The Next Generation of Cloud Management Starts with a Cloud Center of Excellence

CloudHealth
by **vmware**®

Table of Contents

Executive Summary

When it comes to driving success in the public cloud, many organizations find that the biggest hurdle they must overcome is not related to technology. As Drew Firment, former head of the Cloud Center of Excellence for Capital One put it, "The success of cloud adoption and migrations comes down to your people—and the investments you make in a talent transformation program. Until you focus on the #1 bottleneck to the flow of cloud adoption, improvements made anywhere else are an illusion.[1]"

To help close this gap, leading organizations are establishing a formalized Cloud Center of Excellence (CCoE), sometimes known as a Cloud Business Office, Cloud Strategy Office, or Cloud Program Office. In this whitepaper we will identify best practices to establish a CCoE and the three key areas of excellence: financial management, operations, and security and compliance.

[1] Cloud Adoption & Talent Transformation, by Drew Firment, May 2, 2018

What is a Cloud Center of Excellence?

Building "centers of excellence" within an organization is a tried and trusted approach to facilitating organizational transformation. They can be especially beneficial for driving the adoption of new technology or processes within an organization—particularly when that change is significant and far reaching. When we consider the implications of public cloud adoption on an organization, it's clear that utilizing best practices to support such a significant change is critical to ensuring the success of any cloud adoption program.

A CCoE is a cross-functional team that is tasked with supporting and governing the execution of the organization's cloud strategy. They do this by establishing policies and guardrails, driving collaboration and adoption of best practices across a range of disciplines—from operations, finance, and engineering to security and enterprise architecture—as well as evaluating and potentially supporting the implementation of new and existing cloud technologies. Where a CCoE may differ from other Centers of Excellence is that this team is more likely to be a long-term entity—the ever-changing landscape of public and private cloud means that in many cases the CCoE will be an ongoing function.

One of the early proponents of the term Cloud Center of Excellence was Stephen Orban, who blogged about it in 2016. At the time, Orban was the Global Head of Enterprise Strategy at AWS (he has since become the company's General Manager of AWS Data Exchange), and his vision for a CCoE involved a team responsible for developing a framework for cloud operations, governing the IT infrastructure, and building best practices across the business. More than four years later, this vision is becoming a reality at many enterprises.

> *"It will be essential for CIOs to develop a formal strategy that helps to put individual cloud decisions in the context of the enterprise's strategic goals.[2]"*
>
> *— GARTNER*

What to Call Your Cloud Center of Excellence

While the term "Cloud Center of Excellence" is broadly understood and accepted in the industry at this point, it's rarely the actual name that organizations use for their CCoE. When considering names for a CCoE, it's important to pick a name that broadcasts the message you want to send to your organization. It will also define the scope and responsibilities of the team within the organization. Many companies shy away from using the term "Excellence" in the actual title of their CCoE because it might come across as exclusionary or pretentious.

> *"At MediaMarktSaturn we've started to grow a community of experts, and now we want to evolve this into a cloud centre of excellence – although without calling it a COE, because we saw that people don't always like the word 'excellence.' Instead, we call it the cloud consulting group. It's a way of distributing knowledge about the cloud across the business, from people who know the processes and the best practices."*
>
> *– THOMAS PFEIGGER*
> *Technical Product Owner for Cloud Platforms at Germam retailer MediaMarktSaturn*

Common names for CCoE teams:

- Cloud Business Office

- Cloud Strategy Office

- Cloud Community of Practice

- Cloud Consulting Group

- Cloud Capability Center

Key Responsibilities of a Cloud Center of Excellence

Supporting the execution of the cloud strategy may seem daunting, but the key responsibilities of the CCoE can be broken down into **three areas:**

1. OWN AND EXECUTE THE CLOUD STRATEGY

First and foremost, the job of a CCoE is to define the organization's cloud strategy, with inputs and guidance from the executive team. The cloud strategy will define what the organization's key goals and objectives are when it comes to cloud and will help answer questions about which workloads or business units are best suited to using cloud computing services, how quickly the organization will migrate, which cloud providers best meet the business's overall objectives, and how application and infrastructure architectures will evolve. These strategies set high level parameters for operating, and it's up to the CCoE to determine how to put these concepts into practice, and then continue to refine and enforce them.

2. DRIVE COLLABORATION AND BEST PRACTICES ACROSS KEY STAKEHOLDERS

The CCoE will identify who within the organization needs to come together to ensure cloud objectives are defined, measured, and align to business goals. Collaboration will typically be required of individuals responsible for managing cloud costs, cloud operations, cloud security, application development, and enterprise architecture. Once assembled, this group will collect and develop best practices, workflows, alerts, and actions for the relevant functions. At some organizations it will also make sense to form an advisory group with leaders from finance, procurement, legal, security, and lines of business. This advisory group will review strategy, influence decisions, and may be consulted when building guidelines.

3.   EVALUATE AND UTILIZE TECHNOLOGY TO SUPPORT BUSINESS INITIATIVES

One of the key components of executing on a cloud strategy is determining how the organization will access, secure, manage, integrate, and govern across public cloud and hybrid environments. This includes not only the selection of public and private cloud providers, but also evaluating and implementing cloud management solutions for the enterprise.

Cloud Center of Excellence

Additional Stakeholders

ENGINEERING/
APP DEVELOPERS

LINE OF BUSINESS
LEADERS

ENTERPRISE
ARCHITECT

AREAS OF EXCELLENCE:

Cloud Financial Management

Cloud Operations

Cloud Security & Compliance

OWNERS:

CLOUD ECONOMIST

CLOUD OPERATIONS MANAGER

CLOUD SECURITY ARCHITECT

Set the tone: advise or prescribe?

Members of the CCoE should think of themselves as advisors providing best practices, architectural standards, and guidance to teams and departments. Ultimately, however, the CCoE is a governing body that is held accountable for the organization's success in the cloud. CCoEs must walk a fine line of providing advice and guidance in some areas (e.g. tagging strategies, architectures) and prescriptive rules in other areas (e.g. security and compliance policies). Finding the right balance of guidelines and guardrails and securing buy-in from different lines of business are some of the biggest challenges to navigate.

The more a CCoE can build and nurture a collaborative community, the more successful it will be. The leader of the CCoE at a large software company cautions that it's critical for the CCoE to take the time to establish a community of support with mutual trust in order to be effective. Including a broad cross-functional group of stakeholders that represent many different teams will provide a balanced perspective.

Areas of Excellence in your CCoE

Taking an organizational view, a Cloud Center of Excellence will typically span **three core areas:**

Financial Management	Operations	Security & Compliance
Continuously optimizing and aligning cloud investments to business initiatives.	Managing and delivering cloud services that meet the availability, performance, recoverability, quality, and scalability needs of the business.	Proactively detecting and remediating vulnerabilities in your cloud environment.
A mature cloud financial management function must:	**A mature cloud operations function must:**	**A mature cloud security and compliance function must:**
• Profoundly understand how all components of a modern cloud environment contributes to TCO	• Ensure operations meet and exceed business requirements	• Ensure continuous compliance with relevant standards
• Make business decisions based on accurate ROI analysis	• Identify and act on areas to improve operational efficiency	• Stay up to date with the changing threat and compliance landscape
• Cultivate financial accountability and ownership across groups	• Drive operational consistency across groups	• Translate business requirements into cloud security standards

Areas of Excellence
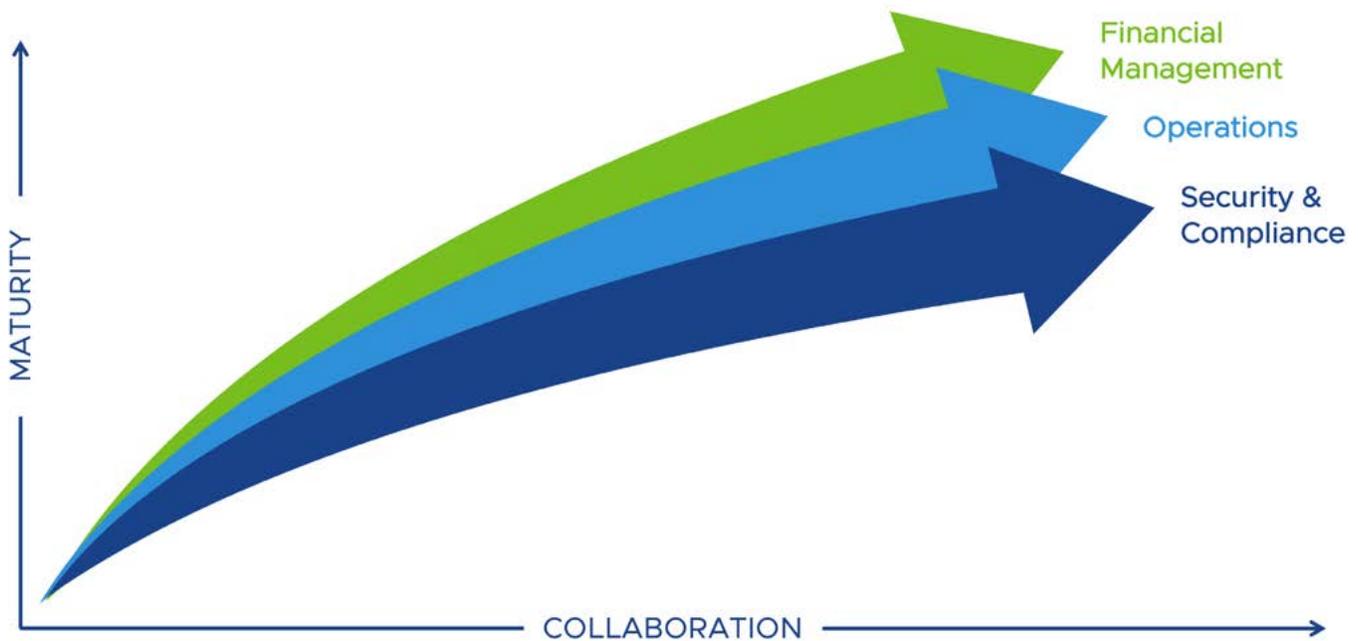
In addition to the responsibilities outlined above, it's critical that each area of excellence has documented best practices that can scale across the organization. This includes identifying best practices within groups that can be adopted more broadly, and bringing in outside standards and practices that will benefit the organization.

Three Steps to Establishing a CCoE

Ready to get started with establishing your CCoE? Take the following steps to get up and running:

Step 1: Plan—assess your current state, define roles and responsibilities

Your first step is all about planning and determining the strategy that will dictate the rollout of your CCoE. Begin by answering the following questions:

Who should be involved in the CCoE?

Determining who sits on the CCoE will be one of the first steps you need to take. You should consider involving stakeholders from any area of your organization that will be affected by the adoption of cloud. Teams should be as durable as possible to keep initiatives on track. Best practice dictates that you start the team small, with 3-5 individuals from the areas outlined in the chart below.

What are the strategic outcomes we're trying to achieve with our CCoE?

It's critical to ensure CCoE outcomes are aligned to business outcomes. For example, is the ultimate goal of the CCoE to enable agility at any cost? Or is the goal to drive towards a specific cost of goods sold (COGS), or perhaps a balance between the two?

Where are we today from a maturity perspective, and where do we want to be?

In our whitepaper **"Benchmark Your Cloud Maturity: A Framework for Best Practices,"** we outline a cloud management maturity model that crosses the three key areas of a CCoE. Using this framework, you can assess your organizations' current state and define your desired future state. This process will help determine tactics and priorities.

Who will be our executive sponsor?

It is vitally important that the team is supported by senior leadership within the organization. Leadership should be sufficiently empowered to enable the CCoE to shape the way that the business will adopt and use public cloud resources. Support at the right levels of your organization is critical to success.

## WHAT ARE THE ROLES AND RESPONSIBILITIES OF CCOE MEMBERS?

Your CCoE is tasked with setting out a framework and path for the rest of the organization to follow as you adopt cloud services. If you recruit team members from the functions referenced below, you'll find that they naturally adopt roles aligned to their professional experience. A collaborative approach is essential, as all of these areas are intrinsically related—decisions in one area will have implications for the others.

	Function	Area/Role	Tasks
CORE MEMBERS	*Finance*	Account & Cost Management / Visibility	• Implement showback or chargeback models • Establish cost governance controls
	Operations	Asset Management	• Define and implement a tagging strategy plus controls to govern it
	Security & Compliance	Identity Management & Security	• Establish best practices for roles and permissions across cloud environments • Implement policies to identify risks
OPTIONAL ADDITIONAL MEMBERS	*Engineering*	Templates & Configuration	• Define standard templates & deployment patterns • Advise on implications of technology decisions
	Line of Business Leader	Business Context	• Represent the specific needs of key lines of business • Provide context on business initiatives and goals
	Architecture	Reference Architecture	• Define standards & repeatable patterns for the use of cloud services • Implement controls where necessary

ASSESS YOUR CURRENT STATE TO GET A BASELINE FOR IMPROVEMENT

One of the key focus areas for a CCoE will be finding opportunities to share best practices across teams and driving consistency across lines of business. CloudHealth has developed a cloud maturity framework and assessment tool that you can use to benchmark your cloud practices against peers and discover areas that need improvement—**read more about the framework here** and **take the self-assessment here.**

Start by assessing the current state of your organization across cloud financial management, operations, and security and compliance. This will help you determine where the CCoE should focus initial efforts and give you a baseline you can use to show improvement across these functions.
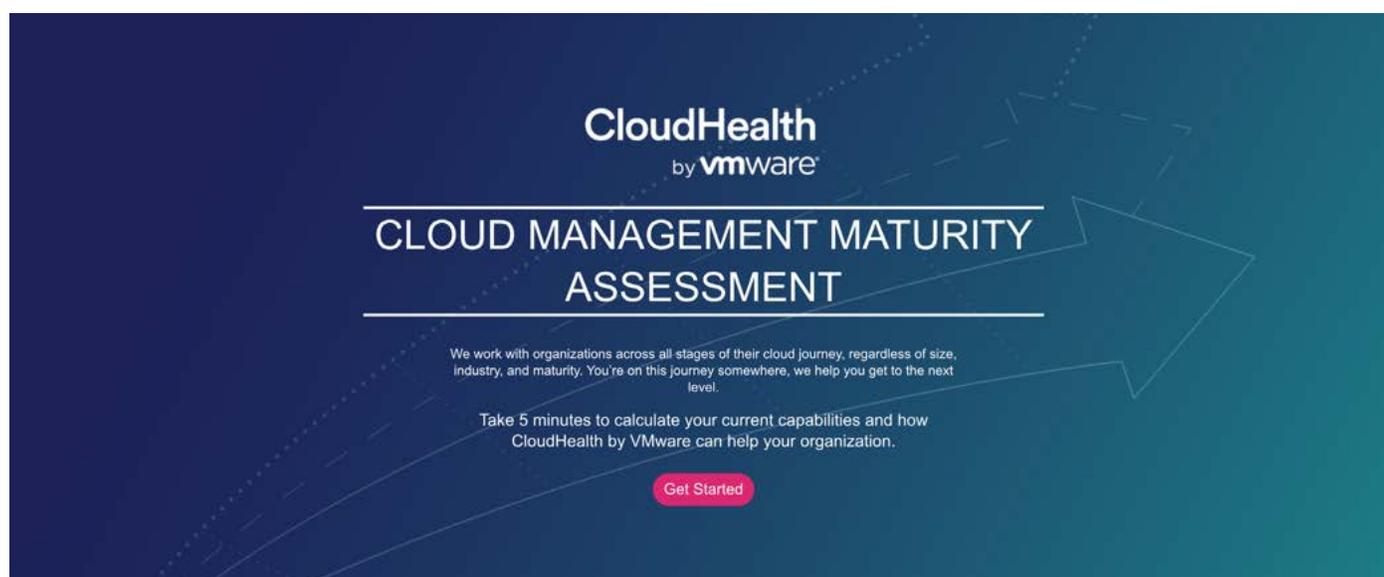
Follow the Leader

To be successful, the CCoE must have a clear leader. But who? In many organizations this job falls to the cloud architect. They have the advantage of looking across many different domains and can understand both long-term and short-term priorities. According to Gartner, the cloud architect is *"responsible for igniting cloud computing initiatives within the organization. The individual should provide thought leadership on cloud strategy and define an architectural vision for cloud across business and technical dimensions.[3]"*

---

[3] Gartner, Cloud Architects: What They Do and Why You Need One, Arun Chandrasekaran, February 27, 2020

Step 2: Build—write your charter and define governance policies

Once you've formed the core team and assessed the current state, the next step is to build a charter document and define governance policies. Having a charter document to refer back to over time will be an invaluable resource as tough decisions are made. The charter doesn't need to be a novel, but it should cover three key areas: purpose, goals/objectives, and responsibilities. You should be able to outline your goals and objectives at the start, but governance policies may take some time to develop, refine, and eventually automate.

Three elements of a CCoE charter:

Purpose
Why are we doing all of this to begin with? Typically, the purpose of the CCoE is to facilitate the execution of the organization's cloud strategy. A secondary purpose may be to foster a community of practice and drive culture changes throughout the organization.

Goals/Objectives
The goals and objectives of the CCoE are directly linked to the organization's cloud strategy. They should be aligned with broader business initiatives.

Responsibilities
Define the actions that need to be taken to meet goals and objectives and assign ownership and timelines to each action item.

CLOUD CENTER OF EXCELLENCE - EXAMPLE CHARTER

PURPOSE	GOALS/OBJECTIVES	RESPONSIBILITIES
Facilitating the execution of cloud strategy	Based on cloud strategy	Develop/impliment & maintain tagging strategy
Driving collaboration & adoption of best practices	Accelerate application delivery	Cost management (Visibility)
Evaluation / implimentation of new and existing technology	Reduce overall costs	Define & measure metrics & KPIs
	Improve performance, scalability or availability	IAM & Security Best Practices
	Promote Experimentation	Reference architectures/ automation strategies
		Monitoring & alerting

FUNCTIONAL, PRESCRIPTIVE, OR ADVISORY?

Many of the responsibilities the CCoE defines will ultimately require detailed specifications to be identified. For example, if a key responsibility of the CCoE is to eliminate wasted spend in the environment, the team will need to determine how much wasted spend should reasonably be eliminated, and how that will be done. Will you terminate unused volumes after one month? Or after 2 weeks?

These detailed specifications can be monitored with automation. Initially, it's a good idea to simply alert the relevant people when something in the environment falls out of policy. This gives the CCoE time to adjust policies to better meet the business's needs. When the same action must be taken over and over again in response to a policy breach, it's now time to automate that action, ensuring 100% compliance.

COMMON CLOUD GOVERNANCE POLICIES

Here are some common governance policies that you may want to consider.

Alert when...

- The monthly cost for any environment is projected to increase by more than 10% compared to the previous month

- The projected monthly cost for any department will exceed the budget by more than 5%

- Reservations are expiring in the next 60-90 days

Terminate when...

- Storage volumes have been unattached for more than 2 weeks

- Elastic IP addresses are not associated with an instance for more than 2 weeks

- Snapshots are not associated to any volumes

Step 3: Run—execute, measure, assess

With the team defined and a charter written, the CCoE is ready to begin the work of guiding the organization toward more secure and cost-efficient cloud operations. Organizations that have successfully rolled out a CCoE that is well integrated across the business offer the following advice:

GAIN EXECUTIVE SPONSORSHIP

An executive sponsor is a critical component to the success of your Cloud Center of Excellence. This person should have good communication skills, and ideally has considerable influence at the executive table.

An executive sponsor will help:

Obtain critical resources

Whether its securing upfront budget to purchase a reservation, or making the case for additional headcount, an influential executive sponsor will help ensure the CCoE has all the resources it needs to be successful.

Ensure alignment with business objectives

The ultimate goal of the CCoE is to ensure cloud decisions align with broader business initiatives. The executive sponsor vets the governance policies created by the CCoE team and communicates to senior leadership how cloud management is bringing the business closer to its objectives.

Create buy-in

Support from the top of the organization should be evident to teams across departments, as it legitimizes the changes being driven by the CCoE. The executive sponsor is responsible for building that coalition of support at the top of the organization.

BUILD A COMMUNITY OF PRACTICE

There are many ways to establish a community of practice, or a group of people sharing their cloud management experiences. Creating a regular forum for discussion will help to drive best practices and foster support for cloud initiatives. You should be inclusive and invite anyone who is interested in participating, no matter their role in the cloud. It's also a good idea to bring in guest presenters with new ideas from outside the organization.

Here are a few ways you can bring like-minded people together for a stimulating cloud discussion:

- Hold monthly cloud optimization stand-ups for teams that work together on a specific topic (e.g. financial mgmt., security, app development)

- Offer free monthly / bi-weekly brown bag lunches or tech talks

- Organize hackathons to generate new optimization ideas

- Schedule quarterly roundtables with one main topic per table and share learnings

- Hold regular workshops / training to up-level cloud knowledge across your organization

GO TO THEM, DON'T MAKE THEM COME TO YOU

Dieter Matzion, a member of Intuit's Technology Finance team, advises that CCoE members should engage in immersions where they sit with engineering teams for a few days to help solve concrete problems. The goal should be to build trust and a mutual understanding of each other's challenges. The CCoE shouldn't be a nebulous group that throws out standards and expects people to follow them. By engaging directly with engineering to solve a real problem, the CCoE member learns about the need for resilient cloud architecture, and the engineer learns about cost and/or security concerns. This process can be embedded in existing training protocols, and if desired, can include required certifications.

PROVIDE CONTEXT IN REPORTING

It's important to always communicate cloud metrics in business context (e.g. cost per customer). As businesses move away from on-premise data centers and toward public cloud usage, it's normal to see your cloud spend increase over time. However, this increase in cloud spend should be communicated in context of what matter most to the business. If reducing your total cost per customer is the goal, then increases in cloud spending should be offset by decreases in data center costs such that your total cost per customer is decreasing. In this case, it's critical to report the decrease in data center costs alongside the increase in cloud costs and highlight the overall decrease in cost per customer.

Wherever possible, you should also benchmark your organization against peers in the industry. Saying that you were able to reduce costs by 30% is a lot more powerful when you can provide the context that your peers only reduced spend by 15% in the same time frame.

Conclusion

The ultimate goal of cloud management is to correlate cloud decisions to business value, and to teach others in the organization to do the same. Organizations should think of cloud spending as an investment and track their return on that investment through the lens of your business KPIs. Making the organizational shift from operating in terms of sunk CAPEX costs to managing OPEX investments can sometimes be more challenging than moving the actual infrastructure. In order to make this shift, and to move at the speed the cloud enables without sacrificing integrity (i.e. security, reliability, performance efficiency, scalability), businesses should create a cloud center of excellence team. The CCoE team pursues a cloud strategy in alignment with business goals and ensures your organization can keep up with the pace of change in cloud management.

> To learn more about how we can help you with your Cloud Financial Management get in touch with the CloudHealth team, request a demo, or start a free trial **here.**