

AWS Academy Cloud Foundations

# Module 1: Cloud Concepts Overview



## Topics

- Introduction to cloud computing
- Advantages of cloud computing
- Introduction to Amazon Web Services (AWS)
- AWS Cloud Adoption Framework (AWS CAF)



**Knowledge  
check**

After completing this module, you should be able to:

- Define different types of cloud computing models
- Describe six advantages of cloud computing
- Recognize the main AWS service categories and core services
- Review the AWS Cloud Adoption Framework (AWS CAF)

Module 1: Cloud Concepts Overview

# Section 1: Introduction to cloud computing

# What is cloud computing?



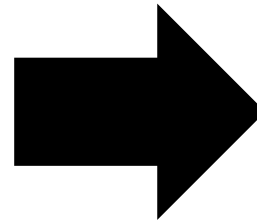
# Cloud computing defined

**Cloud computing** is the **on-demand** delivery of compute power, database, storage, applications, and other IT resources **via the internet** with **pay-as-you-go** pricing.



# Infrastructure as software

Cloud computing enables you to **stop thinking of your infrastructure as hardware**, and instead **think of (and use) it as software**.





- Infrastructure as hardware
- Hardware solutions:
  - Require space, staff, physical security, planning, capital expenditure
  - Have a long hardware procurement cycle
  - Require you to provision capacity by guessing theoretical maximum peaks

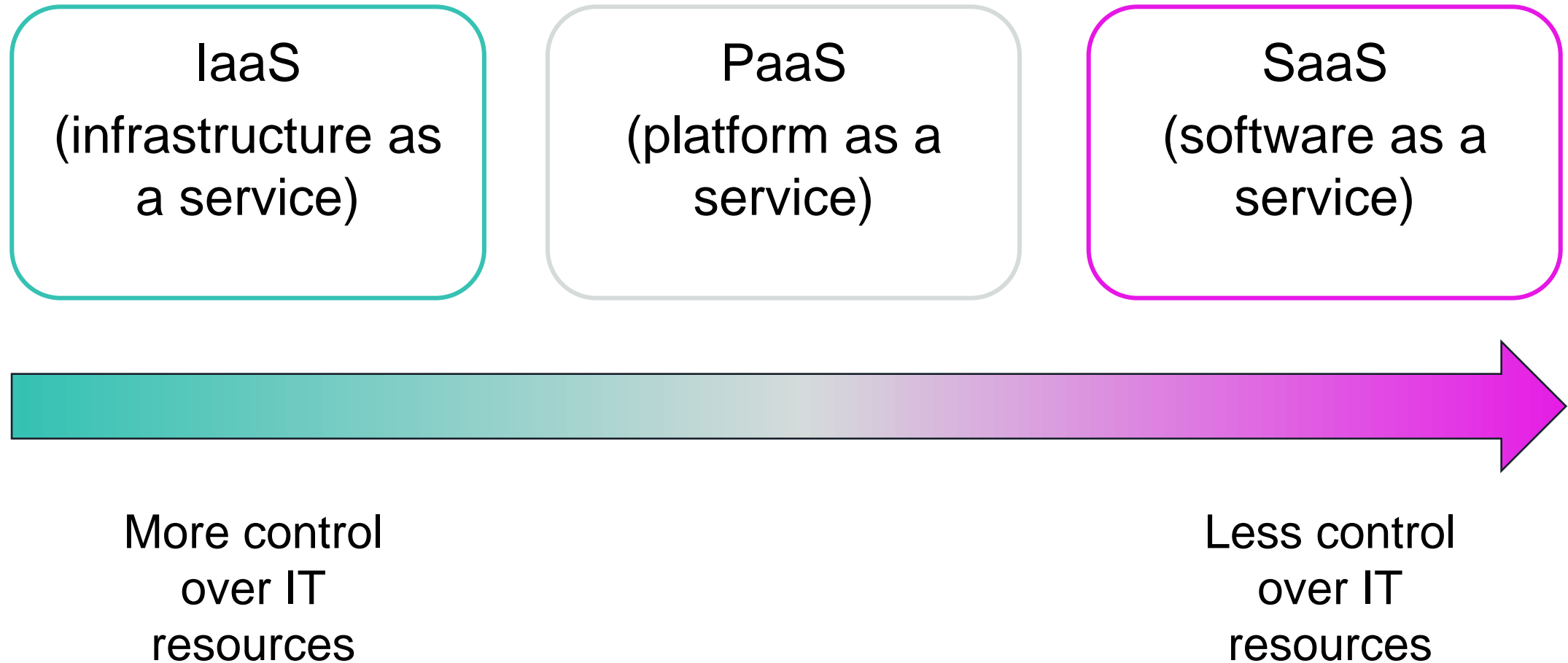


# Cloud computing model

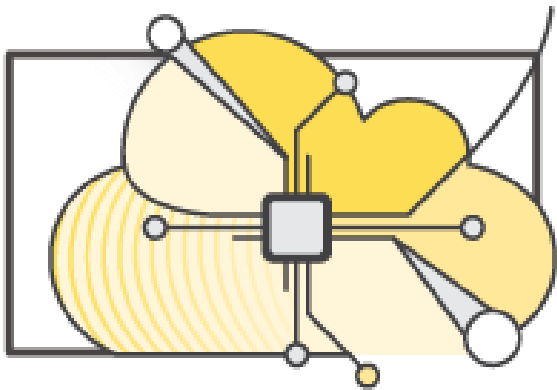


- Infrastructure as software
- Software solutions:
  - Are flexible
  - Can change more quickly, easily, and cost-effectively than hardware solutions
  - Eliminate the undifferentiated heavy-lifting tasks

# Cloud service models



# Cloud computing deployment models



**Cloud**

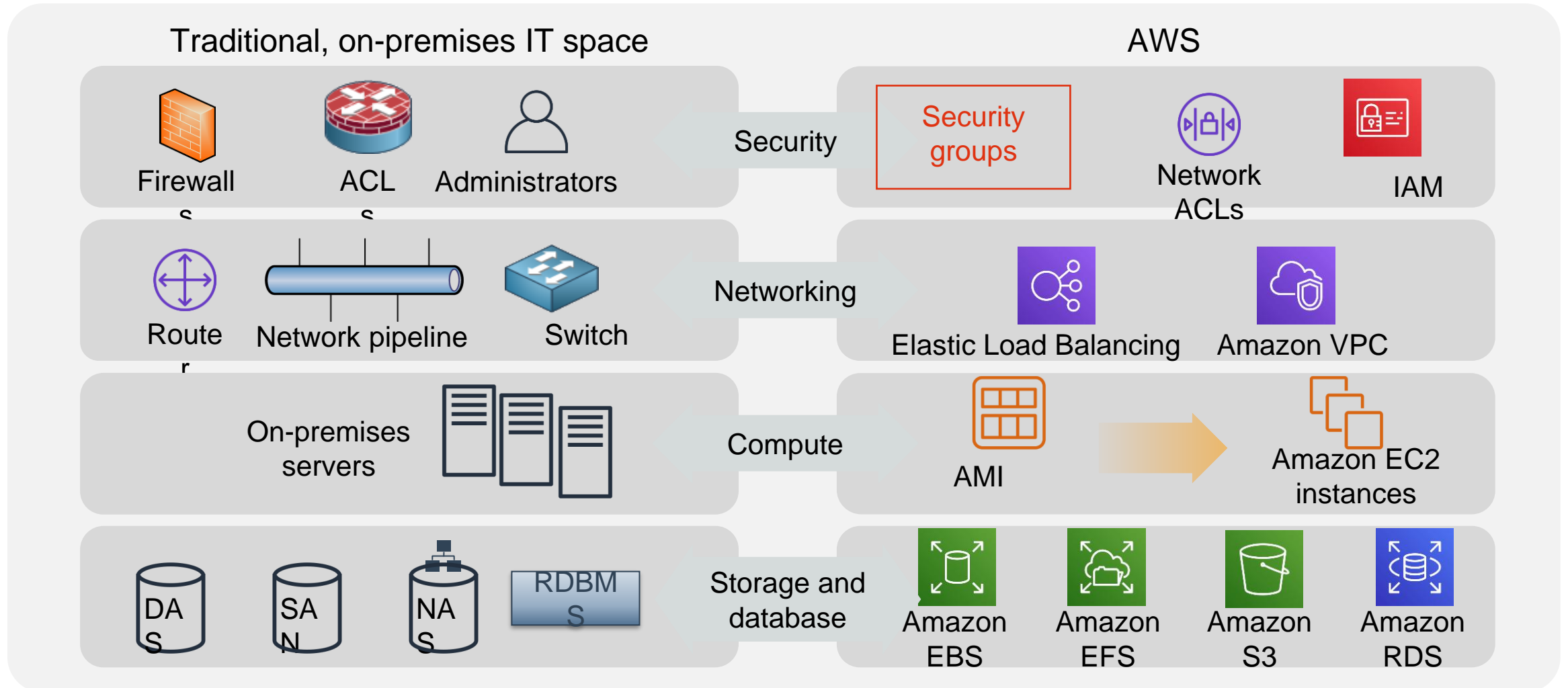


**Hybrid**



**On-premises  
(private  
cloud)**

# Similarities between AWS and traditional IT



# Section 1 key takeaways



- Cloud computing is the on-demand delivery of IT resources via the internet with pay-as-you-go pricing.
- Cloud computing enables you to think of (and use) your infrastructure as software.
- There are three cloud service models: IaaS, PaaS, and SaaS.
- There are three cloud deployment models: cloud, hybrid, and on-premises or private cloud.
- Almost anything you can implement with traditional IT can also be implemented as an AWS cloud computing service.

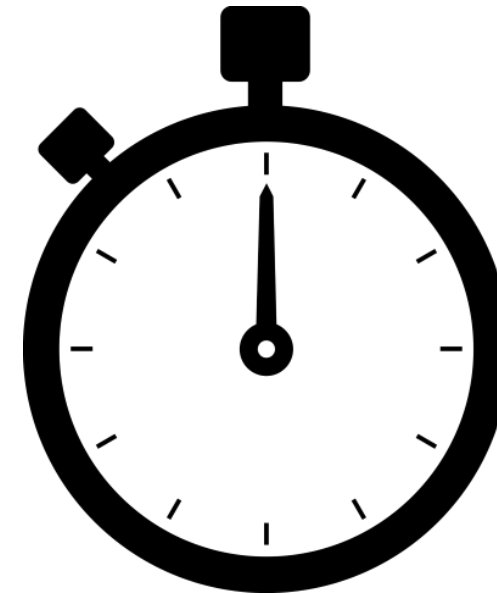
Module 1: Cloud Concepts Overview

# Section 2: Advantages of cloud computing

# Trade capital expense for variable expense

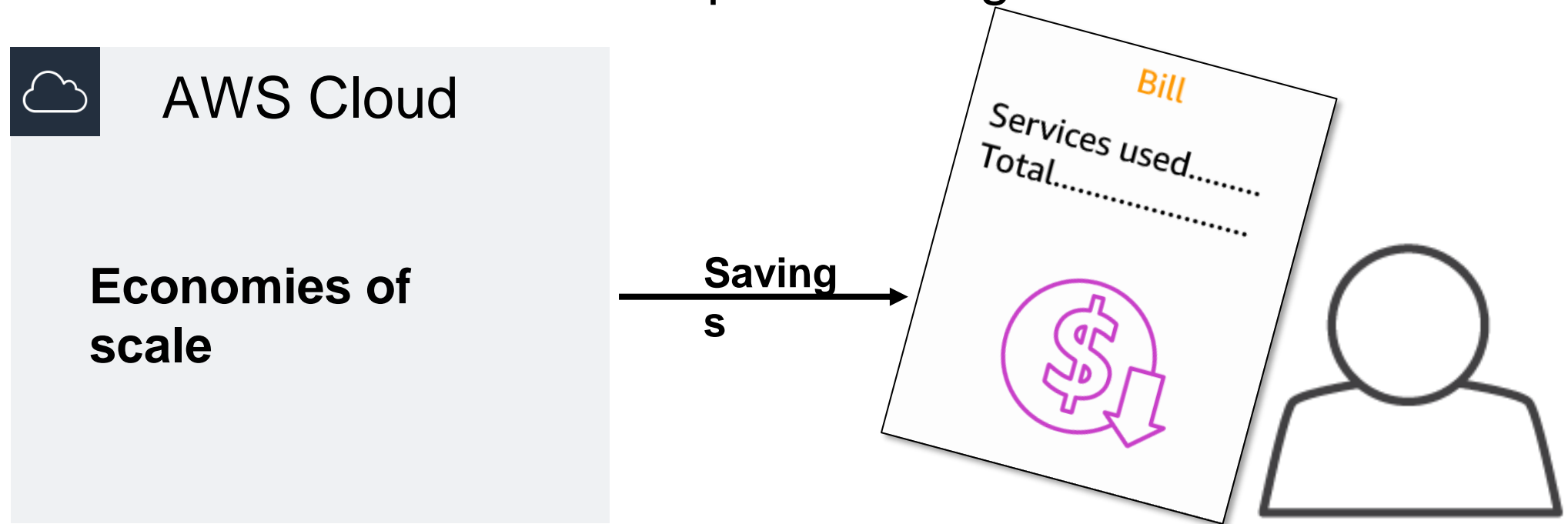


Data center investment  
based on forecast



Pay only for the amount  
you consume

Because of aggregate usage from all customers, AWS can achieve higher economies of scale and pass savings on to customers.

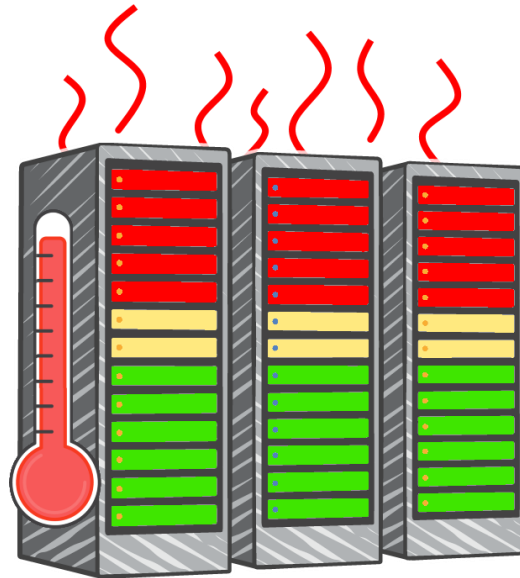




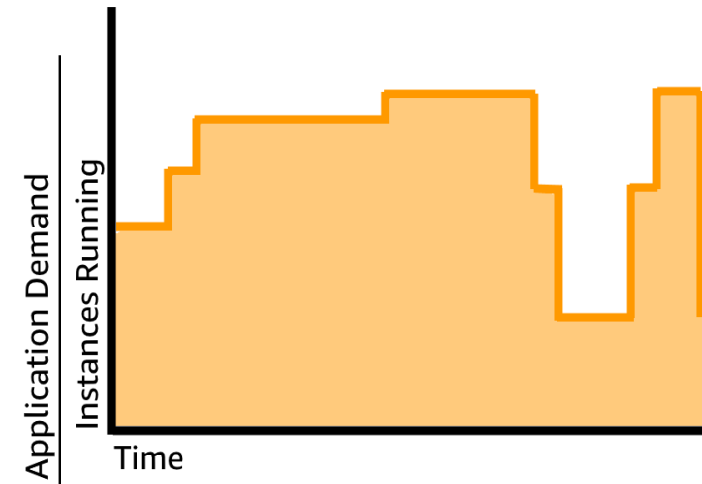
# Stop guessing capacity



Overestimated server capacity



Underestimated server capacity



Scaling on demand

# Increase speed and agility

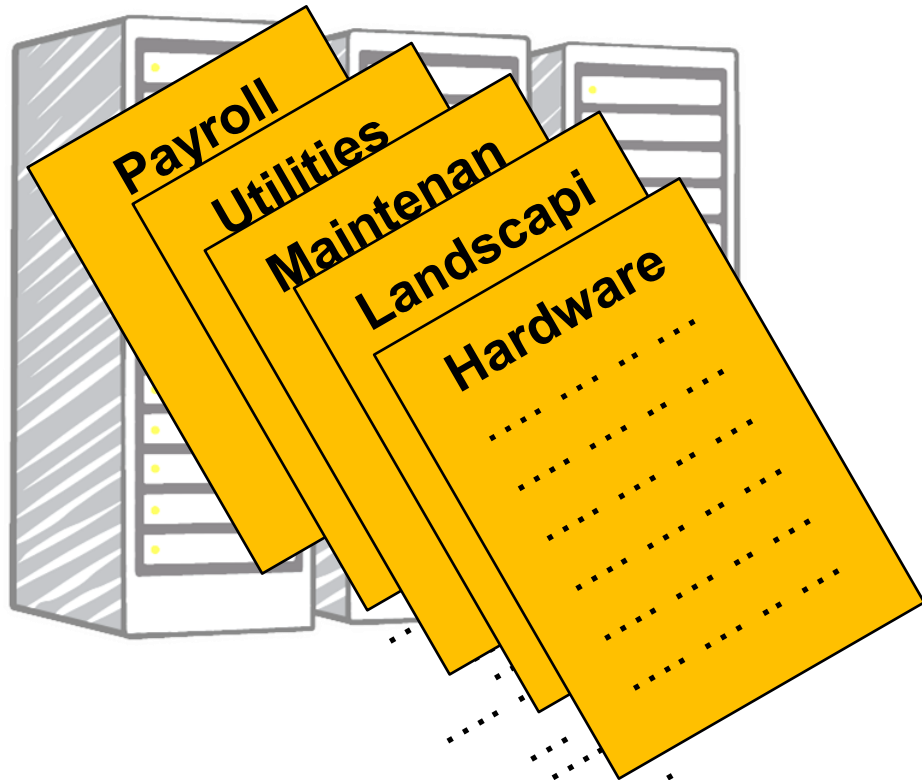


*Weeks* between wanting resources and having resources

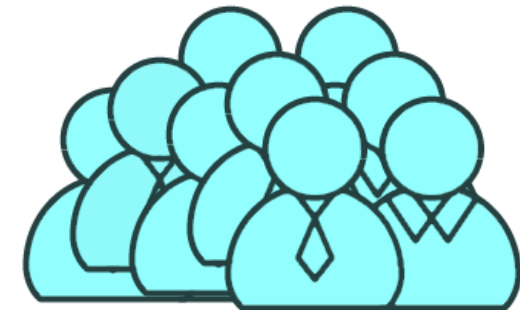
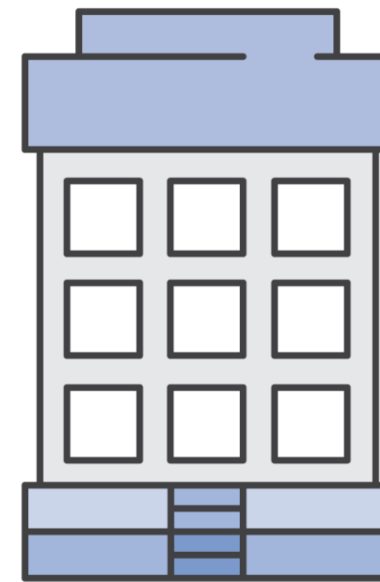
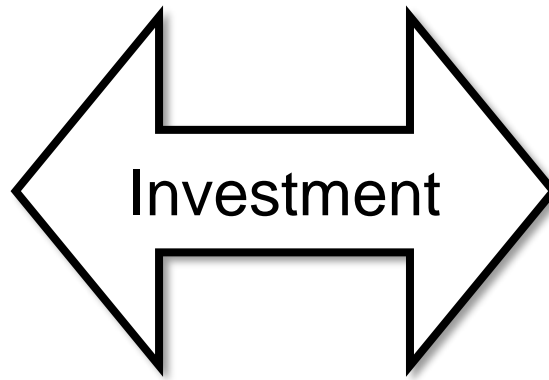


*Minutes* between wanting resources and having resources

# Stop spending money on running and maintaining data centers



Running data centers



Business and customers

# Go global in minutes

The image shows a screenshot of the AWS console interface overlaid on a world map. The console displays the 'AWS services' page with a search bar and a list of recently visited services including EC2, Elastic Transcoder, AWS Budgets, and S3. Below this, there is a 'Build a solution' section with four quick-start options: 'Launch a virtual machine' (With EC2, ~2-3 minutes), 'Build a web app' (With Elastic Beanstalk, ~6 minutes), 'Connect an IoT device' (With AWS IoT, ~5 minutes), and 'Start a development project' (With CodeStar, ~5 minutes). On the right side of the console, a dropdown menu is open, listing various AWS regions. The 'US West (Oregon)' region is highlighted in orange. A hand cursor is pointing at the 'Asia Pacific (Sydney)' region. Three callout boxes with icons of a folder, a document, and a play button are positioned around the console, with arrows pointing to the search bar, the 'Build a solution' section, and the region dropdown menu respectively. The background map shows various regions marked with colored circles.

# Section 2 key takeaways



- Trade capital expense for variable expense
- Benefit from massive economies of scale
- Stop guessing capacity
- Increase speed and agility
- Stop spending money on running and maintaining data centers
- Go global in minutes

# Thank You

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