AWS Whitepaper

AWS Cloud Adoption Framework: People Perspective

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Abstract

As the proliferation of digital technologies continues to disrupt market segments and industries, adopting Amazon Web Services (AWS) can help you transform your organization to meet the changing business conditions and evolving customer needs. As the world's most comprehensive and broadly adopted cloud platform, AWS can help you reduce business risk; improve environmental, social, and governance (ESG) performance; increase revenue; and improve operational efficiency.

The AWS Cloud Adoption Framework (AWS CAF) uses AWS experience and best practices to help you digitally transform and accelerate your business outcomes through innovative use of AWS. Use AWS CAF to identify and prioritize transformation opportunities, evaluate and improve your cloud readiness, and iteratively evolve your transformation roadmap.

AWS CAF groups its guidance in six perspectives: *Business*, *People*, *Governance*, *Platform*, *Security*, and *Operations*. Each perspective is covered in a separate whitepaper. This whitepaper covers the People perspective, which serves as a bridge between technology and business, accelerating the cloud journey to help organizations more rapidly evolve to a culture of continuous growth, learning, and where change becomes business-as-normal, with focus on culture, organizational structure, leadership, and workforce.

Are you Well-Architected?

The AWS Well-Architected Framework helps you understand the pros and cons of the decisions you make when building systems in the cloud. The six pillars of the Framework allow you to learn architectural best practices for designing and operating reliable, secure, efficient, cost-effective, and sustainable systems. Using the AWS Well-Architected Tool, available at no charge in the AWS Management Console, you can review your workloads against these best practices by answering a set of questions for each pillar.

For more expert guidance and best practices for your cloud architecture—reference architecture deployments, diagrams, and whitepapers—refer to the AWS Architecture Center.

Introduction

Millions of AWS customers, including the fastest-growing startups, largest enterprises, and leading government organizations, use AWS to migrate and modernize legacy workloads, become data-driven, automate and optimize business processes, and reinvent operating and business models. Through cloud-powered digital transformation, they can improve their business outcomes, including reducing business risk, improving ESG performance, increasing revenue, and improving operational efficiency.

Organizational ability to effectively use the cloud to digitally transform (organizational cloud readiness) is underpinned by a set of foundational capabilities. A *capability* is an organizational ability to use processes to deploy resources (people, technology, and any other tangible or intangible assets) to achieve a particular outcome. The AWS CAF identifies these capabilities, and provides prescriptive guidance that thousands of organizations around the world have successfully used to improve their cloud readiness and accelerate their cloud transformation journeys.

AWS CAF groups its capabilities in six perspectives:

- Business
- People
- Governance
- Platform
- Security
- Operations

Each perspective comprises a set of capabilities that functionally related stakeholders own or manage in their cloud transformation journey.

The *People* perspective serves as a bridge between technology and business, accelerating the cloud journey to help organizations more rapidly evolve to a culture of continuous growth, learning, and an environment where change becomes business-as-normal, with focus on culture, organizational structure, leadership, and workforce. It comprises seven capabilities shown in the following figure. Common stakeholders include chief information officers (CIOs), chief operating officers (COOs), chief technology officers (CTOs), Chief Human Resources Officers (CHROs), cloud directors, and cross-functional and enterprise-wide leaders.

People are the lifeblood of any successful cloud transformation effort. Having a workforce that is skilled, motivated, engaged, and driven by a leadership team that is committed to the value and return on investment of cloud will have a flywheel effect on your organization. As leaders become more inspired by customers and want their business to innovate, they will drive their workforce to learn and develop more technologies powered by cloud. This will result in a culture that is continuously learning, innovating, and open in their communications, lessons learned, and even failures.

AWS and the AWS Partner Network (APN) provide tools and services that can help you along each step of the way. AWS Professional Services is a global team of experts that provide assistance through a collection of AWS CAF aligned offerings that can help you achieve specific outcomes related to your cloud transformation.

AWS CAF People perspective capabilities

Culture Evolution	*Evaluate, incrementally evolve, and codify organizational culture with digital transformation aspirations*
Workforce Transformation	*Enable talent and modernize roles to attract, develop, and retain a digitally fluent and high-performing workforce*
Transformational Leadership	*Strengthen leadership capability and mobilize leaders to drive transformational change*
Change Acceleration	*Accelerate adoption of the new ways of working by applying a programmatic change acceleration framework*
Organizational Alignment	*Establish ongoing partnership between organizational structures, business operations, talent, and culture*
Cloud Fluency	*Build digital acumen to confidently and effectively leverage the cloud to accelerate business outcomes*
Organization Design	*Assess and evolve organization design for alignment with the new cloud ways of working*

AWS CAF People perspective capabilities

Culture evolution

Evaluate, incrementally evolve, and codify organizational culture with digital transformation aspirations, and best practices for agility, autonomy, clarity, and scalability.

Culture is the way things get done in an organization. To succeed in digital transformation, you'll need to use your heritage and core values, while you incorporate new behaviors and mindsets that attract, retain, and empower a workforce that's invested in continuously improving and innovating on behalf of your customers.

There is strong recognition, supported by evidence, that an organization's culture is a powerful determinant of transformation success. The influence of culture is further magnified in cloud transformation where the extraordinary capability of cloud is limited only by how people interact with those capabilities. Culture and behavioral challenges are often cited as the most significant barrier to digital effectiveness.

Given the impact of culture on transformation velocity and value, applying dedicated expertise (such as Organizational Change Acceleration, or more traditionally referred to as Organizational Change Management) to evolving culture is recommended. "Culture" is an ambiguous term that is open to interpretation, and culture change efforts often struggle to produce tangible results. The only way to reasonably change or evolve culture is to decompose cultural characteristics into specific behaviors that can be observed and measured.

Start

Evolving culture and turning potential barriers into enablers requires establishing a good understanding of where you are. Begin by assessing your current culture construct and measurement systems. Ask yourself the following questions:

- What are the cultural characteristics that your organization values?
- How do you measure those characteristics?
- How do you demonstrate what is important to your culture through communications, incentives, rewards, recognition, hiring, and promotions?
- How do you demonstrate what is not tolerated nor prioritized in your culture through communications, role modelling, and performance consequences?

Next, define the cultural characteristics that will have the most impact on successful cloud transformation and determine where you may have potential barriers or gaps as compared to the current state. This is commonly referred to as a Change Impact Analysis. For more information, refer to AWS Prescriptive Guidance: AWS Change Acceleration 6-Point Framework and OCM Toolkit.

Note that each organization may have slightly different areas of focus due to differences in current state, desired business outcomes, and cloud transformation strategy and roadmap. Some common characteristics that are often identified as highly impactful in using cloud to drive business value include:

- Customer focus.
- Cross-functional collaboration.
- Decision making (agility and empowerment).
- Experimentation/failing fast.
- Product centricity.
- Agile methodology/practices.
- Data fluency.
- Budgeting practices/processes.

With a solid understanding of where you are currently and where you need to go, the next step is to assess your organization's capability to evolve culture. Apply dedicated culture expertise to develop a change acceleration roadmap and implementation plan that aligns to your cloud transformation approach to ensure that the right cultural elements are in place at the right time.

Advance

Implement the change acceleration roadmap and prioritize cultural characteristics that will have the most impact on advancing cloud adoption by following a programmatic organizational change framework. It is important to recognize that, having started with an amorphous concept of culture and cultural characteristics, you will need to continually refine culture concepts into something that is tangible and actionable for the organization. To do this, evaluate each of your prioritized culture characteristics by considering:

- How are these characteristics demonstrated by specific behaviors?
- What behaviors would have the greatest impact?
- How do we measure these behaviors?

- How do we provide timely feedback on these behaviors?

Once characteristics are decomposed into new behaviors, it is necessary to:

1. consider the goals for cloud adoption; and
2. determine which stakeholder groups would have the most impact on those goals by demonstrating new behaviors.

As part of the culture change roadmap, begin a communications and enablement campaign. The goals of the campaign should be related to:

- Increasing awareness of the importance of culture and cloud adoption.
- Increasing understanding of cultural characteristics and behaviors that typically offer success in cloud adoption.
- Setting expectations for measurement and feedback of new behaviors.
- Obtaining commitment by leaders to demonstrate and drive new behaviors.
- Supporting managers in understanding how certain cultural characteristics and behaviors that drive cloud success may be in direct conflict with those that drive on-premises success.
- Increasing employee awareness that cloud transformation will naturally cause a cultural evolution, and to accept the shift, versus trying to resist it.

As part of the culture change communications and enablement plan, you should be proactive and intentional in:

- recognizing and rewarding new behaviors; and
- recognizing and redirecting behaviors that are anti-patterns to the desired cultural characteristics.

For example, are you praising and providing positive feedback for “experimenting, failing fast and iterating”, or are you inadvertently punishing those behaviors by asking harsh questions, stopping experimentation, or eliminating budget?

At this point, it’s particularly important that all leadership levels are consistent in demonstrating and recognizing new behaviors. If parts of the leadership hierarchy are consistently recognizing the “old way” of performing, the mixed signals to the organization will delay the evolution of culture.

Excel

Concurrent with implementing the change acceleration framework, begin aligning systemic talent management levers, such as acquisition, onboarding, learning and development, reward, and performance management. This is a matter of ensuring that the new behaviors are sufficiently incorporated into each of the talent management levers.

- **Talent acquisition** — The new behaviors are clearly communicated in recruitment and are thoroughly assessed in selection/hiring (such as behavior-based interviews specifically addressing desired cultural characteristics).
- **Onboarding** — The new behaviors are communicated as part of onboarding new hires.
- **Learning and development** — Specific training programs are created to:
  - train new behaviors for all stakeholders; and
  - train leaders on how to model, recognize, and reinforce new behaviors.
- **Reward** — Both informal reward/recognition programs and more formal compensation systems reflect the desired cultural characteristics.
- **Performance management** — The performance management system includes the cultural characteristics whereby each individual has goals and feedback related to new behaviors.

At its foundation, evolving culture requires sensitive measurement and feedback systems that allow you to answer the following questions:

- Is behavior changing over time in the right direction?
- Are the predominant behavioral patterns in the organization consistent with the desired cultural characteristics and behaviors?
- Can each individual describe and provide examples of the desired cultural characteristics and behaviors?

Once new behaviors are consistently demonstrated, talent management systems are aligned, and agile feedback and measurement systems are in place, the enterprise will have a self-sustaining evolution of culture. However, your cloud journey is not static, and as your cloud capabilities mature over time, the cultural characteristics that are important will also change over time.

For example, in the early stages of migrating to the cloud, fast decision making, breaking down organizational silos, and cross-functional collaboration may be the cultural characteristic with the

highest priority. Further into the cloud adoption journey, innovation and new product development may be the business priority that requires cultural characteristics related to forming product teams and rapid experimentation. So, continue to evaluate your change acceleration roadmap against your cloud transformation plan to ensure that the right cultural elements are in place at the right time.

Transformational leadership

Strengthen your leadership capability and mobilize leaders to drive transformational change and enable outcome-focused, cross-functional decision making.

To succeed with cloud transformation, leaders should focus on people as much as they do on technology. Without an effective blend of technical and business leadership, your transformation may slow down or stall. Refer to The Chief People Officer—The CIO's Partner in Change blog post.

Start

An organization's ability to be successful in the digital era requires not only an investment in technology, but also a change in culture, with a focus on transformational leadership. This approach supports the changes necessary at the organizational level through changing mindsets, perceptions, and behaviors at the contributor level generating a shared, inspiring vision and strategy to drive organizational transformation and learning. The maturity of an organization to adopt cloud and transformational solutions is dependent on the leadership style and full support of the C-level executives, directors, and senior leaders.

Leadership's role is to establish a baseline to measure organizational readiness for cloud adoption. As a leader, gather the insights necessary to know where the organization needs to support transformational initiatives and how they are performing across multiple key business areas. This facilitates making decisions regarding talent acquisition and the required level of training needed for current employees, as well as the acceleration of recruiting and skill-building needed. This baseline informs the speed and the success of your cloud transformation.

Assess the current business operations, processes, procedures, people, and change to identify gaps in the organization's ability to adapt and adjust, as well as adhere to compliance aligned with the goals and direction supporting the business outcome.

Leaders should apply thought leadership and design thinking to identify skillsets needed for growth and sustainability of operations during transformational initiatives, and continuous innovation to drive the desired business outcome. The formation of a leadership team with a focus on Transformational Leadership will assist in building a transitional roadmap supporting the vision and strategy. Implementing this approach will prove valuable to aligning the organizational structure with a culture that adapts to innovative trends, impacting competitive environment and industry.

Advance

Establish a Transformational Leadership Office (TLO) consisting of a Chief Transformation Officer and additional supporting roles comprising representatives from the various C-level executives, including the chief executive officer (CEO), COO, chief financial officer (CFO), chief data officer (CDO), chief risk officer (CRO), chief information security officer (CISO), CIO, CTO, CHRO, and business unit leaders as appropriate who will provide executive sponsorship, executive vision, and executive guidance. This office will be responsible for changing the way people in the organization think, how they behave, how they measure success, and steadily aligning the culture with the strategy and vision. The TLO will also develop transition roadmaps to address identified areas that will impact organizational alignment, operational processes, procedures, training, and development of employees and services. For more information, refer to The Agile Organisation: Changing our Worldview blog post.

Implement a structured process based on people and change that will guide the transition of employees to support cloud adoption. Engage the various C-level executives and business teams to understand the impact on desired business outcomes they are trying to achieve. Use the structured process to define the requirements for the support needed to facilitate the outcome. Ensure all stakeholders know exactly what's being asked of them, why it needs to be done, and to what standard. The next step is to assign employees an individualized transitional plan (if it's out of a typical Human Resources (HR) annual cycle), adding accountability to provide direction, and having them demonstrate their support of cloud adoption and transformation initiatives.

The TLO will sustain a focus on people, culture, and change, establishing the organization's cloud readiness and transformation initiatives. The entire organization will significantly affect, and be affected by, your organizational culture. Understanding these cultural implications, your organization's receptivity to change, prior change successes and failures, communication patterns, organizational structure, and the level of executive sponsorship, commitment, and alignment, are all important elements of building a successful approach to cloud adoption. This process, which we call the AWS 6-Point Change Acceleration Framework, is a highly flexible and scalable framework for fitting the needs of the transforming organization.

The AWS Change Acceleration 6-Point Framework and Organizational Change Management Toolkit helps prioritize the steps that cloud leaders and their teams must get right to realize the desired outcomes of cloud adoption.

The important role of middle managers should not be ignored. Data suggests that people prefer to learn about changes impacting their daily work from their manager. But keep in mind that

middle managers are often stretched too thin, overloaded with daily tasks and personnel issues, balancing a tightrope between strategy and implementation. While providing support to middle managers, senior leaders should model the expected behavior. In doing so, keep these five change management obstacles in mind:

1. Lack of executive support and active sponsorship.
2. Lack of effective communication led to misalignment.
3. Lack of change buy-in and solution support created resistance.
4. Limited knowledge and resources for change management.
5. Change-resistant culture and attitude.

Excel

The Transformational Leadership Office builds upon managing alignment, direction, expectations, and development for the teams across the organization. Alignment is implemented through a top-down/bottom-up approach, aligning internal stakeholders across business unit leaders and directs, and tying jointly with Objectives and Key Results (OKRs). Refer to the Connect Your Technology and Business Strategies with These Two Frameworks blog post for more information.

Direction creates excitement and sets the tone for your organization's transition to use innovative cloud capabilities. Change creates new role requirements needed to support migrating and using cloud technologies, and creates opportunities to drive workforce transformation as the method for equipping the workforce with the training and skills necessary to keep up with the changes in your organization's transformation strategy.

Implementing the plan for training your workforce in the specific technology areas ensures that teams build the right skills based on your organization's initiatives, as well as developing a training pipeline that is future-focused to meet demands for the organization transformation.

To accelerate cloud adoption and help your organization change the way it thinks, decides, and behaves, enlist a core team of cloud experts within your enterprise to scale cloud proficiency to the entire organization. Many organizations establish these groups as sharing mechanisms that complement their formal training programs by helping to build on current knowledge, while incorporating the new. Known as Cloud Centers of Excellence (CCOE), these teams are comprised of a Cloud Leadership team, a Cloud Business Office, and Cloud Platform Engineers, with cloud experts from different roles within the organization, such as developers, network engineers, database administrators, and security and finance experts.

A CCOE can add value by:

- Serving as a change lever to help the organization accelerate changes in how they think, behave, decide, and innovate using cloud.
- Accelerate sustainable autonomous working by implementing standards based on best practices.
- Empowering cloud-driven product teams with a self-service environment, minimized disruptions, and increased productivity.
- Programmatically optimizing agility and value of cloud scale through ongoing risk mitigation.

Changing behavior and developing employees, leaders, and teams fosters a culture of continuous learning, where people have permission and are actively encouraged to learn and experiment without fear of failure. Instituting this culture starts at the top. Senior leaders should align on and commit to employee development as a business imperative and priority.

Cloud fluency

Build digital acumen to confidently and effectively use cloud to accelerate business outcomes.

The requirement for an exceptional workforce goes beyond adapting to a digital environment. The greatest challenge is not the technology itself, but rather the ability to hire, develop, retain, and motivate a talented, knowledgeable, and proficient workforce capable of using technology to drive business outcomes.

Start

Assess current capabilities through a Migration Readiness Assessment (MRA). This will be at a high level and give initial areas of focus. Cloud learning and development should become a part of the existing training strategy for your technology, business, and finance workforce. Information and analysis from the MRA may be used to inform this strategy. Learning requirements should be linked to how the cloud will generate business value.

Business value should be considered across the four pillars of the Cloud Value Framework, including cost savings, staff productivity, operational resilience, and business agility. Learning needs typically focus on either staff productivity or business agility, both of which are enhanced through learning about how to get the best out of the cloud, though there are benefits that will be gained in the other areas as well.

Begin building the foundational skills to understand and use cloud. General information sessions, town halls, and lunch-and-learns should be offered widely to both business and technology stakeholders to explain the value that cloud brings. Create an information repository or self-help site on your intranet for whitepapers and articles that may be of interest. Begin exploring AWS Skill Builder for both technical and non-technical staff, or those who may already have projects running on AWS and require some formal training.

Offer informal training, such as webinars or simulators, to build interest and generate momentum for change in the existing workforce. Identify those that will become part of an initial Cloud Foundation Team and offer them formal classroom training. They will need to be “ahead of the game” when it comes to both business and technical skills. They will then be able to place cloud value in the context of the organization.

Advance

Your organization will now have some cloud knowledge, and will be able to make informed decisions around how it wants to achieve business value through cloud. It should now look to baseline its cloud skills through a more formal Learning Needs Analysis. This allows your organization to develop a targeted training strategy specifically for cloud and those who will be involved. This will be informed by your workforce transformation and your organizational design work. For more information, refer to AWS Ramp-Up Guides and the article "Is Your Under-skilled Workforce Holding You Back from Digital Transformation?"

Using the output of the Learning Needs Analysis, you can now start building individualized training programs alongside your organizational design and target operating model. This will be a key responsibility of your cloud training team, focused on designing and coordinating role-based cloud training. Your cloud training team should be aware of and use courses available from AWS and third-party training providers. The training team can be part of the enterprise training function in your HR department.

Relevant OKRs may include:

- **Objective** — AWS platform teams are available to sustain, optimize, and grow workloads.
- **Key result** — There is a compute team, a networking team, a database team, and a security team. Each team member has obtained relevant AWS certifications.

At this stage, training should begin to cover intermediate and, in some cases, more advanced content, including specialty certifications. Use AWS Skill Builder to develop your training plans. Training should now include the following elements:

- Classroom (virtual or in person).
- Experiential training, such as immersion days.
- Certifications (both technical and business).
- Challenges.
- Hackathons.
- GameDays.

Excel

Just as organizations do with their technology products, they must also iterate to achieve cloud fluency. Consider implementing a *skills guild*. This will help maintain excitement and momentum around a continuing transformation journey. The AWS Skills Guild is a programmatic approach that helps accelerate cloud outcomes by creating excitement, creating cloud advocates, sharing knowledge and best practices, and nurturing a culture of learning for builders and innovators.

A skills guild helps form communities of practice consisting of individuals with mutual interests within your organization. These can run along functional lines such as software development, infrastructure operations, or machine learning (ML). Depending on the nature of your organization, they could also be formed around your lines of business, such as consumer packaged goods, industrials, or supply chain and logistics. A combination of both may be suitable.

These communities of cloud experts participate in activities to grow their knowledge, evangelize the capabilities and services in their domains, and support customer (both internal and external) engagements. They share best practices, case studies, and lessons learned with one another for the mutual benefit of all. Community members, as experts, collaborate with other skilled practitioners and are connected with opportunities for networking and career advancement. These communities allow for formal and informal mentoring and shadowing activities, further helping to develop your workforce.

Organizations are increasingly seeking to become data driven. This relies upon being data literate, which in turn relies upon having the right skills and capabilities within the organization. Building data literacy starts with agreeing on the level of proficiency that is needed. From there, you can develop a plan for how to upskill your workers. Technologists with AWS experience may begin working towards their Data Analytics certification. This will equip them to use platform tools to generate insights that can in turn generate business value.

Workforce transformation

Enable talent and modernize roles to attract, develop, and retain a digitally fluent high-performing and adaptable workforce that can autonomously drive key capabilities.

Workforce transformation is the programmatic approach to identify the necessary cloud skills, the pipeline of talent that possesses and will possess these skills, and mechanisms to attract, develop, and retain that talent. When learning objectives are linked to a cloud migration or modernization roadmap, it makes it easier to identify the individuals and learning paths that are required. Beyond the talent, managers, and leaders that are required for workforce transformation, business functions such as finance and HR also need to factor learning and headcount budgeting into their annual processes. As organizations adopt DevSecOps practices as part of their cloud transformation journey, workforce transformation becomes a vital factor in their success.

Start

An inclusive and diverse workforce with the appropriate mix of technical and non-technical skills is essential for a successful move to cloud. Amazon tries to create teams that are no larger than can be fed with two pizzas; we call this the two-pizza team rule. In that spirit, many companies, Amazon included, find success in empowering "Two-Pizza Teams" to achieve their goals.

In line with the Amazon Leadership Principle "Think Big" but start small, smaller teams promote better collaboration, which is critical when software releases are moving fast. A team's ability to deliver software can be a differentiating factor for your enterprise against your competition. One way to start small is to embark on the previously mentioned AWS Learning Needs Analysis (LNA) to analyze your workforce's current knowledge, skills, and interest in upskilling on AWS. With or without the LNA, you can start addressing technical skills by using the AWS Ramp-Up Guides. These guides are organized by role (such as developer, solutions architect, and system operator) as well as by solution (including containers, cost management, and data analytics).

Advance

Your HR and Organizational Change Acceleration teams can use your migration and modernization roadmap to determine the skills and competencies that are likely to be needed in the short, medium, and long term.

To increase and diversify your talent pool, consider motivating your workforce to upskill and cross-train in cloud technology domains. This may help you with your inclusiveness, diversity, and equity

(ID&E) objectives by expanding upskilling and certification opportunities to those who have been historically underrepresented in science, technology, engineering, and mathematics (STEM) fields. You can take this one step further beyond internal employees to external contractors and recruits as well.

Once you have recruited and/or upskilled employees, put a talent retention plan in place that incentivizes employees to stay with your organization. While this point may seem obvious, cloud skills are in high demand in the marketplace, and at times, organizations are caught off guard when their best talent leaves. This frequently happens when organizations do not recalibrate the employees' newly acquired skills against a market test for compensation and culture.

Habits, mental models, and ways of working will change. It is not just technology teams that will become agile; business functions will as well. For example, some Capital Expenditure (CapEx) may become Operating Expenditure (OpEx). Small amounts of funding should be released, with more pre-agreed and easily available as experiments begin to show value. Costs should be optimized and finance staff should be proficient in using the AWS pricing calculator and other native tooling to create cost estimates that can be used in business cases. They should have a good working knowledge of relevant cloud services and understand why they are being used.

Excel

At this stage, you should undertake a proactive analysis of current workforce supply and future demand to build required capabilities and capacity to achieve business objectives. HR leaders with cloud knowledge need to be able to look at an enterprise roadmap and plan what will be required in the future, and then either upskill the current cloud workforce or attract new talent. To attract new talent, build a strong employer brand by publicly promoting your digital vision and organizational culture and use it in your recruiting strategy, social networking channels, and external marketing. Explain to internal staff future requirements and seek willing volunteers. Create skill redundancy in anticipation of friction. As cloud services lower the barrier between infrastructure and application teams, rotate staff between different teams.

ML and artificial intelligence (AI) are showing their potential in boosting individual skill management and in the talent acquisition process. Organizations can now build personalized training recommendations for employees based on digital transformation roadmaps combined with personal preferences. ML tools can help HR hire new talent, track a candidate's journey throughout the recruitment process, and accelerate feedback to applicants.

A distributed workforce strategy should be strongly considered. Employees who are enabled by ubiquitous technology can work from multiple locations, including central offices, homes,

satellite offices, and coworking spaces. This allows organizations to widen their pool of talent and take advantage of the global marketplace, while offering work/life balance and flexibility to its workforce. A hybrid model is trending as a best practice to provide balance with community and individual work options, which offers some onsite time together as a team to foster strong interpersonal bonds and spark creative interactions, and independence to work from wherever, whenever.

Change acceleration

Accelerate adoption to the new ways of working by applying a programmatic change acceleration framework that identifies and minimizes impacts to people, culture, roles, and organization structure when moving from current to future state.

Cloud transformation creates widespread changes across business and technology functions. As enterprises embark on cloud transformation, there is a temptation to focus first on the technology without planning for the organizational impacts that transformation has on culture, roles, skills, and leadership. Yet, again and again, we find that proactive focus on organization alignment, leadership, people ability, and culture is the key to realizing the transformational value of cloud adoption.

Organizations that apply a programmatic end-to-end change process that is structured, integrated, and transparent achieve higher rates of success with value realization and adoption to the new ways of working. By applying a change acceleration framework such as the AWS Change Acceleration 6-Point Framework, from project onset, organizations more readily achieve alignment, a shared vision, and reduced waste. The AWS Change Acceleration approach has been designed with a mindset for Return on Investment (ROI) at the forefront, to accelerate organizational adoption of cloud services and solutions, minimize the degree of business performance dip, and shorten project completion times. Building your organization's change muscle is key to transformational levels of success.

As AWS continues to innovate at a rapid pace each year, and as your organization quickly adopts those solutions and innovates, business value is enhanced. These initial cloud successes lead to faster, quicker, and more cost-effective adoptions, and the cycle of migration and modernization repeats itself. By focusing on the human elements of cloud transformation using a structured yet flexible Change Acceleration framework, you will see spillover outcomes in the form of culture evolution, transformation leadership, and talent capabilities. It also breaths energy into structural areas of change, such as advancing the purpose and maturity of your CCoE and Cloud Operating Model (COM).

Start

Start with data about the current state of your organization regarding change. Conduct a stakeholder assessment by interviewing cross-functional IT, finance, HR, and line of business leaders about your cloud strategy and transformation efforts. By asking different leaders the same

set of questions separately, a clear picture of awareness, understanding, and buy-in will begin to crystallize. If there are areas of strong organizational support, reluctance, resistance, or constraint, these also become evident in the interviews. When interviewing leaders, only listen, and probe for clarification or deeper understanding. It is important not to correct or argue, and realize that it is common to hear differing views of the vision, inconsistent answers on timeline, and worry about the organization's prioritization or capacity for change at a given point in time.

Here are some questions to consider asking:

- What is your sense of the reason or rationale for this cloud transformation? How well is this understood in your group?
- What outcomes are you expecting?
- What changes of this magnitude have you experienced before? How have they gone?
- How does the culture here encourage involvement with this kind of initiative?
- What effect will this cloud transformation have on your team's daily processes and responsibilities?
- What skills will need to change? What skills are missing?
- What barriers or risks do you perceive with the cloud transformation?
- Related to communications and training within your organization, what channels do you prefer or recommend?

Next, articulate a vision for what the future looks like. If this has not been done to date, take some time to meet with the executive sponsor of the program, and any trusted team members to discuss the future state vision. Consider writing a press release and frequently asked questions (PRFAQ) to define, invent, refine, test, and iterate the future state vision. Articulate the customer and internal benefits from your cloud transformation, and work backwards from those. Then, think through a list of questions customers would likely have about cloud transformation, and develop the FAQ list. For more information, refer to Working Backwards.

Align and mobilize cross-functional cloud leadership. One way to do this is to bring back the leaders that were initially interviewed and share a report of findings. Anonymize the feedback to earn trust, and point out areas of agreement and disagreement to build alignment. By seeing how others reply to the same questions, leaders can acknowledge the similarities and differences in how they are prioritizing the cloud transformation with their teams, where there are pinch points in capacity, knowledge, and skills, and how metrics and shared OKRs will play a role in the path forward.

Develop a change acceleration strategy and roadmap that addresses risks and uses strengths. It can be comprised of leadership action plans, talent engagement, communications, training, and risk mitigation strategies. To keep executive engagement strong and cross-functional, try to give each leader a task to own on a quarterly basis. This gives each leader accountability for the success of cloud transformation, as well as interesting and timely topics to speak about that may be beyond their typical scope of control. This technique helps to spread the word across the organization horizontally and will nicely complement communications that are happening vertically throughout the IT function. For the change acceleration roadmap, create a view of the time horizon of the transformation and include any key milestones such as migrations, data center exit, and modernization efforts.

From there, consider the following questions:

- What do people need to know?
- When do they need to know it?
- What do managers need to know?
- What big events and training will need to take place?
- Who is the audience impacted?
- How will hiring plans be impacted?
- What can we highlight about cloud at recruiting events?
- What approvals or involvement may we need from a finance or HR perspective to meet our milestones?

By working backwards from key objectives and creating people-related milestones between them, you will start to form a robust change acceleration roadmap. The roadmap can then be broken down into specific phases, releases, epics, sprints, and user stories for project management purposes. For more information, refer to the re:Invent video "Working backwards: Amazon's approach to innovation".

Advance

Envision the future by assessing your organization's readiness for cloud through impact assessments. Identify key stakeholder groups, cross-organizational dependencies, key risks, and barriers to transformation. Empathize with their day in the life as much as possible to see the world of impacts from where they sit. Consider the changes to processes, people, organization,

technology, applications, metrics, data, and reports. Also consider timing for key milestones (such as training events, migrations, and data center exits) in the context of other changes impacting that stakeholder group, and modify to relieve pinch points and avoid unnecessary stress.

Plotting each stakeholder group methodically in a change impact map will help you identify patterns. Some groups will be more positively impacted than others. Some groups may not have capacity for yet another enterprise-wide initiative and will require careful sequencing within the roadmap. Change impacts also formulate a logical basis for determining communication messaging and training plans in a role-based holistic manner.

Change readiness is another factor. When there is an impending change, such as a big migration, a data center exit, or modernization milestone on the roadmap, it helps to send a survey to impacted cloud users to gauge readiness for change. This will help shore up any additional needs for communication or user support ahead of time, or at least provide advance notice for what frequently asked questions and trouble tickets are bound to appear after the change takes place.

Here are some statements that you may wish to consider evaluating on a Likert scale to provide a health check on organizational readiness:

- I believe a clear vision for cloud transformation has been communicated.
- I support the business rationale for cloud transformation.
- I understand how we will measure the success of cloud transformation.
- I understand the priority of this change in relation to other initiatives in this organization.
- I feel sufficiently informed about cloud transformation plans.
- I have received consistent communication about cloud transformation.
- I have the skills necessary to effectively work in the cloud.
- I am motivated to learn new processes and skills associated with cloud.
- I have sufficient time to learn cloud skills and/or attend training.
- I believe the right level of skill development is available to support cloud transformation.
- I know where to go to acquire new skills needed for cloud transformation.
- My manager/leader effectively communicates what is expected of me related to cloud transformation.
- My manager takes an active interest in this cloud transformation.
- Senior management (higher than my manager/leader) supports cloud transformation.
- The people leading cloud transformation “walk the talk”.

- Mistakes will be treated as opportunities to learn rather than punished as failures.

Define what success looks like early in the journey by creating key performance indicators (KPIs) and metrics that are specific, measurable, action oriented, relevant, and timebound (SMART). Beyond quantifiable metrics, use anecdotes, which are a form of observable data that should not be ignored just because they cannot be measured. If you are using an organizational readiness survey like described above, this can be used as a mechanism to gather metrics for your scorecard. Consider metrics that evaluate various aspects of the change acceleration strategy.

For example:

- The number of applications you are migrating/modernizing.
- Governance and participation metrics of your CCoE and other cloud leaders.
- Outcomes of migration or modernization events.
- Cloud certifications achieved.
- Cloud usage and cost data.
- Documentation of repeatable processes and patterns.

Consider shared outcomes for leaders in the form of shared OKRs. Shared OKRs give cross-functional leaders a common goal, and work as a forcing function to establish collaboration, versus siloed ways of working. When measuring and sharing progress, remember to show heart and soul. The goal should be progress, not perfection. Build positive momentum and encouragement, and point out sparks of inspiration versus adopting a format of sterile status tracking. Be sure to recognize early wins and celebrate them in visible communications. Hearing about good work, and even hearing about missed objectives that are still progressing in the right direction, give the organization hope. It also sets the stage that cloud change is important, and failing fast or failing forward is both tolerated and encouraged.

Excel

Beyond implementing a programmatic framework for change acceleration, applying behavioral science enables you to more rapidly achieve desired results. The fundamental principle of behavior science is that behavior is a function of the events that precede (antecedents) and follow it (consequences). Effective application of this principle, which comes from decades of research in behavioral science, gets many leaders aligned on a critical few “desired behaviors” and collectively applies antecedents and positive consequences.

The behavior of managers and leaders directly impacts the behavior of everyone in the organization. Therefore, changing the behavior of mangers and leaders will impact/change the behavior of everyone in the organization.

If this behavior change is aligned around strategic priorities, then an organization can quickly and profoundly impact results. For example, if the desired behavior is to fail fast, then, when an employee does run an experiment that fails, they should not be criticized for that failure, but rather complemented on the agility to quickly recover and share lessons learned.

Make changes stick by reinforcing, recognizing, and rewarding desired behaviors that drive the cloud strategy and transformation effort forward. Be sure to also delicately point out when behavior needs to change. Keep in mind some best practices around rewards and recognition. For a rewards and recognition program to be effective, it should be sufficiently funded, aligned with goals and values, appropriate, timely, artfully carried out, administratively uncomplicated, and regularly evaluated.

When considering the behavioral changes that are beginning to take place, do not be afraid to test and refine. Despite the best of leader intentions, sometimes the behavioral science works against you, and the consequences you thought would drive positive momentum may actually backfire. For example, if the desired behavior is to submit innovative ideas to a central repository, and then, when employees do that, they may get invited to subsequent meetings, leading to additional work on top of their day jobs, they may quickly stop sharing their innovative ideas. Instead, acknowledge that the mechanism did not work as intended, and employees who are selected for the top innovative ideas will get relief in other areas of responsibility, or win a coveted prize.

If it seems warranted, acknowledge those mistakes and give yourself permission to fail fast and fail forward too. Refine by adjusting the consequence. See if the new consequence with the same antecedent drives a different behavior. If so, great. If not, keep testing and refining, and adjusting organizational algorithms accordingly to nudge the workforce in the right direction.

Recognize that change acceleration is never complete. The journey is more important than any milestone or destination, and it may take you on tangential journeys to places you never imagined. As the speed of cloud continues to advance, the speed at which your organization can absorb, adopt, anticipate, and respond to change will be a differentiator between your organization and that of your competitors. In a competitive talent market, it will be the gamechanger for you as an employer. Ideally, your organization builds a strong muscle for change, until it becomes business as usual, or until you can level up your scale and impact.

Organization design

Assess organization design for alignment with the new cloud ways of working, and evolve as you progress through your transformation journey.

Organization design is the process of modifying organizational structures to better enable the coordination and implementation of strategy. As strategy and priorities change, structures or organization design may need to change as well. The ultimate purpose of organization design is to improve business outcomes by influencing what people do to achieve those results. For more information, refer to the Failing & Creating a Culture of Learning blog post.

Organization design is simply one of the formal levers for improving business outcomes. Other formal levers include mission, values, strategy, goals, work processes, technology, measurement and information processes, recruitment and training, performance management, recognition and compensation, and so on. The inter-relatedness of these formal levers is characterized simply by McKinsey's 7-S Framework.

As you use cloud to digitally transform, ensure that your organization design enables your core business strategies, processes, people, and operating environment. At some point in your cloud journey, it is assured that you will need to change many levers, including organization design, to put yourself in the best position to achieve desired business outcomes.

Start

Start by assessing your current organization design and determine how it can enable or hinder your cloud strategy. This assessment should include key characteristics that are instrumental to your cloud and digital transformation, such as innovation, customer-focus, experimentation, autonomy, and collaboration. This assessment can also be done in conjunction with value stream mapping that depicts how you deliver value to your customers, which often illustrates how the value stream may be complex and inefficient due to multiple organizational units and silos. Use your consulting partners or HR organization to conduct this assessment. For more information, refer to the Go Faster! But How? How mapping your product-development process can help you build a high performing organization blog post.

Early in you cloud journey, AWS recommends that you begin forming cross-functional cloud teams (Two-Pizza Teams), often as part of an initial CCOE or initial migration teams. For example, AWS recommends that the initial Cloud Foundations Team be comprised of cross-

functional representation of cloud leader, product owner, financial analyst, organizational change acceleration, training, cloud architect, platform engineers, and security. This represents a self-contained product team that can deliver cloud solutions without needing to flow work across organizational units or silos.

Advance

Begin experimenting with product teams more deliberately. Relative to cloud, a product team is an organizational structure with formal or informal reporting lines that consists of individuals with skill sets that represent the lifecycle of a digital product. With the business or product owner defining the desired outcome of the product, the product team has the requisite skills and authority to build and operate the product without needing work processes to extend outside of the product team, thereby avoiding hand-offs and other, non-value-adding activity.

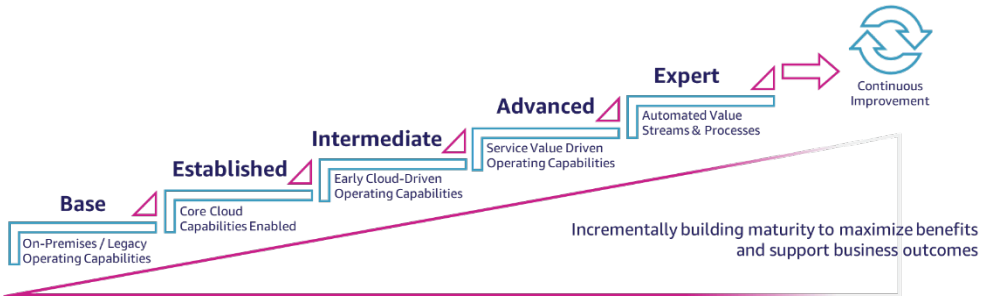
The typical product team usually consists of six to eight individuals. The creation of the product team structure is only one of the levers for improving performance and outcomes. Ensure that other best practices are followed, including establishing a single-threaded leader, business outcome focus, accountability, and empowerment.

As you prepare to scale up your cloud journey, consider conducting a Cloud Operating Model (COM) assessment. The needs of a team will be shaped by their industry, their organization, the makeup of the team, and the characteristics of their workload. It is unreasonable to expect a single operating model to be able to support all teams and their workloads. A COM is a collection of capabilities that are required to build, mature, and optimize one or more cloud environments. Different capabilities are required at different times in your cloud journey; you do not have to do everything at once, but you do have to be deliberate about the capabilities and how they are organized.

The COM assessment consists of:

- Review the current state using the COM framework.
- Understand current operating model.
- Assess operating model and identify what is necessary to achieve desired business outcomes.

The COM assessment can provide recommendations for future operating models and playbooks for increasing maturity. Based on where you are in your cloud journey, beginning testing new operating models at a small scale.



Cloud operating model maturity

Excel

Continue to actively monitor and obtain feedback on friction points as it relates to organization design. Iterate and refine your cloud operating model by conducting quarterly checkpoints. These checkpoints should also address other performance levers, such as goals, work processes, technology, measurement and information processes, recruitment and training, performance management, and recognition and compensation.

As your external environment and business strategies change, continue to assess and adjust your organization design. For example, if your company has gone through a merger, acquisition, or other transaction, the organization design needs to be reevaluated. Additionally, if there have been significant leadership changes due to re-organizations, retirements, leavers, or joiners, then the organization design in alignment with the business strategy may need to change again.

There is no such thing as a perfect organization design. Inherent in any design is the pressure to change it, especially when the rationale for choosing the current design becomes outdated. When you do significantly change your organization design, ensure that you follow a change acceleration framework to communicate a compelling rationale for the change.

Effective organizational design and planning must keep pace with fast moving workforce trends and must address five key components, including:

- **Size** — The right number of people in the right roles, spending the right amount of time achieving given outcomes.
- **Shape** — Identify duplication and inefficiency to establish the right balance of administration to professionals, junior to seniors, experienced staff to new hires, spans, and layers of management.
- **Spend** — Benchmark pay and reward to pay the right price for required skills.
- **Space** — Ensure the required staff resources are available in the right location to meet the current and future workload.

- **Skills** — Assess the gaps in the competencies and skills that will be needed to meet future goals.

If the path to ensuring that the five key components above are addressed is too time consuming or expensive, consider using AWS Managed Services (AMS) as a potential solution. AMS helps you adopt AWS at scale, and operate more efficiently and securely. It uses standard AWS services and offers guidance and implementation of operational best practices with specialized automations, skills, and experience that are contextual to your environment and applications.

AMS provides proactive, preventative, and detective capabilities that raise the operational bar and help reduce risk without constraining agility, allowing you to focus on innovation. AMS extends your team with operational capabilities including monitoring, incident detection and management, security, patch, backup, and cost optimization. By using AMS operators to handle the undifferentiated operations work, you can free up their time to focus on enterprise self-service deployments and business outcomes like accelerated cloud migration, application modernization, and long-term cost optimization.

Organizational alignment

Establish ongoing partnerships between organizational structures, business operations, processes, talent, and culture to enable enterprise rapid adaptation to market conditions, and the ability to capitalize on new opportunities.

To augment cloud value realization, organizational alignment serves as a bridge between technology and business strategy, so that technology changes are led or embraced by the business units that produce business outcomes.

Start

Embarking on a cloud journey introduces the need for significant change into the organization. To begin the change and start aligning organizational entities and performance levers, it is imperative to clearly articulate your cloud strategy, desired business outcomes, and specific goals. With a clear picture of what needs to be accomplished with cloud, begin communicating the case for change and establish ongoing partnerships among all organizational entities that will influence success, including business units, IT, operations, talent, culture, and learning.

As you prepare to scale up your cloud journey, ensure that your organization design supports your cloud migration and modernization plans. For example, if you are planning to fully embrace DevSecOps practices within your business units, then develop a plan for transitioning centralized operations and security teams to support decentralized application development teams.

Develop mechanisms to align organizational design with evolving cloud plans. Creating organizational alignment is an evolving and iterative process. Establish both short term (12-18 months) and long-term (3-5 years) goals, and focus on aligning organizational entities and performance levers to achieve your short-term goals. These short-term goals become your priorities that provide the impetus for alignment. Ensure that that cloud goals and priorities are harmonized with other ongoing priorities, and that they are effectively communicated. Communicate cloud goals in a way that shows how cloud augments or supports any other ongoing initiatives or priorities, and does not conflict or detract.

Advance

Advancing organizational alignment requires articulation and alignment of cloud goals. Cloud goals should represent a broad spectrum of value levers, including business agility, staff

productivity, operational resilience, and cost savings. This represents what you want to accomplish. The value levers of cloud must be fully integrated into your business goals. To maximize business outcomes and value through cloud adoption, consider how existing business goals need to change in a way that harmonizes cloud adoption and reduces potential conflict.

For example, if the business has committed a 2-year plan for delivering a number of on-premises features and, at the same time, cloud is being introduced with IT wanting an aggressive migration plan, then ultimately, the existing business commitments will likely win out. This harmonization of business and cloud goals needs to occur at the beginning of your cloud journey; otherwise, conflicting goals between business and IT may greatly slow cloud adoption.

Your messaging should not only address the *what* but also *how* you want the organization to accomplish its goals; for example, work cross-functionally, collaborate, empowered decision making, experimentation, working backward from the customer, and so on. Often the *how* represents new ways of working, or at least a renewed emphasis. Establish methods to assess the *how*, and provide feedback to leaders on how to demonstrate and motivate new ways of working.

Large organizations can be full of hidden drivers for misalignment. As a part of your change acceleration framework, use the stakeholder analysis and leadership alignment tools to uncover hidden drivers of misalignment or conflict.

Some of the categories of misalignment might include:

- Conflicting business and IT priorities.
- Areas of individual resistance to cloud.
- Functional or siloed goals compared to business outcome goals.
- Incentives that motivate the old way of doing things.
- Areas where the workforce is stretched too thin.
- How cloud budget is approved and spent.
- Speed to market of key innovations and business ideas.
- Middle management that is overworked with on-premises jobs, and cannot allocate time to upskilling their teams on cloud.
- KPIs that measure outdated processes.
- Performance management systems that measure and motivate the old ways of doing things.

Excel

To align organizational entities and performance levers to drive cloud outcomes, develop and implement systemic and substantially automated methods to develop, harmonize and cascade cloud goals. The goals should extend through to business units, functions, departments, teams, and individuals.

Prior to cascading cloud goals, plan and align incentive systems using key criteria, including:

- Bonuses, such as spot, project, performance, and retention.
- Merit-based raises.
- Promotions.
- Recognition (formal and informal).
- Friendly competitions and prizes for individuals who complete cloud certifications.

This represents more of a top-down alignment. Early in your cloud journey, implement quarterly checkpoints to formally assess potential areas of misalignment.

To increase and continue alignment, develop and implement bottom-up mechanisms for teams and individuals to identify and rectify any alignment-related friction points related to design or structure, business processes, talent, and culture. This can be done in conjunction with the cascaded goals. Where goals are missed, or even substantially exceeded, the change acceleration team can conduct deep dive feedback sessions to assess misalignment issues as potential causal factors.

As market conditions change or as new opportunities arise, ensure that your cascading goals systems are capable of responding in a timely manner and that your feedback systems are sensitive enough to detect potential areas of misalignment.

Conclusion

Programmatically managing the risks that people, organization, culture, and politics can cause will help prepare your organization to avoid common pitfalls and sources of delay when it comes to the journey to the cloud. The seven capabilities described in this paper are inter-related. Each one is important to your cloud transformation success, and each capability needs to be matured in relation to the others. Implementing the seven capabilities described in this paper will help you identify and remove blockers, reach alignment on goals, progress, and achievements, and ultimately accelerate your cloud adoption journey.

AWS CAF perspectives and foundational capabilities

Business

- Strategy Management
- Portfolio Management
- Innovation Management
- Product Management
- Strategic Partnership
- Data Monetization
- Business Insight
- Data Science

People

- Culture Evolution
- Transformational Leadership
- Cloud Fluency
- Workforce Transformation
- Change Acceleration
- Organization Design
- Organizational Alignment

Governance

- Program and Project Management
- Benefits Management
- Risk Management
- Cloud Financial Management
- Application Portfolio Management
- Data Governance
- Data Curation

Platform

- Platform Architecture
- Data Architecture
- Platform Engineering
- Data Engineering
- Provisioning and Orchestration
- Modern Application Development
- Continuous Integration and Continuous Delivery

Security

- Security Governance
- Security Assurance
- Identity and Access Management
- Threat Detection
- Vulnerability Management
- Infrastructure Protection
- Data Protection
- Application Security
- Incident Response

Operations

- Observability
- Event Management (AIOps)
- Incident and Problem Management
- Change and Release Management
- Performance and Capacity Management
- Configuration Management
- Patch Management
- Availability and Continuity Management
- Application Management

AWS CAF perspectives and foundational capabilities

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Further reading

Further reading

For additional information, refer to:

- AWS Architecture Center
- AWS Case Studies
- AWS Cloud Adoption Framework
- AWS Cloud Adoption Framework (eBook)
- AWS General Reference
- AWS Knowledge Center
- AWS Prescriptive Guidance
- AWS Partner Solutions (formerly Quick Starts)
- AWS Security Documentation
- AWS Solutions Library
- AWS Training and Certification
- AWS Well-Architected
- AWS Whitepapers & Guides
- Getting Started with AWS
- Overview of Amazon Web Services

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AWS Glossary

For the latest AWS terminology, see the AWS glossary in the *AWS Glossary Reference*.