# Principles of Distributed and Parallel Database Systems Why Distribution?



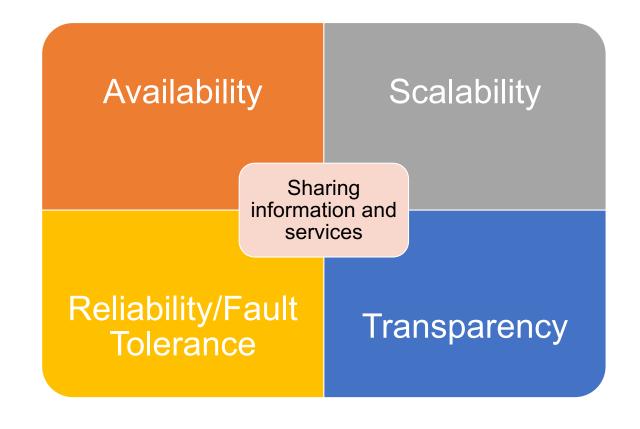
### **Objectives**



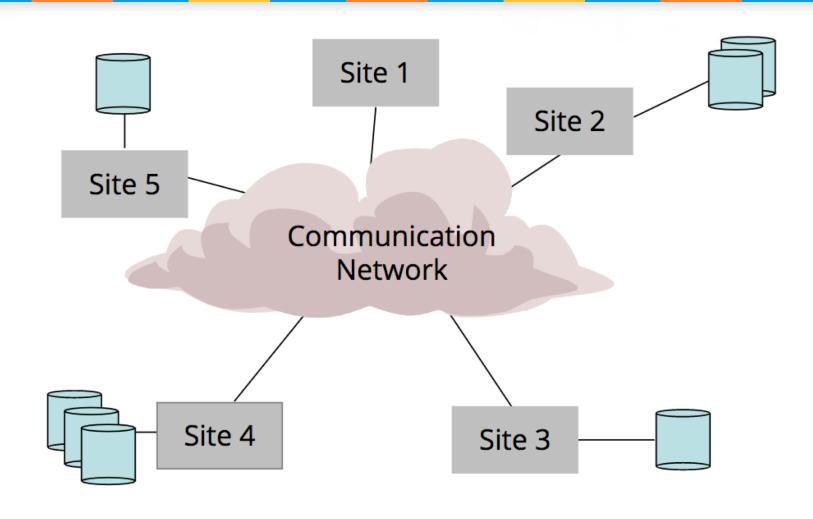
Objective

Realize how queries are processed in distributed databases

## Why Distribution?



#### **Distributed DBMS Environment**



#### What is a Distributed Database System?

A collection of multiple, logically interrelated databases distributed over a computer network

The software that manages the DDB and provides an access mechanism that makes this distribution transparent to the users.

Distributed database system:

(DDBS) = DDB + D-DBMS

#### **Distributed DBMS Promises**

Transparent management of distributed, fragmented, and replicated data

Improved reliability/ availability through distributed transactions

Improved performance

Easier and more economical system expansion

#### **Transparency**

Separation of the higher level semantics of a system from the lower level implementation issues.

Fundamental issue is to provide data independence in the distributed environment