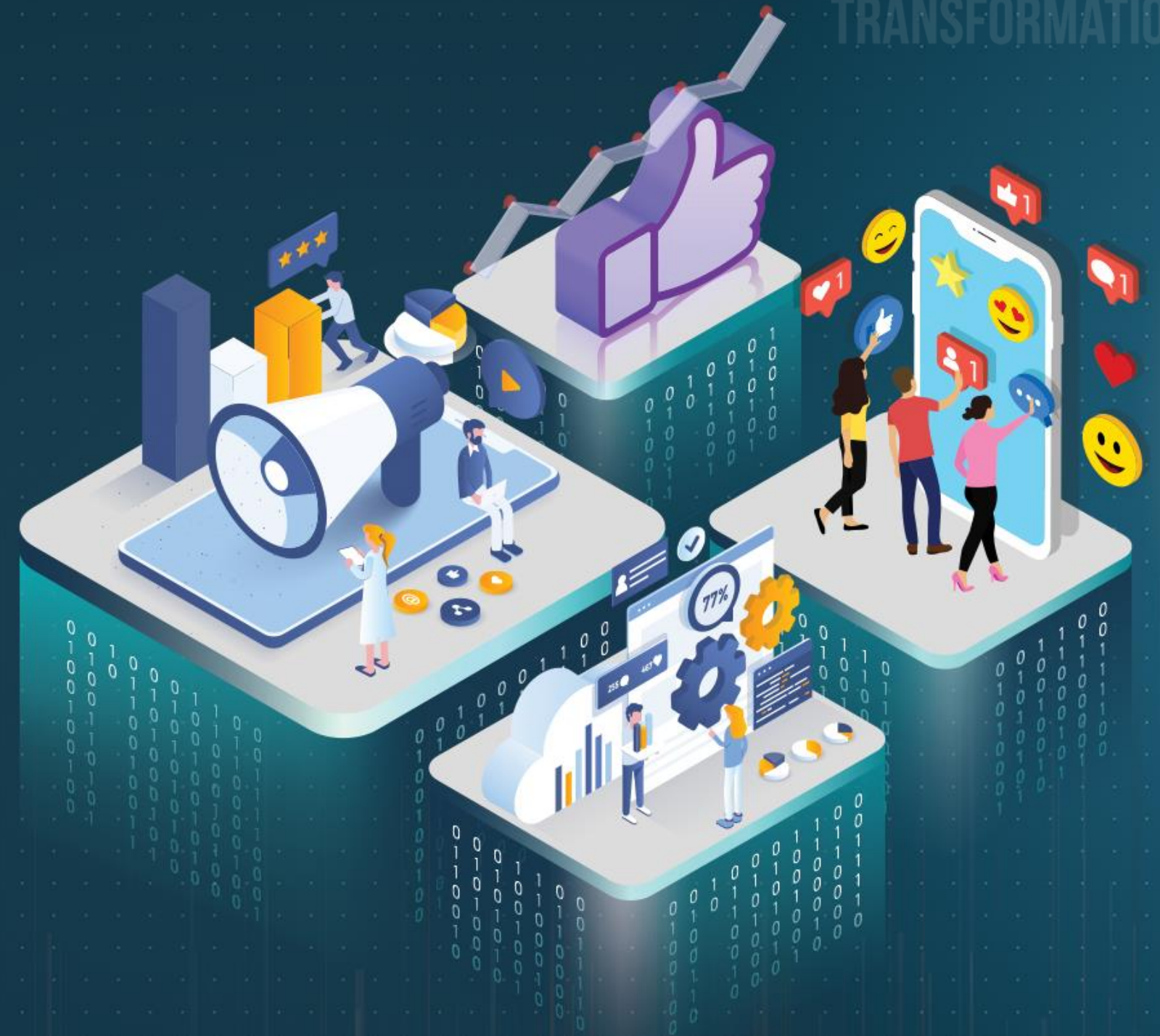


## Digital Transformation for Leaders





# Cloud and DevOps



## Learning Objectives

By the end of this lesson, you will be able to:

- Define cloud computing
- List the benefits of cloud computing
- Identify the service and deployment models of cloud computing
- Explain the association between cloud computing and digital transformation
- Describe the meaning of DevOps
- Analyze the relation between Cloud, DevOps, and Digital

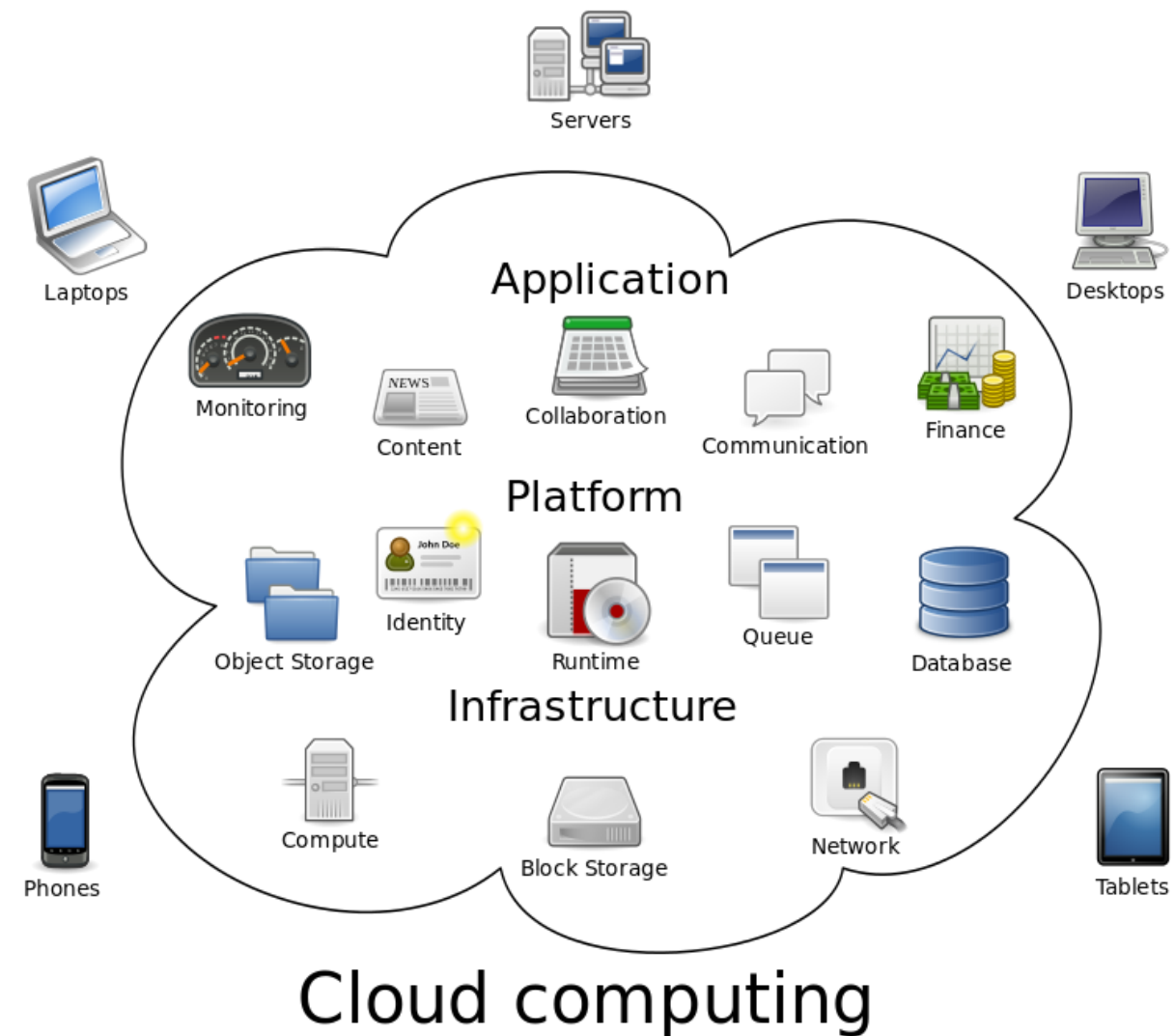




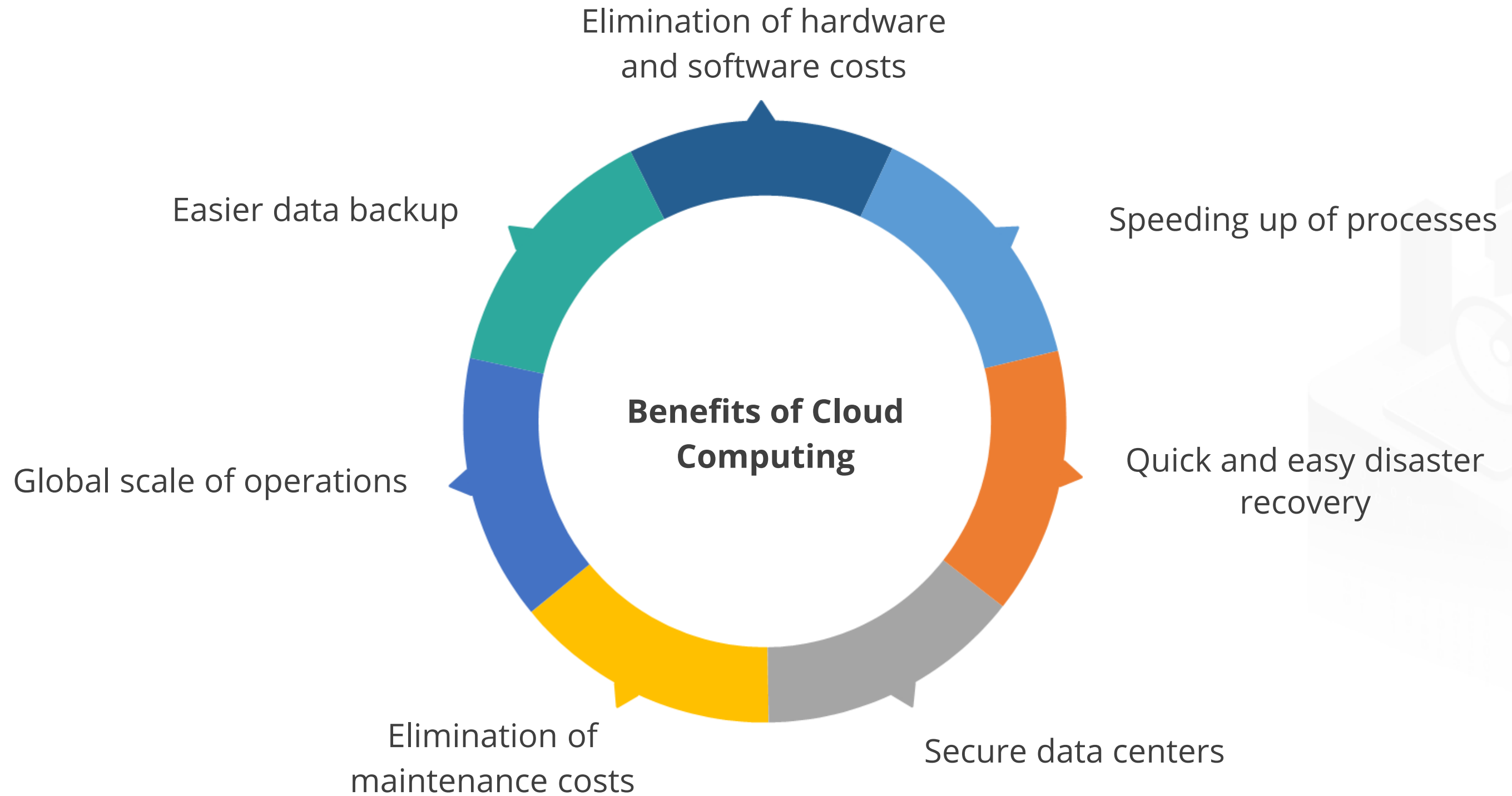
# Cloud Computing

# What Is Cloud Computing?

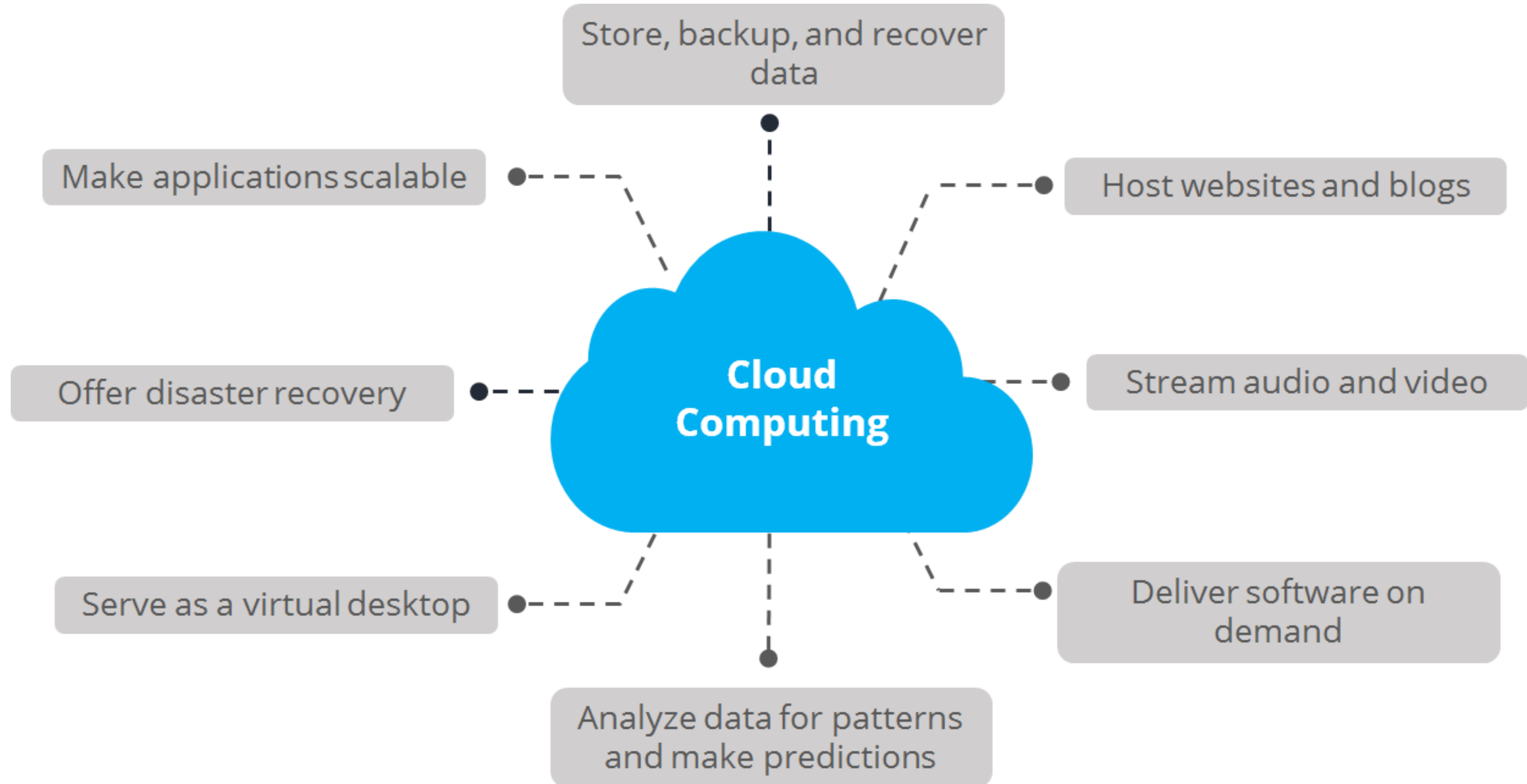
Cloud computing refers to the storing and accessing of data and programs over the Internet instead of your computer's hard drive.



# Benefits of Cloud Computing

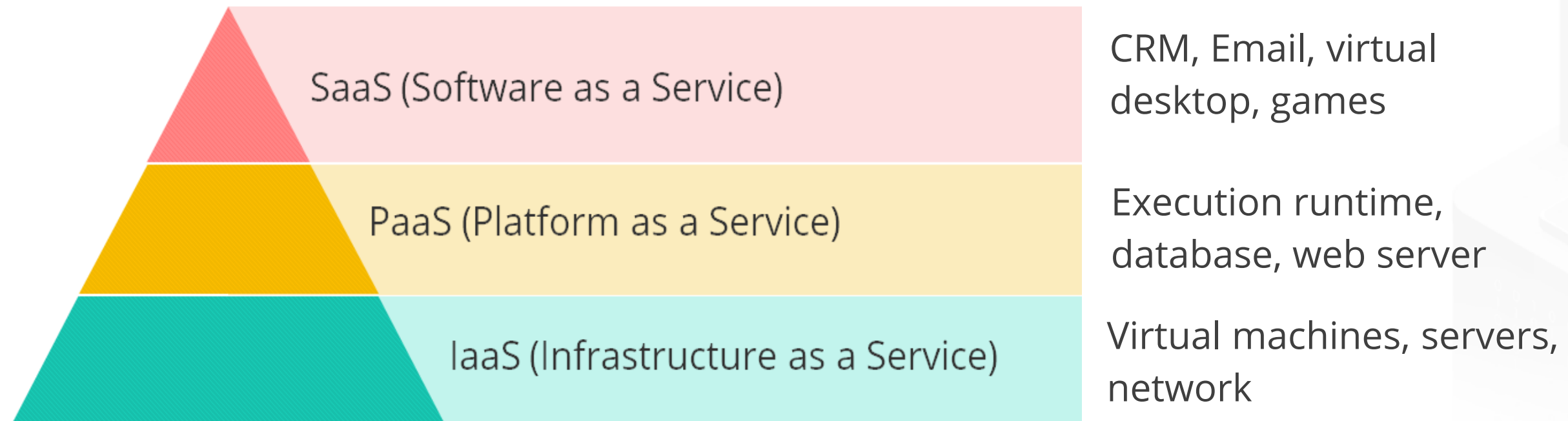


# Uses of Cloud Computing



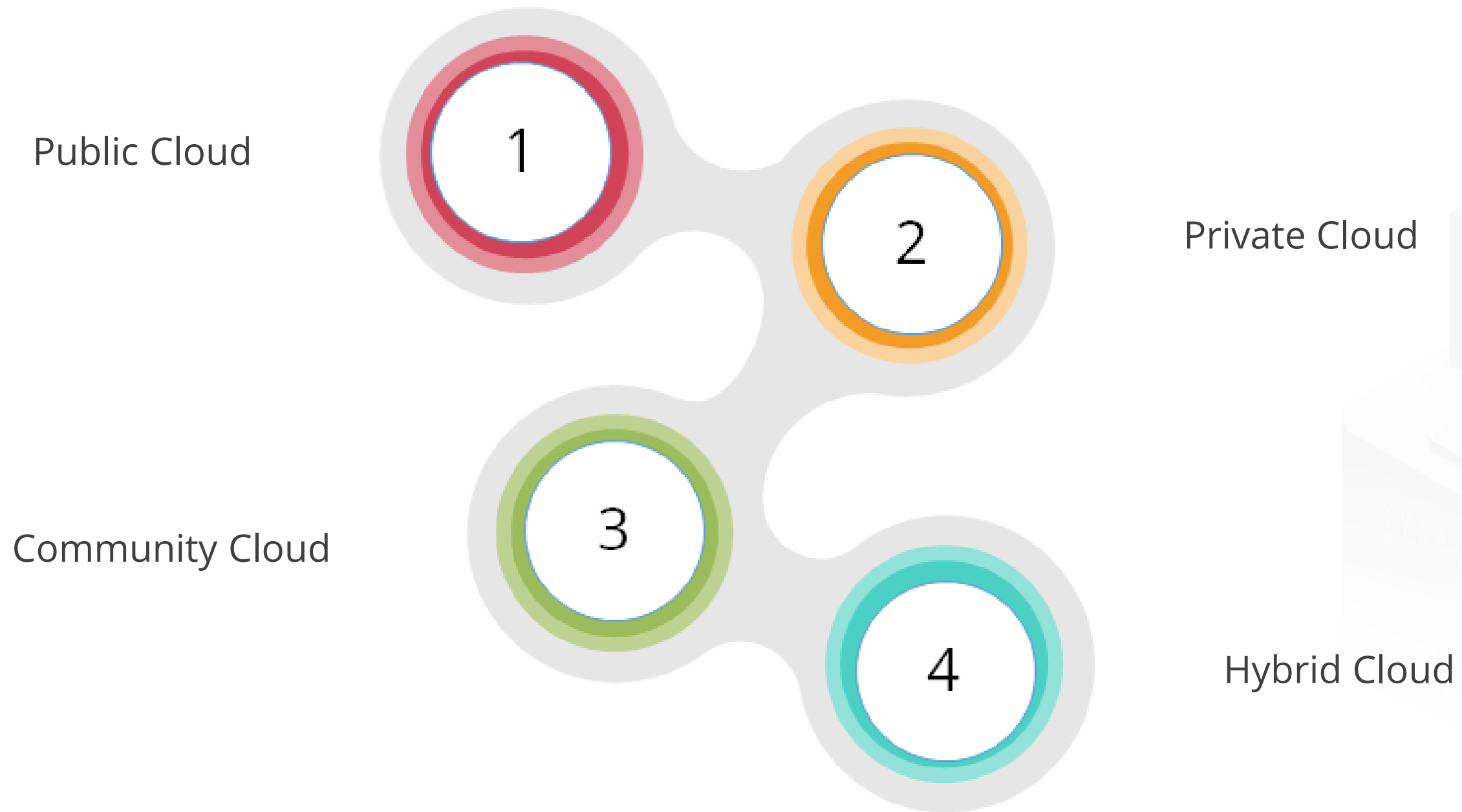
# Cloud Service Models

The three common cloud service models:





# Deployment Models of Cloud Computing



## Use Case: Communication Tools

Many messaging tools and network-based communication applications today are based on cloud infrastructure.



All messages and information are stored on the service provider's hardware instead of users' personal device. This enables users to access this information from any device over the Internet.

# Cloud Computing and Digital Transformation



- Cloud services offer unlimited and dynamic IT resources.
- They form the foundation of digital transformation.
- They can facilitate rapid business change.
- The cloud provides a good starting point for digital business in a dynamic environment.
- Digital transformation does not assume that the physical business will disappear.
- It assumes that revenue from the physical business will continue to erode until a new equilibrium is reached between the digital and physical environments.



# Cloud Computing in Finance

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Allstate is using cloud computing mostly in the form of software-as-a-service (SaaS).

CompoZed Labs, a unit under Allstate, uses Pivotal Cloud Foundry, a software workbench for building applications that can run on a company's internal servers or on a third-party public cloud infrastructure.

# Cloud Computing in Healthcare



McKesson, the largest U.S. pharmaceutical distributor, has developed a fully-integrated, cloud-based sourcing solution to completely automate the healthcare supply chain.

Users of the new solution will have access to information on critical medical-surgical supplies, high-cost physician preference items, and group purchasing organization or self-contracted items through a private marketplace.

# Cloud Computing in Travel

Amadeus has transformed travel industry services with private cloud.

It implemented an enterprise private cloud to meet the evolving needs of internal and external customers.

This helped increase its flexibility and business agility.





# Cloud Computing in Banking

Bank of America is turning to Microsoft Cloud to deliver new business efficiencies, support digital culture change, and meet customer needs effectively.



# Cloud Computing in Entertainment



**NETFLIX**

- Cloud computing offers scalable resources through various subscription models.
- This means that you will only need to pay for the computing resources you use.
- This helps in managing spikes in demand without the need to permanently invest in computer hardware.
- Netflix leverages the potential of cloud computing to its advantage.
- Due to its on-demand streaming service, it faces large surges in server load at peak times.
- The move to migrate from in-house data centres to cloud helped expand the company's customer base without investing in setup and maintenance of costly infrastructure.

# Cloud Computing in Netflix

## Innovation (1997)

- Introduction of monthly subscription concept for DVD rentals
- Growth of subscribers to one million within six years

## Disruption (2004)

- Non-linear TV applications took over linear television and brick and mortar Netflix stores
- Sudden decrease in DVD-by-mail and subscription revenue

## Transformation (2007)

- Video streaming is introduced with deep insights on preferences
- Shows are produced based on customer preferences

## Growth (2017)

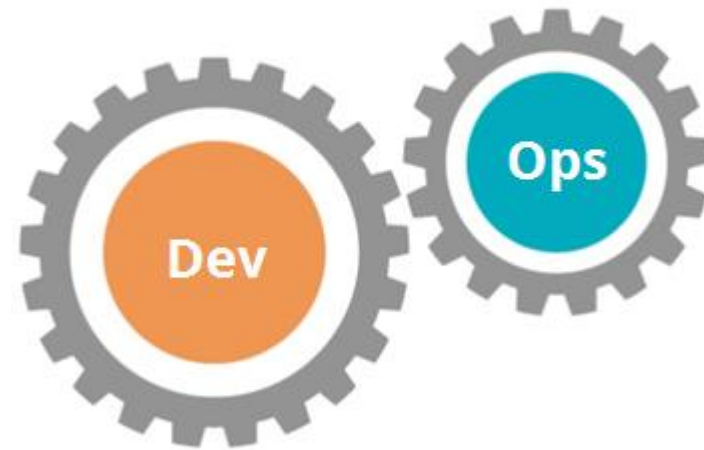
- 109.25 million streaming subscribers worldwide
- A collection of 6,500 movies and 1,700 shows streamed globally



## DevOps

# What Is DevOps?

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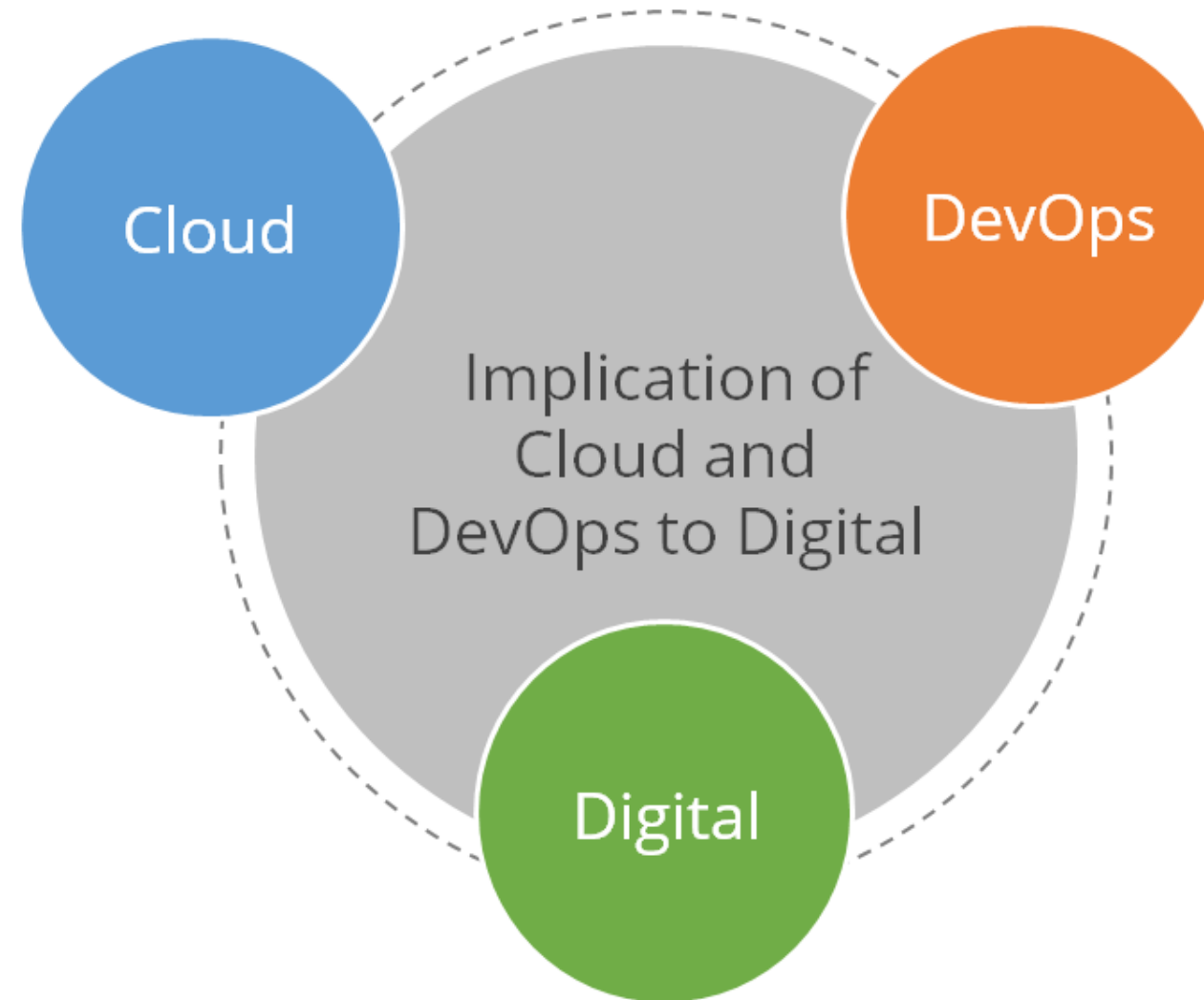


- DevOps stands for development operations.
- It is a practice of optimizing development and operations activities through structured processes, automation, and collaboration.
- It aims to synergize processes between development and operations teams to make them more efficient.

# DevOps, Cloud, and Digital

DevOps, Cloud, and Digital are closely linked subjects.

Cloud is the main vehicle for Digital Masters to provision applications and infrastructure capabilities in an agile, flexible, and speedy way.



DevOps is all about speed, quality, and value for money

There is an increased appreciation for the role of Digital with Cloud and DevOps entering the scene.



# Benefit of DevOPs

DevOps integration benefits the company in the following three areas:

## Technical benefits:

- Continuous software delivery
- Less complexity to manage
- Faster resolution of problems

## Cultural benefits:

- Happier, more productive teams
- Higher employee engagement
- Greater professional development opportunities

## Business benefits:

- Faster delivery of features
- More stable operating environments
- Improved communication and collaboration

# Impact of DevOps Integration

DevOps integration changes the way an enterprise is structured and ensures faster delivery.

The DevOps approach helps:

- Effective code management
- Rapid processes
- Prompt configuration management

# Impact of DevOps Integration

**Effective Code Management**

**Rapid Processes**

**Prompt Configuration Management**

The development team needs to feed in the raw code once and leave for testing.

DevOps ensures that developers perform rapid integration testing that reduces errors and time taken for launch.

# Impact of DevOps Integration

**Effective Code Management**

**Rapid Processes**

**Prompt Configuration Management**

When software developers are encouraged to quickly produce a minimal viable product, testing happens sooner and important feedback is sent back to the developers.

Using the DevOps development approach, bugs are fixed quickly, features and changes are added, and new versions can be rolled out faster than before.



# Impact of DevOps Integration

**Effective Code Management**

**Rapid Processes**

**Prompt Configuration Management**

With DevOps, companies benefit from cloud vendors platform as a service (PaaS).

PaaS automatically provides the appropriate runtime container and middleware services for an application in a consistent environment across the application life cycle. It minimizes the costs of downtime and abstracts applications from infrastructure dependencies.

## Key Takeaways

- Cloud computing refers to the storing and accessing of data and programs over the Internet instead of your computer's hard drive.
- Cloud services offer unlimited and dynamic IT resources and form the foundation of digital transformation.
- DevOps is a practice of optimizing development and operations activities through structured processes, automation, and collaboration.
- There is an increased appreciation for role of the digital with cloud and DevOps entering the scene.

