The Cloud Strategy Cookbook, 2023

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Initiatives: Navigate Inflation and Recession Resource Center

> Succeeding with cloud computing requires a business-outcome-driven cloud strategy. Enterprise architecture and technology innovation leaders should use our "cookbook" approach to creating a "living" cloud strategy document that connects a business strategy with implementation and migration plans.

More on This Topic

This is part of an in-depth collection of research. See the collection:

- 9 Winning Actions to Navigate Inflation and Recession

Overview

Key Findings

- Many organizations lack a cloud strategy. Those without one are less likely to achieve their desired business and technology outcomes than those that have one.

- Devising a cloud strategy leads to secondary questions about principles, priorities and consensus. Effective cloud strategies align these questions with other strategies.

Recommendations

Enterprise architecture and technology innovation leaders responsible for cloud strategy should:

- Maximize the benefits from their use of cloud by creating a cloud strategy. Make it a living document that provides a concise view of the cloud's role in the organization by using Gartner's cookbook as a template.

- Put their cloud strategy into practice after establishing this strategy and an advisory council, producing their cloud strategy, establishing their principles and, at least, starting to produce an inventory. Do so by following the guidelines set out in the strategy and by applying to the inventory the principles established for deciding what to do with a workload.

Introduction

Organizations with a cloud strategy — a concise viewpoint on the role of cloud computing in the organization — aligned with their desired business outcomes are more likely to achieve better outcomes from cloud computing than those without one. They have more-coherent approaches to cloud usage, and they anticipate the benefits and potential downsides of cloud use, attempting to exploit the benefits, while minimizing the downsides. As an enterprise architecture (EA) or technology innovation (TI) leader, you can't be fully prepared to meet your organization's needs if you don't have a common strategy to draw on and to consult for priorities. Likewise, your colleagues in the other subdisciplines of IT also need such a strategy.

Many of the top questions in cloud computing revolve around the cloud strategy. And these questions are becoming more urgent. They range from "What is a cloud strategy and why do I need one?" to "How do we build a comprehensive cloud strategy?" Such questions lead to others about principles and prioritization.
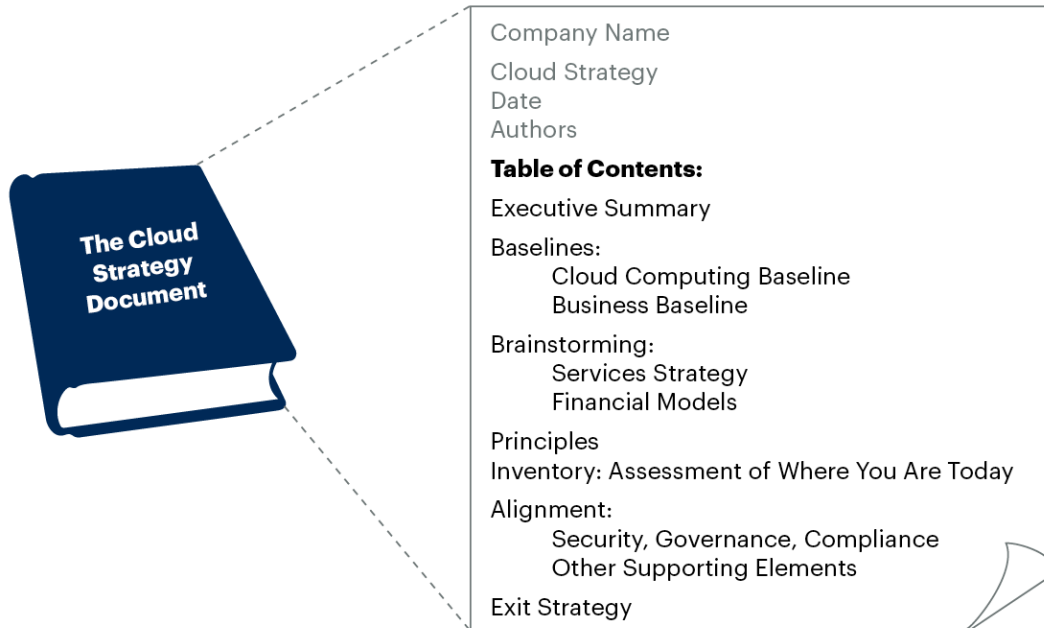
You must align your cloud strategies with other strategies (for example, data center, security and architecture strategies). Your organization's cloud strategy should enable its digital transformation initiatives.

Although it's best to craft a cloud strategy before adopting cloud computing, that's rare. Most organizations devise their cloud strategies after they've gained some experience with the cloud. However, the sooner you establish a cloud strategy, the more issues you'll avoid. It's never too late to develop a cloud strategy. If you don't have one, today is the best time to start creating one.

Use this research, along with Align Your Cloud Strategy With the Organizational Strategic Plans and Top 10 Tips for Avoiding the Most Common Mistakes in Cloud Strategies to devise a sound cloud strategy. (Figure 1 shows a high-level outline of such a cloud strategy.)

Figure 1: Outline for a Cloud Strategy Document

Outline for a Cloud Strategy Document

Company Name
Cloud Strategy
Date
Authors

Table of Contents:

Executive Summary

Baselines:
    Cloud Computing Baseline
    Business Baseline

Brainstorming:
    Services Strategy
    Financial Models

Principles
Inventory: Assessment of Where You Are Today
Alignment:
    Security, Governance, Compliance
    Other Supporting Elements
Exit Strategy

Source: Gartner
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Analysis

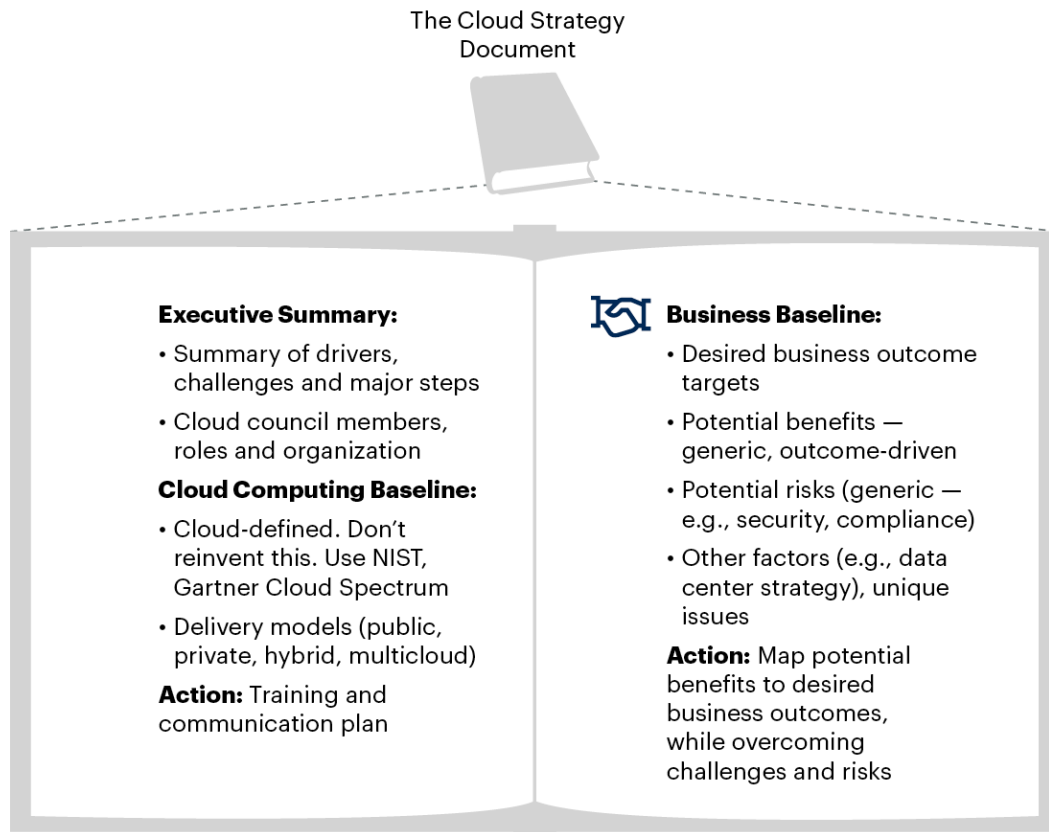### Use Our Cookbook as a Template for Your Cloud Strategy

Use our "Cloud Strategy Cookbook" as a virtual template to devise your cloud strategy. Our cookbook is tried and tested — we've based it on strategy reviews and discussions with hundreds of clients. Create an executive summary that gives a high-level overview of the main sections. Include in the strategy some baselines and, perhaps, the most important elements, the principles and an assessment of your current position.

Start by using the Cloud Strategy Council construct (described in Align Your Cloud Strategy With the Organizational Strategic Plans). Note the differences between a cloud strategy document (which is the focus of this approach) and a cloud adoption or migration plan. The strategy document answers the "what" and "why" questions, while an adoption/migration plan addresses the "how" and "when" questions (see Quick Answer: What's the Difference Between a Cloud Strategy and a Cloud Adoption Plan?).

The executive summary appears first, but it is often best to write most of this after writing the other sections. We've listed them in the order they'll appear in your document; however, this isn't necessarily the order in which you'll write them (see Figure 2).

Figure 2: Cloud Strategy Document — Executive Summary and Baselines

Cloud Strategy Document — Executive Summary and Baselines

The Cloud Strategy
Document

Executive Summary:

• Summary of drivers, challenges and major steps

• Cloud council members, roles and organization

Cloud Computing Baseline:

• Cloud-defined. Don't reinvent this. Use NIST, Gartner Cloud Spectrum

• Delivery models (public, private, hybrid, multicloud)

Action: Training and communication plan

Business Baseline:

• Desired business outcome targets

• Potential benefits — generic, outcome-driven

• Potential risks (generic — e.g., security, compliance)

• Other factors (e.g., data center strategy), unique issues

Action: Map potential benefits to desired business outcomes, while overcoming challenges and risks

Source: Gartner
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Executive Summary

Treat the executive summary as your chance to communicate with senior management. Use it to summarize the document. Include the names and organizations of the people in your cloud council. Include people in all the different roles to show that your cloud strategy is not just an IT document. Write the executive summary last, because it summarizes the entire effort.

Baselines

Begin your cloud strategy by creating baselines for cloud computing and the desired business outcomes.

Cloud Computing Baseline and Terminology

Keep this simple. Eliminate confusion by agreeing on cloud computing definitions and using them consistently. The U.S. National Institute of Standards and Technology (NIST) has created a set of definitions, as has Gartner (see NIST and Gartner Cloud Approaches Are More Similar Than Different).

There are newer terms cloud computing (e.g., cloud native, multicloud and distributed cloud); however, the meanings of such terms aren't as well-established. If you use them, clarify their meaning (see Define and Understand New Cloud Terms to Succeed in the New Cloud Era). Consider using other terms, such as pure cloud and cloud-inspired (described in Gartner's Cloud Spectrum; see Four Types of Cloud Computing Define a Spectrum of Cloud Value) to provide clarity. Use existing terms, don't reinvent them. You can also refer to an appendix that gives more details.

Creating a cloud strategy will enable you to populate a training and communication plan, which is essential to broadening discussions about the cloud.

Business Baseline and Goals

In this section, summarize the top-level business strategy and desired business outcomes, as well as business transformation initiatives. Use annual reports, speeches by senior management and conversations with business leaders as sources.

Next, look at the potential benefits and risks. These are mostly generic and aligned with bimodal IT principles. Know what the goals are (typically, cost cutting/cost-efficiency or agility/innovation), and assess the ways in which cloud computing can help achieve those goals.

Use bimodal IT principles (see Your Cloud Strategy Needs to Be Bimodal), because the prioritization they enable is key to addressing business outcomes. You can group the potential cloud benefits into the two buckets shown in Figure 3. This prioritization involves the benefits, not workload priority in movement to the cloud.

Figure 3: Potential Cloud Benefits Can Be Grouped Into Two Main Buckets

Potential Cloud Benefits Can Be Grouped Into Two Main Buckets

Secure Modern Self Service Pervasive On-Demand Innovative Cost-Effective Scalable and Elastic Pay-per-Use Resilient Adaptive Global

Traditional: Cost and Efficiency

Agile: Innovation, Speed, Time to Market

Source: Gartner
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Gartner

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Then examine issues unique to your organization. For example, explore:

- What your business is trying to accomplish in your industry and in your region

- Whether you need to align with a data center strategy

- Whether there are extenuating circumstances

- The impact of responding to uncertainties, such as the COVID-19 pandemic or other similar events with far-reaching impacts
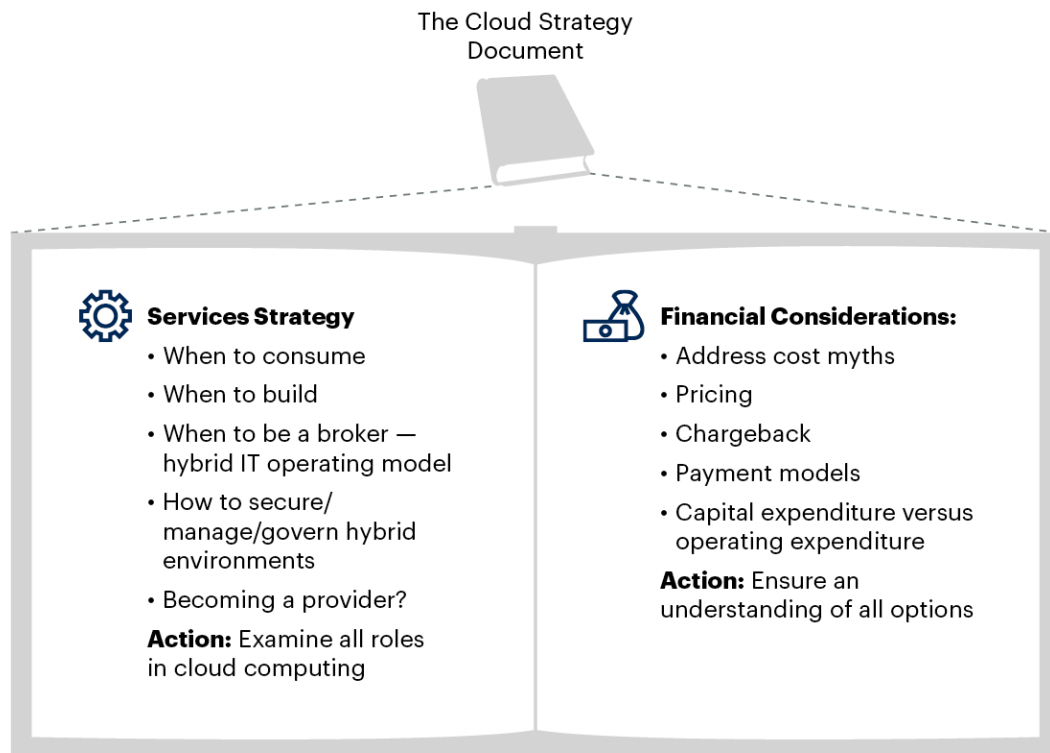
In this section, map business goals to the potential benefits of cloud computing, and explain how to overcome the possible challenges. State why your organization is interested in the cloud. Prioritize and begin focusing on the goals using the bimodal principles.

Brainstorming

This phase is fluid and should accommodate many discussion points. A service strategy and financial considerations make good discussion points when brainstorming the main principles that will drive your cloud strategy. Document these to increase your understanding of those principles and how to use them (see Figure 4).

Cloud Strategy Document — Brainstorming

The Cloud Strategy
Document

Services Strategy
- When to consume
- When to build
- When to be a broker — hybrid IT operating model
- How to secure/manage/govern hybrid environments
- Becoming a provider?

Action: Examine all roles in cloud computing

Financial Considerations:
- Address cost myths
- Pricing
- Chargeback
- Payment models
- Capital expenditure versus operating expenditure

Action: Ensure an understanding of all options

Source: Gartner
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Services Strategy

Determine your services strategy by deciding when you'll consume cloud services from a public cloud provider and when you'll build — or at least continue to maintain — capabilities on-premises or elsewhere. Distinguish the use cases for infrastructure as a service (IaaS), platform as a service (PaaS) and software as a service (SaaS).

Address scenarios in which you may want to be a broker, and how to have a hybrid IT operating model in which you simultaneously consume services, act as a middleman and provide services. Ask and answer the question, "how do we secure, manage and govern the resulting hybrid environment?"

Don't take the decision to build cloud services lightly. It's a huge effort. Most organizations maintain some on-premises capabilities, but don't try to duplicate the functionality of hyperscale cloud providers. Examine the applicability of all potential roles in cloud computing — consumer, provider and broker (including governance).

Financial Considerations

You must understand, at a high level, the financial implications of cloud computing. Examine issues such as cost transparency, visibility, budgeting and predictability. Organizations typically fund cloud computing from operating expenditure (opex), rather than capital expenditure (capex). However, owning capital assets is a key part of the corporate financial strategy for some companies. If you change everything to opex, it could change your organization's financial profile. Involve finance professionals, because they understand the implications of changes to corporate financial models.

Understand pricing model trends to ensure that you meet expectations. For example, IaaS is mainly aligned with hardware costs, so the prices have tended to go down slowly (inflation may be changing this). IaaS can be purely a pay-as-you-go model. Contracts aren't required for IaaS, but may be desirable in some scenarios (such as for pricing discounts). Contrast that with SaaS for applications in which the prevalent model is subscription. SaaS contracts typically last three years and charge per user, per month. The price for SaaS tends to go up. And above all, don't believe the biggest myth about the cloud — that you always save money by moving to it.
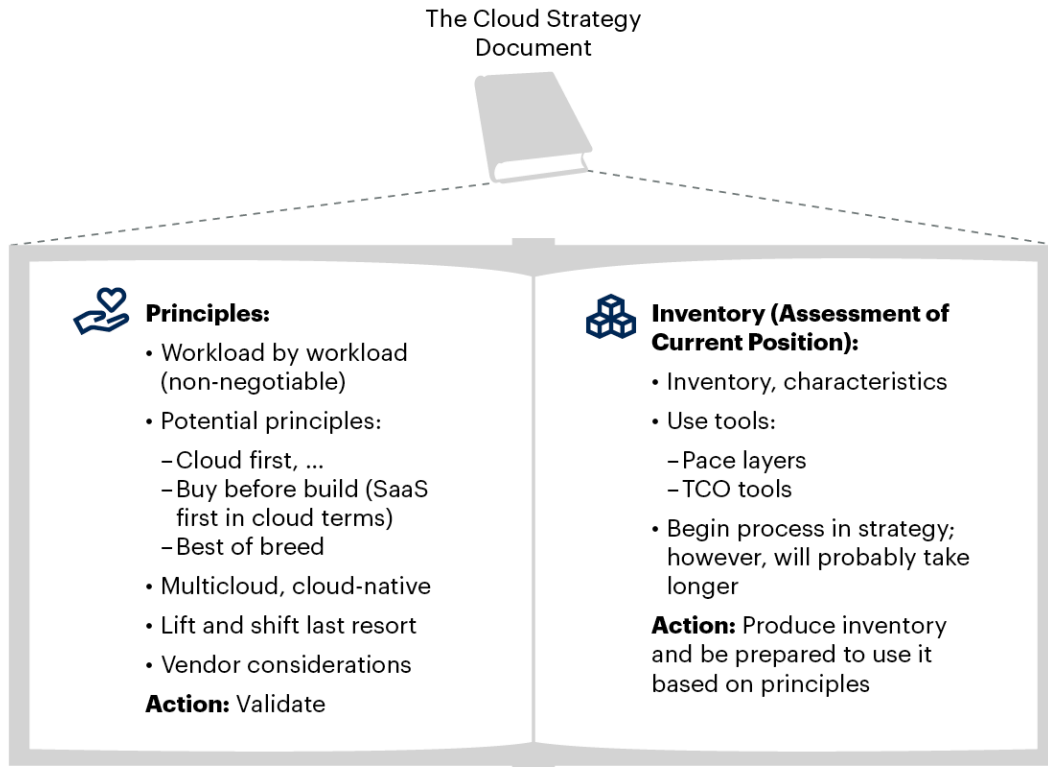
Completing this section of the cloud strategy will give you an understanding of the many implications of the financial options available. It won't give you a business case for or against cloud computing.

Principles and Inventory (Assessment of Current Position)

Principles and inventory (see Figure 5) are, in many ways, the most important parts of a cloud strategy.

Figure 5: Cloud Strategy Document — Principles and Inventory

Cloud Strategy Document — Principles and Inventory

The Cloud Strategy
Document

Principles:

- Workload by workload (non-negotiable)
- Potential principles:
  - Cloud first, …
  - Buy before build (SaaS first in cloud terms)
  - Best of breed
- Multicloud, cloud-native
- Lift and shift last resort
- Vendor considerations

Action: Validate

Inventory (Assessment of Current Position):

- Inventory, characteristics
- Use tools:
  - Pace layers
  - TCO tools
- Begin process in strategy; however, will probably take longer

Action: Produce inventory and be prepared to use it based on principles

Source: Gartner
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Gartner

Gartner

Principles

Decide which principles will determine your cloud strategy. Some should be non-negotiable — for example, a cloud strategy (unlike a data center strategy) is a workload-by-workload or application-by-application exercise (workloads are groupings of applications). We recommend explicitly stating others, such as, "lift-and-shift migrations to the public cloud should be a last resort."

You generally don't gain much from lift-and-shift migrations, although sometimes they're appropriate. For example, if your data center strategy (or edict) is data center closure, you must align with it, which means you may have to find a home for things. However, don't expect to gain huge cost savings or many agility benefits from lift and shift, unless your current situation is highly inefficient. Such a migration may make sense for other reasons. For example, you may not want to change the application (to avoid potential disruptions in operations), and the application must be colocated with data or applications that have been moved to the cloud (for all the right reasons). However, using lift and shift without a sound reason is rarely wise.

Also document any vendor-oriented considerations, such as positive relationships or investment in skills.

Consider common principles, including:

- Cloud first, or variations (e.g., cloud smart)

- Buy before build (which, as related to the cloud, is often called "SaaS first")

- Best of breed

- Multicloud

Some of these may be architectural principles, such as cloud-native or multicloud. These are likely to resurface during your exit strategy or when aligning with architectural principle documents.

Cloud first is a common principle guiding cloud strategies and adoption decisions. Some people dismiss it as a slogan. Although it's more than that, it's not a whole strategy.

Cloud first is often misunderstood, It doesn't mean everything goes to the cloud. It means that, when you ask for an investment (for example, when you want to renew, enhance or build something), the default approach is to use the public cloud. Cloud first also means you should consider the cloud as the first option for any new technology or business initiative.

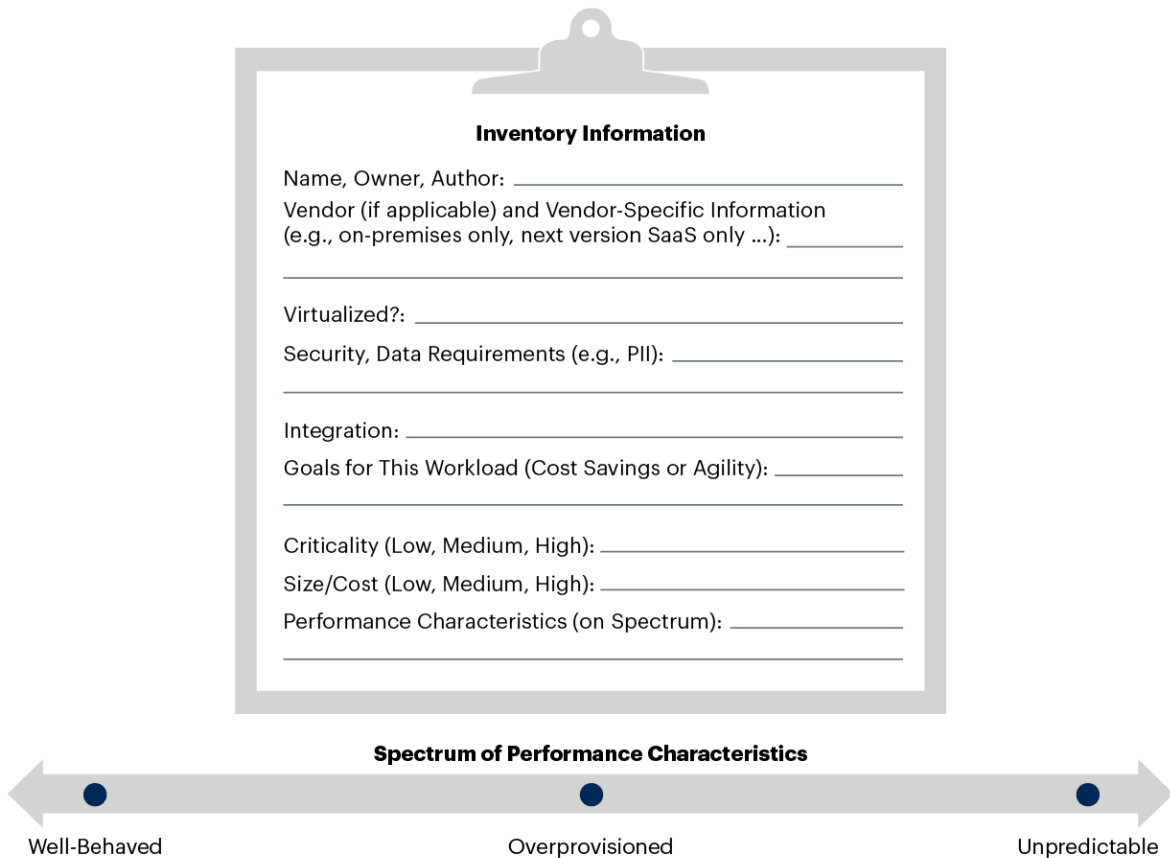### Inventory (An Assessment of Current Position)

Because your cloud strategy is workload by workload, you must inventory those workloads. For each workload, you must have a set of information at your fingertips.

Use Gartner concepts and tools, such as bimodal IT, to help you decide what kinds of information to capture about each workload to help you make decisions. Is your goal to save money on this application? Or is your goal to be more agile? If your goal is to be more agile, it may cost more, which may be acceptable. Other tools, such as total cost of ownership (TCO) and pace layering, can be helpful.

The inventory effort can be substantial, and it is often spun off as a separate project or as part of adoption. What's most important in the strategy phase is to specify what information should be collected about each workload. You should determine the scope and can start the effort in the strategy phase. Figure 6 shows the elements of an inventory.

Figure 6: Cloud Strategy Document — Inventory Information for Each Workload

Cloud Strategy Document — Inventory Information for Each Workload

Inventory Information

Name, Owner, Author: _____
Vendor (if applicable) and Vendor-Specific Information
(e.g., on-premises only, next version SaaS only …): _____
_____

Virtualized?: _____
Security, Data Requirements (e.g., PII): _____
_____

Integration: _____
Goals for This Workload (Cost Savings or Agility): _____
_____

Criticality (Low, Medium, High): _____
Size/Cost (Low, Medium, High): _____
Performance Characteristics (on Spectrum): _____
_____

Spectrum of Performance Characteristics

Well-Behaved   Overprovisioned   Unpredictable

Source: Gartner
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Gartner

Include some basic information for each workload, including answers to the following questions:

- What's the name of the workload?

- Who owns it?

- Who authored it (if you wrote it in-house)?

- Does it depend on other applications?

- Is a vendor involved?

- Is it a packaged application from a vendor?

    - If so, what do you need to know about that? (For example, if you're on the last on-premises version from this vendor and you want to upgrade, do you have to go to its SaaS version?)

- Is it virtualized?

- What are the security, governance, compliance and data requirements?

- Does it have personally identifiable information and security requirements?

- Does it have special integration or location requirements?

- What's the goal: efficiency or agility? (This element is critical and isn't found in most other application rationalization or asset management efforts, which can be a good starting point.)

When deciding whether you have a good candidate for the cloud, analyze performance characteristics. Using a spectrum is helpful:

- At one end of the spectrum are unpredictable workloads. These are externally facing and difficult or impossible to predict demand for, such as a website, a mobile app or an API gateway. These are generally good candidates for public cloud.

- At the other end of the spectrum are well-behaved applications. For example, these could be typical enterprise applications that are already virtualized and running efficiently in your data center. They're steady-state applications that don't vary much and don't have peak workloads. Such predictable workloads don't typically benefit from cloud and aren't the first choices to move.

- Things aren't so clear cut in the middle of the spectrum. For example, you may have a classic, overprovisioned workload. Such a workload may have a peak for which you must overprovision. Cloudbursting has long been cited as a goal in cloud computing; however, it has limited applicability. Assess the merits of moving such a workload to the cloud.

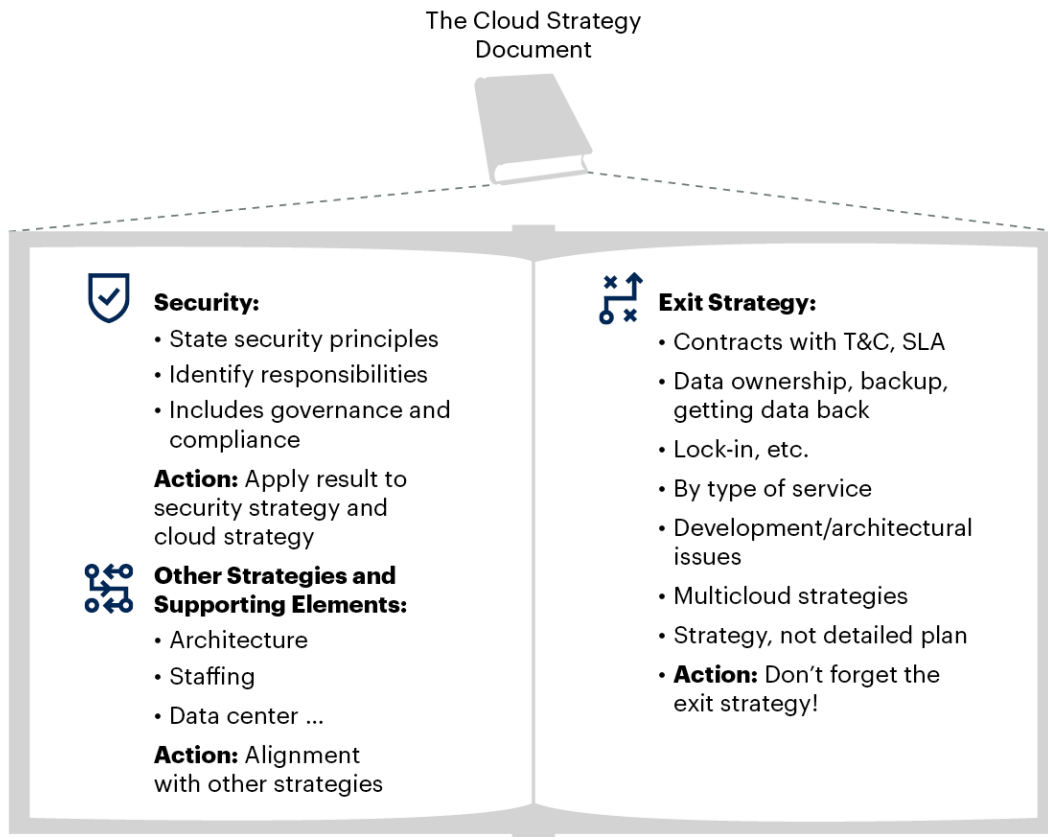### Align Your Cloud Strategy With Other Strategies and Supporting Elements

Cloud computing doesn't exist in a vacuum, and neither should your cloud strategy. Ensure that your cloud strategy aligns with existing strategies (such as those for security, data center, edge computing, and development and architecture). It shouldn't reinvent or contradict them. Communicate and negotiate with other groups to create a successful cloud strategy.

Security

Because it's so important, security warrants a section of its own. Approach security (including governance, compliance and privacy) and all the other supporting elements (such as technical architecture, infrastructure, staffing and procurement) by ensuring that they align. Figure 7 describes these. If you include something about security in your cloud strategy, ensure that it also goes in your security strategy and vice versa. Sometimes this may mean the security team has to modify the overall security strategy.

Figure 7: Cloud Strategy Document — Alignment and Exit Strategy

Cloud Strategy Document — Alignment and Exit Strategy

The Cloud Strategy
Document

Security:
- State security principles
- Identify responsibilities
- Includes governance and compliance

Action: Apply result to security strategy and cloud strategy

Other Strategies and Supporting Elements:
- Architecture
- Staffing
- Data center …

Action: Alignment with other strategies

Exit Strategy:
- Contracts with T&C, SLA
- Data ownership, backup, getting data back
- Lock-in, etc.
- By type of service
- Development/architectural issues
- Multicloud strategies
- Strategy, not detailed plan
- **Action:** Don't forget the exit strategy!

Source: Gartner
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Gartner

Gartner

Security is a shared responsibility. You must understand the different roles and responsibilities in security to use the cloud securely (see Clouds Are Secure: Are You Using Them Securely?).

Approach security with high standards using concepts such as tiering providers. Remember that anyone can claim to be a cloud provider and may have a far lower level of security capability than a top-tier provider.

The top-tier cloud providers generally do an excellent job of securing the services they provide, but they don't secure the applications or data that you host there. You must lock down the data you put there appropriately. If you leave your data unprotected, then it's not the provider's fault.

Supporting Elements — Organizational and Staffing Issues

Just as you must align cloud security issues with your overall security strategy, so you must also align cloud staffing issues with your overall staffing strategy. Cloud computing will change your staffing requirements, depending on the level of cloud service you adopt. You'll need different mixes of skill sets. You'll probably need fewer people who manage servers directly, but more people who do higher-level tasks, such as integration, network engineering, business analysis, vendor management and security. Growth opportunities will exist for some, and it's important to involve the right people. That's why you must include HR in this effort.

You should also discuss the cloud strategy council and cloud center of excellence (CCOE) constructs from an organizational perspective.

Exit Strategy

Cloud repatriation (moving workloads back from a public cloud) is rare. However, it's vital to devise an exit strategy that describes dependencies and choices, even though you may never use it. Awareness of possibilities and planning for them is an important part of strategic planning. Several regulators, mainly in the European Union (EU) and focused on financial services, now mandate an exit strategy.

Organizations that do look at exit strategies often focus on contracts — aspects such as terms and conditions, and service-level agreements (SLAs). Although contracts are important, it's just the beginning when it comes to an exit strategy. You must also examine such issues as:

- Data ownership

- Backup

- Getting back your data

- Portability

Include in your exit strategy both technical and business factors. And don't forget all the supporting infrastructure for the cloud service, including networking, management tools, integration and third-party services.

Make lock-in one of the main issues you discuss as part of your exit strategy. You can have lock-in in many different places:

- At the data level

- At the application level

- At the architecture level

- At the skills level

This may be what makes you examine multicloud and cloud-native issues. Many say they want to follow a multicloud approach, but note in their cloud strategy documents that they also want to be cloud native. These concepts can conflict if you take them to their logical extremes. If you want to follow a multicloud approach and not depend on a vendor, then be careful when using the native capabilities of a vendor. There are trade-offs. No simple answer exists, but you should handle these issues in your cloud strategy (see Infographic: Cloud-Native and Multicloud — Buzzwords or Key Principles in Your Cloud Strategy and A CTO's Guide to Cloud-Native: Answering the Top 10 FAQs).

SaaS is part of cloud computing. And as we are taking an application-by-application approach, consider what choices are important to you. When you consider SaaS vendors, take into account that many vendors are becoming pure-play SaaS providers. Fewer traditional, on-premises offerings are available.

Focus your exit strategy on answering the "what" and "why" questions. Cover the answers to the "how" questions in a more-detailed exit plan (often part of your adoption plan). Make your exit plan workload-specific, and if it doesn't work out as planned, then describe how you'll get out of a particular cloud situation.

Put Your Cloud Strategy Into Practice

Figure 8 shows how your cloud strategy will work in practice. You have established your cloud council, produced your cloud strategy and established your principles. You have also at least started to produce an inventory.

Figure 8: Cloud Strategy in Practice

Cloud Strategy in Practice
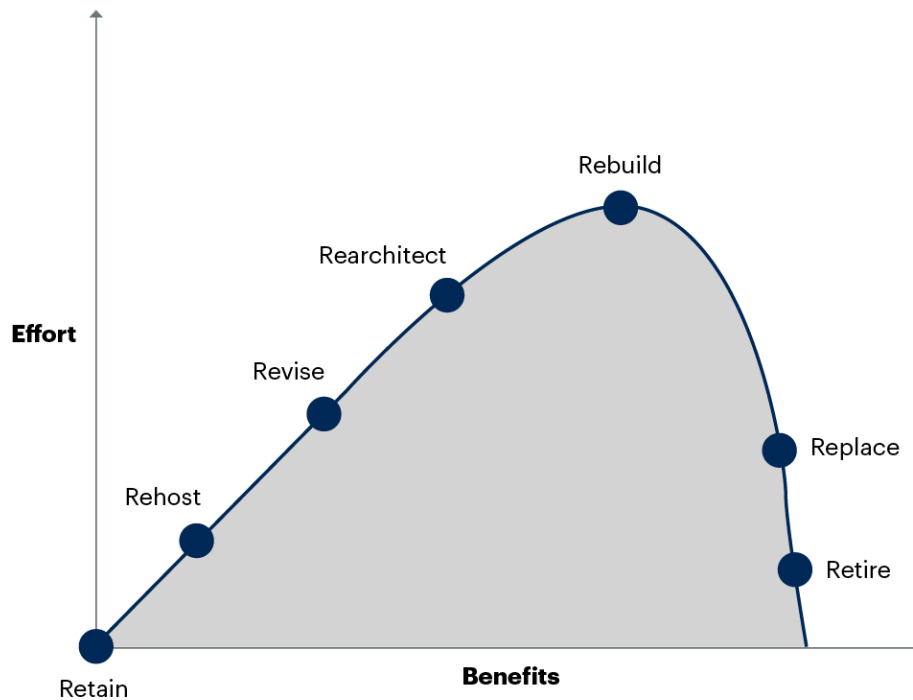
Source: Gartner
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For example, if you have decided to follow a cloud-first principle, when a request comes in to enhance an application, you'll consult the inventory and apply the principles to the request. It becomes more complicated if your data center strategy is to close the data centers in two years. In that case, you must also start to build a cloud migration plan in which you find homes for everything. However, don't go through all your applications and move them unless you have that kind of edict.

This is where the connection with a data center strategy comes in, and where you move from strategy to execution. Data center and I&O-centric issues often drive the extenuating circumstances. However, other considerations — such as application modernization, mergers and acquisitions, new product development, business resilience and other strategies — may trigger mass migrations.

Decide what to do with a workload guided by the process of applying principles to your inventory. Figure 9 shows the different decisions you can make about a workload. We call these the "Rs."

The Rs — Take Action on Each Workload

Source: Gartner
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Gartner

Work on the Implementation/Adoption/Migration Phase

As a living document, your cloud strategy feeds the next phase of implementation (also called adoption or migration). Even if you've already started implementation, you can work on strategy and implementation simultaneously.

Use the following research to help you with the implementation phase:

- 2022 Planning Guide for Cloud and Edge Computing

- How to Design a Multicloud Workload Placement Policy

- Innovation Insight for the Cloud Center of Excellence

Evidence

Information has been gathered from Gartner inquiries.

Document Revision History

The Cloud Strategy Cookbook, 2021 - 17 February 2021

The Cloud Strategy Cookbook, 2019 - 2 April 2019

Recommended by the Author

Some documents may not be available as part of your current Gartner subscription.

Infographic: Cloud Strategy Cookbook

Devise an Effective Cloud Computing Strategy by Addressing 5 Key Areas

Your Cloud Strategy Needs to Be Bimodal