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MODERN **DATA CENTER TRANSFORMATION** IN THE **FINANCIAL SERVICES** INDUSTRY

IT'S TIME TO **TRANSFORM** FOR THE NEXT PHASE OF **GROWTH**

Over the past few decades, the financial services sector has witnessed tremendous growth in data creation and consumption by its customers. To leverage this vast array of consumer data, organizations have previously invested large sums in on-premises legacy technologies for storage and data management. While this has helped firms in their growth journey, it doesn't position them well enough for the next wave of value unlock.

Over the years, the expected time to value has declined, and a seamless digital experience with omnichannel presence has become the new norm. Financial services firms must adapt to the new requirements demanded by consumers driven by an "always on" culture. They must also transform their existing data centers to stay ahead in this data-driven, highly regulated, and sensitive market. This requires an organization-wide rethink of data centers as a strategic enterprise asset rather than the cost center they have traditionally been considered. Firms need to think of not just moving enterprise workloads to the cloud but other critical aspects like network and security posture management to realize the true potential through estate modernization.

A **BUSINESS-LED** APPROACH WITH FOCUS ON **AGILITY** AND **SUSTAINABILITY**

The data center is the digital heart of all modern businesses. Transforming these environments inherently brings significant risk as many business processes are transformed to meet clients' needs, requiring back-office systems to follow suit. Sustainability and corporate social responsibility have become board-level discussions as organizations work to attract a new generation of digital-savvy customers, which is now a significant priority. We operate in a world where a single tweet can drive social change or disrupt an entire industry.

This need for flexibility and improved productivity drives modern data center transformation. The rate of change expected by consumers, partners, and the business itself can no longer be supported by legacy environments in which even the slightest change requires significant planning and carries the risk of unplanned outages, data loss, and long restoration times. Financial institutions know this all too well. In industries built on risk management, they stand out as late adopters of many truly transformational technologies. However, this can no longer be the case as "born in the cloud" versions of these firms are rapidly disrupting the well-established status quo.

Does this mean there is now a straightforward path to adopting cloud technologies? Should a hallmark of digital transformation be exiting the data center in favor of moving all workloads to a hyperscaler? In most cases, the answer is likely no. Business-led transformation, and thereby data center transformation, now focuses on sustainability, agility, and enabling the business to move quickly to respond to market trends while providing a competitive advantage. This means adopting and transforming to cloud methodologies and technologies regardless of where a workload resides.

DATA-CENTER MODERNIZATION STRATEGY SHOULD BE GUIDED BY THREE KEY ELEMENTS – DATA PROCESSING, RESIDENCY, AND PROTECTION

Adoption of cloud-like technologies across the financial services industries is far from uncommon. However, the speed and scale of adoption vary greatly depending on the size and complexity of the current business. The global pandemic has done much to accelerate the transformation. Still, as we emerge from this unexpected urgency, we expect a much more deliberate and focused effort as the attention is focused on significantly more complex core systems.

A well-thought-out data center transformation strategy should consider at least a few critical elements aligned to business outcomes. From a technology perspective, this can be viewed through the lens of data processing, residency, and protection.

HORSES FOR COURSES – HOW TO CHOOSE THE RIGHT DATA PROCESSING APPROACH

In many financial institutions, the mainframe is still a strategic asset performing several mission-critical functions around data processing. App modernization for the mainframe is never an easy topic, nor is it always the correct answer. Mainframes can present a myriad of challenges, such as programming languages that are often decades old and a significant skills shortage. These programs are usually effective in reducing the workload on the mainframe, but seldom eliminate it. They also tend to be highly complex, time-consuming, and costly. Working with a strong partner in app modernization can significantly enhance the ability to move away from these workhorses while ensuring that any potential remaining workloads are managed sustainably and efficiently. Private clouds are the modern equivalent of legacy infrastructure environments focusing on hyper-automation. This doesn't simply include typical x86 environments but extends into midrange and mainframe workloads. Once the data processing facilities are enabled with common automation toolsets and processes, the foundation is set for hybrid cloud models that can include public cloud hyperscalers.

DATA IS THE HEART OF DIGITAL TRANSFORMATION – HOW TO ENSURE DATA AVAILABILITY

Data residency continues to be a focus of not only regulators but also privacy-minded consumers.

In a hybrid model, it is also a significant driver of costs. While we continue to see various approaches to address this, there is no single way to do so, nor do we expect there to be. The goal is always to ensure that the data is readily accessible and at the lowest cost while meeting the needs of regulatory agencies and compliance officers. This requires an understanding of the business drivers, regulations, and application needs to ensure that the data is available in the right place at the right time. Ultimately this will be a mix of approaches ranging from the "walled garden" to national clouds and disaggregated metadata. Many migrations to the public cloud failed because data availability was not fully understood before the move. Additionally, the corporate network will require significant modernization. Technologies like software-defined WAN can significantly reduce costs while improving access. Combined with network function virtualization and cloud access gateways, the ability to deploy networks not only becomes a considerably easier task but can now be codified with application deployment. In many cases, the hyperscaler can become the backbone of the modern corporate enterprise, and when combined with edge technologies in computing and 5G, can enable the transformation of branch offices.

DATA SECURITY MATTERS – HOW TO ENSURE ZERO-TRUST DATA SECURITY AND COMPLIANCE

As the third element of this triad of transformation, data protection is often the least considered. While the public cloud can provide significant flexibility and rapid scalability, how it protects the enterprise's lifeblood – the data – is not always clearly understood. There are many methods to physically protect the data in a public cloud that generally involve replication to other discrete regions within a hyperscaler. Often, legacy operational models assume that the data is protected without understanding or verifying the mechanism. Furthermore, protecting assets in the private cloud needs to follow a shared process. This is where a fully automated hybrid model can help quickly restore business operations. Another aspect of data protection is securing the data. With data breaches becoming a significant threat to the business, access to the data can no longer be trusted to simple user/ password combinations. Cloud-based security models such as Zero Trust Network Access must be implemented to reduce the attack surface areas as bad actors' methods and tools continue to advance.

Together these three elements allow for a truly agile approach to workload optimization while allowing the business to quickly respond to changing conditions. Adopting a hybrid approach blurs the lines between the data center and hyperscaler environments and enables the actual transformation of the legacy data center model, acknowledging that a complete move to the public cloud isn't always the best option, while ensuring interoperability with legacy environments.

Transforming the business and underlying processes, systems, and applications will never be straightforward. What works for one firm may not work, or be appropriate, for another. For some, sustainability might be the primary goal, while others may be focused on core fundamentals like compliance. A well-planned and executed data center transformation strategy requires a partner with deep industry knowledge and experience that can approach it from a holistic view across the business, applications, and infrastructure. Giving you the future that you want.

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For more information, please contact the author of the Point of View:

Michael Sausen
Global Portfolio Director for Infrastructure Services
michael.sausen@capgemini.com

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infra.global@capgemini.com