

10 Most Innovative Data Center Companies to Watch
October 2022

CIOINSIGHTS

Insights from Technology Leaders

DATA CENTER
EDITION

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Kevin T Hart
CEO

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Editor's Note

Artificial intelligence

Technology has become the core fundamental of our existence today. The scope of the global software industry has evolved over the past two decades, and today we see the application of advanced technologies in almost every industry giant. Back in the 1950s, the fathers of Artificial Intelligence, Minsky and McCarthy, described it as 'tasks performed by machines that would previously require only human intelligence to complete. It is not what you can do, but how well and efficiently you can learn new things.'

Today, Artificial Intelligence has become ubiquitous in our existence and has seen a massive shift in just a few years. From recommending what should be our next purchase to the use of virtual assistants such as Amazon's Alexa and Apple's Siri, AI can merge our daily lives and make them simpler. These once expensive and exclusive technologies have become commonplace today.

The Artificial Intelligence industry is set to grow to \$190 billion by 2025. In 2021, the global AI systems spent more than \$57 billion, and more than 85% of businesses considered investing in AI a strategic priority. With such on-point statistics, we know that every industry will require Artificial Intelligence in some form or the other. As we inch closer to different discoveries, AI-powered systems have gained momentum in various facets of our life, such as self-driving cars to plagiarism tools, the study of brains' neurological systems to restaurant applications, banking to credit and fraud, chatbots to video gaming, AI is everywhere.

Every business has a scope to adopt artificial intelligence in their daily operational commitments, thus increasing their revenue and reach. Companies creating AI software must be more vigilant and respond to customer queries and requirements quickly to keep up the pace and ensure safety and security.

The subtle breakthroughs have enabled companies to identify problems in their industry and tackle them with utmost precaution using artificial intelligence. In this edition of CIO Insights, our thought leaders will address and share their crucial insights, learnings, and impact of artificial intelligence in every industry and how it is changing the global software landscape.

We hope you have a fantastic time reading it!

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Insights from Technology Leaders

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SEGRA®



"Segra – your premier data center partner offering enterprise network infrastructure and high availability data center services."



Kevin T Hart
CEO

Faster and reliable connectivity gained prominence during the pandemic. But along with the need for increased capacity came a heightened focus on cybersecurity and data breaches. For organizations looking for safe, secure, and reliable services, Segra provides a one-stop shop for fiber and managed services for its customers.

But what makes Segra different from other data centers? Read on.

While there are numerous data centers in the Eastern US, Segra is a regional leader, offering high-availability data center services throughout the mid-Atlantic. Not only because of its impressive network, data centers and products, but also its exceptional customer service, Segra is unmatched in the industry.

One of the largest independent fiber infrastructure bandwidth companies in the Eastern US, Segra owns and operates an advanced fiber infrastructure network throughout nine Mid-Atlantic and Southeastern states.

Segra offers wavelength, Ethernet, MPLS, dark fiber, advanced data center services, IP, VPN, managed services, voice, and cloud solutions, all backed by its industry-leading service and reliability. Its prominent customers include carriers, enterprises, governments, higher education, and healthcare organizations.

Focusing exclusively on enterprise services, Segra offers high-availability data center services throughout the region including in Virginia, West Virginia, Pennsylvania, South and North Carolina, and Georgia. With direct connectivity from the Segra fiber footprint, along with ample options for connectivity, Segra's data centers are uniquely positioned to offer clients on-net data center and colocation services.

Segra's data centers are directly connected to the company's extensive fiber network, and house, maintain, and protect mission-critical servers and data for its customers.

The enterprise-class facilities in Charlotte, NC, for example, are staffed 24x7x365, are SSAE 16 SOC 2 Type II certified, and PCI DSS and HIPAA compliant. In addition to colocation, enterprise services include Infrastructure as a Service (IaaS), Disaster Recovery as a Service (DRaaS), Storage as a Service (STaaS), and Security Operations Center as a Service (SOCaaS), and Backup as a Service (BaaS).

"Segra's Charlotte data center acts as a carrier hotel," said Segra CEO Kevin T Hart, "with 12 of the largest carriers in Charlotte having fiber routes and points of presence (POP) within its facilities, allowing robust, cost-effective options for clients."

Segra offers fiber-based end-to-end connectivity solutions, security, collaboration, voice services, and wireless backup. This is in addition to data center colocation and cloud services products, IaaS, DRaaS, and BaaS.

Remote work continues to be the order of the day, with companies continuing to enable remote workers – a shift ignited by the pandemic and currently an accepted norm. Companies are no longer mandating their employees work onsite, nor do they want on-premises data centers. So, companies are seeking data center space that can run their workloads.

Enter Segra with its multipurpose solutions and broad range of cutting-edge technology.

"Colocation takes the worry out of managing a facility. We offer audit compliance, power, cooling, 24x7x365 staffing with Segra full-time employees, as well as physical security for colocation customers," said Hart.

Cloud products are gaining momentum as companies shift critical data onto the cloud. Companies can run their traditional workloads in the Segra Cloud and take advantage of Segra's hypervisor management, OS management, SIEM service, immutable Backup and Restoration, and Disaster Recovery services.

With many companies seeking out the low network latency between data centers to meet the requirements of their applications such as IoT (Internet of Things) applications, stretch clustering, and active application architecture, Segra data centers offer extremely low latency with few hops on their data center network fabric. And with their Express Cloud Access product, they can offer connectivity to public cloud providers for companies choosing to run a hybrid cloud architecture.

When asked about the challenges faced by customers, Hart acknowledged that many companies are facing staffing issues like recruiting and retention during the current 'war for talent'. However, by opting to move out of their company-owned facility, organizations no longer need to retain the staff to run a data center. By subscribing to cloud services, customers no longer have the burden of managing the underlying hardware, hypervisor, and OS, so their team members can focus on the applications serving their enterprises and customers.

With the issue of where to house company data mitigated, another daunting challenge remains. Ransomware and other cyber security breaches represent one of the most prominent issues of working in a connected world and a key concern that keeps CIOs up at night.

Organizations suffer significant financial losses and damaged reputations at the hand of ransomware and data breaches. This is one of the reasons a reliable data center partner like Segra is vital to companies of all sizes in any industry.

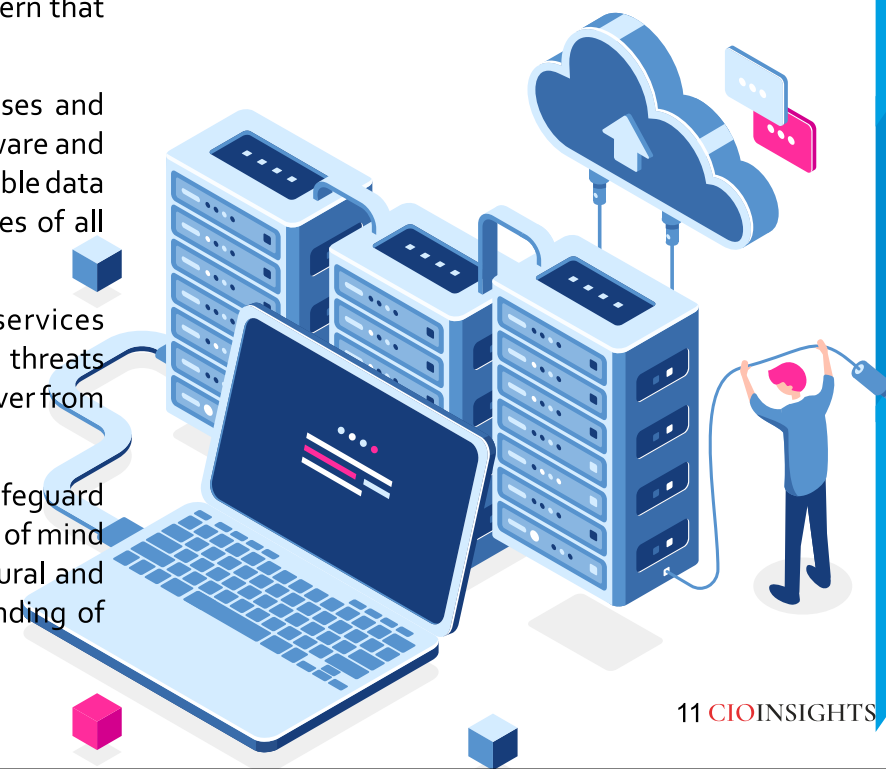
Segra provides an integrated managed services platform to help alert customers of potential threats and provide disaster recovery services to recover from ransomware attacks quickly.

With the predictive alert, companies can safeguard their servers. Segra's data centers offer peace of mind amid the threats of security breaches or natural and man-made disasters. With a deep understanding of

risk management, Segra's team of experts partner closely with organizations to meet the growing challenges of doing business in the digital age.

Elaborating on the company's role as a partner and advocate for its customers, Hart said, "At Segra, we deliver standardized solutions with diversity, redundancy, and scalability in mind, all backed by a strong fiber backbone. We have an experienced team of engineers with diverse backgrounds coming from many different industries who collaborate to build solutions to meet the specific needs of the enterprises we serve. We host customers from various industries like education, finance, health care, law firms, construction, retail, and technology."

He added that product highlights include Tier-3 and Tier-4 class data centers, including space, power, and environmental management. Customers have direct, resilient access to Segra's super-regional fiber footprint and network services. And Segra provides 24x7x365 monitoring by the Segra Network Operations Center for all their data centers.



Segra is a partner, advocate, and network connector providing secure and accessible data storage and retrieval for colocation, along with IaaS, BaaS, and DRaaS solutions.

To summarize, Segra provides responsive customer services, unmatched in the industry, and is both nimble and flexible, able to scale services to support customers as they grow.

When we inquired about case studies, Hart said, "With our unique menu of managed services and strength of our fiber network backbone in addition to our data centers, Segra enables enterprise partners to overcome hurdles daily. Three customers come to mind."

The first is a mid-size healthcare provider out of Wilmington, NC. Located between Cape Fear River and the Atlantic Ocean, their data centers were constantly impacted by hurricanes. Segra worked with them to provide a custom disaster recovery solution that is a hybrid of their DRaaS and colocation products. The customer has deployed a third-party appliance to replicate medical imaging files from their data center in the hurricane zone to Segra's inland facility. The customer also replicated all their virtual machines to Segra's DRaaS platform. In a disaster, the team of experts at Segra failover all their virtual machines to run in Charlotte and point those machines to the secondary image store in the customer's colocation space.

The second one is a regional law firm. With multiple offices across a geographic footprint that extends the length of the eastern United States, from Maine and Michigan down to Florida and nearly every state in between, the large firm subscribes to a wide array of services to power its regional practice. Segra provides many services, including colocation, IaaS, BaaS, DRaaS, hosted firewall, and L3 VPN interconnected to the customer's offices via fiber-connected MPLS or SD-WAN with wireless LTE backup. This law firm has entrusted Segra with its business. They are also a long-term customer that has referred several other law firms to Segra based on the excellent service and support they receive.

And the third customer example is one of the world's largest emergency response and environmental remediation providers. It is not only a data center colo customer, but its family of companies count on Segra for additional services, which include IaaS, DRaaS, hosted firewall, connectivity, voice, and much more. This customer utilizes almost every service Segra offers and enlists Segra to deliver secondary circuits to their larger sites. When they have a new network or data center, cloud, or security requirement, Segra is the first organization engaged to engineer the best solution.

"Segra is the largest independent fiber company in the eastern US we've got a best-in-class next-gen network, and business Internet connectivity is at our core. We are small enough to be agile with unmatched customer service and nimbly customer-focused to customize services to meet our customers' needs. On the flip side, we are an independently operating subsidiary of Cox Communications backed by Cox's buying power," said Hart.

"Segra has its fiber network and data centers, interconnected via fiber path diversity," he explained. "They can add managed services to continue to help their customers to scale their businesses."

Hart added, "We have a saying at Segra, we help provide our customers freedom to grow, so we're there to invest in their future."

Segra's world-class data centers meet the strictest industry standards. They are compliant with the Health Insurance Portability and Accountability Act of 1996 (HIPAA), Statements on Standards for Attestation Engagements (SSAE), and the Payment Card Industry Data Security Standard (PCI DSS). All Segra facilities are SSAE 16 SOC 2 Type II-certified and are monitored continuously. "Additionally, as one of the nation's largest independent fiber infrastructure bandwidth companies, Segra can provide customers with the fiber connectivity they require between their offices to reach our data centers."

Another key point of differentiation is that Segra has an immediate Tier 3 Engineer engaged in all DR incident response scenarios. This helps save time when mitigating risks.

The Segra Infrastructure as a Service (IaaS) platform takes the headache out of customer-managed server environments by hosting customer data in one of its secured data centers. Connected via Segra's private fiber network into its 24/7/365 staffed, highly available data centers, customers can leverage all the compute and storage resources needed to run critical applications. Segra's IaaS comes in two forms, a multi-tenant cloud offering for clients requiring minimal resources and a private cloud offering for customers requiring more dedicated resources.

Segra's Security Operations Center as a Service (SOCaaS) combines a powerful and scalable Security Information and Event Management (SIEM) solution. Along with our dedicated cybersecurity team, customers have visibility and actionable intelligence in real-time across their entire network. It reduces risk and exposure, enabling customers to act quickly before the spread of an attack and without the need for personnel investment, management, and maintenance.

Additionally, providing an industry-leading, multi-layered approach to security, Segra Hosted Firewall services work together to eliminate or reduce the risks associated with blended attacks while coordinating

security alerting, logging, reporting, compliance, and response. The Hosted Firewall service applies security policies to all Internet traffic traversing a customer's network.

Looking Ahead

Speaking about the future, Hart shared that Segra continues to look at ways to expand its offerings, whether through strategic growth that adds to its data center geographical footprint or with additional technologies in the data center space, such as container orchestration or Desktop as a Service (DaaS), as well as offerings in the managed services arena such as SASE deployments and Security as a Service (SECaaS).

Segra continues to grow as one of the largest independent fiber infrastructure bandwidth companies in the eastern US. It owns and operates an advanced fiber infrastructure network throughout nine Mid-Atlantic and Southeastern states. Segra provides wavelength, Ethernet, MPLS, dark fiber, advanced data center services, IP, VPN, managed services, voice and cloud solutions, all backed by its industry-leading service and reliability. With a robust team of experts and state-of-the-art technology, Segra offers its clients the confidence and connectivity to achieve their dreams.





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PEOPLE-CENTRIC NATIONWIDE CONNECTIVITY, FLEXENTIAL EMPOWERS THE IT JOURNEY OF THE BUSINESSES IN THE COUNTRY.



Ryan Mallory
Chief Operating Officer

With the global pandemic, businesses went remote, and connectivity became a major issue. The demand for faster connectivity and reliable services was at an all-time high.

Enter Flexential with its people-centric approach and nationwide connectivity that promised to empower the IT journey of the most complex businesses. The offerings include integrated colocation with a data center space of three million square feet in 19 markets that are highly connected.

Data center space is undoubtedly evolving daily; Flexential has recognized three major trends impacting the data center arena. And plans to leverage these trends for their growth in the market.

Talking about the trends, Flexential, Ryan Mallory, Chief Operating Officer, said, "The three major trends include—

- An increasingly dispersed workforce, causing the need for widespread connectivity.
- A multitude of new risks leads to a focus on disaster preparedness.
- A focus on sustainability, drawing attention to environmentally conscious providers."

Elaborating further on each of the trends, Ryan Mallory talking about the first trend, said that about 82% of urban areas have experienced a decline in residency as people are shifting from their more urban homes to their suburban homes. "This shift – accelerated by COVID-19 - has created an urgent demand for more widespread connectivity to support users' daily personal and professional life," informed Ryan Mallory.

Now, businesses are challenged to provide low-latency, high coverage access to Google Workspace, Microsoft Office 365, collaboration tools, video conferencing applications, and more within their corporate IT stacks to remain productive.

Flexential is ready for the challenge, as Ryan Mallory mentioned. "Flexential recognizes this challenge and is expanding their data centers to rapidly growing Tier 2 and Tier 3 cities like Nashville, TN, and Denver, CO – with no intention of slowing down," revealed Ryan Mallory.

Regarding the second trend, Ryan Mallory revealed that businesses have become more vulnerable than ever, and remote work has widened the threat landscape. Many forward-thinking leaders are now investing more time, energy, and dollars in disaster recovery (DR), data backups, and cybersecurity awareness. "Flexential supports this effort by offering customers access to a broad array of data and network security services with a security expert on the job 24/7. The security team offers upfront assessments, ongoing audits, simulated event tests, and regular reviews of security and disaster recovery plans to ensure that the company stays safe," said Ryan Mallory.

The third trend focuses on sustainability with the attention drawn toward environmentally conscious providers; and sharing his views on this trend, Ryan Mallory said that in recent years, many leaders are requesting more ESG reporting transparency from their providers and better tools to operate sustainably. Interestingly, carbon emissions from cloud services will play a major role in purchasing by 2025.

"Given this shift, we have recently taken monumental steps to design, build and maintain our data centers with the environment top of mind. In December, we tied our multi-billion-dollar investment directly with sustainability, issuing the green notes under our Green Finance Framework.

Moving forward, all new data center projects supported through the Framework must demonstrate a power usage effectiveness (PUE) of 1.4 or below, as well as zero water usage, to qualify for funding," informed Ryan Mallory.

Talking about the challenges faced by the Data Center Space, Ryan Mallory said, "Flexential recently collected extensive customer feedback from real-life deployments, aiming to help customers better scale their digital business during such a volatile time. From the feedback, Flexential created three new FlexAnywhere blueprints designed specifically to address the key pain points CIOs face in meeting ever-changing business challenges."

These blueprints will provide the following to the customers:

- **Provide Agility and Ability to Scale IT Infrastructure:** To meet business requirements, services, tools, and new business initiatives, with the ability to rapidly scale up or down resources, infrastructure, and data center footprints according to demand.
- **Improve Application Performance and Reliability:** To meet higher SLAs, application and network availability requirements, and provide CIO-level visibility into critical infrastructure.
- **Deliver Superior Network Performance and Interconnection:** To improve response times and create a predictable performance for distributed users, provide secure and reliable connectivity to core data centers, and improve network reliability to customers' cloud providers and business partners.

"With a tagline – Interconnected Data Centers and Hybrid Cloud IT Solutions – Flexential strives to empower its customers' IT journeys via an end-to-end human experience. Utilizing its 38 data centers across 19 markets, Flexential delivers tailored,

effective hybrid IT solutions," said Ryan Mallory when asked to throw light on their brand statement.

Ryan Mallory added that with Flexential, customers could access various offerings, including colocation, cloud, disaster recovery, data protection, connectivity, and professional services.

Flexential, with its sophisticated interconnection, allows customers to:

- Adjust their IT infrastructure
- Integrate new technologies easily
- Elastically conform capacity for effective digital ecosystem management

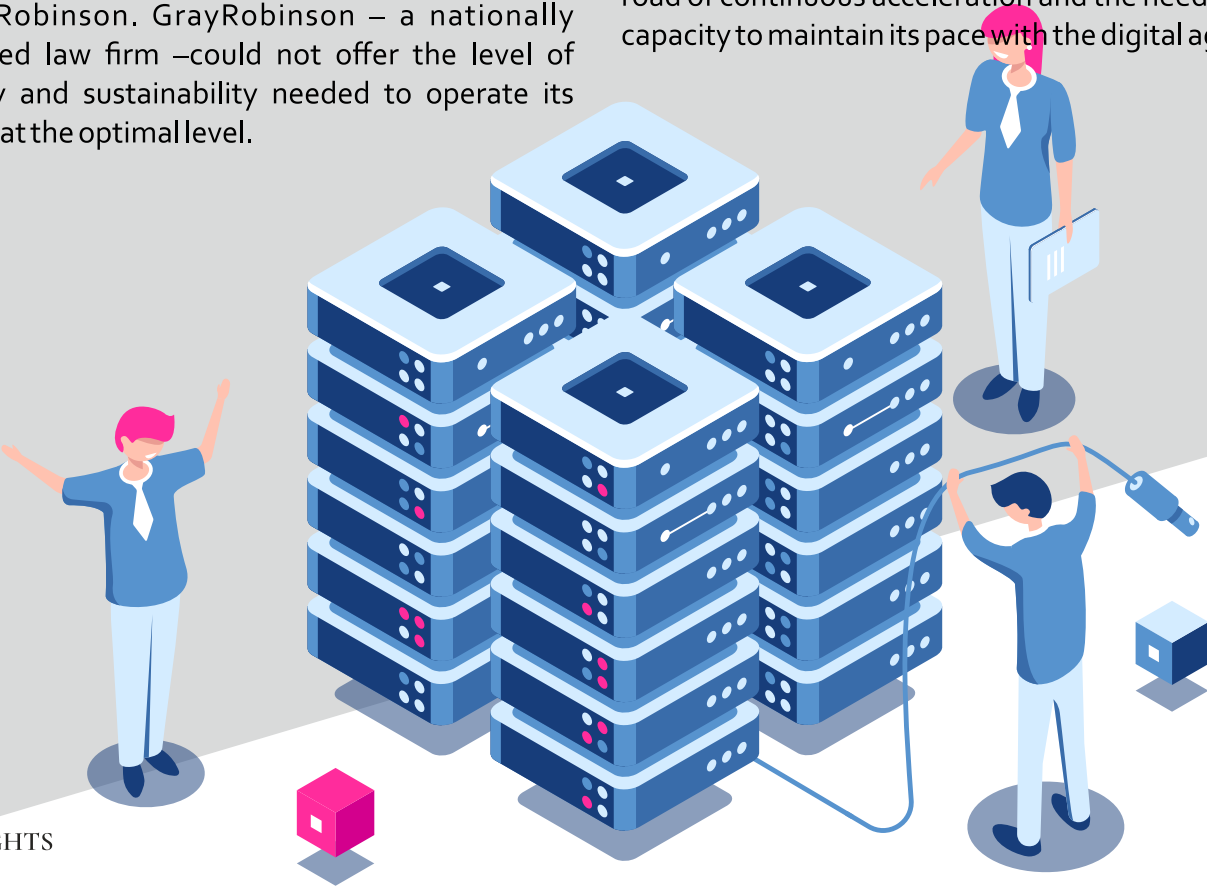
In a nutshell, Flexential leverages a consultative approach and comprehensive solutions and gives technology leaders an arsenal of strategic paths to uplevel their organization.

Citing the case studies where Flexential has enabled clients to overcome their hurdles and achieve the desired outcomes with their innovative range of solutions, Ryan Mallory talked about the recent study of GrayRobinson. GrayRobinson – a nationally recognized law firm – could not offer the level of reliability and sustainability needed to operate its business at the optimal level.

Flexential entered and, with its colocation environment, delivered disaster recovery services. Flexential implemented a DR strategy that used Flexential's flexible, reliable DRaaS solution tailored to meet GrayRobinson's unique replication and recovery needs. Flexential housed GrayRobinson's data in a facility built to endure a Category 5 hurricane. And with that in place, GrayRobinson substantially decreased its footprint with regard to leased space and has lowered its overall carbon footprint by a large margin.

Talking about the market competition, Ryan Mallory said, "Flexential is a customer-first business in every sense of the phrase. We are tirelessly committed to staying in the know on the latest IT trends and keeping open conversations with our customer base to ensure we're offering effective purpose-built products. As companies are getting their footing after COVID-fueled challenges, Flexential is helping customers reimagine what it takes to meet the needs of their teams and their end-users. We put our customers and their wants above all else, which is something many organizations can't claim today."

As far as the future is concerned, Flexential is on the road of continuous acceleration and the need for more capacity to maintain its pace with the digital age.



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Wafic Naccash

In today's progressive and forward-looking era, businesses are hardly functional without leveraging the technology around them. In 2020, an EY report shows that companies ahead in digital transformation share habits that are leading to improved financial performance. The ever-evolving digital landscape means competitive business models targeting the operations of the current business setup in unique ways. Both to sustain popularity amid escalating competition, and to beat the competition, companies must continue to look ahead.

The most effective way companies can do this is by undergoing a digital transformation. This applies to businesses that are still using traditional models of operation as well as those that come with a digital heritage but might want to tweak their setup. Now, digitization can involve a complete overhaul of numerous kinds but data management is a key component when making this transformation.

Why Businesses Must Leverage Data Management for Digital Transformation

Setups that have successfully reaped the benefits of digitization achieved it by addressing the quality of data available at their disposal. Data management has become the pivotal focus for businesses given the exponential rise in information availability compounded with an equally intense fall in the cost of data storage and cloud computing. This has resulted in most businesses replacing descriptive analytics with pre-embedded analytics to better inform decision-making. Restructuring business operations to a digital-first setup is a daunting task. It has been revealed that the number one factor hampering businesses from effective data management and a successful transition is the lack of efficient data architecture. Businesses that wish to avoid the hassle must follow a systematic transition process and here are the steps to it.

Data Strategy

Embarking on an ambitious expedition of digitizing data warehouses, without a set strategy in place, can lead to failure. The vision for transformative data management will only bear fruit once it aligns with realistic expectations of the value that's expected to derive from it. Start with strategizing on sound data architecture, eliminating disposable systems, and defragmenting data. This results in reduced IT costs and greater returns.

Data Governance

Erecting a sound data architecture and implementing data management strategies boil down to effective governance and here's how to achieve it.

- **A Top-Down Leadership Involvement**

Effective data management and governance are contingent on leadership support. Without buy-ins from the C-Suite, implementation is unlikely. Large scale companies can follow up by creating data-governance councils that highlight the potential challenges and benefits of effective data-governance for full-scale digitization. Data domains must be created and handed over to thought leaders responsible for overseeing and managing data elements.

- **Align Data Governance with the Overall Digitization Model**

Data supervision must be intricately linked with digital transformation, enterprise modernization, and omnichannel creation. Thorough integration of data-governance with in-house transition mechanisms yields value at the point of production and consumption.

- **Prioritize Data and Apply Appropriate Regulatory Pressures**

Instead of dealing with data on a holistic basis, categorize it by domains and then further prioritize data assets within each domain. This slims the governance focus to points of criticality and makes the process more effective.

Another point to bear in mind is that governance intensity must remain need-based. Industries vary based on the regulatory pressures they face and data governance must align with these to prevent unnecessary complexities.

Data Architecture

Remodeling data architecture regularly can bring businesses the highly sought-after opportunity of data monetization. The foundation of this architecture are data lakes consisting of consolidated data in its raw state for easy storage and inclusive accessibility within an organization. Information ingestion of such sort can prevent businesses from drowning in mismanaged data swamps and gain value. An in-built data-governance system can help businesses achieve this transformation.

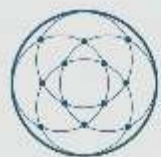
Data Innovation

Augmenting the current intelligence environments with AI, predictive analytics, and related technologies is the next phase. While it increases data complexity, it can prove vital for incremental user experiences for long-term retention. Businesses must try 360 engagement that involves bringing innovation and commitment to every facet of the business from customer retention to supplier management.

Final Words

The purpose of digital transformation is to augment one's customer base through better engagement and quality delivery. Data management is the gateway to a smooth transition. Mastering this new currency of the digital landscape will enable a head start, competitive edge, and operational value for the business needs.





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By combining its platform with a broad data science service portfolio such as patient recruitment, patient engagement media and a host of RWE late-phase solutions, EvidentIQ significantly guides clients in the optimization of their HTA submissions, pricing, and reimbursement needs.



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Herman Chan

President

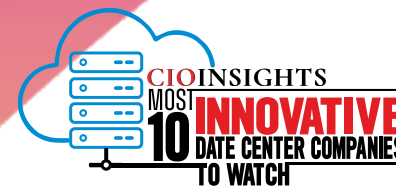
Demand for data center space led innovative software companies like Sunbird to evolve solutions supporting the complexities associated with managing data centers.

Data infrastructure is expanding at a rapid rate with no end in sight for cloud operators. Additionally, enterprise customers' demand for data center space, power, and cooling is also rising.

The result was a need for innovative software companies to support the complexities associated with managing the proliferation of data center infrastructure equipment. The next big trend is the digitization of data center operations.

Enter Sunbird Software with a focus on real user scenarios for real customer problems, Sunbird helps data center operators manage tasks and processes faster and more efficiently than ever before, while saving costs and improving availability.

Innovative software companies like Sunbird are rapidly evolving solutions to support the complexities associated with managing data center infrastructure equipment proliferation.



Sunbird Software President Herman Chan said, "The next big trend is the digitization of data center operations. The traditional IT CMDB is extending into the Data Center CMDB, unlocking additional productivity and efficiency that is obtained from the integration of tools and operational teams, providing a holistic view of the entire IT stack from applications to compute, network, storage, and the underlying space, power, and cooling infrastructure that supports these services."

Talking about the trends, Herman Chan said that while the biggest trend is the digitization of data center operations, data center professionals are under increased pressure to comply with corporate sustainability initiatives and intelligently reduce energy costs.

There is also a renewed focus on increasing capacity utilization efficiency to get the most out of existing resources and defer costly new buildouts. Finally, the debate over cloud vs. colo vs. hybrid is heating up as organizations weigh the pros and cons associated with "cost, security, flexibility, and scalability".

"Sunbird Data Center Infrastructure Management (DCIM) enables data center professionals to centrally track and manage all their resources, across their entire estate, in a single pane of glass. With our tool, organizations can make smarter data center management decisions to better achieve their sustainability, productivity, efficiency, and cost-containment goals," said Herman Chan.

The most common challenge is that high-density workloads disrupt their ability to utilize the capacity they are paying for fully. The decision-makers have available space but cannot use it to deploy new equipment and roll out new services because only a few power-hungry devices can go in these high-density cabinets. Any additional devices would generate more heat in the cabinet than traditional cooling methods can accommodate.

"Sunbird DCIM addresses these challenges by simplifying high-density rack management and enabling customers to intelligently increase their density without risking downtime. Users can identify and proactively remediate hot spots, set thresholds and alerts on power and environmental conditions before a serious problem, automate power capacity planning to eliminate stranded capacity, and get at-a-glance views of the health and capacity of all sites," said Herman Chan.

Elaborating on the statement – A Leader in Second-Generation DCIM for Remote Data Center Management – Herman Chan said that first-generation DCIM software vendors marketed their products as a panacea to all data center problems. Still, their overhyped tools did not deliver as promised. When Sunbird was formed, the team asked data center professionals why their legacy DCIM software failed them. The Sunbird team kept hearing the same: they were difficult to use, slow to deploy, lacked integration, and had incomplete functionality.

"We wanted to solve these real customer problems with a new class of DCIM software that dramatically simplifies remote data center management. The key pillars of second-generation DCIM include automation via integration, zero-configuration analytics, ease of use, AI and machine learning, and completeness of capabilities including asset, capacity, change, energy, power, environment, security, and connectivity management, along with 3D visualization, and built-in Business Intelligence & analytics," said Herman Chan.

"Our customers tell us that second-generation DCIM provides a serious Return-On-Investment in the form of increased productivity, efficiency, and uptime," added Herman Chan.

Citing some case studies, Herman Chan said that Data center professionals often struggle with the complexity of accurately planning capacity. The traditional approach to power budgeting is to derate the server nameplate value to around 60% to 70%. This process is

manual, estimated, and largely inaccurate and wastes space and money.

“Sunbird’s patent-pending Auto Power Budget machine learning algorithm takes the guesswork out of capacity planning by automatically calculating a highly accurate power budget number for each make and model instance of a server based upon the actual measured load of that device in your environment running your applications.

“Leading customers are getting incredible value from Auto Power Budget. Comcast uses this feature to get 40% more usage out of their facilities and power resources, and eBay can deploy projects with 33% fewer cabinets, saving them \$120,000 in just a single project,” said Herman Chan.

Talking about what sets Sunbird apart from its competitors, Herman Chan said that the company has an extreme focus on delighting customers. Their experts listen intently to and understand the customers’ problem statements and use cases and feed that information to the product development teams. The customer input on our product roadmap allows us to create a superior and more complete solution.

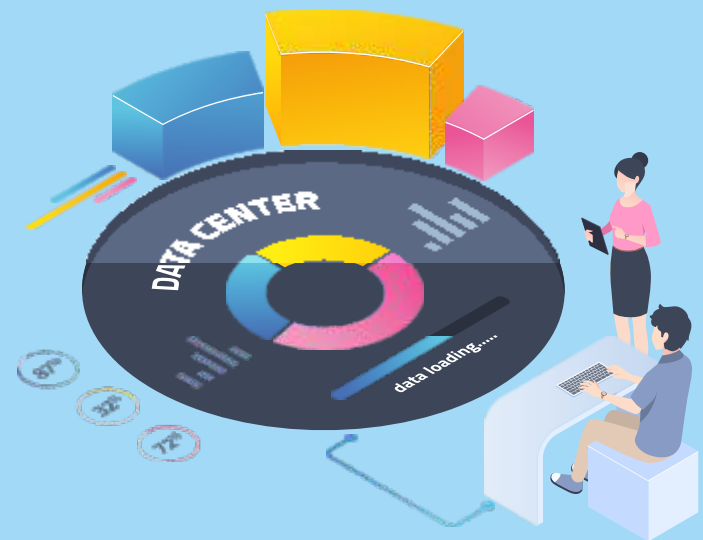
“Our vast collection of customer testimonials and case studies, near 100% customer satisfaction rating from support reviews, and our customers’ strong willingness to become public references all confirm that, together with our customers, we are changing the way data centers are managed with elegant software that’s easy, fast, and complete,” said Herman Chan.

The future is bright for Sunbird. It is surprising that to this day, many enterprise customers who run data centers with hundreds and sometimes thousands of cabinets of equipment could still be using Excel, Visio, and home-grown databases to track and manage their data center infrastructure assets. Sunbird will continue investing in its proven enterprise-class platform, adding automation and AI enhancements to the product, expanding its team globally, and becoming a leading global DCIM provider with the highest customer satisfaction ratings.

Data centers are not going away anytime soon. The world depends on them in all aspects of daily life. The problem statement is pervasive, and the opportunity for us to help is significant. CIOs are challenged with disparate tools and siloed teams that often don’t talk to each other resulting in reduced productivity of the entire IT management stack.

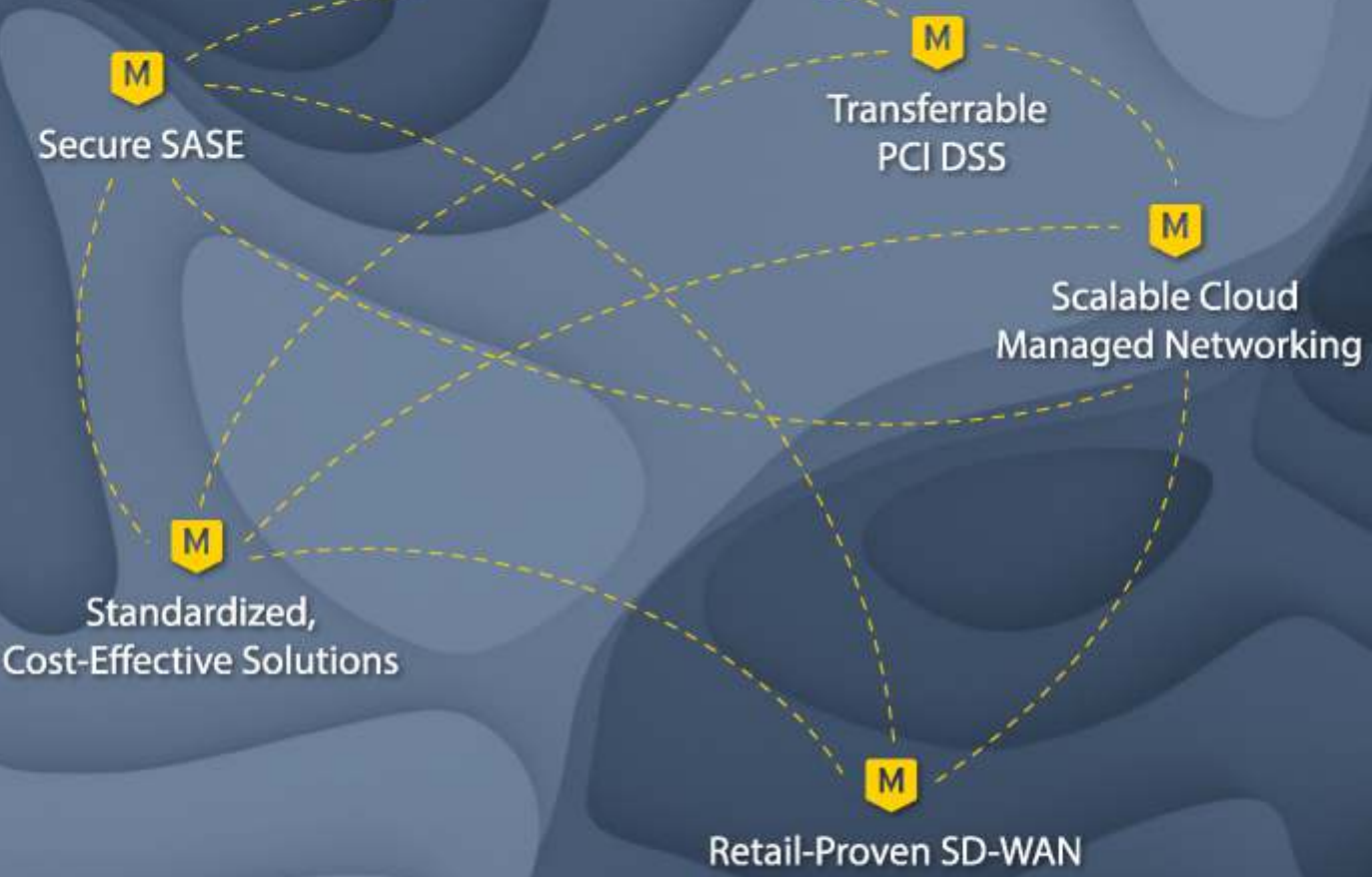
Integrating data center operations and facilities management systems into the overall IT stack for a more holistic view of all relationships and dependencies of siloed tools and teams. The data center CMDB needs to be shared with the IT CMDB and vice versa.

Only then can you have seamless flow-through operations and fully understand your cost per application as you can drill down into the relationships and dependencies that support those applications. Integration and data-sharing across systems is the key to unlocking new productivity levels, efficiency, and cost containment.



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Jimmy Yam

Today, data is arguably the most valuable commodity in the world. As the community responsible for storing, managing and processing this 21st century asset safely, the data center industry needs to consistently innovate and transform to keep up with mounting demand.

We've seen rapid growth in the data center industry in recent years, with a record US \$37 billion spent on data centers by tech giants Google, Meta, Amazon and Microsoft in the third quarter of 2020 alone. We've also seen some very positive trends within the industry as we move towards carbon neutrality with growing adoption of renewables to cool and power data center facilities.

But the energy transition journey does not come without obstacles. Beyond the universal cost concerns, refreshing legacy power management infrastructure and a lack of technical expertise surfaced as Asian businesses' top power management challenges in Eaton's recent industry report. Adding to the challenge is the rise in frequency of extreme weather events, which will impact the already uneven grid reliability across different countries and data center markets in Asia Pacific.

Decarbonizing the data center beyond RECs and carbon credits

Amidst growing sustainability mandates by governments across the region, data center developers and operators are facing mounting pressure to make promises of utilizing more renewable energy and reducing their overall carbon emissions.

In response, the tech industry at large has made commendable efforts towards improving energy efficiency and decarbonizing their operations through carbon trading and renewable energy certificates. However, more needs to be done by data centers operators to make meaningful changes towards more sustainable industry growth.

Forward-looking organizations in Asia Pacific are beginning to take steps towards this direction by adopting physical on-site power generation and storage systems as well as intelligent power and infrastructure management solutions. In fact, our report found that three in five Asian businesses are keen to invest in new technologies to digitize power management in the short term, with a focus on intelligent power management software and energy storage solutions.

Such technologies will be increasingly crucial in helping data centers manage and optimize their power network performance – a key factor for business resilience and competitiveness in the coming year as global energy prices continue to surge.

Digitization will drive the energy transition

Combined with the maturing of new energy storage technology such as hydrogen fuel cells and lithium-ion batteries, digitization is a key trend that will drive the energy transition.

At the fundamental level, the adoption of automation, holistic monitoring and predictive analytics in power management will enable operators to drive better efficiency within data centers while also allowing the integration of disparate energy sources in power networks. But when integrated with modern power generation and storage technologies, such power management solutions can enable organizations to not just receive but also contribute energy to the grid, creating an additional revenue stream for operators.

This concept has already been tested and proven in a pilot project between Microsoft and Eaton, as well as various European data centers and Eaton's headquarters in Dublin, Ireland over recent years.

The increased efficiency from this digitization of power management will be a key part of a successful transition, and will incentivize businesses to make the switch. With

continued advancements in power management technology, this trend is set to gain traction in the coming years – paving the way towards a decentralized, user-generated grid where organizations and eventually consumers can use renewable resources to meet their own energy needs and sell excess electricity back to the grid.

Growing cybersecurity threats for OT facilities

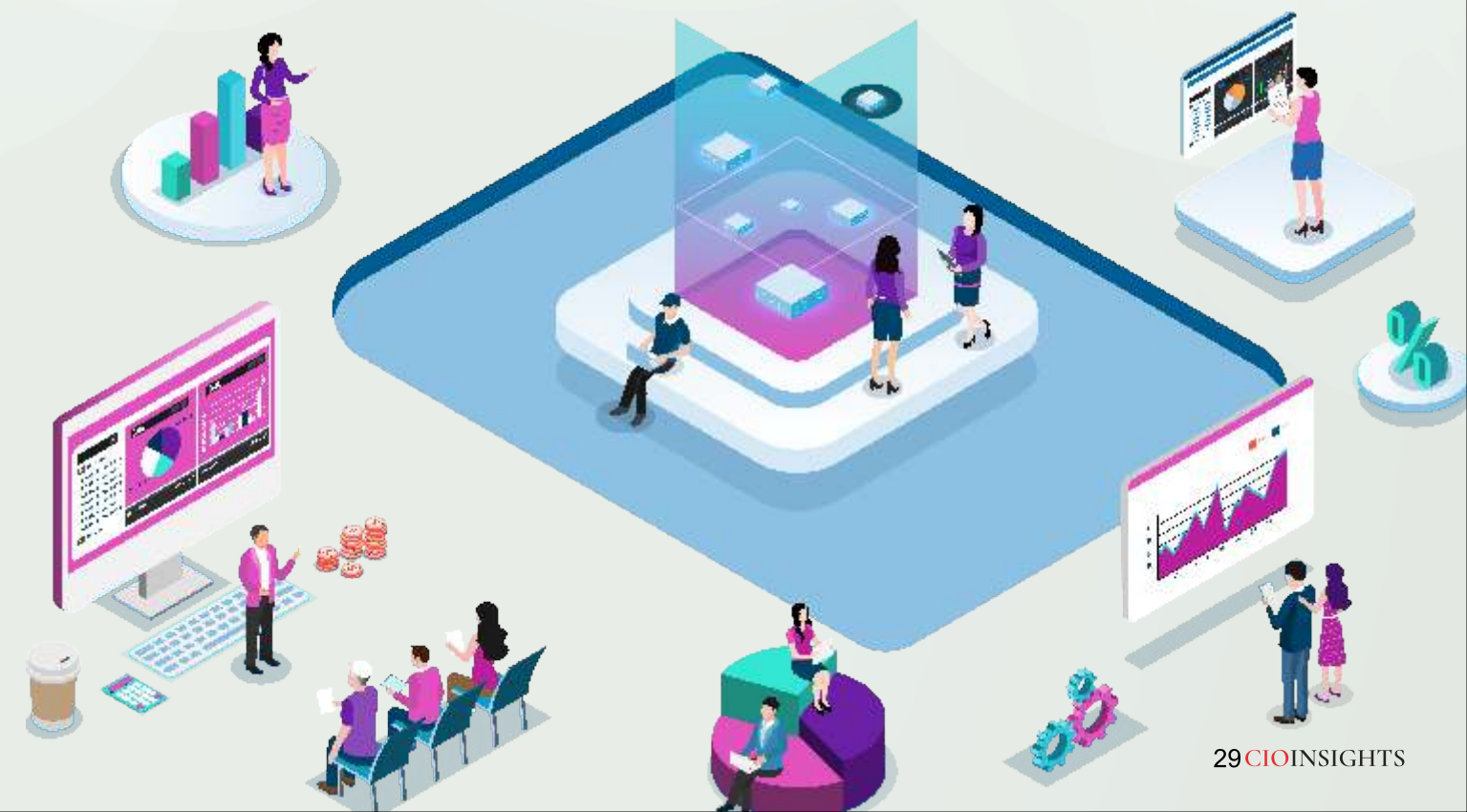
While digitalization opens the doors to new opportunities for data center power networks, it does not come without risks and challenges. As it is, the growth of the Internet of Things (IoT) and Industry 4.0 has already added an additional layer of security threat for our data and facilities. We have already seen a number of high profile cyber attacks on operational technology, including the hacking of the largest fuel pipeline in the United States earlier this year.

Regulation, industry protocols and best practices already exist in the information technology (IT) arena, but more will need to be done to secure OT facilities. With increased digitization, critical infrastructure like data centers will have a larger attack surface for cybercriminals to target. OT and IT teams need to start working together to facilitate a holistic cybersecurity strategy with established standards and protocols.

The silver lining is that there is growing awareness and resolve to address OT cybersecurity threats. In Singapore, the government has taken the lead with the launch of the nation's Operational Technology Cybersecurity Masterplan in 2019, and is laying the groundwork to attract and develop talent for the emerging OT cybersecurity sector with the development of the OT Cybersecurity Competency Framework this year.

As an industry, we have also seen cybersecurity and OT experts come together to establish and advocate new standards and best practices for Industrial Control System (ICS)/OT environments. At Eaton, we've been collaborating with global safety science organization UL since 2018 to advance cybersecurity for power management technologies across industries. More recently, we've launched the Cybersecurity Perspectives virtual conference and online education program.

With continued government support as well as collaboration across organizations and experts from cybersecurity and ICS/OT disciplines, I am confident that we will be able to realize the potential digitization of power management in the tech and data center industry, and break new grounds in the ongoing energy transition journey.



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CEO

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Aera Technology

Frederic Laluyaux
CEO

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Blueshift

Vijay Chittoor
CEO

The Blueshift platform uses patented AI technology to unify, inform, and activate the fullness of customer data across all channels and applications. Through unified data, omnichannel orchestration, intelligent decisioning, and unmatched scale, Blueshift gives brands all the tools to seamlessly deliver 1:1 experiences in real-time across the entire customer journey.

Dynatrace

Rick McConnell
CEO

Dynatrace exists to make software work perfectly. Our platform combines broad and deep observability and continuous runtime application security with advanced AIOps to provide answers and intelligent automation from data. This enables innovators to modernize and automate cloud operations, deliver software faster and more securely, and ensure flawless digital experiences.

FortyOak

Anthony Giardina
Managing Partner,
Solutions

FortyOak's Talent First Automation Strategy leverages our internal expertise to identify the unique network of expert Artificial Intelligence and Intelligent Automation (AI & IA) resources. Flexible resource modeling provides options for our customers who are growing or scaling programs that

Haptik

Aakrit Vaish,
CEO

Haptik is one of the world's largest Conversational AI companies, having reached over 100 million devices, and processed over 4 billion conversations. Haptik's Enterprise CX Platform helps brands to build Intelligent Virtual Assistants that power the entire customer lifecycle from purchase to support, thereby accelerating top-line revenues and improving operational efficiencies

HireVue

Anthony A. Reynolds
CEO

HireVue is where hiring happens - transforming the way organizations discover, engage, and hire the best talent. Connecting companies and candidates anytime, anywhere, HireVue's industry leading end-to-end hiring platform features video interviewing, assessments and conversational AI. HireVue has hosted more than 29 million video interviews and 150M chat-based candidate engagements for over 800 customers around the globe.

John Snow Labs

David Talby
CTO

John Snow Labs is a leading, global AI and NLP for a healthcare company, providing state-of-the-art software, models, and data to help healthcare and life science organizations build, deploy, and operate AI projects. Developer of Spark NLP, the world's most widely used NLP library in the enterprise, John Snow Labs' award-winning clinical NLP software powers leading healthcare and pharmaceutical companies.

OSI Digital

Glenn Gesell
President

OSI Digital, Inc., (formerly OSI Consulting, Inc.) provides purpose-built business and technology solutions that optimize performance to enable data-driven outcomes for our customers. OSI accelerates digital transformation by offering integrated solutions that capture, secure, integrate, analyze and optimize data. Our services include the design, development, and implementation of new solutions as well as the ongoing management, enhancement and support of our customers' existing business systems.

Seclea

Raja Naeem Akram
CEO

A major hurdle for AI to become a ubiquitous technology is how individuals trust its behavior and decisions. Trust comes with understanding (knowing how a system works), validation (the system is evaluated to the nth degree to ensure it works properly), and accountability (if things go wrong, we have a mechanism to investigate). Unfortunately, the most advanced AI algorithms don't meet these trust requirements. Regulators worldwide are pushing for AI algorithms to ensure they meet the trust requirements.

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Tectrade

A CSI GROUP COMPANY



Nick Westall
CTO

Managed Service Cloud Provider with global reach, Tectrade specializes in eliminating and moving complex business apps to the cloud.

Data centers have become a popular buzzword, with all the tech giants moving their businesses to the cloud. A place where one can safely store crucial information, applications, and data, they have become an integral part of the growth and scalability of an organization.

Tectrade is an award-winning Managed Service Cloud Provider with global reach, and a specialist in evaluating environments critical to its clients' operation. With a promise of eliminating any pressure of managing the data once they are onboard, Tectrade removes the inefficiencies and assists the clients' organizations in moving to a streamlined and contemporary solution.

Tectrade, Nick Westall, CTO, said, "We help clients to securely move their critical, regulated, and complex business applications to the cloud. Our unique mix of cyber security, application software support, and infrastructure services ensures we manage every step of the journey."

Organizations can react faster to changing customer behavior when they embrace innovative applications and flexible platforms than traditional methods.

In short, there are no more physical boxes, cables, racks, power, cooling, or planning shift patterns around holidays and vacations. Tectrade cleans up your business, improves efficiency, and allows your company to become more agile to the evolving needs of the business.

Tectrade's 35 years of managing mission-critical applications and underlying platforms translate into clients who can take the journey to the cloud without

interrupting current workload function and performance - no matter where they are.

One of the greatest challenges decision-makers face is the competitive pressure to modernize their applications and back-office operations. The challenge is not just to update but to react before their competitors if they don't want to lose the strategic advantage and market share.

The decision-makers with complex back-end workloads in regulated industries like financial services, health, pharma, and manufacturing, have data processing demands that don't play well in the public cloud. Their sheer volume of data or its complex processing burden is so great it costs too much to ingest or process the data in the cloud.

Regulated organizations are gaining an advantage over their competitors by splitting the load and placing the customer and employee interaction with their applications into the public cloud while keeping the processing securely in the private data center. Tectrade provides 'secure by default' hybrid multi-cloud hosted managed services to allow their customers to seamlessly leverage the agility of the public cloud with the security and power of data center infrastructure.

Elaborating on their statement – Interconnected Data Centers and Hybrid Cloud IT Solutions – Nick Westall said, "Tectrade is operating in over 20 data centers across North America, UK, Europe, the Middle East, and AsiaPac, delivering seamless, demanding, multi-cloud services with Microsoft Azure, AWS, and GPC. Provided with a 24x7 end-to-end, full-depth, managed service wrap, they support dynamic applications and data services driven by mixed VMware, x86, IBM, containerized IaaS, PaaS, and SaaS. Tectrade provides its managed service to remove CAPEX dependency, freeing up capital to fund accelerated infrastructure and application modernization. Tectrade not only provides its own managed infrastructure, they also manage and operate its customer's environments, wherever they are located. True flexibility reflects the changing reality of the customer's complex modernization journey."

Citing some case studies, Nick Westall said that Tectrade's hybrid enablement for financial services: Needing the platform services and dynamic scalability of public hyper-scalers for their customer banking

application, combined with the back end, on-premises security, and access to sensitive customer transactions, a regional retail banking organization lacked the public cloud skills to transform and relocate their customer application workloads into Microsoft Azure. Tectrade provided the reference architecture and cyber resilience design enabling the bank to achieve regulatory approval. With permission, Tectrade built and delivered a seamless, secure mixed private/public multi-cloud environment, spanning the customers' data centers and Microsoft Azure using resilient high-speed interconnectivity with bespoke landing zones. Provided a 24x7 fully managed service wrap Tectrade removed the customer's knowledge and resource constraints with a single, simple, sustainable solution to a complex technical problem.

Nick Westall said about the market competition, "Tectrade is one of the only four companies worldwide who can provide public, private, and hybrid solutions in complex, demanding environments that are regulated or have IBM-powered applications or systems. Customers often lack or cannot retain a critical mass of skilled employees to do this themselves. Or they lack the diversity of talent required to modernize to public cloud demands while keeping normal business working. Delivering and changing in a complex environment is difficult and expensive. Tectrade supports over a thousand customers across the US and Europe with its 24x7 managed services. For the last four decades, Tectrade has provided end-to-end managed infrastructure, with cyber resilience, data protection, compute, storage, and connectivity, wherever it is located."

The future is bright for Tectrade as it is snowballing with infrastructure and application SecDevOps services. Complemented with intelligent Application Resource Management solutions to dynamically guarantee application performance in multi-cloud and hybrid environments beyond human scale. Tectrade's dominance in the corporate sector sees them achieving impressive gains in large, regulated enterprises. Tectrade is one of the only companies with the depth of offering, and experience, to deliver a highly differentiated service at scale.



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- Increasing efficiency through heat retention
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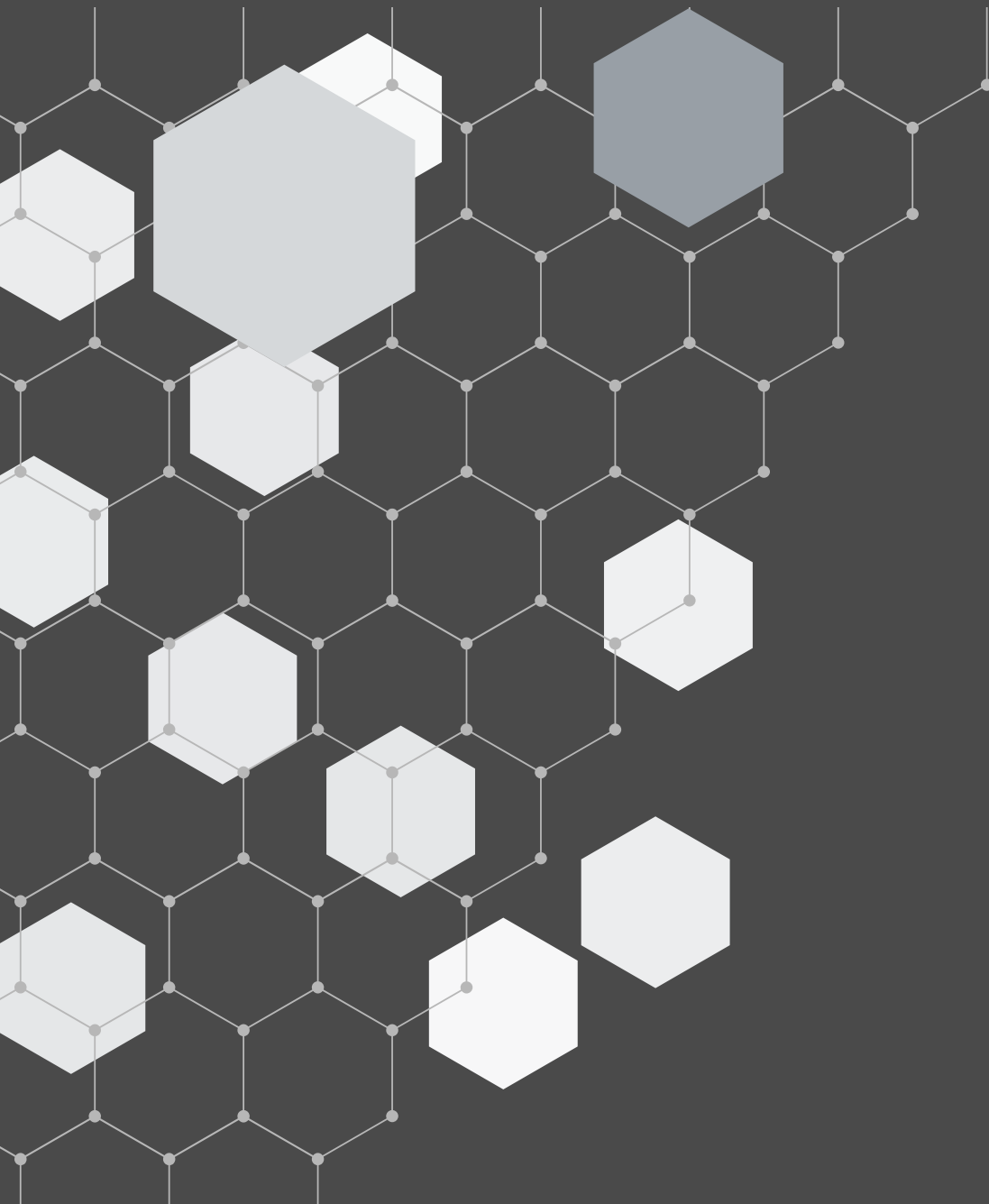
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