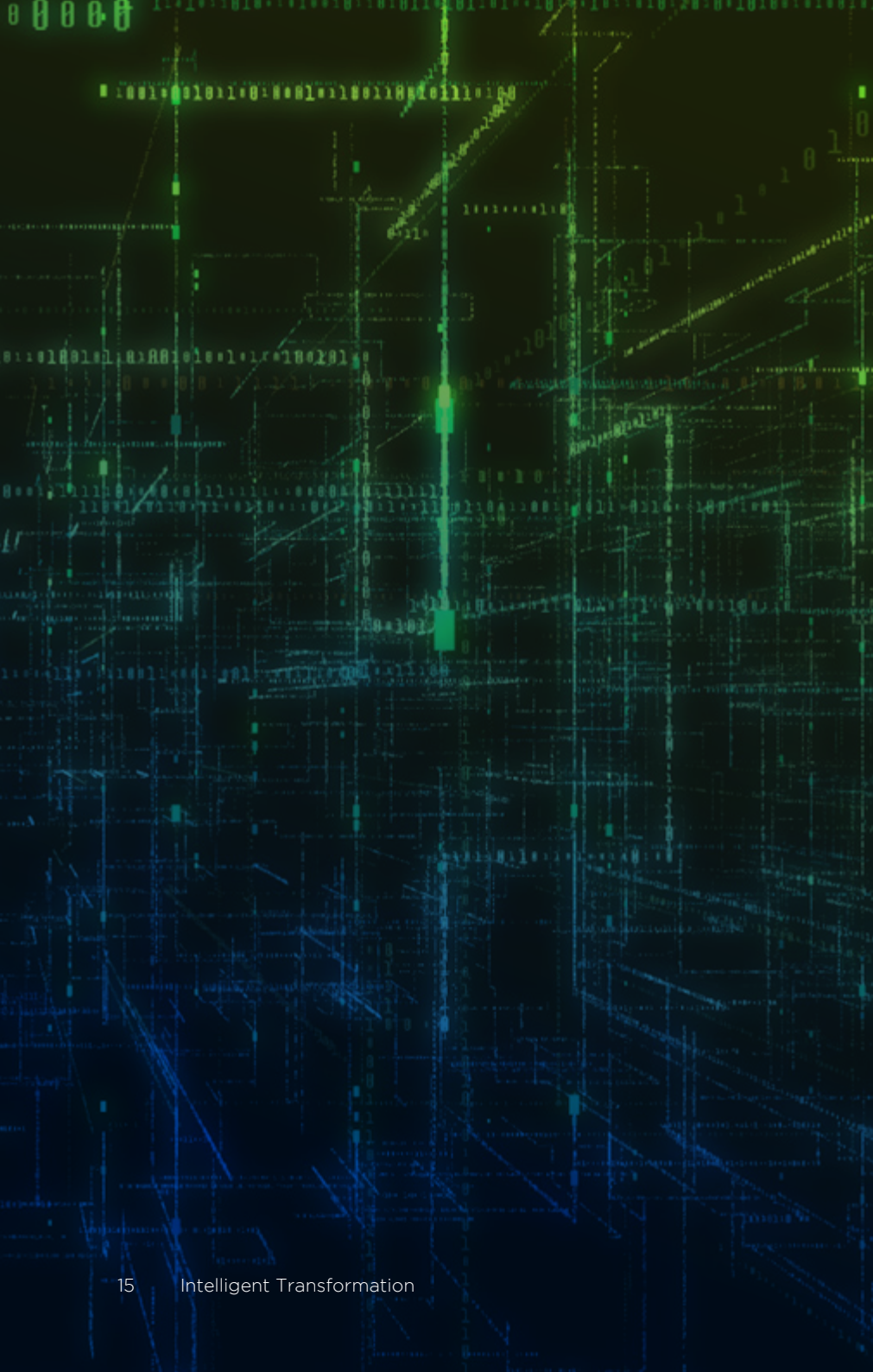
Deploying Nutanix solutions at the edge is simple, so you can introduce new analytics and AI workloads at edge locations and keep applications updated with minimal effort.

## IT automation for I&SS

A dynamic IT environment that includes IoT, AI, and advanced automation solutions requires a greater ability to automate the IT processes that underlay these initiatives.

Nutanix Enterprise Cloud provides the ideal platform to address the unique challenges of IT automation with a unified IT operating environment that melds private, public, and distributed clouds, providing a single point of control for managing infrastructure and applications across your entire operational footprint.





## Reliability of streaming services

Nutanix offers a wide range of capabilities across the stack to make sure data and Virtual Machines (VMs) are continuously available. We have built high availability and data protection into our platform. One of the core tenets of being web-scale is the ability to self-heal. We build our software with a fundamental assumption that the hardware it runs on will fail. We strive hard to ensure that VMs and apps are never impacted when such failures happen and the underlying issue is automatically fixed without any user intervention. The Nutanix hardware platform has redundant power supplies, memory, and CPU. The platform is resilient to individual hard disk failures. If a disk fails, data is automatically rebuilt without any impact to the app. Rest assured that with Nutanix, Sony's customers will enjoy unmatched availability and reliability.

## Sustainable

Nutanix solutions are power-efficient, consolidating a large amount of legacy hardware into a much smaller and power-efficient footprint. Enjoy up to 80% reduction in electricity consumption from reduced rack space and power and cooling costs.

## All together now

Achieving the objective of One Sony requires unified operations across all your business groups and technology silos. With Nutanix, you can bring your compute, data, storage, networking, and virtualization all together for a complete hyperconverged infrastructure package. Nutanix solutions unify operations across all your clouds, bringing multicloud operability to your enterprise workloads — and making hybrid cloud architectures a reality. With Nutanix Enterprise Cloud, you have a single point of control for all of your applications and data.

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We are convinced that with Nutanix, we will be able to realize our plans for a flexible future.”



**Martin Strickler**  
*Head of IT, Schiller AG*

## Chapter 4

### CASE STUDY

Thousands of customers around that globe have partnered with Nutanix to simplify their datacenter and gain predictable performance, linear scalability, and cloud-like infrastructure consumption. Take the Swiss firm Schiller AG for example, one of the world's leading companies in the development, production, and sale of medical equipment for cardiopulmonary diagnosis, patient monitoring, and emergency medicine.

Schiller AG needed an infrastructure platform that would meet all compliance and data protection requirements.

Find out how they leveraged intelligent transformation on the next page.



## Searching for a cost-efficient, reliable, and flexible platform

As a medium-sized manufacturer of technical medical devices, Schiller AG faces considerable competitive pressure. They are also subject to strict regulatory requirements at the national and international level. The company works together with numerous clinics, exchanging a large amount of patient data that is subject to special legal restrictions. For these reasons, data protection is a top priority at Schiller.

“We were seeking a solution that not only met our current needs, but could also flexibly satisfy our future requirements at an attractive price-performance ratio for our medium-sized company,” noted Martin Strickler, Head of IT at Schiller AG. “The hyper-convergent, web-scale approach from Nutanix was the best solution for our needs — not only when compared to traditional infrastructure, but also with convergent offerings.”

## Fast implementation

The Nutanix infrastructure was configured from the very start to enable easy scalability. Two Nutanix NX-6220 systems were implemented with a total of four nodes – with a VMware vSphere ESXi hypervisor running on each one. In total, 48 processor cores and a storage volume of 3.2 TB SSD and 80 TB hard disks in the Nutanix cluster provide future-proof performance and more than enough storage capacity. “The migration to Nutanix was completed over a single weekend, which meant our users didn’t even notice the changeover,” recalled Strickler.

## On the path to a digital company

In addition to implementing a new extranet, additional workloads have already been implemented on the Nutanix appliances, including Schiller AG’s intranet and email system.

“We haven’t experienced a single outage on the Nutanix systems since we went live in October 2014,” notes Strickler. “Everything has run smoothly without any problems. The administrative time savings have also been enormous. It only takes one quarter of the time for the regular patching of the systems and applications on Nutanix, despite the fact that IT is directly managing 20 to 30% more systems than before going live with Nutanix.”

## Ready for today, prepared for tomorrow

Over the long term, Schiller AG is intending to offer centralized IT services for the entire group. “We are convinced that with Nutanix, we will be able to realize our plans for a flexible future, including the implementation of hybrid cloud scenarios such as disaster recovery. We are even discussing whether we should also run our ERP system on Nutanix,” explained Strickler. “With Nutanix, our company is superbly equipped for future international competition.”

>>> Read the full case study [here](#).



## Chapter 5

### REALIZING VALUE WITH NUTANIX

Gartner has named Nutanix both a “leader” and a “visionary” in hyperconverged infrastructure. Speaking to our customers, Gartner only found happy ones. They valued the flexibility of our solution for its broad, vendor-agnostic accommodation of hypervisors, server platforms, and deployment models.

We also asked IDC to interview 11 organizations about their experience running various enterprise workloads on Nutanix Enterprise Cloud Platform. These interviews revealed that the study participants are realizing significant value with Nutanix as a cost-effective, efficient, and business-enabling IT platform built on hyperconverged infrastructure.

The resulting [white paper](#) found that the average organization deploying Nutanix could expect the following results:



534% five-year ROI



\$4.24 million in average annual benefits per organization



60% reduction in five-year cost of operations

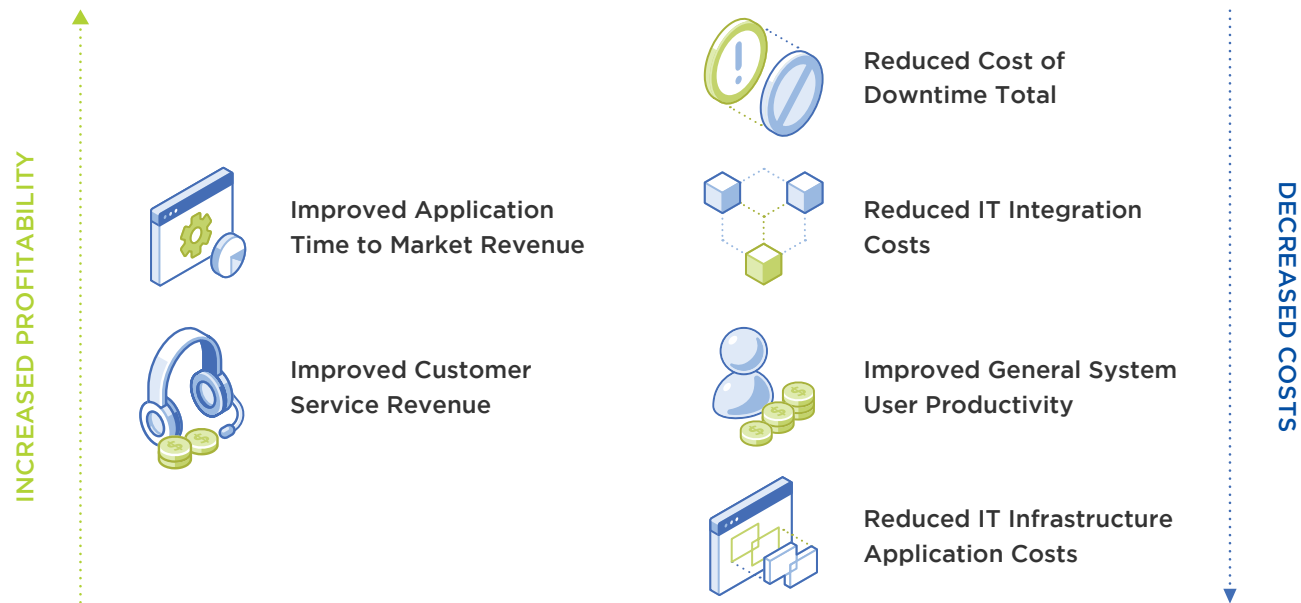


97% fewer unplanned outages

# SONY X NUTANIX: A PROFITABLE PARTNERSHIP

Intelligent transformation doesn't have to cost you money. In fact, deploying Nutanix could make a substantial difference to Sony's bottom line.

Based on revenue benefits, improved time to market for Sony's applications, reduced downtime, and improved customer service, Sony is poised to join the organizations who have partnered with Nutanix to increase profitability and decrease costs.



These savings improve operating profit, allowing Sony to invest more heavily in what it does best: getting closer to people and enriching their hearts through creativity and technology.



## Chapter 6

### NEXT STEPS

This eBook has included suggestions on how Nutanix can enable Sony to intelligently transform datacenter operations and to provide the supporting infrastructure for a cloud-based future.

With Nutanix as your chosen intelligent transformation partner, Sony can achieve agility, efficiency, and most importantly, further industry-first creativity and innovation.

As a hyperconverged infrastructure pioneer, Nutanix Enterprise Cloud combines the agility and simplicity of the public cloud with the security and control you enjoy within the datacenter. Built on the industry's leading hyperconverged infrastructure (HCI) technology, it integrates compute, storage, virtualization, and networking in a full-stack solution that runs nearly any application.

If you would like to learn more,  
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