

A man in a white suit is shown from an overhead perspective, looking down. His shadow is cast to the right.

JOURNEY
TO CLOUD

A man in a blue pinstriped suit is shown from an overhead perspective, looking down. His shadow is cast to the right.

SUCCESS
FULLY
ADOPTING
CLOUD

Two large chevrons pointing to the right. The top one is green and the bottom one is blue.

Companies usually begin their cloud experience with a wholesale cloud migration that can create far more problems than it solves.

Even as cloud solutions become ubiquitous, organizations still struggle to optimize the technology's adoption, largely because each enterprise requires unique implementation and migration strategies. By focusing on the insights and recommendations offered here, organizations can benefit from the power and flexibility of a fully optimized cloud deployment.

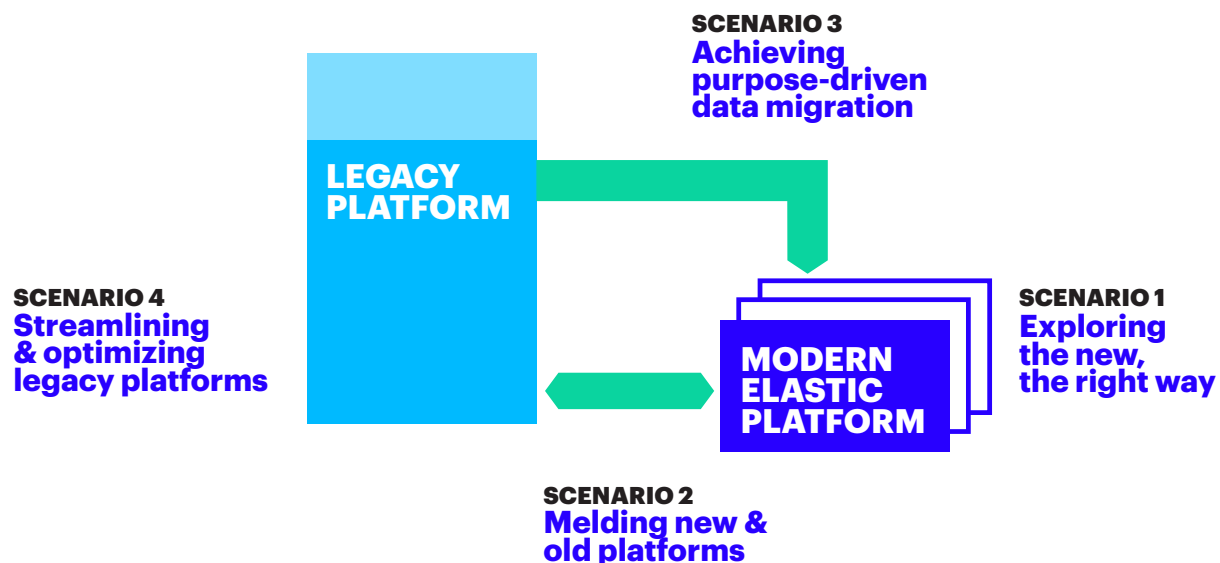
Cloud capabilities promise impressive productivity and agility, but making the switch to this technology is often a challenge.

Many times, enterprises have mistakenly pursued “migration-first” approaches when adopting the technology, viewing cloud as just another hosting environment onto which they can offload problematic internal legacy IT systems. While doing so can cut infrastructure costs and improve performance, companies often short-circuit their cloud adoption process by following a “legacy first” route instead of taking advantage of the new capabilities this modern, highly elastic platform offers. Consequently, they miss 80 percent of the cloud’s benefits.

Instead, Accenture advises companies to turn this approach on its head, no longer treating migration as an initial elementary cloud adoption activity, but rather positioning it as the most important of four critical elements (Figure 1).

Figure 1 | Four major scenarios for cloud realization and IT optimization

HOW ORGANIZATIONS USE CLOUD TO DRIVE CHANGE IN THEIR TECHNOLOGY ENVIRONMENT



SCENARIO 1

EXPLORING THE NEW, THE RIGHT WAY

With proliferating public offerings on the market, companies might view the cloud simply as a new hosting environment offered by Amazon Web Services or Microsoft Azure.

While such services play a role, large organizations first need to grasp the cloud's power and how it differs from legacy systems by fully immersing themselves in multiple small proof-of-concept projects. Topics might include artificial intelligence, machine learning or predictive analytics, and pursuing them will enable organizations to understand cloud security issues, create a development pipeline, and take advantage of the technology's elastic principle. Because these innovations aren't possible in a traditional data center, companies can use them to prototype a workable agile DevOps approach.

Unencumbered by legacy constraints, these new cloud capabilities offer the most flexibility and generate the greatest gravitational pull within the organization. They're also the place companies can learn the most, enabling new processes and empowering a fresh workforce using innovative technologies. The output from this stage often takes the form of multiple cloud concepts, Internet of Things platforms, or machine learning capabilities.

SCENARIO 2

MELDING NEW & OLD PLATFORMS

After the company has spun up and absorbed these new concepts and developed a portfolio of new cloud-based capabilities, it needs to integrate them within the portfolio itself and across the organization's legacy environment.

Both the portfolio and legacy operations will ultimately interconnect and thus require strategies to work together effectively. An important consideration, given the different pace and tempo of change in the new cloud area versus legacy, is the need for multi-speed IT operations.

Successfully integrating platforms in the company data center and on the cloud has four key elements. First, ensure network connectivity. Second, navigate the security whitelisting process by gaining approvals for all systems. Third, resolve operational and management platform issues, and fourth, sort out questions concerning authentication and auto-registration.

At this point, out of fear or a lack of confidence, companies may effectively abandon the cloud and focus on what's left of the known and comfortable legacy operations. The resulting organization ends up running parallel IT operations that they never truly attempt to integrate, effectively blowing away their cloud aspirations.

SCENARIO 3

ACHIEVING A PURPOSE- DRIVEN DATA MIGRATION

Companies use different migration approaches, some of which may resemble the movement of truckloads of data center “stuff” onto the cloud.

The least effective are “lift and shift” exercises, which transfer legacy processes to the cloud—along with all the organization’s current IT problems. Instead, organizations should take a purpose-driven approach to this challenge, using it to gain leading-edge cloud-based capabilities. That means focusing on software-as-a-service (SaaS) or platform-as-a-service (PaaS) plays first, with the goal of enabling as much net new capability as possible in the cloud.

So rather than lift and shift, they should “drop and shop,” which means dropping legacy applications and shopping to replace them with more effective solutions designed and developed for the cloud. This enables companies to eliminate as much “technical debt” as possible (the need to repair or replace the easy, often decades-old software fixes developers used instead of choosing the best overall solution). The technique allows organizations to leap-frog different generations of applications and deployments and land squarely on state-of-the-art solutions.

SCENARIO 4

STREAMLINING & OPTIMIZING LEGACY PLATFORMS

Companies moving to the cloud need to recognize that they will operate in a world with both cloud and legacy capabilities in play and adjust to this reality.

While some leaders would prefer to do away with their legacy IT entirely, businesses will draw from both areas for extended periods. Legacy operations can benefit from cloud-based innovations like IT automation and the latest cross-discipline techniques, enabling organizations to change their incident management processes and problem management approaches. Applying new techniques in legacy areas can streamline and make them more effective.

One telecommunications company with aging infrastructure approached . It first highlighted the gaps between a cloud environment and the company's traditional data centers to create urgency within the organization to move. It then lined up the new capabilities, and contrasted them with the current legacy systems so that as the company made investments in the legacy side, the spending would reflect cloud innovations such as IT automation, thus infusing legacy systems with leading-edge technology.

DRIVING CLOUD STRATEGY, IMPLEMENTATION AND ADOPTION

Different clouds for different needs. The needs of companies can diverge significantly when it comes to the cloud.

For example, a growing tech company complained its slow and cumbersome IT system was delaying features it wanted to use in new platforms. Its leaders wanted to eliminate IT and shift all development to the cloud to increase speed and flexibility and gain access to the latest software and innovations. At the other end of the spectrum, a major media and entertainment company wanted to reduce its infrastructure footprint by moving to the cloud, vacating data centers and ultimately reducing costs. Each case will require unique cloud solutions to succeed.

How a company approaches its move to the cloud will depend on its answers to a few questions (Figure 2).

Figure 2 | Drivers of cloud strategy, implementation, and adoption approach

CRITICAL FACTORS THAT SHAPE A CLOUD ADOPTION APPROACH

DESIGN QUESTIONS

What part of the technology stack drives?

APPROACH CONSIDERATIONS

APPLICATION-LED

INFRASTRUCTURE-LED

What are the business objectives?

Accelerated Innovation

Increased Speed and Flexibility

Reduced Risk

Reduced Cost

First, are the needed changes and overall approach—in terms of cloud strategy, implementation and adoption—driven by application or infrastructure elements of the technology stack?

APPLICATION LED

An application-led situation highlights the role and needs of developers, meaning its business objectives focus more on accelerated innovation and increased speed and flexibility. Freed from the limitations of the company's legacy infrastructure, developers can draw capabilities from the cloud to run experiments and create applications. In fact, freedom and flexibility are critical cloud advantages that application-led initiatives value highly. Without the cloud, many companies could not realize key innovations simply because they can no longer afford to develop software in their data centers.

The business events the cloud might support could include contract renewals, or the desire to upgrade hardware. Contract renewals, for instance, often represent a compelling reason to change the environment and review vendor performance. Likewise, companies that have continually spent millions of dollars to buy the latest servers as they refresh hardware are now expressing interest in trading in that hardware for cloud capabilities.

Determine whether the capabilities needed to initiate the cloud program exist. Take networking and connectivity, for example, which focus on how a company connects its data center with its own IP address. And having a robust security approval process allows businesses to employ cloud capabilities widely without objections from the cyber-security team. In most cases, cybersecurity will have to investigate and approve each cloud service's use.

If the application-led approach does not drive the technology stack, then infrastructure elements may be a better fit in terms of cloud strategy, implementation and adoption.

INFRASTRUCTURE LED

When infrastructure concerns drive cloud activities, the company will focus on business objectives in terms of reducing risks (e.g., the cloud's more robust cyber-security and plant protection) and cutting costs. In terms of security, for instance, compared to an enterprise's infrastructure cybersecurity team of 5 to 10 workers, a typical public cloud provider will have significantly more, perhaps 3,000 to 5,000, security experts.

It also makes sense to ask whether the infrastructure transformation supports specific business events. For example, merger and acquisition activities can expose the need for cloud solutions, like a spun-off entity seeking capabilities their parent company once provided. Or, an enterprise launching a new line of business might use the cloud to support commercial or procurement processes.

Decide if the organization has sufficient kick-starting capabilities to initiate the cloud program in terms of monitoring and operations, and authentication and authorization. From an infrastructure perspective, monitoring and operations look at the operational realities and the challenges organizations face as they embrace the cloud. Companies also need to solve the problem of authenticating cloud content and authorizing who can do what—in the cloud and in the company's data center.

NINE WAYS TO ENSURE BLUE SKIES ABOVE YOUR CLOUD



Different perspectives matter when a company goes to the cloud.

The first three perspectives are completely non-technical in nature but play critical roles in the success of a cloud initiative.



1. VALUE STREAM

Value stream focuses on the value of cloud computing from the business's perspective, because leaders want to understand how the cloud drives benefits to the company's top and bottom lines. That said, the cloud often has upfront costs that companies can defray from a total cost of ownership perspective via lower operational costs over the course of a year-long implementation.



2. PEOPLE STREAM

People stream examines the cloud's impact on the company's workforce, addressing new job descriptions, organizational structures and workforce management issues. Some organizations find they can reduce IT support personnel by up to a quarter, while training those who remain in the latest cloud technology. However, these upskilled workers likely won't settle for their former wage levels, given the scarcity of this talent, and keeping them could erase much of the company's anticipated labor cost savings.



3. SERVICE STREAM

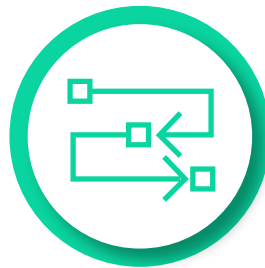
Service stream includes service purchasing, metering, service syndication and agile service portfolio management. It effectively shifts the IT organization from its traditional role of service provider to service "broker." No longer predominantly focused on creating and providing solutions for the business, IT now buys some services from the cloud provider and other sources, and configures them for the specific needs of the business.

These perspectives are technical in nature and therefore are fairly routine if the company has the knowledge to implement them correctly.



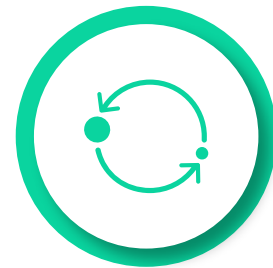
4. DEVELOPMENT STREAM

Development stream focuses on the new, creating DevOps automation to get the most out of cloud-driven capabilities. Organizations need skills and capabilities for developing the cloud “natively” while coexisting with legacy IT in a multi-speed model. They should build a continuous pipeline for development needs to keep teams constantly working and improving.



5. APPLICATION STREAM

Application stream defines the strategies for each application and workload. It involves trading ineffective legacy programs and processes for better cloud ones. This process starts by analyzing the applications that exist within the organization, developing a strategy for migration, and building out the capabilities to execute.



6. INFRASTRUCTURE STREAM

Infrastructure stream involves the creation of modern solutions capable of absorbing everything coming from the legacy side to ensure a smooth transition and optimal integration. Organizations focus on their targeted cloud environments to design the underlying infrastructure across networking, computing, and storage needs while optimizing for the cloud’s “pay-as-you-go” service model.

The final perspectives reflect the realization that when company cloud initiatives hit turbulence, it often involves these topics.



7. INFORMATION STREAM

Information stream, enables data restructuring in the cloud, facilitating structured storage and persistency services. It has one common but unappreciated issue that involves data management: what happens to the data-bases, and what do you do with “old” data since the cloud can theoretically store information forever? Moving from a few realistic data management options to an unlimited cloud menu of them can make matching the right technologies with the right data even harder.



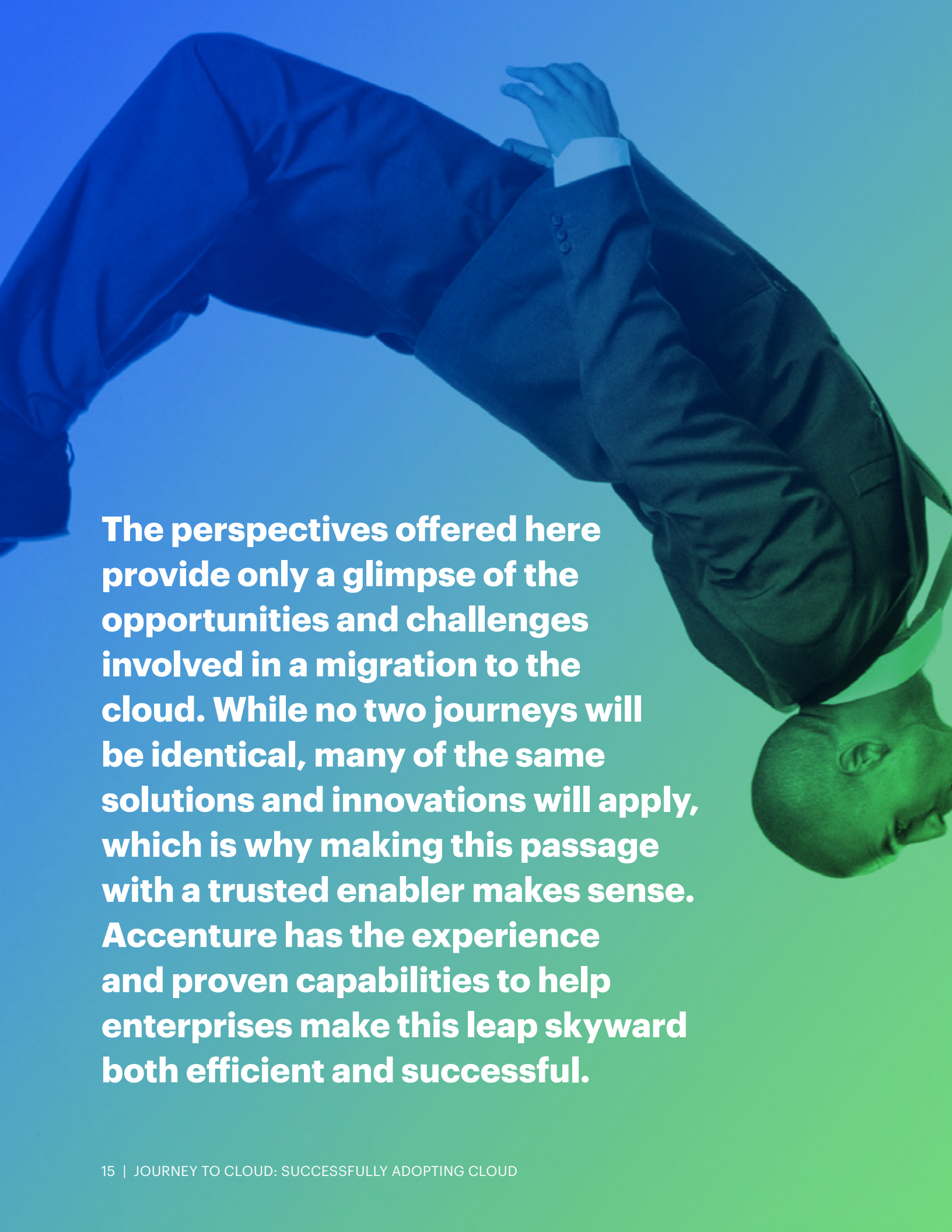
8. OPERATIONS STREAM

Operations stream focuses on the unique aspects of running the cloud versus legacy operations. It defines the modern cloud operating model and enables hyper-scale automated operations. Since the cloud is massively automated, it allows companies to capture vast amounts of information and, for example, can detect the need for more servers, while subsequently adding them (with human guidance). A good analogy for the operations stream is the transition from a labor-intensive production line to today’s highly automated assembly plant, where robots play a major role in product development. In the latter, humans create and program the robots, just as they do operationally in the cloud.



9. SECURITY STREAM

Security stream focuses on security governance and risk, enabling tight security control over cloud resources. It’s how the company ensures its cloud assets are safe from external attackers and those inside the company. Companies update their traditional on-premise models from a hard-shell intrusion protection approach to a defense-in-depth system that can enable each component to exist on the raw internet without disruption.

A man in a dark suit is performing a handstand, balancing on one hand. The background is a gradient from blue at the top to green at the bottom. The man's head is at the bottom right, and his legs are extended upwards and to the left. The text is overlaid on the left side of the image.

The perspectives offered here provide only a glimpse of the opportunities and challenges involved in a migration to the cloud. While no two journeys will be identical, many of the same solutions and innovations will apply, which is why making this passage with a trusted enabler makes sense. Accenture has the experience and proven capabilities to help enterprises make this leap skyward both efficient and successful.

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