HFS

In partnership with

unisys

Shift Your App Modernization Mindset to Unlock Value and Avoid Disillusionment

OCTOBER 2022

Joel Martin, Executive Research Leader

The situation: Adopting the cloud is vital to becoming a dynamic organization. With the cloud comes the opportunity to modernize applications granting your firm the ability to adapt, access and make actionable data and insights amid rapidly changing market conditions. However, to be successful in becoming a cloud native, you must shift your mindset to think like a cloud-native enterprise.

Applications are the drivers in creating a business-first, cloud-native operating model for your business

As we shift to a cloud-native, mobile, data-driven world, modernizing applications just makes sense. But data from HFS Pulse shows many firms struggle with their overall cloud strategy. In 2021, an HFS study of 800 Global 2000 firms highlighted that 33% of firms have yet to define their cloud strategy and more than 43% see migrating to the cloud as a means to reduce costs. It's time to stop seeing the cloud as only a technology investment and rather accept becoming cloud native is a mix of technology, organizational change management and operational modernization.

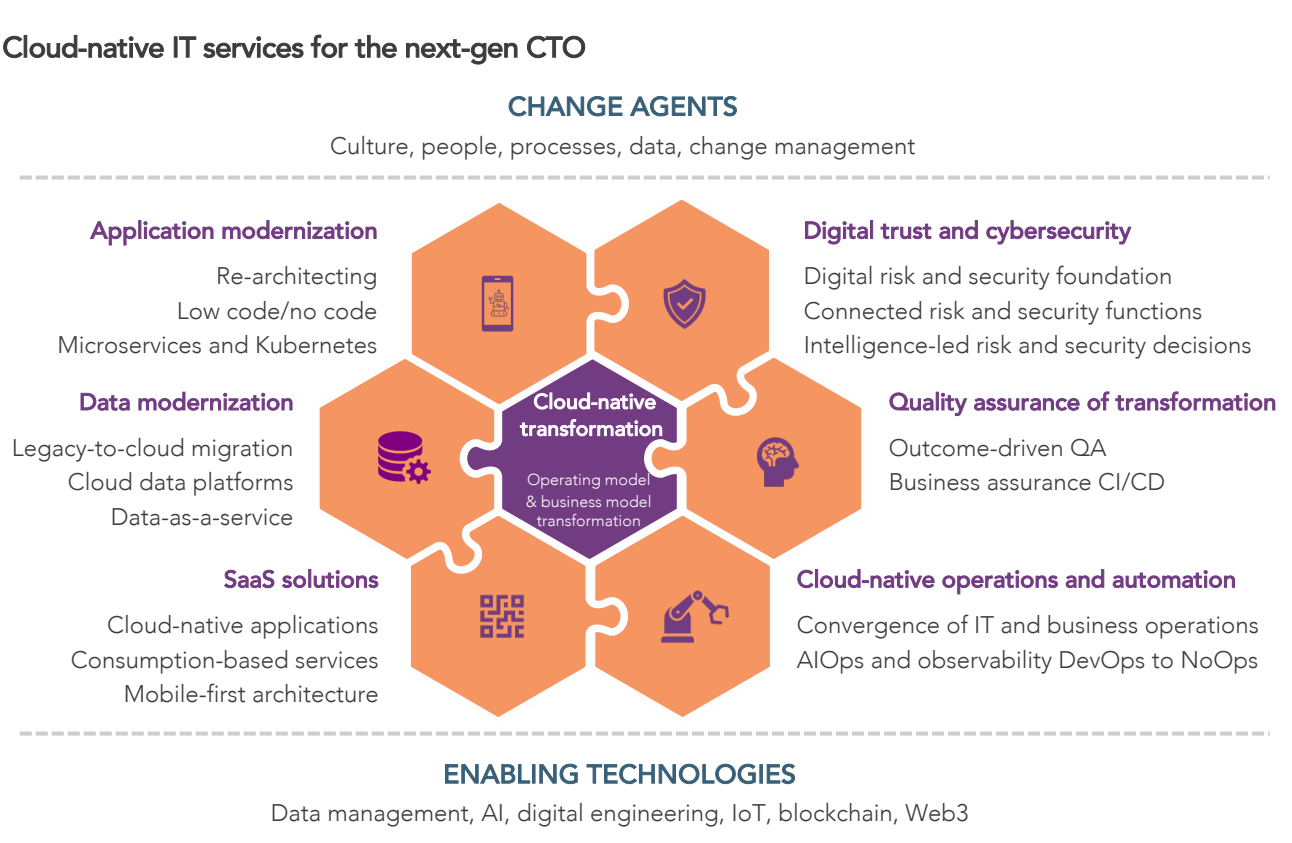
As the migration to the cloud is an operational shift, technology leaders must deal with increasing complexity, changing cost structure and the challenges of cloud-first application and data concerns. As illustrated in Exhibit 1, the IT services needed by a CTO leading a cloud-native organization are evolving. As such, application modernization is a significant change agent driving this shift in mindset.

Changing your mindset and how you work is hard. As a result, many firms seek guidance and support from their technology and services partners to define a vision and business outcomes as precise indicators of success. As these services involve a healthy investment of time and money, consider the following as guidance across culture, operations and information management to drive meaningful outcomes.

Migrating to the cloud isn't what will differentiate your firm; changing how people and technology operate will

Start by focusing on a business operations-centric future state, not a technological one. Successful digital transformation journeys are gradual and iterative.

Exhibit 1: Being the CTO/CIO in a cloud-native organization requires a shift in your focus



Source: HFS Resource, 2022

These journeys must involve combining a firm's business and technology teams, its software and hyperscaler firms and its partners to work together as they traverse the expected and unexpected. Unfortunately, these beginnings can get complicated.

To help streamline the process, HFS advises enterprise clients to start defining how adopting a cloud-centric architecture changes a firm's ways of working and how these new ways of working lead to improved business outcomes.

Next, work closely with your partner to create a technology-centric cloud on-ramping plan to lay the foundation for business change. By doing so, companies can build a framework for soliciting participation from the necessary business units as they recognize the early benefits of achieving desired outcomes in an agile manner.

Identifying which cloud on-ramp you are on can accelerate your success

In partnership with Unisys, HFS identified three common "on-ramps" to the cloud:

1. A need to **rationalize existing technology stacks** (or silos) operating independently or via multiple ad hoc or customized integration points.

2. An effort to **shed non-core costs and reduce the total cost of ownership (TCO)** associated with hosting, managing and supporting systems that are either commoditized or are non-differentiating for the business, its process, or its customers.

3. **The growing complexity of multi- or hybrid-operating models** that compose, consume and curate information and data via modernized applications.

Determining your most likely "on-ramp" can ensure new digital capabilities reach the end user faster, thus promoting a shift in habits and achieving measurable outcomes.

These on-ramps aren't meant to be set in stone. Instead, a firm's initial vision for how it will proceed will evolve. As efforts shift from cloud migration to application modernization, success will depend upon customer, partner and executive feedback on access, usability and outcomes. Understanding these and their effects can lead to business and customer success, allowing the technology team to continually fine-tune how your firm works with applications, cloud providers and internal teams to iterate quickly, stay agile and become cloud native.

Embrace the shifts in mindset needed to be successful at different stages of your journey

As digital transformation journeys evolve, so should your work with your teams and external service provider to unlock value without disillusioning your teams or leadership. Here are four mindset shifts to keep in mind to help your firm unlock value and avoid disillusionment.

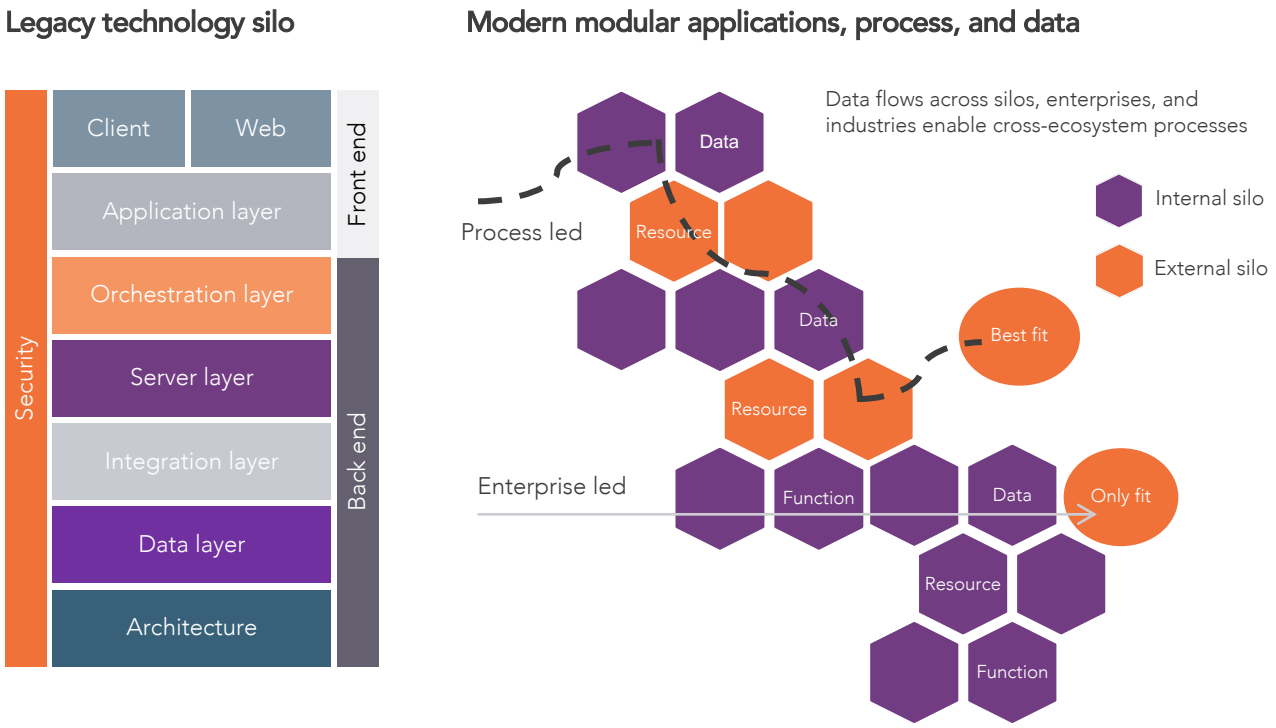
Mindset shift 1

It's not about the cloud; it's about clarifying the role of technology in enabling your business, employees and customers

Modernizing applications is more than refactoring or renewing as service-oriented architectures (SOA), microservices, containers, or serverless computing. If you approach it from a rigid standpoint, you are likely to find yourself with repacked versions of what already exists. In addition, you'll be exchanging existing technology silos with cloud-based components mimicking the previous system's functionality rather than taking an adaptable, agile approach.

As Exhibit 2 illustrates, the real opportunity for application modernization is to swap organization-based technology project components for agile, modular components based on business capabilities with a product mindset that facilitates a dynamic configuration for accessing data needed by a system, person, or workload. This design shift makes application modernization an operational change. The resulting plan is to build on a functional design. Each component exists to optimize a specific purpose, such as a workload, data need or function and each can link with other components through manual or automated orchestration.

Exhibit 2: Move from a legacy tech silo to a modern model, developed around the flow of data



Source: HFS Research, 2022

Applying this mindset shift at the project's onset will increase the chances of success. A firm must work closely with its application development, software development (DevOps) team and partners to capture meaningful outcomes regarding the future state of operations based on a shared responsibility model. It is critical to think about future applications, such as SaaS, custom development and commercial off-the-shelf (COTS) software, as components that facilitate composing, consuming and curating information across the organization. HFS calls this adopting a OneOffice™ mindset.

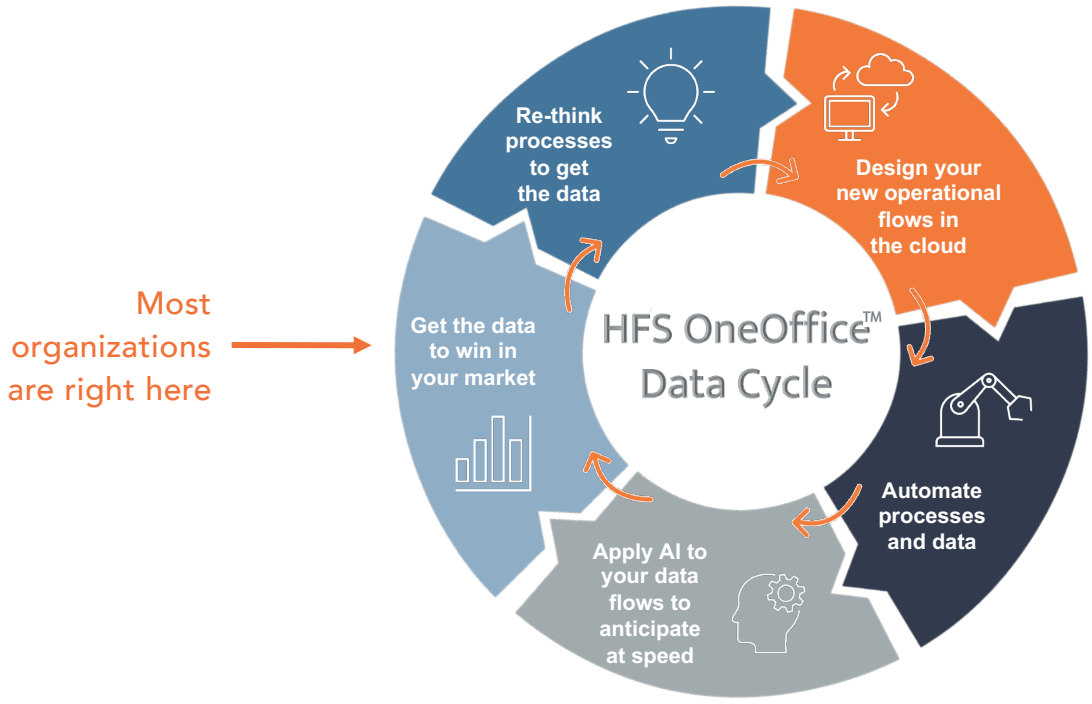
For example, a global bank technology executive shared his epiphany for applications modernization when he challenged his team, *"Why aren't we splitting out our horizontal applications into functional containers that create business services that amplify what we know we need to do?"* By encouraging the team to rethink their application development strategy and assume expectations for long-term support, they could refocus and build modern software based on data quality, process simulation and minimal human interaction.

Mindset shift 2

Application modernization is about improving how data, workloads and the orchestration of processes enable the delivery of business and customer value

A pivotal aspect of an enterprise's cloud modernization journey is about defining what data people need and how they can quickly and securely access it. When combined with processing data pipelines, artificial intelligence (AI), machine learning (ML) and automation, data democratization provides business insights to drive value throughout the enterprise. Together with orchestration and dashboards, these enable users to become more effective and efficient when doing their jobs. Alas, many companies continue to struggle with their data journey. In Exhibit 3, HFS provides some guidance on thinking about the data journey you must also undertake.

Exhibit 3: HFS OneOffice Data Cycle



Source: HFS Research, 2022

Exhibit 3 illustrates that the journey to uncover the richest business outcomes starts with data and analytics. By investing in these areas, your firm's on-ramp efforts can accelerate sustainable business growth as employees, leadership and customers have improved access to data-driven decisions and insights. The systems leveraging automation, AI/ML and analytics can learn and adapt to augment operations, workflows and experiences.

One Unisys customer remarked that harnessing the data from newly developed, modularized applications, containers and databases created exceptional experiences for their staff and the more than 500,000 customers they served daily. While moving to the cloud was the impetus for working with Unisys, the customer said business outcomes transcended cloud or applications and reframed the organization's digital workplace. For example, the customer now has the data needed to be customer-centric rather than customer-reactive as scheduling, reporting and administrative data become real-time for users.

Mindset shift 3

Be mindful of security and you'll become the hero

Today's enterprises should recognize we have an excellent set of process improvement, DevSecOps, AIOps, security and governance tools to manage, monitor and control workloads in real time. In addition, they also need to understand and operate in the new reality of a shared responsibility model ushered in by cloud adoption and establish governance, risk and compliance (GRC) policies.

GRC and data security efforts must go hand in hand with your modernization efforts. Amazing usability won't cut it if you leave critical corporate or customer information exposed. As one Unisys customer in the media and technology industry said, "Our desired outcome was a rationalized and agile application environment wrapped in an enhanced and trusted cybersecurity envelope."

With all the changes your firm can expect as part of its modernization journey, this will likely be an area where you'll lean heavily on a partner for support. As a technology or business leader, that partner must play a role in developing and maintaining a resilient cybersecurity posture for your firm as it promotes more access to the insights and processes needed to differentiate its services at an accelerated velocity. This partner should also be ready to aid in extending your firm's security posture across its digital ecosystems to maximize reliability and business agility.

Mindset shift 4

Application modernization is a business operational shift, not a technical one

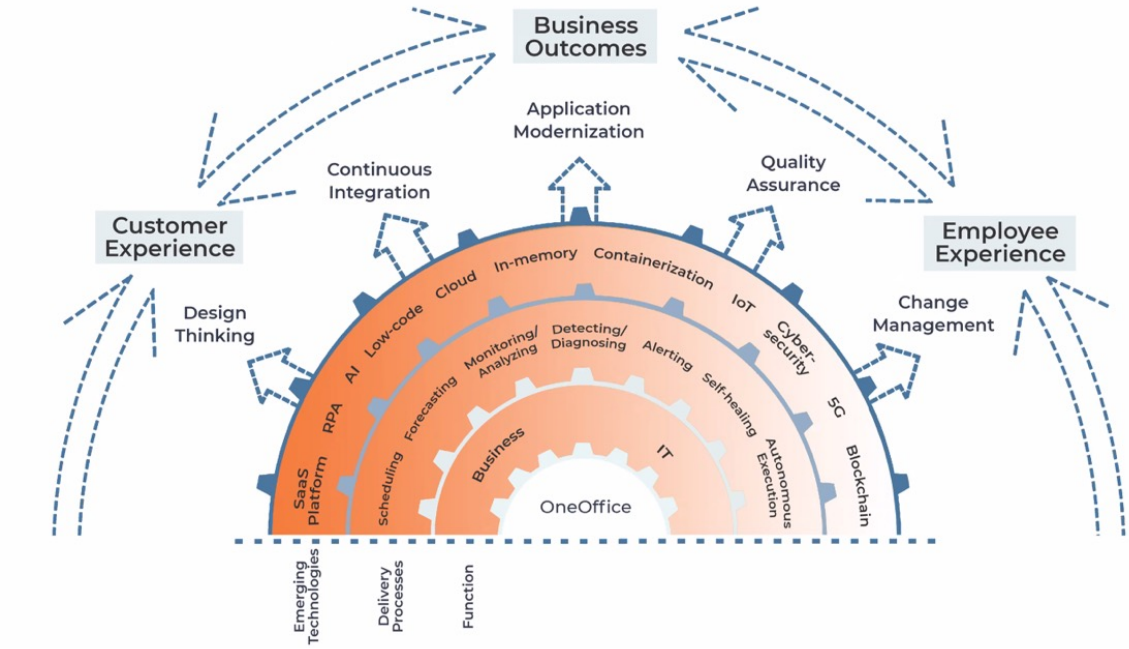
Successful application modernization often is driven by business priorities and is supported by modern application and cloud architectures. Business priorities include faster time to market, new compliance requirements and additional digital revenue streams. A genuine modernization effort involves optimizing, reimagining business workflows and customer interactions to serve the business.

To properly make this shift using a cloud approach, you must start by establishing a clear set of business outcomes and ensuring the operational change needed for the business administrators is **the most important step** toward defining success for application modernization initiatives.

As the stage is set for the IT divisions, application modernization is a multidimensional puzzle; IT must deal with the changing cloud landscape, ensure business continuity and rationalize existing application ecosystems while modernizing to achieve the business outcomes defined by the business. It is a delicate balancing act to plan and execute the roadmap aligning the relevant stakeholders.

To ensure a successful transformation, application modernization efforts strive to create self-sustained, domain-driven, functional application components from monoliths and horizontal architectures. Your firm's full-stack application teams must contribute to decoupling their IT architecture to pave the way for new solutions like low code, process automation and microservices. The goal is for the business and technology teams to collaborate in a more agile and flexible manner to develop applications and get to market faster.

Exhibit 4: Start with a OneOffice mindset to rethink how technology leads to outcomes



Source: HFS Research, 2022

Technology teams are also free to reimagine and create new applications, not just support the existing applications in the company. In addition, firms can continually leverage partners to improve processes and workloads with domain and technical expertise. Finally, a successful application modernization strategy delivers outcomes based on how people can work more effectively, rather than limiting each person to a predefined design about how to work and with what.

Adopting modern applications, developed internally or via a third party, must focus on changing the experience of how teams work in a cloud-native world. Enabling full-stack application teams to provide solutions for solving business needs quickly and optimally supercharges the enterprise. Promoting access and creation as teams use technology will facilitate further innovations in an increasingly decentralized manner by soliciting inputs from across the business. Moreover, firms adopting this agile mindset will attract the best talent and arm them with the best tools to succeed.

From a technology perspective, these firms will also reduce the need for the IT department to constantly fix process exceptions and allow them to focus on building more value-added services. Imagine a future where technology and business teams collaborate to codify new operations, workflows and data streams into updated machine learning models rather than build them from scratch with complex code, custom applications and APIs.

This is the future of application modernization. Whether containers, serverless, SaaS, or COTS, we must ensure product enhancements reach the end user faster. Technology and business teams should not just replace, replatform, or "lift and shift." Instead, technology and business leaders must work together to reimagine and lead the modernization of applications, data and process functions to create lasting value on multi-cloud.

The Bottom Line: A successful application modernization program depends on the company's business, technology and partners working in lockstep to achieve shared, measurable business outcomes resulting in better experiences for employees and customers.

Adopting the cloud is a shift in how applications are hosted, managed and delivered. However, the real business value is created when a firm accepts this is an operational mindset shift and stops limiting its thinking to "just technology upgrades." Instead, industry leaders will define an application modernization strategy that does more than "lift and shift" applications and data into functional components with robust security, agility and data management.

HFS recommends working with a trusted technology service provider that shares in your vision, adds dynamic capabilities and brings the required expertise to develop a functional application architecture for long-term value creation across both hybrid- and multi-cloud architecture needs.

HFS Research author

Joel Martin

Executive Research Leader

Joel looks after HFS Research's software and applications services.

As firms adopt a cloud-native operating model, software-as-a-service (SaaS) is the primary way of getting things done. His research delves into how companies, service providers, and software vendors architect and deliver code via the cloud. Joel's research covers the latest trends in developing code on microservices architectures while using containers and Kubernetes to adopt and integrate SaaS solutions into complex business workflows. Topics Joel is passionate about include edge computing, the role of 5G in cloud services delivery, governance and compliance, low-code, and go-to-market strategies for software and services.

HFS

About HFS

Insight. Inspiration. Impact.

HFS is a unique analyst organization that combines deep visionary expertise with rapid demand side analysis of the Global 2000. Its outlook for the future is admired across the global technology and business operations industries. Its analysts are respected for their no-nonsense insights based on demand side data and engagements with industry practitioners.

HFS Research introduced the world to terms such as "RPA" (Robotic Process Automation) in 2012 and more recently, the HFS OneOffice™. The HFS mission is to provide visionary insight into the major innovations impacting business operations such as Automation, Artificial Intelligence, Blockchain, Internet of Things, Digital Business Models and Smart Analytics.

Read more about HFS and our initiatives on:
www.hfsresearch.com or follow
@HFSResearch