# WHAT IS CLOUD ECONOMICS?

Cloud economics is the study of cloud computing's costs and benefits and the economic principles that underpin them. As a discipline, it explores key questions for businesses: What is the return on investment (ROI) of migrating to the cloud or switching current cloud providers? And what is the total cost of ownership (TCO) of a cloud solution versus a traditional on-premises solution?
When individual businesses understand the economics of cloud computing, they can optimize their investments and obtain the greatest value for their organization.

## What are the economic benefits of cloud?

Cloud economics involves two primary principles: economies of scale and global reach. Through economies of scale, cloud providers save organizations money because they purchase computing resources in massive quantities at lower costs. When companies utilize these shared resources, they avoid the substantial up-front CAPEX costs of purchasing their own expensive infrastructure. And with a pay-as-you-go pricing model, companies pay only for the resources they actively use, scaling up or down as needed.

The global reach of cloud computing also brings substantial savings. When servers no longer need to be housed on premises—they can be located and accessed from anywhere in the world—companies can dramatically reduce labor costs. Their IT teams no longer need to devote time to deploying and maintaining complex hardware on site.

By deploying consistent infrastructure and operations across IT environments, IT teams can unlock additional operational savings, as well as reduce complexity and IT silos.

Beyond the tremendous efficiencies and cost savings of cloud computing, there is another economic benefit: business agility. Companies that utilize cloud computing resources can deploy applications faster and ramp up storage and computing power on demand. This IT agility allows businesses to respond to market changes and customer demands more quickly, leading to faster revenue growth.

## Making the business case for cloud economics

Before making the leap to cloud, businesses should analyze the economic pros and cons in depth to get a detailed picture of specific costs and savings. Will it lead to long-term savings and efficiencies? The answers will vary depending on the organizational needs and circumstances and on the cloud solution being considered. The goal is to avoid a cloud adoption strategy that drives up cost, complexity and staffing resources.

When exploring cloud economics for their company, IT and finance managers can follow a basic process to determine cloud computing ROI and TCO, and use those estimates to help make their case to executives. The process should include these three elements:

**Benchmarking**: Calculate the cost of operating your current data center, including capital costs over the equipment lifespan, labor costs and any other maintenance and operational costs, from licenses and software to spare parts.

**Cloud costs:** Estimate the costs of the cloud infrastructure you're considering (public cloud, private cloud, hybrid cloud, etc.). You'll need a quote from your vendor, but look beyond this basic pricing structure to consider ongoing fees, labor and training costs, ongoing integration and testing of apps, as well as security and compliance.

**Migration costs**: Determine the cost to migrate IT operations to the cloud or to switch cloud providers. These costs should include labor and expenses to integrate and test apps.

With hard numbers in hand, IT managers can compare the TCO of different cloud architectures and scenarios. This way they can make a stronger case for the business value of cloud adoption to the decision-makers in their organization.

# What IT needs to know about cloud economics

By exploring cloud economics in cloud computing, IT teams can gain a far more sophisticated understanding of their capital and operational expenses. Beyond just the hard numbers though, they should consider ways that cloud computing can empower and support the productivity of developers and engineers. Cloud economics goes beyond just cutting cloud computing costs; it's about meeting business goals through greater speed and agility. Understanding the larger perspective in this way will help IT teams choose the best cloud solution for their needs.

IT teams should also be careful to approach their decisions around cloud economics with objectivity and an awareness of basic behavioral economics. A host of potential biases and blind spots can negatively affect their decision making:

**Overconfidence** blind spot: Being too confident in your understanding of costs and project timelines.

**Recency blind spot:** Considering choices soberly versus being wowed by the latest technology.

**Confirmation blind spot:** Letting pre-existing notions or false beliefs affect your objective review of the information.

**Refactoring and rework blind spot:** Underestimating the time and money to refactor applications to run in the cloud.

**Talent reskilling blind spot**: Overlooking the cost to retrain or maintain multiple operations teams.

**Talent reskilling blind spot**: Overlooking the cost to retrain or maintain multiple operations teams.

# What is a cloud economist?

A cloud economist is an expert in cloud economics: principles, costs, and benefits. Cloud economists help businesses forecast their costs and savings for a new cloud solution. A TCO business case analysis from a cloud economist can serve as an invaluable decision-making resource.

Engaging with a cloud economist typically begins with a customer discovery process, in which they learn about your business objectives and IT pain points and challenges. Next, they perform financial modeling based on your real data and industry benchmarks.


In a final TCO and ROI presentation, they can compare cloud solutions for you, highlighting pricing structures, costs and savings (including capital costs versus operating costs), line-of-business impacts, recommendations, and next steps.

Taken from: https://www.vmware.com/topics/glossary/content/cloud-economics.html