

A series of stylized, overlapping white clouds with soft shadows, creating a sense of depth and floating in the sky.

HIT THE CLOUD RUNNING:

A Guide to Addressing the
Cloud Skill Gap Challenge





Broken Promises?

The cloud promises significant advantages for businesses and IT organizations. It drives speed and responsiveness, reduces maintenance headaches, and increases the capacity for innovation. But the degree of change management needed to realize these promises is often underappreciated.

Go cloud, the correct way

Successful cloud programs begin with strong strategies. And they sustain themselves with a range of new skills, methodologies and business approaches.

This guide addresses the root causes of four of the most common cloud enablement gaps. It provides you with a detailed understanding of why they happen and what you can do to address them.



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Intro:

Key Issues Driving Cloud Enablement Gaps

As traditional IT silos are blended and infrastructure becomes increasingly software defined, cloud computing is challenging IT organizations to think and work differently.

The issues obstructing cloud enablement are broad and varied. They include:

The War for Talent: Huge demand for experts means hiring won't be cheap or easy. Cloud professionals demand an average salary of \$117,000 a year, with a hiring difficulty of 8 on a scale of 10.¹

A Lack of Experience: Given the cloud's relative newness, finding veterans in the field is rare. In fact, 1 in 5 IT decision makers say they struggle to find skilled cloud computing pros.²

A Radical Cultural Change: Traditional roles in the Storage, Server and Networking realms are becoming blended. Meanwhile, IT must prepare for a new way to budget, administer, develop and collaborate with the entire business across departments.

Over Confidence: Too many businesses start a cloud project before they are truly ready. Thinking "I can handle this" the same way they've handled past IT projects often results in undertaking initiatives that do not deliver material value to the business.

HOW EXTENSIVE IS THE SKILLS PROBLEM?



ADOPTION

70% of IT leaders say they've planned extensively for cloud yet only 40% are leveraging it in a meaningful way



CLOUD FAILURES

34% of IT leaders admit experiencing a cloud failure caused by staff actions



TRAINING REQUIRED

More than 91% of IT leaders report that cloud training has grown as a priority for their organization

¹ Where Cloud Computing Jobs Will Be In 2015, Louis Columbus, Forbes, December 12, 2014

² There's a shortage of cloud experts, Mike Magee, TechEye, April 14, 2015

Enablement Gap #1: Managing and Configuring the Cloud

Cloud is inherently configurable. The new paradigm presents multiple opportunities for organizations to take advantage of cloud attributes, but it also introduces new processes, operations and skills development challenges for IT to address.

THE PROMISE

Freed from the burden of managing physical IT infrastructure, many IT maintenance obligations and associated risks are significantly reduced in the cloud. This increases IT staff availability to focus on strategic initiatives. The promise:

- Less maintenance and fewer break-fixes
- Less capital sunk into material infrastructure
- Reduced risk associated with infrastructure failures
- A more agile and responsive IT organization
- More engaging, transformative and impactful work for IT personnel

THE GAP

Configuring and maintaining your cloud is complex. There is an overwhelming number of options as you set up and create policies that will dictate your success. Very few businesses have skilled individuals who know these procedures inside-out. There are very few cloud veterans outside of professional and managed services organizations who have “been there and done that.” As a result:

- Configuration errors are common and time consuming to correct
- Ineffective set-up or management processes lead to unnecessary consumption and cost overruns
- Unskilled, inexperienced workers tasked with cloud duties may introduce errors adding unnecessary risk

Our Expert Says:

“Recognize that as demand for skilled cloud talent increases, so does its acquisition cost. That said, a failed cloud project or moving too slowly could cost your business far more than what it would have to acquire the necessary talent in the first place.”

– Craig McQueen, Microsoft Practice Director, Softchoice

Enablement Gap #1: Managing and Configuring the Cloud

As demand for skilled cloud talent increases, so does its acquisition cost. That said, a failed cloud project or moving too slowly could cost your business even more.

CLOSING THE GAP

Whether you choose to strengthen your existing team or find fresh talent, the answer is to look squarely at your talent pool, understand its current and potential capability and do something to elevate it. Here's how:

- **Invest in Talent:** Ensure your organization places as much emphasis on talent development as it does on technology. Without the right talent to run it, cloud technology won't benefit you much. Recognize that as demand for skilled cloud talent increases, so does its acquisition cost. That said, a failed cloud project or moving too slowly could cost your business even more.
- **Level-Up Your Team:** Hiring is not always an option. Training, mentorships and certifications can be powerful ways to elevate your existing team to take on the cloud. Look for programs offered by cloud service providers and managed IT service partners. These can help your organization learn as you go while taking risk out of the equation.
- **Aptitude to Learn:** Cloud is an ever-changing field. The way things are done today can and very likely will change tomorrow. For that reason, when hiring or deciding which talent to invest in, always consider not only what the person currently knows, but their capacity to take in new information and learn. Someone who is inherently teachable but presently knows less may be a more suitable (and less expensive) long term candidate.
- **Partner for Success:** Finding the right partner can immediately help bridge skills gaps while providing existing employees with guidance on proven approaches and techniques.

Enablement Gap #2: The Modern IT-Business Relationship

Not only does cloud free IT from many maintenance obligations, but by merging, streamlining and eliminating a variety of legacy functions, it also helps IT evolve to play a more strategic role in the organization.

THE PROMISE

A successful cloud-first IT department focuses less on setting up and operating the technology, and more on anticipating and addressing the needs of its line of business partners. With this IT becomes better positioned to drive organizational innovation and growth. The promise:

- A user centric IT driving greater and more intelligent technology adoption and value
- IT evolves from gate-keeper to trusted innovation partner
- IT becomes a more purposeful area of the business, attracting and retaining critical talent

THE GAP

The modern IT-business relationship demands a level of inter-personal skills rarely associated with legacy IT. In this new world, a combination of “people skills” and analytical problem solving skills become as important as a technical skillset. A significant worry for many IT leaders is the threat of Shadow IT – where end users adopt a tool without the IT department’s knowledge or permission. The risk of this occurring increases where IT is perceived as barrier to rather than an enabler of success. As a result:

- IT continues to be perceived as gate keeper, prompting the emergence and growth of Shadow IT
- IT departments struggle to assume the role of innovator with existing staff
- IT’s strategic business value is never realized

Our Expert Says:

“Fostering a strong business analyst (BA) practice in your IT department will encourage stronger relationships and better communication between IT and lines of business.”

– Craig McQueen, Microsoft Practice Director, Softchoice

Enablement Gap #2: The Modern IT-Business Relationship

When it comes to addressing IT-Business relationship gaps brought on by cloud, IT leaders need to look beyond traditional ways of doing things and get creative in their problem solving.

CLOSING THE GAP

- **Business Analysis.** This is the practice of enabling change in an organization by defining needs and recommending solutions that deliver value to stakeholders. Fostering a strong business analyst (BA) practice in your IT department will encourage stronger relationships and better communication between IT and lines of business. BAs function primarily to listen to, understand and analyze problems, translating business needs and coming up with the most efficient solutions possible.
- **BA's can also be employed to understand critical applications in depth,** facilitating discussions with line of business partners around migration to the cloud and ongoing optimization.
- **Coaching and Mentorships.** Coaching and mentorship is sometimes available in cheap and cheerful fashions, and closer to home. Where business analyst practices are present in your organization, consider employing them to mentor others in more technical IT roles. The idea here is to help your technical IT teams begin to think more holistically about the lines of business they support, and apply problem solving approaches more consistently in their work.
- **Off-Loading Day-to-Day Operations:** Working with an experienced partner provides an easy, reliable approach to bridging this gap. With managed service programs, your team can be reasonably freed from operational minutia to focus on solving higher-level, strategic problems.

IT'S A CULTURE SHIFT AS MUCH AS SKILLS SHIFT.

Owing to its agility, cloud positions IT well to drive business innovation, but many line of business partners don't yet see it that way.



CLOSE TO 68%

view IT as a cost center rather than a revenue generator



ALMOST 62%

say they see IT as a gatekeeper rather than an enabler



OVER 55%

perceive IT as a help desk rather than a strategic partner



ALMOST 48%

believe they can procure applications faster without IT's help

Enablement Gap #3: The Software-Defined Data Center

Definition

The term Software-Defined Data Centers (SDDC) refers to data centers where all infrastructure is virtualized and delivered as a service. Control of the data center is fully automated by software, meaning hardware configuration is maintained through intelligent software systems.

THE PROMISE

The cloud promises to replace manual, expensive infrastructure maintenance, with quick, efficient and easily optimized software-defined processes. This includes things like “Infrastructure as Code” – or provisioning infrastructure with repositories of code, DevOps and repeatable processes. The promise:

- IT delivers innovation faster with an iterative, minimum viable product (MVP) model
- Less time wasted going down the wrong path; failing fast is a virtue
- More flexible, democratic access to provisioning resources

THE GAP

The iterative and agile methodology the cloud enables is often entirely new to many seasoned IT veterans. This lack of experience can cause much confusion at the configuration stage, as well as missed opportunities to move quickly by employing agile methodologies or optimizing through automation.

On the flipside, developers given the keys to the infrastructure kingdom often under-appreciate the criticality of governance and control measures. At best this leads to over-spend and waste, and at worst to security breaches and fraudulent usage.

Our Expert Says:

“Freeing your developers to provision computing resources faster is great. It’s one reason we love the cloud. But it has to be done correctly.”

– Craig McQueen, Microsoft Practice Director, Softchoice

Enablement Gap #3: The Software-Defined Data Center

To avoid cost overruns, privileges should be based on the minimum requirements to do their job and nothing more. In some cases, that means being able to access a database - full stop.

CLOSING THE GAP:

Closing this gap is all about striking a balance between agile developer processes, and the rigid, transparent processes needed to keep risk and costs in check:

- **Embrace the Practice of ‘Least Privilege’.** Most IT organizations are under intense pressure to provide cloud-based resources as quickly as possible. For the sake of speed, relatively junior people, or those who aren’t accountable for cost overruns, are given blanket rights to deploy whatever they want. For most, privileges should be based on the minimum requirements to do their job and nothing more. In some cases, that means being able to stand up a workload or access a database – full stop.
- **Clearly identify costs and processes:** Leverage a structured methodology, such as Softchoice’s Azure Governance Workshop, to build a model to clearly define which business units should be consuming what technology, as well as the processes needed to clarify accountability and keep spending in check.
- **Understand and be prepared to manage ‘Compute Sprawl’.** One unchecked source of cloud over-spending is IT adding cloud resources to support application development and then failing to decommission them after the completion of the project. So-called ‘compute sprawl’ is one of the biggest contributors to cost-overruns. Clearly documented policies to support the process of requesting and retiring workloads will help you avoid this problem.



Further Reading:
Right-Size Your Azure for Best Financial Returns

Enablement Gap #4: Cost Management

Managing costs in the cloud is different. Performance management takes on a new and more critical role to ensure effective budget management, governance and accountability. Similarly, IT skills sets must align to support this enhanced need.

THE PROMISE

Because cloud is based on a consumption model just like a utilities bill: you only pay for what you use. Similarly, the jump to an Operational Expense (OpEx) model can provide a high-degree of flexibility and predictability versus the static CapEx model.

The promise:

- Every dollar is well spent and nothing is wasted
- Granular control and insight drives accurate budgeting and expenses
- You can plan for lowest common denominator usage and scale-up resources only when demand requires it
- Organizations can easily pivot and react to changes in their markets and industries without fear of technology holding them back

THE GAP

While the promise of only paying for what you consume is tantalizing, without the proper oversight and governance processes in place, many organizations end up spending more and getting less. This is caused by an absence of the skills, tools and knowhow to accurately forecast and manage cloud consumption. Fully optimizing resource usage and spending also requires staff with an intimate knowledge of cloud automation capabilities. Failing to address these gaps means you end up paying for more compute power and storage than you need to support the business.

Our Expert Says:

"You can't change something you can't see. Businesses need the right people enabled with the right tools to capture insight into how their cloud dollars are being spent."

– Craig McQueen, Microsoft Practice Director, Softchoice

Enablement Gap #4: Cost Management

Properly employed, automation ensures resources can be dialed up as needed and scaled back when not. Only paying for what you need sounds simple but can be difficult to realize without effective automation.

CLOSING THE GAP

Start with an objective baseline of your consumption and then ensure you have the right tools in place to keep tabs on and optimize your spending over time:

- **Get objective insight before you start:** Many of the gaps are directly caused by a lack of insight into your applications, environment and workforce. This is problematic both prior to and following cloud migrations. To plan a migration properly (or assess current cloud spend) you need tools to gauge usage and people who can accurately analyze the data. The idea here is to establish appropriate consumption thresholds and understand the associated cloud resources needed to support them.
- **Gain real-time insight into daily usage:** Businesses need deeper, more granular insight into consumption in order to control costs. Tools such as Softchoice's Cloud Dashboard give you a real-time view into what technology is being consumed by project, application, department or individual, hour by hour, day by day.
- **Optimizing through orchestration and automation:** Being entirely software defined, cloud infrastructure delivers enormous advantages over physical infrastructure provided you have people who are knowledgeable working with codebases to enable effective orchestration and automation. Orchestration creates workflows for simple tasks and automation enables these sequences to run automatically. Properly employed, automation ensures resources can be dialed up as needed and scaled back when not. Only paying for what you need sounds simple enough but can be difficult to realize without effective automation.



Further Reading:
Three Mistakes to Avoid When Managing Public Cloud

Cheat Sheet: Closing the Skills Gaps

A lot can get in the way of realizing the promise of the cloud. But there are clear steps you can take today to close the gaps and ensure success.

Throughout this guide we've offered specific considerations to solve specific problems. Here we summarize and offer a consolidated recommendation of what to do to address the broader skills and cloud enablement challenge.

- ✓ Get the right tools to provide objective, real-time insights to keep costs down and efficiencies high
- ✓ Employ a Business Analysts practice to engage the business, support innovation and avoid the rise of Shadow IT
- ✓ Invest in and value your talent as much as you do your technology
- ✓ Use training, mentorships and certifications to elevate your existing team
- ✓ Find the right partner to immediately bridge skills gaps and provide guidance on proven approaches and techniques
- ✓ Get a comprehensive, granular view of your cloud investments and consumption patterns as you go with tools like Softchoice's Cloud Dashboard

HOW ARE ORGANIZATIONS ADDRESSING THEIR SKILLS GAPS AND DEFICIENCIES?

Organizations are taking a variety of approaches to gain the necessary skillsets and evolve their culture:



24.1%

contract external partners



42.0%

augment teams with external managed service providers



20.4%

have a "Do it Yourself" approach using internal resources



13.5%

do a little of everything

Hit the Cloud Running with Softchoice

Our Services and Tools Help Close the Gaps and Realize the Cloud's Full Potential

As a leading Microsoft Azure and Amazon Web Services partner, [Softchoice](#) helps organizations across North America realize strategic business value with public cloud technologies. Our holistic approach includes solution design, implementation, migration, asset management and managed services.

WITH SOFTCHOICE YOU WILL:

MAKE INFORMED DECISIONS:

Working with Softchoice you'll develop a plan that provides business value and creates internal alignment by assessing your current state and desired outcomes, creating a secure, stable foundation to grow on.

LEARN AS YOU GO:

Working with Softchoice, we support you with highly experienced cloud engineers and solution architects. And once launched, you can continue honing staff knowledge with ongoing mentorship and live support.

GAIN REAL-TIME INSIGHT INTO USAGE:

Working with Softchoice, you'll have clear view of how your technology services are being used, and by whom. You'll assign costs based on usage, and you'll be able to budget for cloud more effectively.

KEY OFFERINGS

Cloud Techcheck	Data-driven assessment of your current state to understand today's environment before planning for tomorrow's
Cloud Governance Workshop	Best-practices workshop to create a custom model for tracking and allocating cloud resources and budget
Cloud Dashboard	Real-time view of consumption to align costs with strategy and ensure accountability
Keystone for Azure & AWS	Our end-to-end managed service for Microsoft Azure, supplementing your team with our expertise and 24/7 support



**500+
PROJECTS
DELIVERED**

Softchoice is a leading North American services and solutions provider, offering managed services, IT solutions and architecture excellence in all areas of the data center. With a deep bench of Microsoft and AWS cloud experts, we are a leading cloud services provider in the United States and Canada, and we offer a series of non-biased data-driven assessments that help our clients chart the best path for their business needs.

Softchoice is also a leader among technology solutions partners for providing insight, and hands on experience in the planning, licensing, delivery and maintenance of large-scale business cloud projects. From our SaaS management dashboards to our accelerator programs, we give you everything you need to be successful in the cloud.

Other guides in this series:

- ▶ [The Essential Guide to Azure Security](#)
- ▶ [The Essential Executive Starter Guide to Microsoft Azure](#)
- ▶ [The Essential Guide to Licensing and Consuming Azure](#)