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## **Cloud:**

**The Destination for Innovation**

CEO White Paper

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## Introduction

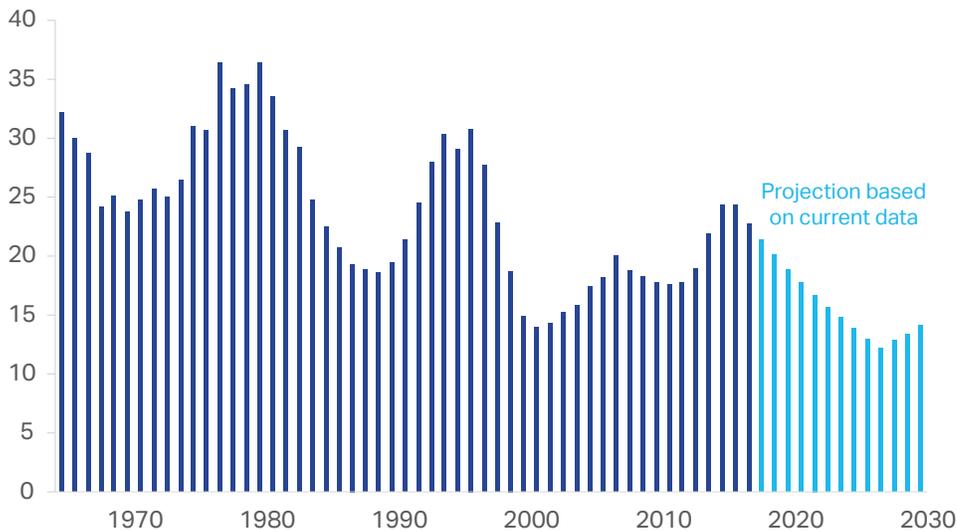
The business landscape is changing at breakneck speed. Today, we are more connected than ever before. We are developing new technology more rapidly than ever before. We are generating more information than ever before. We are moving faster than ever before.

*But slower than we ever will again.*

Digital transformation is not a vision for the future. It is here. It is now. And the consequences of inaction are dire.

Businesses that do not adapt will die. Look no further than the accelerating churn of the S&P 500 for proof. In 1980, companies on the S&P 500 could expect an average tenure of over 35 years. Compare this with 2027, when the average tenure is forecasted to be only 12 years. In 10 years, at least half of the companies on the S&P 500 will be replaced.<sup>1</sup>

**Average Company Lifespan on S&P 500 Index**  
Rolling 7-year average



**Figure 1:**

Average Company Lifespans Are Decreasing<sup>2</sup>

This is happening in every industry.

Disruptors are rapidly displacing incumbents, using new technologies—like cloud, the Internet of Things (IoT) and artificial intelligence (AI)—and leveraging the surge of information available to create a competitive advantage. The winners are embracing digital transformation. Above all, they are innovating.

Change is inescapable. In this new industrial revolution, how organizations leverage their information to fuel innovation will make the difference between success and failure.

## Innovate or Die

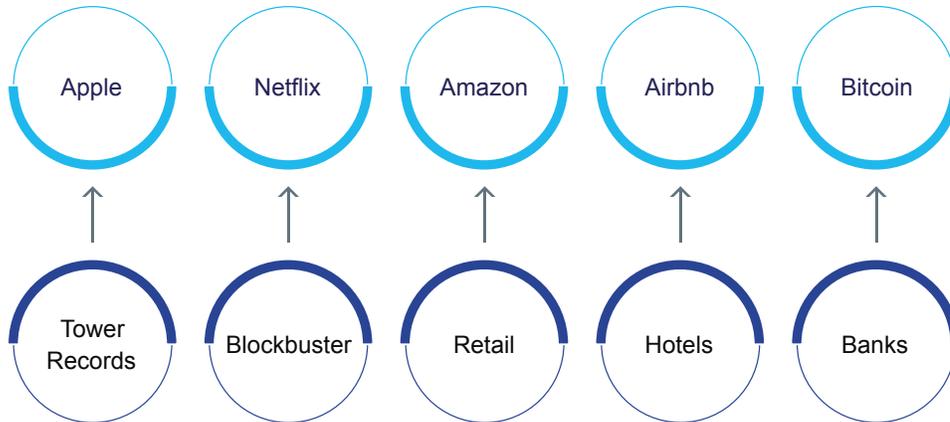
It is quite simple: organizations can innovate, or they can limp into obsolescence. There is no middle ground.

Agility is key in this new era. Technology is transforming every aspect of business, in every industry. Businesses are competing on a vast, planetary scale. Customer expectations are rising, always looking for more convenience, more speed, more customization, more, more, more. Markets are shifting at lightspeed. Volatility is swelling. The enterprise is expected to adjust in near real time.

Slow-moving companies will not survive.

There are no more barriers to entry for new ideas. Companies can test new applications, processes, products or services at scale with little to no infrastructure. A good idea needs only a computer and an internet connection to hit the ground running.

Consider Airbnb. Now worth an estimated \$38 billion, this major disruptor to the global hospitality industry has humble beginnings.<sup>3</sup> Two people who struggled to pay rent decided to rent out air mattresses in their apartment when they noticed that hotels were overbooked because of a local conference. They set up a simple website, and Airbnb was born. Within seven years, they went from three guests in their apartment to 10 million guests worldwide.<sup>4</sup>



**Figure 2:**

Innovators Disrupt Their Markets

Amazon’s seamless online shopping and two-day delivery experience has restructured retail, forcing other companies to compete on the ecommerce giant’s terms. Fintech companies run A/B tests and deploy new code daily, dancing circles around the glacial pace of banks. General Electric is applying lean startup innovation techniques in its FastWorks program, iterating prototypes according to customer feedback and introducing products to market faster and cheaper than the traditional approach to research and development.<sup>5</sup>

In the information age, business acceleration is the name of the game.

Organizations need to harness technology, ramp up growth and increase speed to market, all with a relentless drive toward innovation. To do this, they must optimize the tidal wave of information at their disposal. It is not easy, but those who succeed will unlock new opportunities and competitive advantage.

By the end of 2019, humans accumulated over 40 zettabytes (40 trillion gigabytes) of data—that is 40 times more bytes of data in the digital universe than stars in the observable universe. But this is only the beginning. In 2025—just five more years—the total amount of data in the world is forecasted to hit 175 zettabytes.<sup>6</sup> This is not only an unprecedented volume but a staggering speed, considering it took decades to create the first 40 zettabytes.

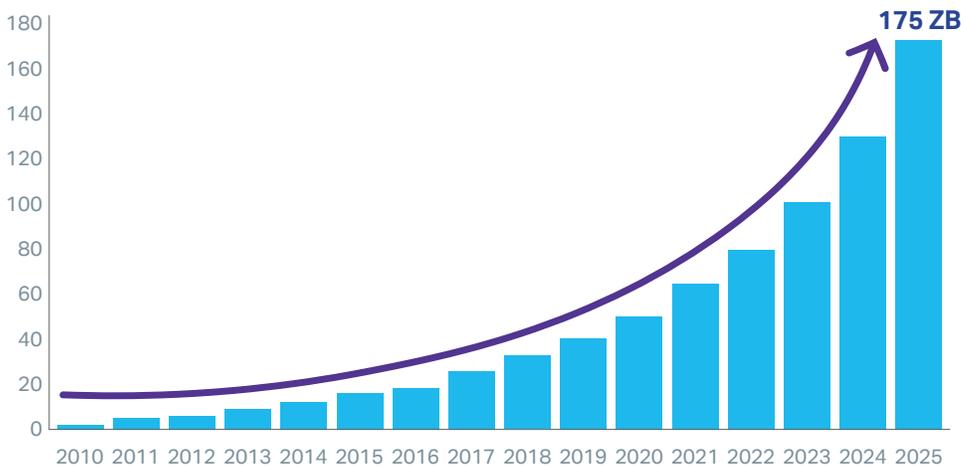


Figure 3:

Exponential Growth of Information<sup>7</sup>

This explosion of data is the product of emerging technologies like AI-enabled automation, 5G and the IoT. IDC forecasts that only 30% of businesses will be able to harness this information into real-time outcomes.<sup>8</sup> The fate of the other 70% is no secret.

Using this information effectively allows the enterprise to achieve operational excellence, unmatched customer experiences and new business models. In the *information age*, it is *information* that powers innovation and transformation.

The race to modernize core business processes and applications has already started. Companies are investing in innovation: by 2024, digital transformation and innovation will account for over 50% of all IT spending.<sup>9</sup> Fourth industrial revolution technologies are transforming transactional systems, sales cycles, databases, inventory, operations and supply networks.

There is one crucial technology that functions as an innovation accelerant, modernizing infrastructure so other technologies can operate at scale and bring together information to fast-track business growth: that technology is the cloud.

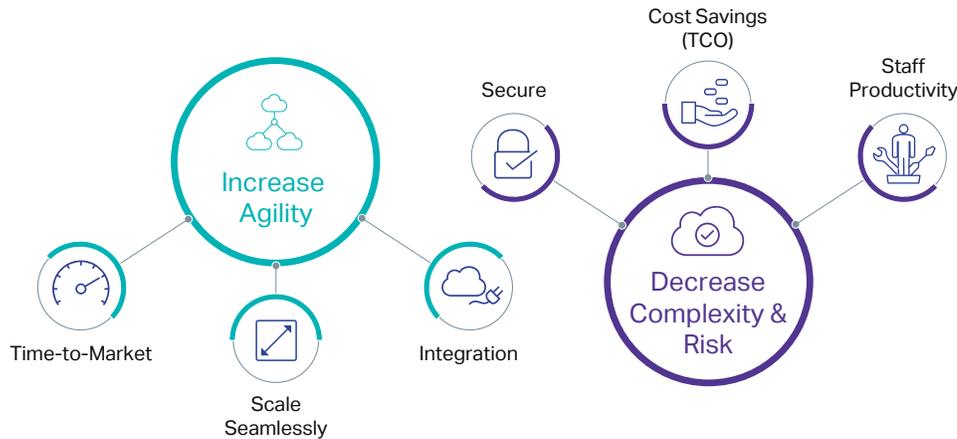
## Cloud Is the Destination for Innovation

Innovation is an enterprise muscle: “By 2025, over two-thirds of the G2000 will be high-performance, large scale producers of software-based digital innovation.”<sup>10</sup>

– IDC

The cloud has matured. No longer the nascent technology of bold startups, today's cloud is enterprise-ready. The enterprise-ready cloud scales seamlessly, integrates easily with other systems and reduces time-to-market. It is the connective tissue of the enterprise. On top of this, cloud is secure and cost-effective.

Cloud allows businesses to operate in very different ways, offering new opportunities to integrate, transform, scale and prosper.



**Figure 4:**

The Cloud Accelerates Business Innovation

This is why 90% of companies are already using some form of cloud, whether public, private, hybrid, managed services or Software-as-a-Service (SaaS).<sup>11</sup> The cloud market has boomed, reaching a worldwide expenditure of \$210 billion at the end of 2019, a 23.8% increase from 2018.<sup>12</sup> Within five years, it is safe to say virtually all workloads will be centralized and operating in the cloud—83% of enterprise workloads already are.<sup>13</sup>

With its near limitless resources, cloud facilitates ideas across the entire business ecosystem, enables information to flow end-to-end through enterprise systems and simplifies interactions between applications, businesses, people and things.

One of the most essential ways it accomplishes this is through **modernization**. An aging IT infrastructure stunts innovation and digital transformation. On-premises deployments—which we refer to as “off-cloud”—often become unwieldy as new modules, integrations and customizations are added. As time goes on, complexity, inefficiency and costs rise while agility and scalability suffer. The business consumes time and money just to keep the lights on instead of applying these resources to drive growth and increase efficiency.

Cloud acts as the catalyst and accelerant for modernization, providing tools and services for continuous business innovation at scale. Moving to the cloud eliminates the heavy lifting required to continually upgrade to the latest version and access new capabilities—in the cloud, you are always running the latest version. Plus, unlike many legacy infrastructures, cloud typically offers 24x7 support, concrete SLA commitments and guaranteed disaster recovery. Modernizing existing business applications drives a more agile and innovation-focused business.



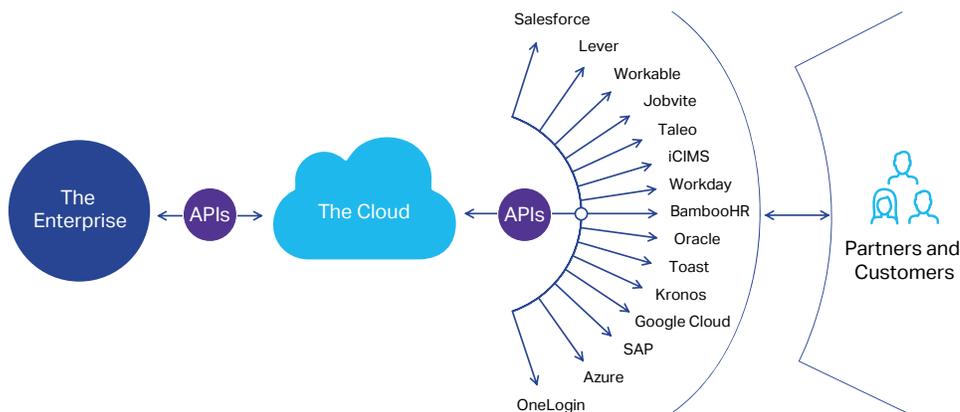
British American Tobacco (BAT) is a global tobacco and Next Generation Products company, with brands sold in more than 200 markets, employing around 50,000 people worldwide. With BAT having grown both organically and through acquisition over many decades, the BAT Human Resources (HR) Function had become highly federated. Globally, many different processes, service levels and IT systems, across approximately 180 countries were in use to manage employee files. As part of its global HR transformation project, BAT set out to provide a world-leading HR service centered on SAP® SuccessFactors®, a cloud solution in keeping with BAT’s cloud-first strategy.

To manage the significant volume of employee file information and document generation, BAT selected OpenText Extended ECM for SAP SuccessFactors to complement its single, global instance of SAP. BAT therefore chose to deploy Extended ECM for SuccessFactors in the OpenText Cloud. As part of the rollout plan, BAT implemented three HR Shared Service Centers at strategic locations around the global. By centralizing the HR function to these centers of excellence, not only are economies of scale providing a return on investment, but standardized and consistent processes are helping to further reduce cost and increase efficiency. Reporting is also more inclusive, accurate and timely. Further, the OpenText solution is helping BAT improve and automate employee communications, as data is automatically extracted from SuccessFactors and used to populate templates. Since the solution is hosted in the OpenText Cloud, the entire global team has access to design templates using the simple web tools. Once documents are generated, they are automatically stored within OpenText for long-term retention and retrieval, ensuring employee files are kept complete.

According to Andy Straw, IT Programme Manager at BAT: *“HR administrators can quickly and easily prepare analysis to support business planning and strategy. It is not just about the time saving, enabling faster decisions, but the completeness of the information and providing accurate analysis.”*

As well as making modernization easier, the shift to the cloud enables faster and simpler **application deployment**. With cloud, hardware and operating environments are ready to begin application work virtually immediately. This is in stark contrast to the lengthy process of approving, procuring, installing and preparing hardware and operating system software (all before application work can even begin). The enterprise can also **extend existing applications** to address new use-cases, without needing to replace current systems. Layering in new capabilities, such as capture, archiving or compliance, is easy. This elasticity allows applications to grow or shift with new business models while minimizing costs.

Likewise, technology partners can build custom solutions for the **API economy** in the cloud. For example, Content Services could be pulled from one platform, customer data from another and security from yet another. Being able to simply call these services from the cloud helps the enterprise quickly develop new and customized use-cases rather than rebuilding the foundations from scratch.



**Figure 5:**  
Enabling the API Economy

A cloud environment that **scales with the enterprise’s needs** enhances agility and decreases time-to-value. It also empowers the enterprise to act on a **global scale**. Customers, employees and business partners around the world can securely collaborate in the cloud with a simple API call and the device of their choice. “Anytime, anywhere” access removes technological barriers and lets people get on with the business at hand. Plus, with no need for an intermediary between customers and businesses, the enterprise has a greater opportunity to develop and implement exceptional customer experiences.

In today’s API economy, **integration** is essential to innovation. As the number of applications and data formats multiply, it becomes increasingly difficult to gain end-to-end visibility of business processes. Companies of all sizes, in every industry, are developing applications and further saturating the digital landscape. Today, the average enterprise has 464 *custom* applications deployed.<sup>14</sup> When information cannot flow across business systems, innovation is stifled.

Shifting applications to a cloud service lets organizations connect any enterprise application with **centralized information management**. Information silos are broken down so data can flow to the people and processes that need it, when they need it. Information sprawl is eliminated with an integrated, secure hub for intelligent data management. This is how improving integration reduces the complexity of managing business information and leads to innovation, illuminating synergies within existing data assets and processes.

Information is the enterprise's greatest asset. Cloud supports massive datasets and complex processes. Cutting-edge technologies like AI and machine learning thrive in the cloud, analyzing the aggregate information and turning it into deeper insights, smarter decisions and an information advantage. IoT devices can submit data to the cloud for analysis in real time, especially as 5G networks open the floodgates. Combining these capabilities makes possible innovations like A/B testing at scale, predictive maintenance and hyper-personalized experiences.

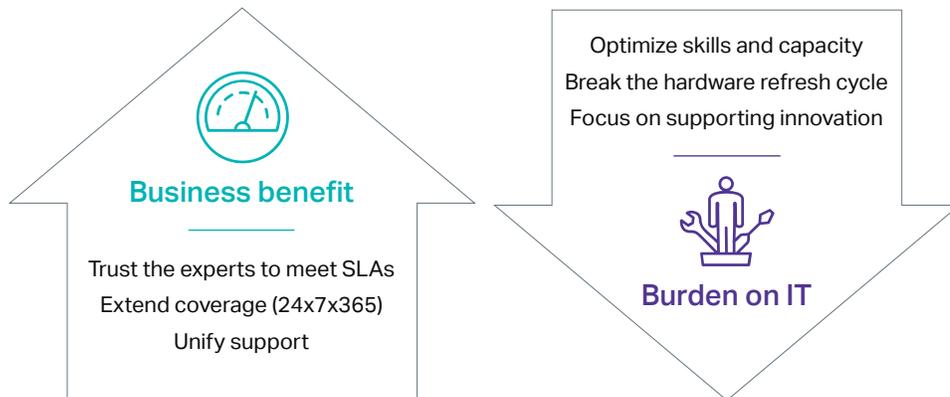


Figure 6:

Refocus Critical Resources

With less infrastructure and operational IT required, the cloud also **lowers the total cost of ownership**. The enterprise can **refocus resources** toward initiatives that will have the biggest impact on innovation, such as research and development or strategic IT projects. In 2017, 74% of chief financial officers reported that cloud computing had *the* most measurable impact on their business.<sup>15</sup>

**Cybersecurity** continues to be a top-of-mind challenge. Points of vulnerability multiply constantly in our hyper-connected, digitally transformed environment while regulatory requirements, such as the GDPR, emerge and expand. Unfortunately, many IT departments lack the necessary resources (whether tools, specialized expertise, personnel or capital) to protect enterprise applications and information. This is where the cloud steps in once again, with the ability to automatically roll out security updates with the latest protection across all systems, leverage big data to predict and manage threats in real time, monitor all connected endpoints, and sustain a Zero Trust security architecture. Innovation can only happen when the enterprise is not worried about putting out fires.

The cloud is not an *end*; it is the *means* by which the enterprise can reach **destination innovation**. It is a force multiplier. It is where brilliant ideas turn into new business models and digital transformation, faster than ever before.<sup>16</sup>

Every large organization must decide what their journey to destination innovation will look like. It is no longer a question of "if", but "when" and "how."

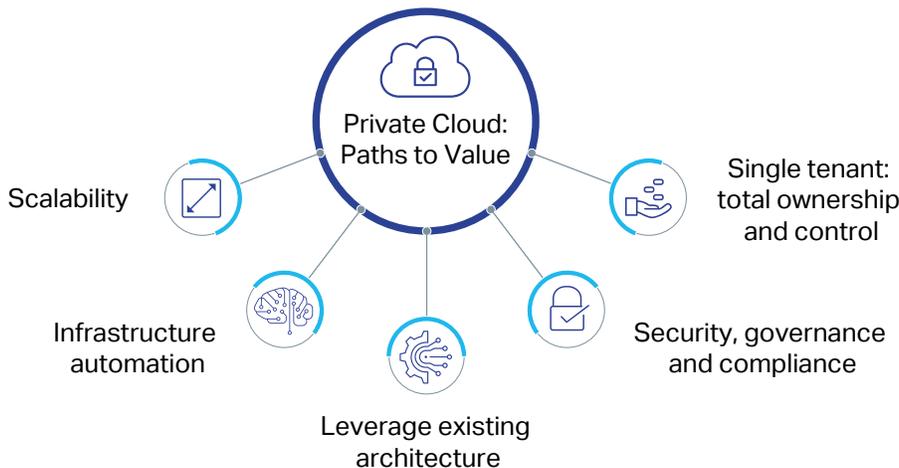
## How to Reach Destination Innovation

Cloud is indisputably the destination for innovation; however, knowing the destination is different from understanding the specific path to get there. Getting to destination innovation is not always straightforward—especially for large enterprises contending with existing infrastructure, vast quantities of data and entrenched processes.

Organizations must first consider types of cloud deployment, which include private and public clouds, managed cloud services, SaaS applications and varying hybrid combinations.

### Types of Cloud Deployment

**Private clouds** are enterprise-ready clouds tailored to the unique needs of an organization. The cloud vendor provides the infrastructure and expertise, helping the business to implement the right solution for them and realize shorter time-to-value.



**Figure 7:**

Benefits of a Dedicated Private Cloud

However, many organizations have already begun to shift enterprise workloads from on-premises to one or more **public cloud** environments, such as Google Cloud, Microsoft Azure or Amazon Web Services (AWS). A public cloud deployment is often a “do-it-yourself” endeavor, unless another technology vendor with supported integrations is brought in to manage the environment.

Within these public or private clouds, the enterprise can run its own applications or take advantage of **managed cloud services**. Managed services outsource operational responsibilities to a vendor that handles transition, management, optimization and future-proofing. This removes the burden of managing the solution from the enterprise, freeing it to focus on higher value activities. It is clear that organizations are finding value in managed services, as the global managed services market was valued at over \$155 billion in 2017 and is expected to reach almost \$300 billion by 2023.<sup>17</sup>



Solenis is a leading global supplier of water treatment and process chemicals that also supports customers with application insights and practical expertise. They produce chemicals that go into process manufacturing for primarily heavy industries. Solenis' global supply chain previously relied on manual processes using legacy systems that made the company's B2B process and supply chain management complicated and cumbersome. They were seeking a solution to help build a digitized conversation where systems could be managed from beginning to end, so they could focus their attention on top line growth, innovation and sales.

Solenis turned to OpenText's cloud-based B2B Managed Services to simplify the management of their global supply chain and automate internal processes such as the flow of transactions with suppliers and customers. With this platform, the company can quickly onboard new customers and suppliers. Further, Solenis is able to leverage OpenText experts to lead the implementation and help manage everyday operations. This cloud-based solution has driven down costs and increased efficiencies, freeing up key Solenis staff to focus on their core business, new opportunities and innovative ideas.

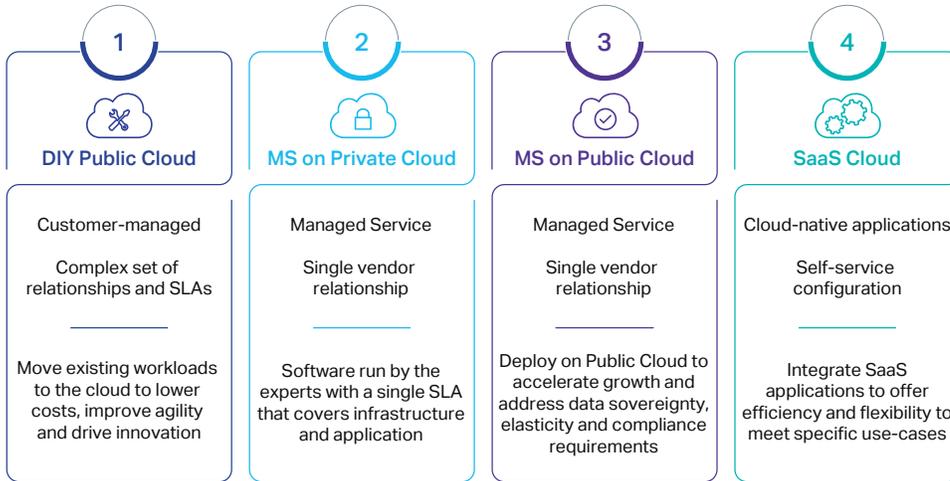
While managed cloud services offer a robust deployment option for businesses looking to outsource operation and support, other use-cases are better addressed by microservices delivered as **Software-as-a-Service**. Regardless of where the enterprise is in its journey to the cloud, SaaS applications are purpose-built to meet specific business needs. Organizations are increasingly familiar with and confident in their SaaS solutions, evidenced by 73% indicating that nearly all their apps will be SaaS in 2020.<sup>18</sup>

**Hybrid cloud** describes a deployment where different components may reside off-cloud, in the private cloud or in a public cloud. It can include elements of managed services or SaaS. Most organizations move to a hybrid deployment when they must retain sensitive data on-premises but want to outsource application workload management and take advantage of the scalability and performance of the cloud.

**Multi-cloud** is another flexible option. IDC reports that 95% of enterprises have built an infrastructure that uses "multiple private and public clouds based on economics, location and governance policies."<sup>19</sup> In 2020, multi-cloud is the new normal for migrating workloads to the cloud, with a focus on a company's specific data requirements and long-term goals rather than the nuances of different cloud platforms.

After understanding these options, the enterprise must determine what pattern of cloud adoption best meets its needs. As more businesses move new and existing workloads to the cloud, we are seeing four common patterns emerging.

**Common Patterns of Cloud Adoption**



**Figure 8:**

Patterns of Cloud Adoption

- Pattern 1 – DIY Public Cloud:** Workloads are moved to a third-party public cloud. This pattern is effective for companies that have a consumption-based agreement with a public cloud provider for all their applications to move to its cloud. However, companies may end up dealing with three or more SLA contracts: one with the infrastructure provider, one with a systems integrator and one with the technology vendor.
- Pattern 2 – Managed Services in a Private Cloud:** An expert technology vendor runs and manages everything within the private cloud. A single SLA covers the infrastructure and applications.
- Pattern 3 – Managed Services in a Public Cloud:** Applications are run in a third-party public cloud but are managed by a vendor and delivered with a single SLA. This pattern gives all the advantages of Pattern 1 while eliminating its drawbacks (the need for multiple contracts and a lack of single vendor accountability).
- Pattern 4 – Cloud-Native SaaS:** These applications and services are born in the cloud. They are purpose-built, self-provisioning and dynamically scaling. SaaS applications help to prevent information sprawl and simplify technology investment decisions.

Although these are the basic patterns of cloud adoption, they can be combined in different ways to meet the varying needs of the enterprise.

The next critical decision is: how will the organization make the transition to the cloud deployment of their choice? Transitioning workloads to the cloud is not one-size-fits-all; there are many paths. To determine the best route, the enterprise must assess its business needs and consider factors including costs, regulatory requirements and data sovereignty.

## Transitioning to the Cloud



Figure 9:

Cloud Transition Strategies

- **Manage in Place:** In this scenario, data is not necessarily migrated from the off-cloud implementation. Instead, business content is managed in place as part of a hybrid deployment, integrating new cloud-based applications with existing on-premises systems. To enable the smooth flow of data, connectors are established between the on-premises applications and data stores, and the cloud applications. This model can also be part of a phased move towards a full cloud deployment, as it allows data to migrate to the cloud over time.
- **Migrate to Modernize:** Also referred to as “lift and shift,” this model is designed to migrate existing applications and data from the current off-cloud deployment to the cloud in a single move. This approach has a major benefit—the system is ready to go live as soon as the migration is complete, shortening the time-to-value. However, as application portfolios grow and data volumes explode, it becomes more challenging and the risks increase.
- **Phased Approach:** This model breaks the migration to the cloud into a series of phases. Typically, there is a large upfront migration followed by a series of smaller migrations until the entire environment resides on the cloud. This approach allows for application and data testing as the migrations continue, which helps ensure data quality and reduce the risk involved in the transition. It also allows for an application version upgrade to be completed as part of the cloud transition.
- **Iterative Approach:** Like the previous model, this approach uses several phases; however, they tend to be smaller and may overlap rather than running sequentially. This approach is becoming the most common because each iteration is small, reducing cost and risk. Many iterations are executed to move all applications and data from off-cloud to cloud.

Regardless of which transition approach an organization selects, the best cloud service providers will help deliver tangible business benefits. Look for a trusted partner that demonstrates the expertise, people, infrastructure and scale to accommodate enterprise requirements on a global basis. The provider must have a deep understanding of the enterprise’s business priorities and technical environment. This requires openness, transparency and trust on both sides. It can be a natural fit for organizations to enter a cloud or managed services relationship with their software solutions provider, as the provider will already understand the applications and priorities.



## Snohomish County Public Utility District (SNOPUD)

Snohomish County Public Utility District (SNOPUD) is the second largest publicly owned utility in Washington, and is committed to delivering power and water to its customers in a safe, sustainable and reliable manner. They started out with an SAP implementation and used OpenText in the background with xECM. After realizing how OpenText xECM benefited their company and helped with their overall collaboration needs, SNOPUD decided to go enterprise-wide with OpenText as the main repository. Since this would mean the demand for content services was going to be higher, they would either require a larger team to support a bigger environment or they would have to move to managed services. Moving to managed services was the logical choice, as it allowed their team to be more proactive. They could spend less time supporting internal systems and more time helping users to be business process oriented.

SNOPUD's migration from on-premises to OpenText Cloud Managed Services provides business value and agility by ensuring the organization is up-to-date on upgrades and patches, along with expediency for project implementation and deployment timeframes. In addition, the company can leverage OpenText expertise and enable its staff members to focus their efforts on value-added activities such as deploying new business functionality versus technical environment setup and troubleshooting. Moving to a Cloud Managed Services environment is a key next step in SNOPUD's digital transformation journey.

Embracing the cloud and reaching destination innovation is not for the faint of heart. It is often a multi-year journey that requires significant investment. Companies must be strategic and committed when following their path to the cloud.

But it is worth it. Beyond bringing essential modernization and integration, the right cloud approach will empower the enterprise's other technologies to accelerate digital transformation. Information Management is a critical suite of technologies that, together with cloud, help the enterprise unlock innovation.

## Information Management in the Cloud

Information Management (IM) allows organizations to capture, govern, exchange and enhance information while keeping it secure. IM brings together key technologies to enrich information and processes from end-to-end. It includes platforms of record and platforms of engagement such as Content Services, Business Network, Customer Experience Management, and Security and Discovery. IM also integrates critical accelerants, such as artificial intelligence, analytics and automation, so the enterprise can get the most from its data.

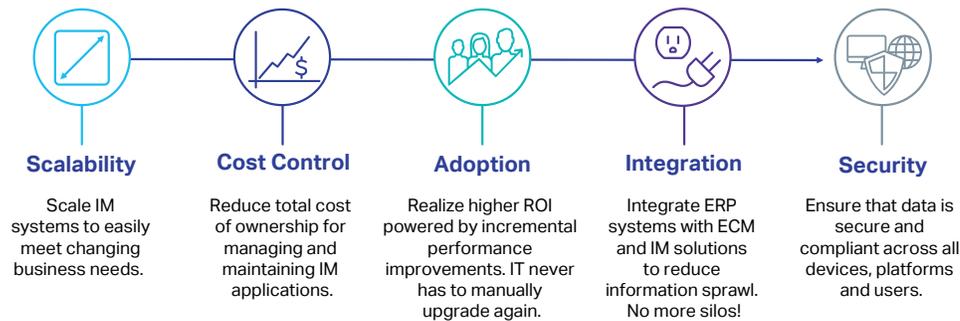


Figure 10:

Benefits of Information Management in the Cloud

Scoping, implementing and managing IM application deployment is a significant undertaking for any enterprise, with on-premises deployment requiring particularly heavy lifting. That is why, although IM can run off-cloud, most enterprises are choosing cloud. Organizations want the benefits of an IM solution without the burden of managing it. They want to speed up implementation and address internal resourcing challenges. According to McKinsey, CIOs see the cloud as a predominant enabler of IT architecture and its modernization, which is why they are increasingly migrating workloads and redirecting a greater share of their infrastructure spending to the cloud.<sup>20</sup>

Information Management in the cloud delivers unfettered access to content for internal and external global users, with the **flexibility and scalability** that deliver a competitive advantage. Businesses can optimize the performance, availability, security and user satisfaction of IM applications in the cloud, starting with service onboarding and continuing through the complete lifecycle. The cloud supports business success by minimizing the time it takes to deploy IM solutions, lowering the risk profile of the enterprise with business continuity services and increasing adoption by keeping users up to date with the latest and greatest that the vendor has to offer.

In the cloud, IM is agile to meet evolving business needs. This empowers the enterprise to transform the way it manages and leverages information, unlocking the Information Advantage and opening the door for innovation.

The benefits are measurable and real. Take **cost control**, for example. When compared to off-cloud deployments, IM in the cloud reduces operational expenses by an average of 30%. Capital expenses are also reduced for assets such as infrastructure and software. Other areas of cost savings, such as improved time-to-market with innovations, may be more challenging to measure, but are critical nevertheless.

Furthermore, shifting to the cloud can change the type of expenditure from capital expense (capex) to operational expense (opex). This is because implementations in the cloud can be executed more rapidly by avoiding capital acquisitions, like hardware and operating systems, and instead creating an ongoing partnership with the cloud software provider. This direct relationship also gives the enterprise access to the cloud software provider's expert teams, which can accelerate implementations and reduce risk in the ongoing operation of applications. Decreasing capital expenditure liberates capital for spending in other areas.



As one of the top logistics providers in North America, Matson Logistics offers domestic and international rail intermodal services, long haul and regional highway brokerage, and supply chain services, as well as third-party logistics services that include warehousing, distribution and international freight forwarding. Matson Logistics sought a B2B platform with world-class EDI capabilities to securely exchange business documents, such as purchase orders and invoices, in a standard electronic format with its network of business partners.

Matson Logistics wanted to focus on their core competencies and move away from the daily grind of managing B2B integration operations. The company was spending too much time and money onboarding new trading partners and managing trading partner issues, rather than on its primary focus of delivering first-rate logistic services to customers.

OpenText B2B Managed Services was the ideal solution to manage the company's B2B network needs, including onboarding and enabling trading partners, mapping, translation, document tracking and monitoring. Matson Logistics consolidated its EDI operations from four different service providers to a single platform and handed off the day-to-day responsibilities to OpenText. With OpenText B2B Managed Services, Matson Logistics achieved cost savings and operational efficiencies, as well as enhanced service delivery to its customers. The company was able to reduce support costs by 24%, cut down trading partner onboarding by five weeks, reduce advanced shipping notice (ASN) fines by 12% due to improved ability to meet service level obligations, and redeploy their IT staff to other value-added functions.

A major consideration with IM is the time and challenge of planning for and executing minor and major upgrades. IM in the cloud eliminates this aspect, as the cloud provider can execute all patches and updates as part of the service. IT staff are freed to focus on other mission-critical business systems. This alone is a powerful reason to consider a shift to IM in the cloud. Enterprises can take advantage of new product features without having to be concerned about the complexities of software updates. **Never manually upgrade again.**

Shifting IM to the cloud gives the enterprise access to highly skilled operations teams that can manage all infrastructure and operations elements, including platform, application, system, security, performance, availability and capacity management in a way that is not possible without the cloud.

As business leaders look to digitally transform, leveraging software ecosystems has become a critical way to gain an advantage and improve business. IM applications in the cloud can be **easily integrated** with other leading applications, such as Microsoft Office suites, HR applications, customer relationship management (CRM) and enterprise resource planning (ERP). Transitioning to the cloud also presents a unique opportunity to embed and integrate advanced technologies like big data analytics, AI and machine learning.

**Security** is another essential benefit of moving Information Management into the cloud. When critical information and applications are in the cloud, the cloud can mobilize to confront threats across the entire technology ecosystem. Cloud has better visibility on endpoints, traffic, users and data than legacy infrastructure. It also easily scales and updates when new security capabilities are needed.

Flexible cloud models for public, private or hybrid deployments let organizations employ the same governance framework used by the most bulletproof on-premises systems with the added bonuses of greater availability, round-the-clock support, concrete SLA commitments and disaster recovery. Leading cloud providers must also pass rigorous security certifications for their data centers and the operations within. These certifications deliver assurance that data is protected and secure, wherever it resides. With these advantages, cloud offers a higher level of accountability than the enterprise can deliver on its own from behind the firewall.



Pillsbury Winthrop Shaw Pittman (Pillsbury Law) is an AmLaw 100 law firm, advising and counseling the world's largest companies across their litigation portfolios. With more than 700 lawyers located in offices around the world, Pillsbury maintains a prominent standing as a trusted legal advisor in a rapidly evolving market. Part of that evolution requires staying on top of the best eDiscovery tools available. A single case can easily involve millions of records that require analysis and attorney review to identify the key documents and information necessary to support an effective trial strategy. The Pillsbury team handles multiple terabytes of active project data at any given time. That data needs to be treated across the entire EDRM workflow, preferably in-house and with special attention to the safety and security of documents.

Meeting this need requires robust processing capabilities, sophisticated administration capabilities, integrated redaction tools, customizable document productions and, critically, the most powerful analytics and machine learning capabilities available to help attorneys quickly find the key facts that could make or break their cases.

Pillsbury selected OpenText Axcelerate to provide a centralized, cloud-based eDiscovery platform for its litigation portfolio and bring the discovery function in-house. Today, Pillsbury manages the entire eDiscovery process in-house from a single interface. The Pillsbury team processes client data, manages its own projects and runs productions themselves, with no dependency on third-party providers. Axcelerate is also among the most secure eDiscovery platforms available because it leverages the AWS Cloud and takes full advantage of the extensive security features available.

Axcelerate's machine learning tools are integrated directly into the platform and standard workflows, giving Pillsbury clients access to the power of artificial intelligence with every project. As a result, Pillsbury has developed significant domain expertise in this cutting-edge facet of the law. In addition, since Axcelerate is optimized for the cloud, Pillsbury is able to realize substantial efficiencies by reducing infrastructure costs associated with hardware. The team possesses all the computing power it needs on-demand.

To get real value and reach destination innovation, Information Management in the cloud cannot be approached *à la carte*—true digital transformation demands a holistic strategy. Only then can cloud act as a force multiplier to power next generation businesses.

## Above the Clouds

Cloud is the destination for innovation because of what it enables us to accomplish. In that light, the pervasiveness of this easily available, powerful technology was unavoidable.

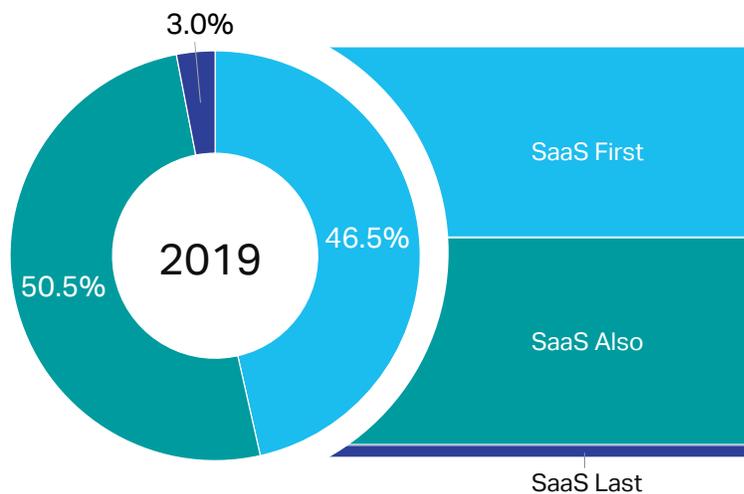
Today, the leading cloud strategy is hybrid. Enterprises are combining public clouds, private clouds and on-premises resources to gain the agility they need to gain competitive and information advantage. IDC predicts that by 2021, 90% of enterprises worldwide will have built a hybrid cloud infrastructure.<sup>21</sup>

What does the future hold?

The next phase of cloud will be more complex, more sophisticated and present an even larger opportunity. We are in the midst of a once-in-a-generation opportunity as the legacy systems and applications at the heart of the modern enterprise move to the cloud. This includes the databases and ERP systems that manage operations at the world's largest companies. As these business-critical workloads move to the cloud, new opportunities emerge to modernize systems and integrate modern technologies to create purpose-built solutions leveraging advanced technology.

Tomorrow is a *cloud-first* world. Evolving capabilities, like SaaS, containerization, the API economy, edge computing and artificial intelligence, are taking the cloud to the next level. These technologies have the potential to transform the market—in ways as profound as the move from client-servers to web application architectures 20 years ago. "Never upgrade again" is a disruptive value proposition. New business models are opening up to innovative companies in the information era.

It has never been faster, easier or less expensive for developers to roll out SaaS applications. SaaS is creating an environment where business users can deploy a technology stack that supports their unique ways of working, without the bulky requirements for an enterprise-wide deployment. This new generation of cloud-native applications represents a significant opportunity for developers, CIOs, and business users to shift the ways they interact with enterprise technology.



n=1,874  
Source: SaaSPath 2Q19, April 2019. IDC

Figure 11:

Organizations Prefer SaaS<sup>22</sup>

With every conceivable business function available through this model, it comes as no surprise that 93% of CIOs have adopted or are planning to adopt cloud SaaS this year.<sup>23</sup> The success of SaaS has yielded a new landscape of “Everything-as-a-Service”—Infrastructure-as-a-Service, Platform-as-a-Service, Information-Management-as-a-Service. Can we see “Innovation-as-a-Service” on the horizon?

Containerization is another way cloud infrastructure is changing. With containerization, applications are packaged up with their operating system so they can be easily installed, run, moved and scaled across any platform or cloud without issue. Functionality is separated from customization, freeing organizations from years of accumulated technical debt and daunting upgrade complexity. As new technology becomes available, entire containers can be moved to new hosts (like a VM) to add capacity or improve efficiency. Multi-cloud and hybrid implementations are no barrier for containerized applications. We will see this incredibly versatile way of designing enterprise technology architecture more often as enterprises pursue all that cloud has to offer.

Containers and SaaS both communicate with APIs, thus integrating effortlessly into the API economy. As mobile and web technologies become ubiquitous, so too does the API economy. It is empowering integrations between all kinds of clouds and applications for seamless user experiences, greater intelligence and insight, and a superior ability to leverage data for information advantage. APIs are enabling new paths to new products, services and ways of doing business.

The API economy will continue flourishing as the IoT, edge computing, artificial intelligence and machine learning make integration even more essential.

At today’s 22 billion endpoints (or, edges), we are only seeing the beginning of the IoT. By 2025, that number will almost double to 41.6 billion.<sup>24,25</sup> Supported by 5G, the IoT will dramatically shift the world’s infrastructure to connect everyone and everything. The cloud is going to the “edge” with edge computing. Edge computing delivers processing power at points that demand low latency and immediate analysis.

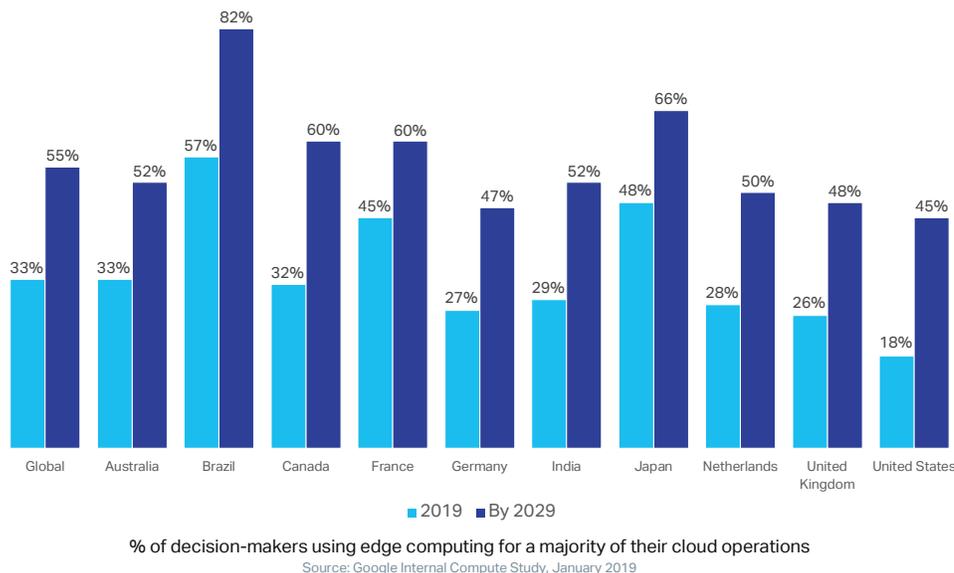


Figure 12: Edge Computing Now and in the Future<sup>26</sup>

For example, connected vehicles require edge computing for instantaneous decision-making that allows systems to respond to changing road conditions in real time. Other less critical automotive systems, such as telemetry, would send information to cloud services for processing. As edge computing becomes a priority, it will be combined with other cloud services to create a well-rounded offering that can provide speed when and where it is critical, while sharing larger data processing capabilities with the cloud.

The cloud is also fundamental to making the most of artificial intelligence and machine learning. A global market expected to be worth almost \$60 billion by 2025, AI is the next big technology that will change the world.<sup>27</sup> AI needs large data sets to create insights and fuel innovation. This data is available to the enterprise in unprecedented volumes thanks in large part to the cloud's ability to collect and manage information. Only in the cloud can this mass of data be captured and analyzed in real time. The commercialization of AI relies entirely on cloud, with no other way for businesses to achieve the sheer scale required to offer such data-intensive capabilities at an affordable cost. The hype around AI is intensifying, and AI runs on cloud.

The heart of cloud's ability to catalyze innovation is its ability to connect a wider ecosystem—including applications, processes, information, developers, business partners, vendors, customers. It removes barriers and smooths the flow of ideas. It is the connective tissue at the center of the information era.

Moving at the speed of business, cloud is the destination for innovation.

## Endnotes

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