WHITE PAPER

Cloud Economics: A Financial Analysis of Information Management IT Delivery Models

Sponsored by: Viewpointe LLC

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IDC OPINION

Executive Summary

Cost optimization is a priority for IT executives operating and planning for datacenter resources to keep pace with the demands of today's digitally fueled business. Cloud services are being considered at an increasing rate as an important component of datacenter cost optimization strategies, requiring managers to understand the economic, operational, and compliance impacts of the emerging hybrid IT environment.

A recent IDC study (the study) of on-premises and cloud-delivered services, sponsored by Viewpointe LLC, found that cloud-delivered services offering information management and governance operations, as defined in this document, can be considered an economically and operationally viable option to on-premises methods. This is especially true for highly regulated businesses that seek optimized datacenter solutions, service enhancements, and effective governance processes.

Specific findings are as follows:

- Using cloud-delivered information management services, enterprise datacenters may experience reductions in total cost of ownership (TCO) related to information management functions of storage management, information governance, and security over unstructured data of up to 36% when using solutions delivered as a dedicated private cloud. TCO savings come primarily from reductions in costs associated with IT staff, facilities (space and power), networking and storage, server hardware, and licensed software.
- Cost savings are derived primarily by eliminating datacenter complexity and infrastructure, transferring or eliminating storage and information management licenses, and reducing staff costs associated with access management, storage, electronic records management, archiving, and ediscovery for workloads that are transferred to the cloud.
- TCO savings include fees for cloud-delivered information management service, determined in this study to be 2.6 times the existing storage management software licensing fees for similar on-premises operations.

- Information management services via dedicated private cloud infrastructure are a viable option for regulated industries, including financial services, healthcare, and energy, that generally share service-level, data protection, security, and regulatory compliance obligations and requirements.
- Users may also experience reductions in the number of unplanned incidents and the amount of downtime associated with information management services offered by cloud-based service models.
- Other optimization benefits identified in the study include storage agility (ability to scale out and up based on changes in users and user demand), reduction in the time needed to manage problems and incidents, time-to-market improvements, and access to expert technical skills from service providers.

IN THIS WHITE PAPER

In this White Paper, sponsored by Viewpointe LLC, IDC presents the economics of cloud-delivered information management services via dedicated private cloud infrastructure for midsize and large enterprise datacenters. IDC utilized data from its Business Value Strategy practice to develop an analysis of cloud-delivered information management services versus traditional on-premises IT platforms and operations for the same services. IDC further validated its model through six one-on-one surveys and interviews with midsize to large enterprises in the financial services and health industries as well as through IDC's aggregated industry Business Value Strategy research.

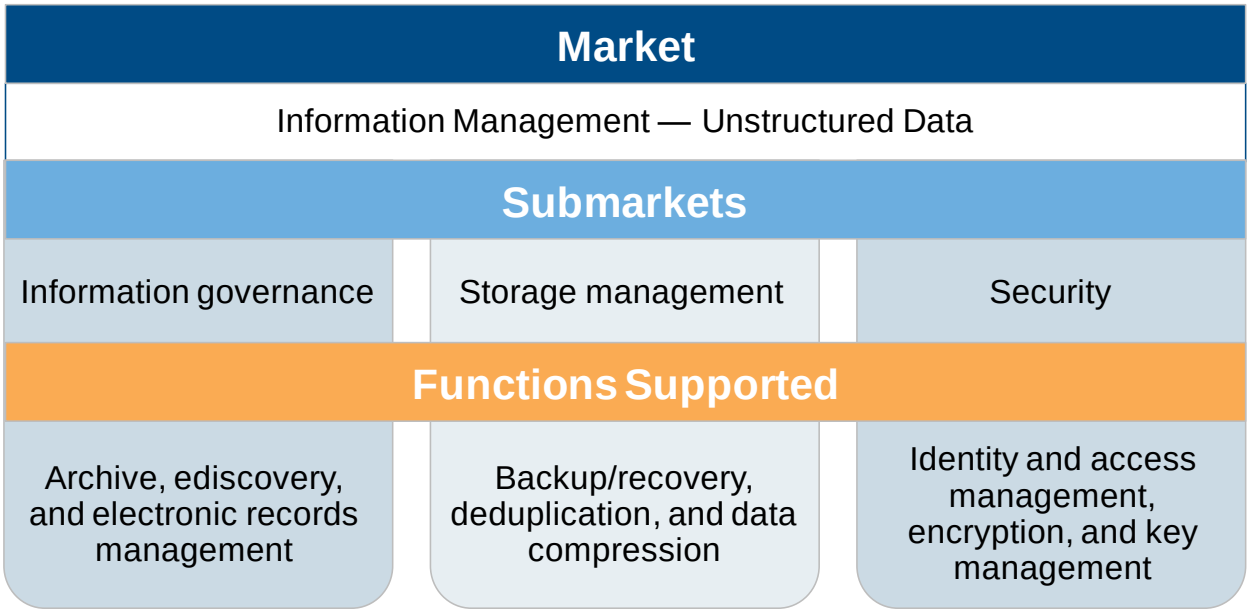
TAXONOMY

As shown in Figure 1, information management was defined for this study to include typical information management components associated with datacenter operations. For the purpose of this analysis, information management components included:

- Information governance, including archive, ediscovery, and electronic records management
- Storage management, including backup and recovery, deduplication, and data compression
- Security, including identity and access management, encryption, and key management

FIGURE 1

Information Management Taxonomy



Source: IDC, 2013

SITUATION OVERVIEW

Today, IT executives find themselves in the midst of one of the most transformational periods in the past five decades. This revolution is fueled by shifting dynamics in all corners of the businesses they support – the demands and expectations of retail, commercial customers, regulatory change, an unrelenting market requirement to optimize datacenter and business operations, critical skill shortages, and margin and top-line growth pressures. The challenges of navigating successfully through these shifts are compounded by aging IT systems. At the same time, IT organizations are moving toward an extended hybrid datacenter model, in which compute, storage, and network resources are available in different physical locations and through different compute models, such as public or private cloud, virtual private clouds, in colocation settings, and in geographically dispersed datacenters.

Further, IT executives face growing demands from line-of-business owners. Many IT executives experience delayed application rollouts; unplanned spending; disrupted service; and power, space, and cooling capacity constraints.

Several years ago, it was common to invest more financial resources into the datacenter to add more servers, networking equipment, and storage to ensure uptime and security. Today, this approach is no longer operationally or financially feasible. Many IT organizations are at a crossroads and face expensive and difficult decisions on whether to expand on-premises capabilities or move certain workloads and functions off-premises to cloud-delivered services.

Data Is the Currency of Business

Against this fluid business environment, datacenter managers also continue their journey to address new IT drivers and disrupters that impact the way they maintain the currency of their business — data and information. Trends in big data competitive analytics, cloud, mobile, and social business technologies have made data management a top CIO priority and effective information governance harder, not easier, to achieve.

Enterprise datacenters face several specific data and information governance headwinds, such as:

- The commercialization of data and new services offered through mobile applications and social collaboration technologies and the evolving ways of engaging in customer and employee electronic communications
- The instrumentation of endpoint devices used in customer interactions, creating more data to protect and govern
- The sprawl of unstructured data stores in end-user computing environments
- The disconnect that lingers between CIO practices and traditional records management policies and the inability to provide defensible records management with automation across the complete information life cycle
- Lack of effective data classification schemes, retention policies, and archiving and data disposition systems to govern critical stores of unstructured content that operate across on-premises, cloud, and hybrid IT environments
- Manually intensive, disruptive, and costly ediscovery, data recovery, and forensics processes that often increase legal risk

In addition, many firms are under continued pressure to modernize legacy IT infrastructures and at the same time improve IT efficiency, enable the user, and deliver a better value proposition on IT and data availability, reliability, and serviceability to the lines of business they service.

Information Management Economics

In the first phase of this study, IDC developed a common taxonomy for the information management and economic benefits model. IDC then populated the model with aggregated cost and resource data across seven vertical industries. The data was segregated to reflect specific cost and resource categories defined in the taxonomy. After developing the taxonomy and the model, IDC designed six operating scenarios to analyze the data and produce a baseline benchmark.

In the second phase of the study, IDC conducted in-depth interviews with six companies (four financial institutions, one pharmaceutical company, and one insurance company). These are large United States–based companies with $5 billion to $70 billion in annual revenue and over 25 petabytes (PB) of data. The interviews provided insights into the relative costs for both on-premises and cloud information governance in each of these organizations. The analysis in the following sections is an aggregate look at the information governance cost structure. We chose a five-year view because five years is becoming the time frame for strategic decisions regarding IT planning and budgeting.

What's Included in the Model

The model used in this study includes costs related to servers, networking, storage, hardware, software licenses (initial and annual maintenance), power, facilities, and IT staff associated with information management functions defined in the previously mentioned taxonomy. IT staff costs are for tasks associated with installation, training, administration, maintenance, configuration, security administration, patch management, problem resolution, and image management. Costs associated with test and development are not included.

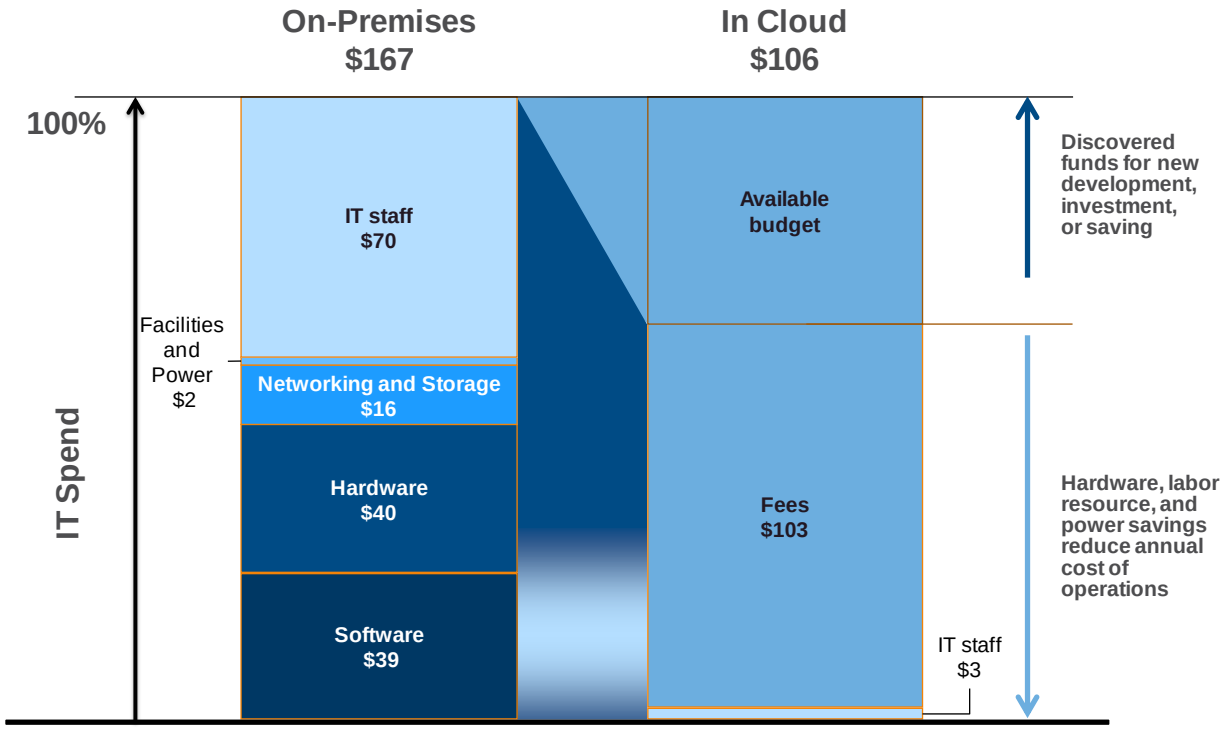
On-Premises Versus Cloud Financial Analysis

The following figures and tables represent a financial analysis of information management costs per 100 users for on-premises IT versus cloud-delivered solutions. Data collected for the financial analysis model was used to build "before and after" scenarios for organizations that move from on-premises models to a cloud-delivered model.

The cloud model addresses the service fees, which include all initial and annual fees to the service provider. IT staff costs relate to the internal staffing costs to support the service provider. The cloud solution enabled these organizations to lower their overall costs for information governance over five years by 36%. The 96% reduction in IT staff requirements also freed up resources to deal with other critical business issues and strategic initiatives (see Figures 2, 3, and 4).

FIGURE 2

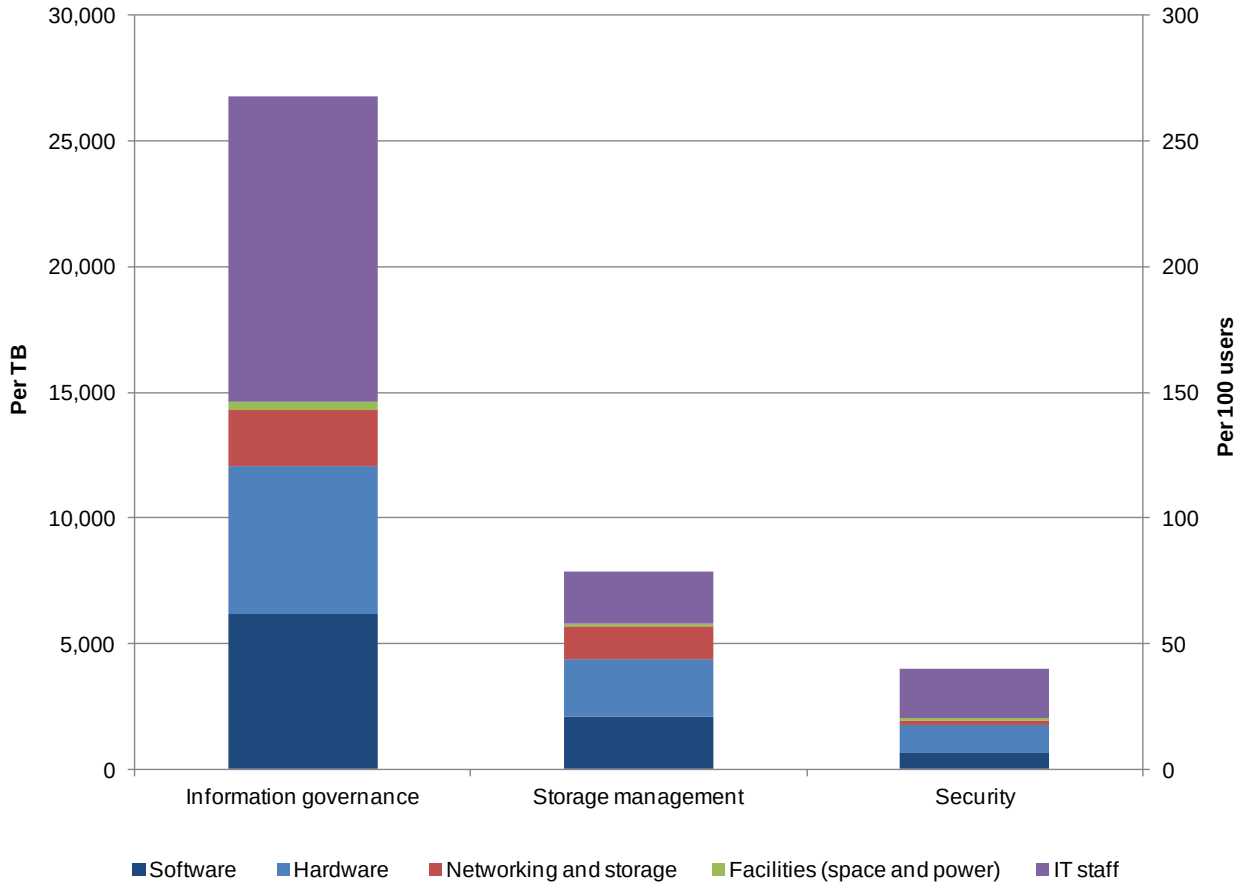
On-Premises Versus Cloud per-User Cost



Source: IDC, 2013

FIGURE 3

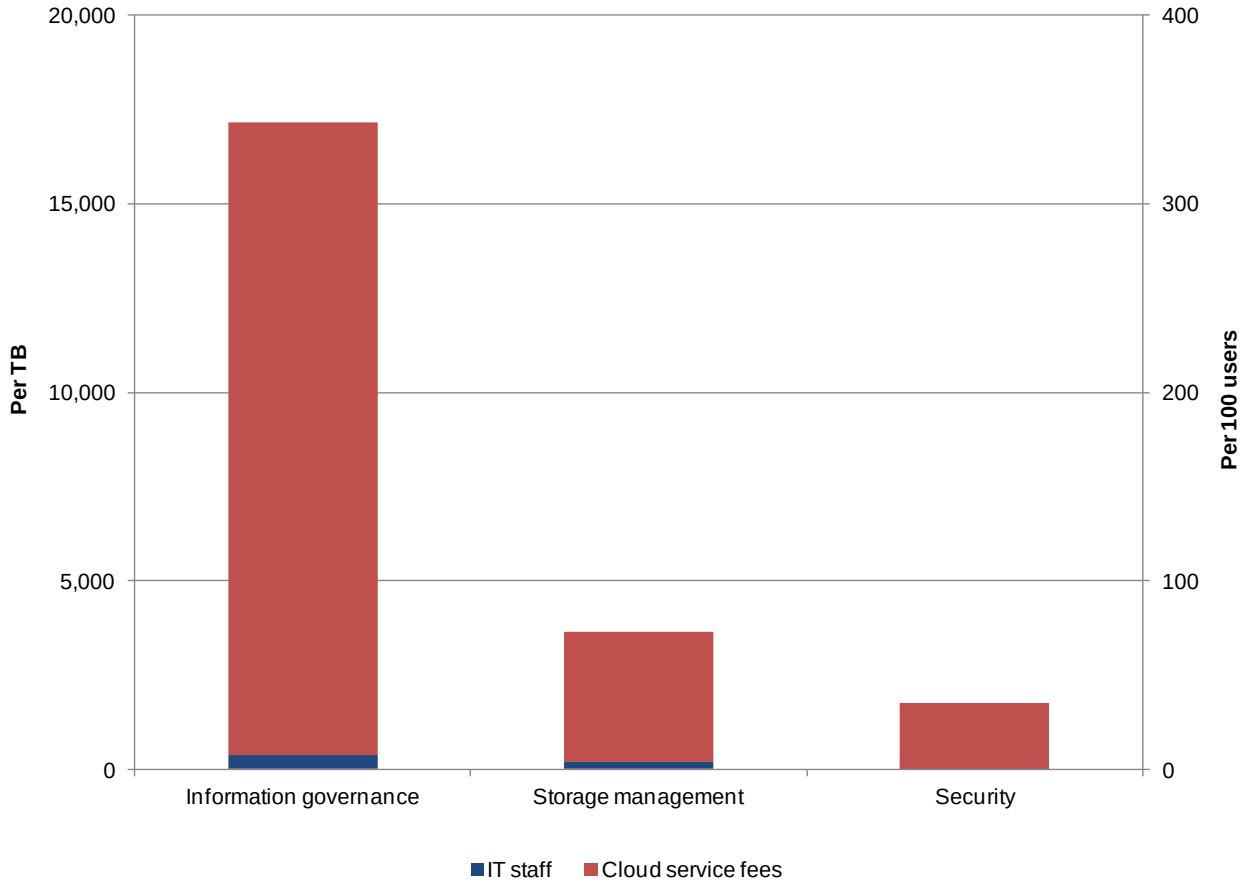
Five-Year Costs for On-Premises ($)



Source: IDC, 2013

FIGURE 4

Five-Year Costs for Cloud Solution ($)



Source: IDC, 2013

The cloud solution also proved to be more reliable, experiencing 76% fewer incidents of unplanned outages. When outages occurred, the response time of the cloud solution was half that of the in-house team, further reducing the amount of time that IT users of the services supported by the information governance solutions were denied access. Overall, the combination of fewer incidents and faster response times reduced downtime by over 13 hours per user per year at a cost of $222 per user, a savings of 95% (see Table 1).

The great benefit often expressed by those who have adopted cloud solutions is the positive impact on business agility. Cloud solutions enable businesses to move faster when capturing new business opportunities or changing strategic direction. In this case, the companies interviewed by IDC in this study reported being able to launch new services and applications 52% faster in a cloud services model (see Table 2).

TABLE 1

Reliability: On-Premises Versus Cloud

Downtime	On-Premises	Cloud	Savings	Advantage (%)
Incidents per month	0.43	0.1	0.32	76
Hours per incident	5.75	2.5	3.25	57
Hours per user per year	14.22	0.77	13.46	95
Costs per user per year ($)	235	13	222	95

Source: IDC, 2013

TABLE 2

Agility KPIs: On-Premises Versus Cloud

	On-Premises	Cloud	Advantage (%)
Time to market, services/apps (months)	5.13	2.47	52
Time to market, new storage (weeks)	4	0.4	90

Source: IDC, 2013

FUTURE OUTLOOK

For the foreseeable future, virtualization, cloud, and datacenter economics will continue to apply a downward pressure on IT executives to produce and operate optimized datacenter environments. At the same time, capex constraints inhibit an increase in the average size of internal, on-premises datacenter facilities. The results of these trends suggest that cloud-based service providers may be able to increase their share of total datacenter capabilities in the next five years, leading to datacenter environments that will be much larger and more capable than on-premises systems.

Regulations, standards, and best practices will continue to drive IT executives to operate hybrid IT environments that include on-premises and cloud-based services. Vendor management standards that

evolve beyond point-in-time service assessments toward capabilities that provide continuous audit and compliance capabilities are well-suited to serve this fluid environment.

Expect cloud-based services to drive IT staffing changes in the enterprise. The position of enterprise architects and IT services managers will become more difficult to staff in the near team. Greater staffing demands are placed on security and compliance officers as their functions become virtualized in step with the IT infrastructure they must manage. IT roles will generally move toward governing and managing IT systems as opposed to building and implementing IT systems. Skills for architecture, security, and network operations will change significantly as a result of cloud and automation in the hybrid IT environment.

CONCLUSION

A strategic technology road map must consider the future state of a hybrid IT infrastructure and operations that support on-premises and off-premises workloads. Economies of scale can be derived from the standardizing of information governance capabilities for unstructured data using cloud-based services. In developing a successful strategy to onboard a cloud-based information management service, IT executives are advised to:

- Use cloud economics as an agent for change to:
  - Optimize IT operations
  - Deliver better IT services to lines of business
  - Improve internal controls, security, and reliability
- Assemble and coordinate efforts through a cross-functional expert team from storage administration, datacenter operations and financials, content and messaging services, legal, risk, and compliance
- Clearly describe a taxonomy, accounting structure, and all-in costs associated with on-premises information management services to end-user groups
- Establish a datacenter information management regime that involves gaining detailed metrics on and visibility into the physical elements of the datacenter, including storage and information management, using tools to control and manage the resources on-premises and off-premises, and ultimately the data and tools to drive strategic decisions
- Conduct extended due diligence of cloud-based information management service providers as part of a vendor management program, including certification benchmark testing, regulatory reviews, regulatory expertise, and continuous operational monitoring
- Understand the differences and commonalities between cloud-based data backup, recovery as a service, and information governance services as represented by the OnPointe offering and the Viewpointe team
- Consolidate requirements to reduce inefficiencies and complexities
- Embed information security, breach notification, compliance, accessibility, recovery point, and recovery time goals in service-level agreements
- Establish organizational ownership and accountability for cloud-based information management vendor relationships

ABOUT VIEWPOINTE

Founded in 2000, Viewpointe has been offering hosted check image archive; end-to-end check image exchange, clearing, and settlement; plus automated clearinghouse (ACH) payment services for the past 12 years. Today, Viewpointe manages over 30 petabytes of data for U.S. financial institutions, demonstrating the scale, security, business process integration, and infrastructure necessary to meet the stringent requirements of both its customers and U.S. archive and payment systems.

Viewpointe's newest offering, OnPointe, is architected to leverage this heritage and provide a new set of unified and centralized information management services for unstructured enterprise data via a dedicated private cloud. OnPointe is a private, cloud-based enablement platform focused on the governance of customer information. It uses a combination of value-based archiving, tiered storage, modern retention management, and ediscovery to govern the life cycle of electronic information.

CHALLENGES/OPPORTUNITIES

While the results of this study support new and significant opportunities for Viewpointe and its customers and prospects, there are inherent near-term and longer-term challenges to the success of the OnPointe offering.

In the near term, Viewpointe must successfully onboard email and messaging, electronic content, and file share data for its first set of pilot clients and use the results of those implementations to demonstrate the economic and operational benefits determined by this study to the next set of prospects. To do this, Viewpointe must perform well against metrics that track TCO improvements for pilot customers and use these metrics in future business development activities. During this first set of onboarding projects, Viewpointe must continue to execute effectively, meet or exceed service-level expectations established for the legacy check image exchange and payment processing services, and successfully scale its IT infrastructure and support organization to support growth in unstructured data storage, indexing, and search and retrieval requests. At the same time, Viewpointe must continue to evaluate and invest in controls and information security systems to stay protected against vulnerabilities and compliance incidents in an environment of heightened cybersecurity threats and operational risks. In addition, Viewpointe must mechanize the client onboarding process to eliminate as much complexity as possible when bringing new clients into its dedicated private cloud community.

Over the longer term, Viewpointe must execute against a successful business plan in the broader cloud-based information governance market with services that, in the eyes of IT buyers outside its current customer base, are sufficiently differentiated by features, price, and service when compared with generalized cloud-based data backup and recovery-as-a-service offerings. Viewpointe must also be in a position to prove a positive TCO for its clients and prospects beyond the five-year horizon of this study, maintain strong partnerships with technology and ecosystem providers, and retain and grow operational and executive talent to run and innovate the business.

About IDC

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications and consumer technology markets. IDC helps IT professionals, business executives, and the investment community make fact-based decisions on technology purchases and business strategy. More than 1000 IDC analysts provide global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries worldwide. For more than 48 years, IDC has provided strategic insights to help our clients achieve their key business objectives. IDC is a subsidiary of IDG, the world's leading technology media, research, and events company.

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