Databases

Why do we need them

- In memory
- Saving to File system
- Problems with multiple connections

DB Servers

- multiple connections
- handle **transactions**
- can give us relations

Relations

- one to one
- one to many
- many to many

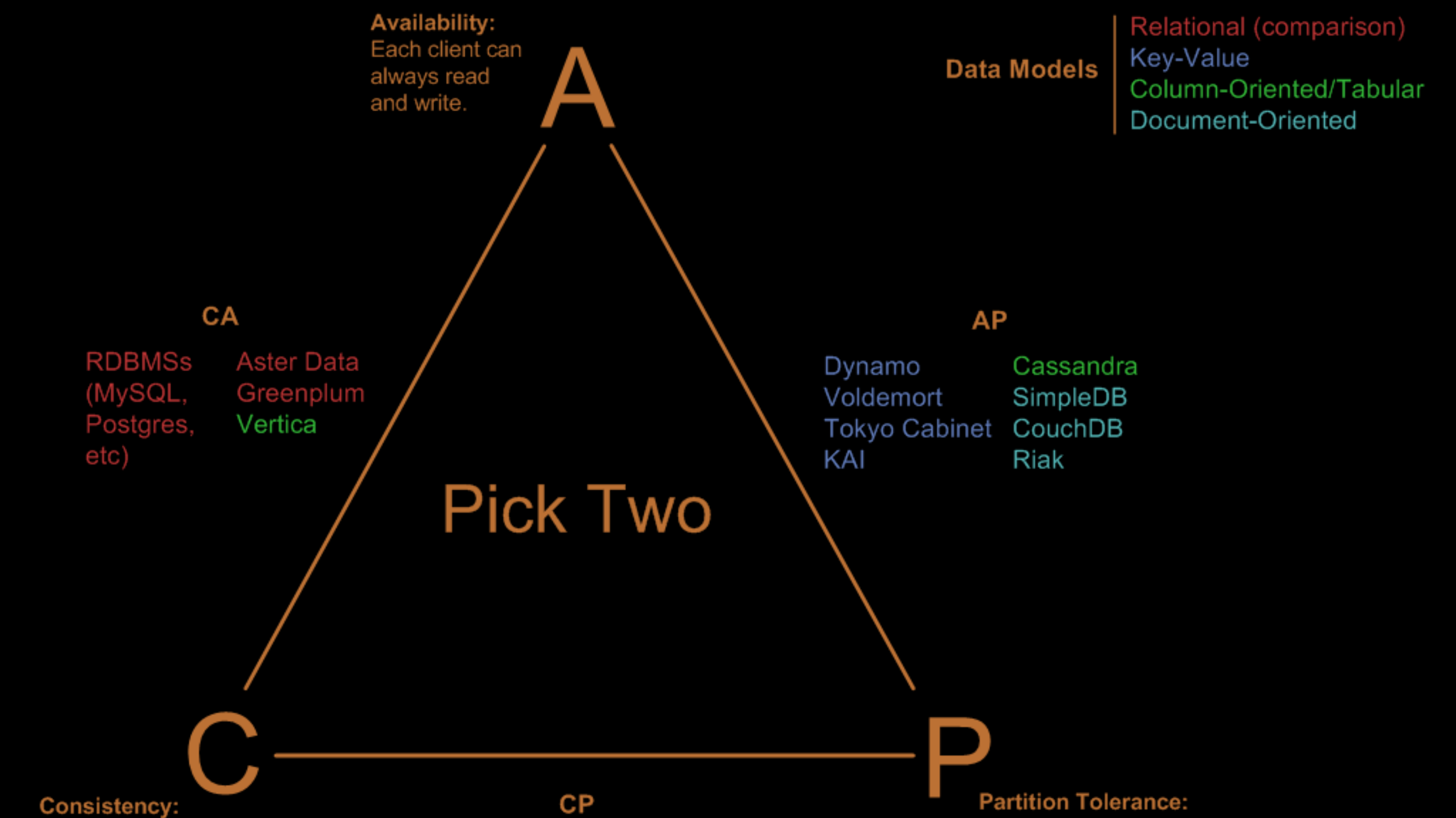
SQL vs NoSQL

SQL databases

- tables
- strict
- schema
- relations

No sql

- collections
- references via an id


Availability:
Each client can always read and write.
A
Data Models
Relational (comparison)
Key-Value
Column-Oriented/Tabular
Document-Oriented
CA
RDBMSs (MySQL, Postgres, etc)
Aster Data
Greenplum
Vertica
AP
Dynamo
Voldemort
Tokyo Cabinet
KAI
Cassandra
SimpleDB
CouchDB
Riak
Pick Two
C
P
Consistency:
CP
Partition Tolerance:

Pros and Cons

- speed
- size
- flexibility