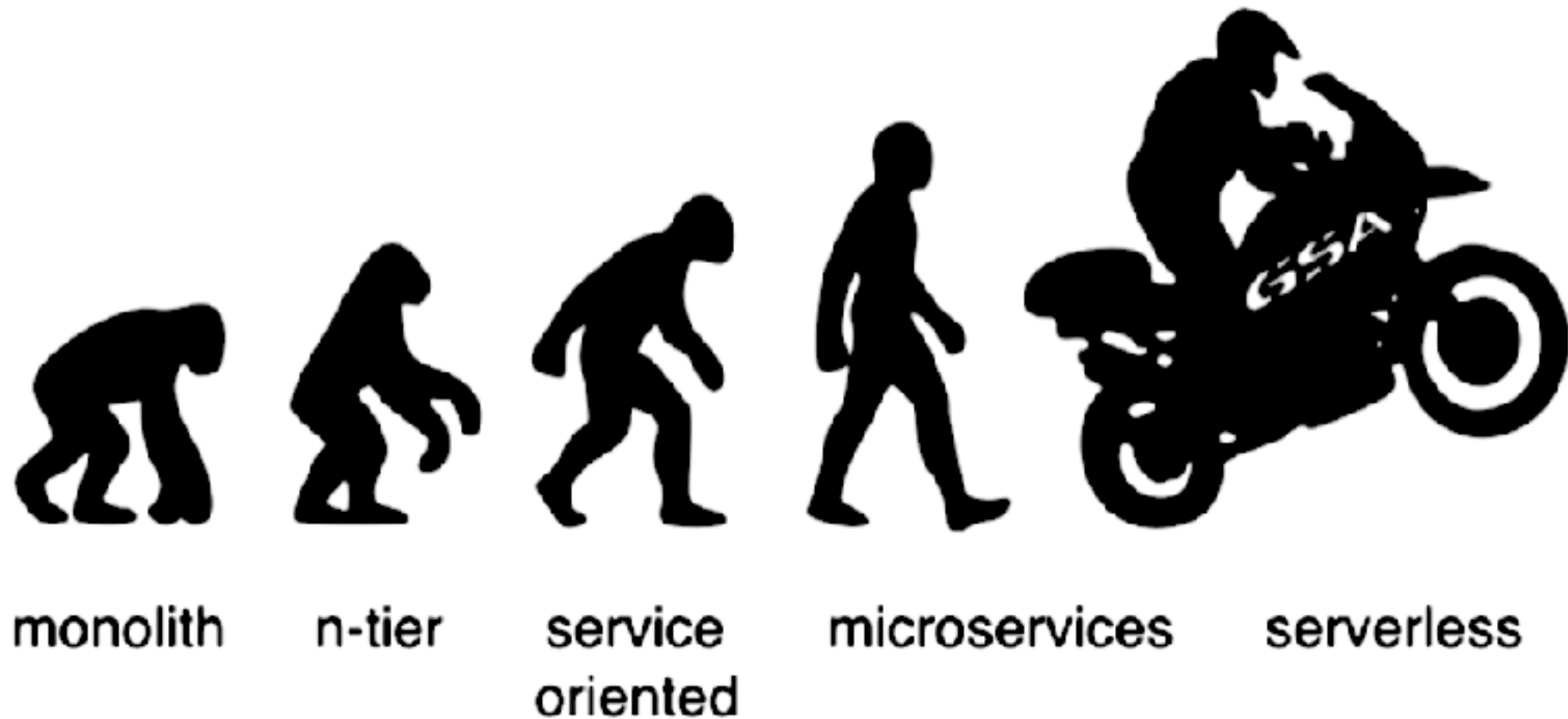


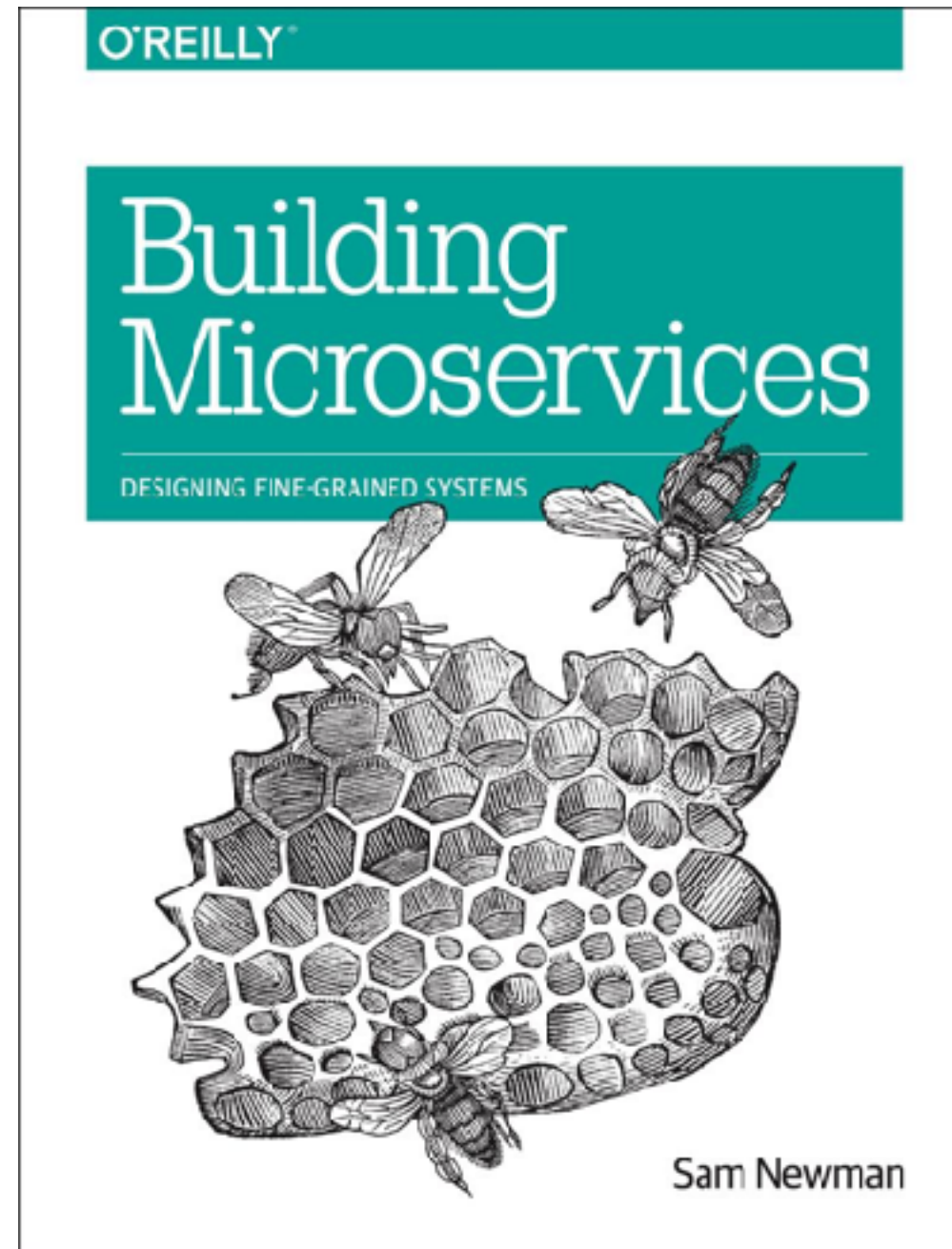
Microservice



@somkiat



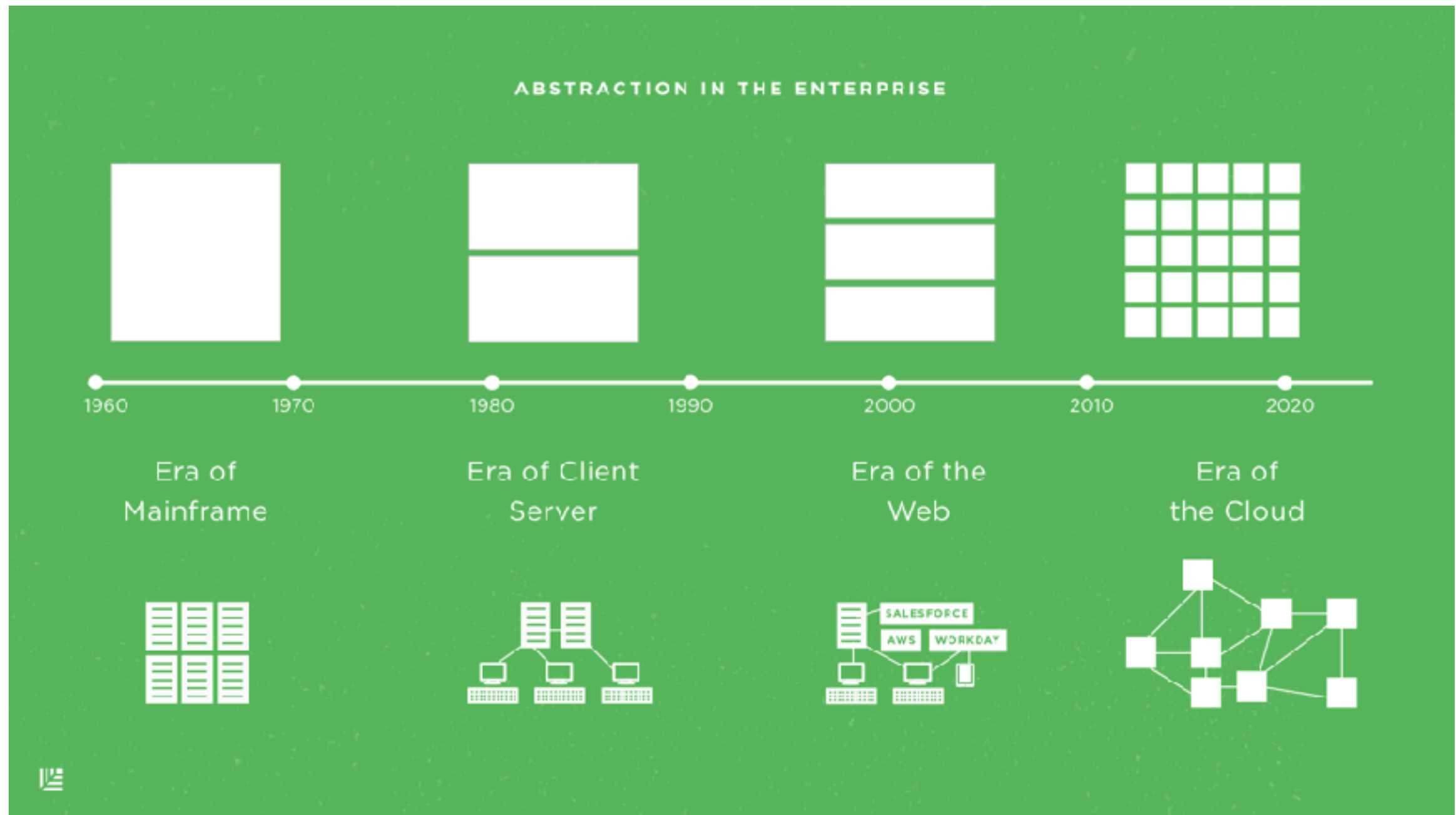
Reference



<http://shop.oreilly.com/product/0636920033158.do>



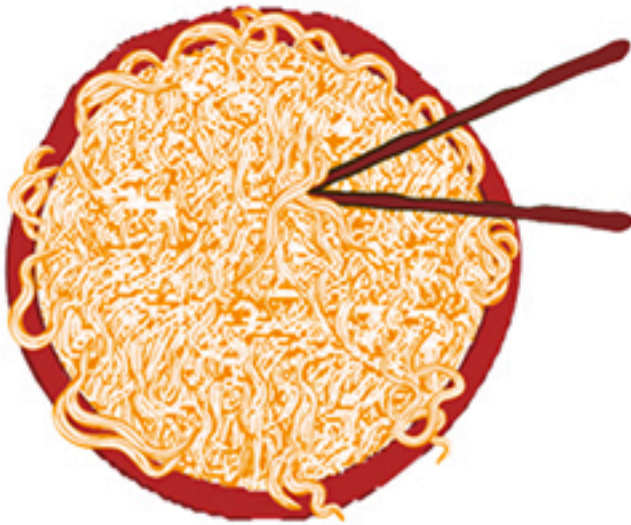
Evolution of Architecture



Developer's perspective

1990s and earlier

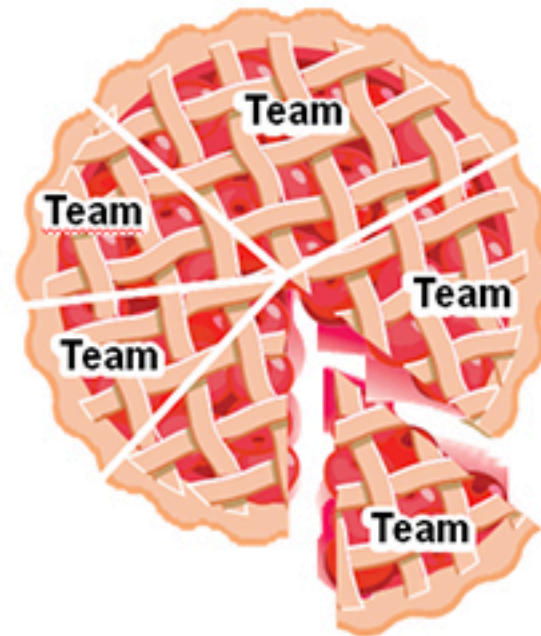
Pre-SOA (monolithic)
Tight coupling



For a monolith to change, all must agree on each change. Each change has unanticipated effects requiring careful testing beforehand.

2000s

Traditional SOA
Looser coupling



Elements in SOA are developed more autonomously but must be coordinated with others to fit into the overall design.

2010s

Microservices
Decoupled



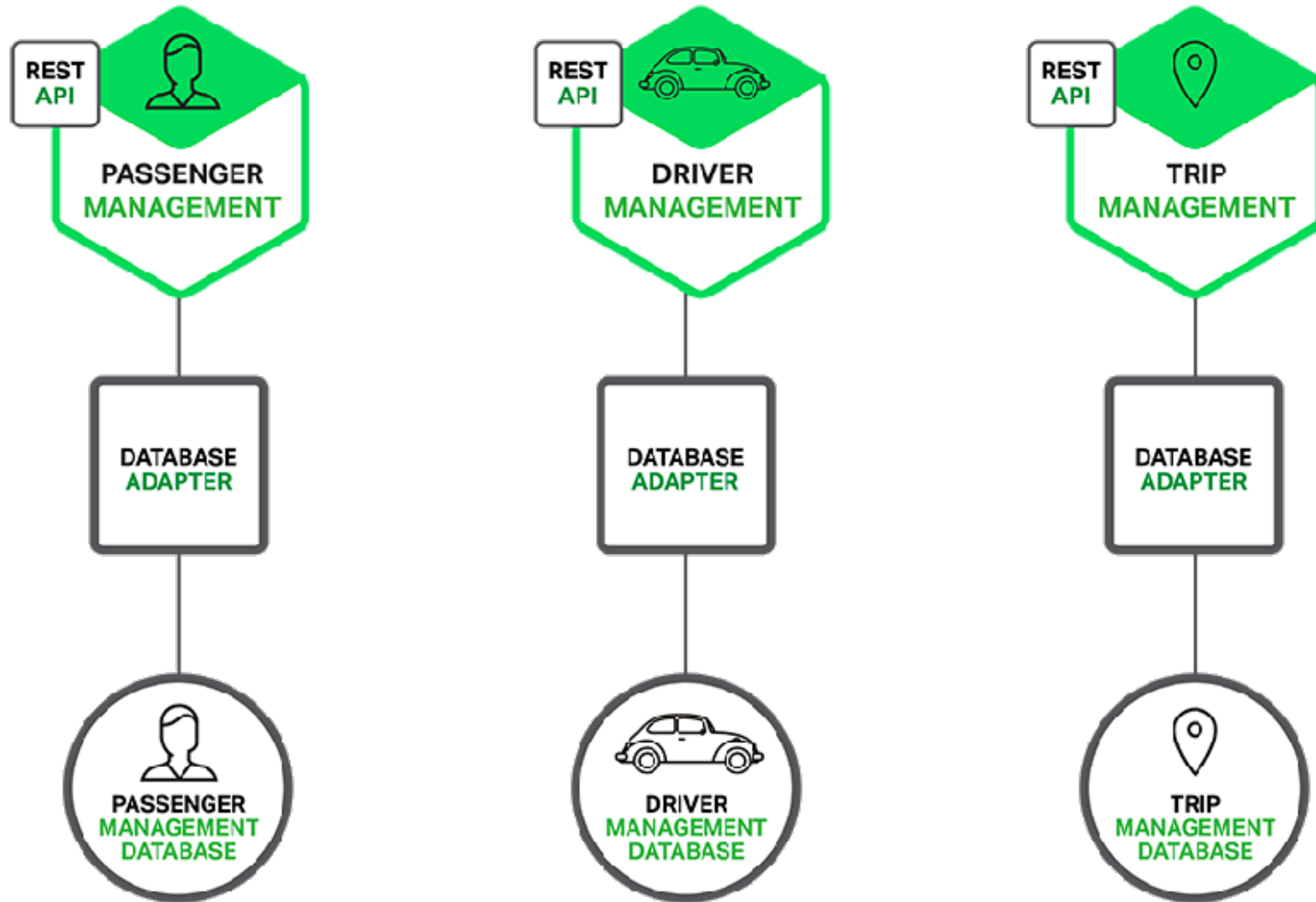
Developers can create and activate new microservices without prior coordination with others. Their adherence to MSA principles makes continuous delivery of new or modified services possible.



Microservice



Microservice



What is microservice ?



What is microservice ?

Small services



What is microservice ?

Small services

Running in its own process



What is microservice ?

Small services

Running in its own process

Communicating with lightweight mechanism



What is microservice ?

Small services

Running in its own process

Communicating with lightweight mechanism

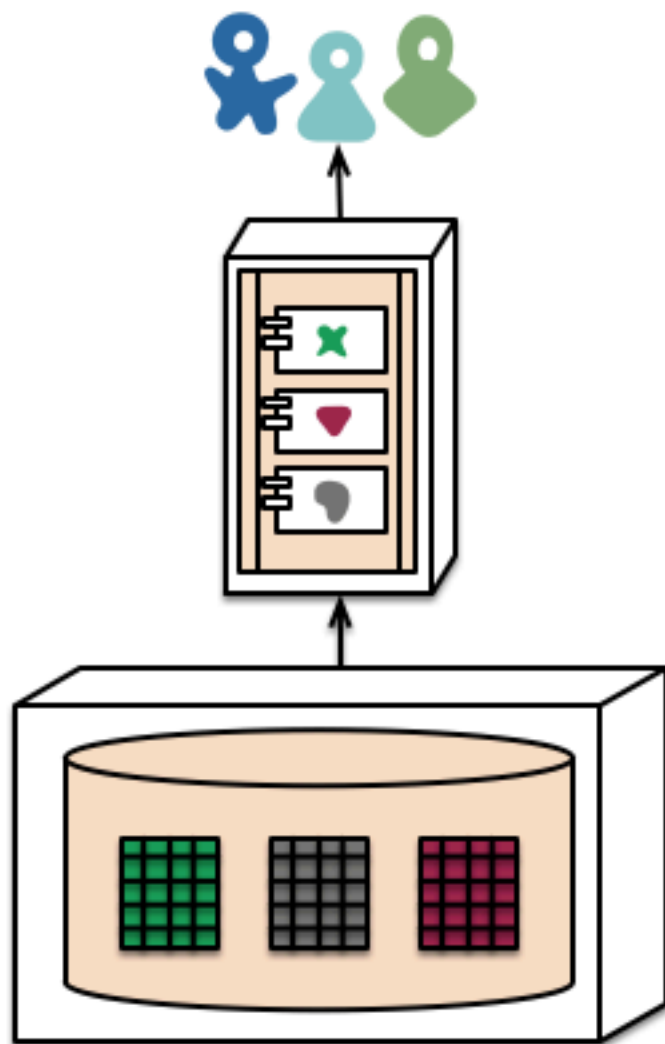
Independently deployable



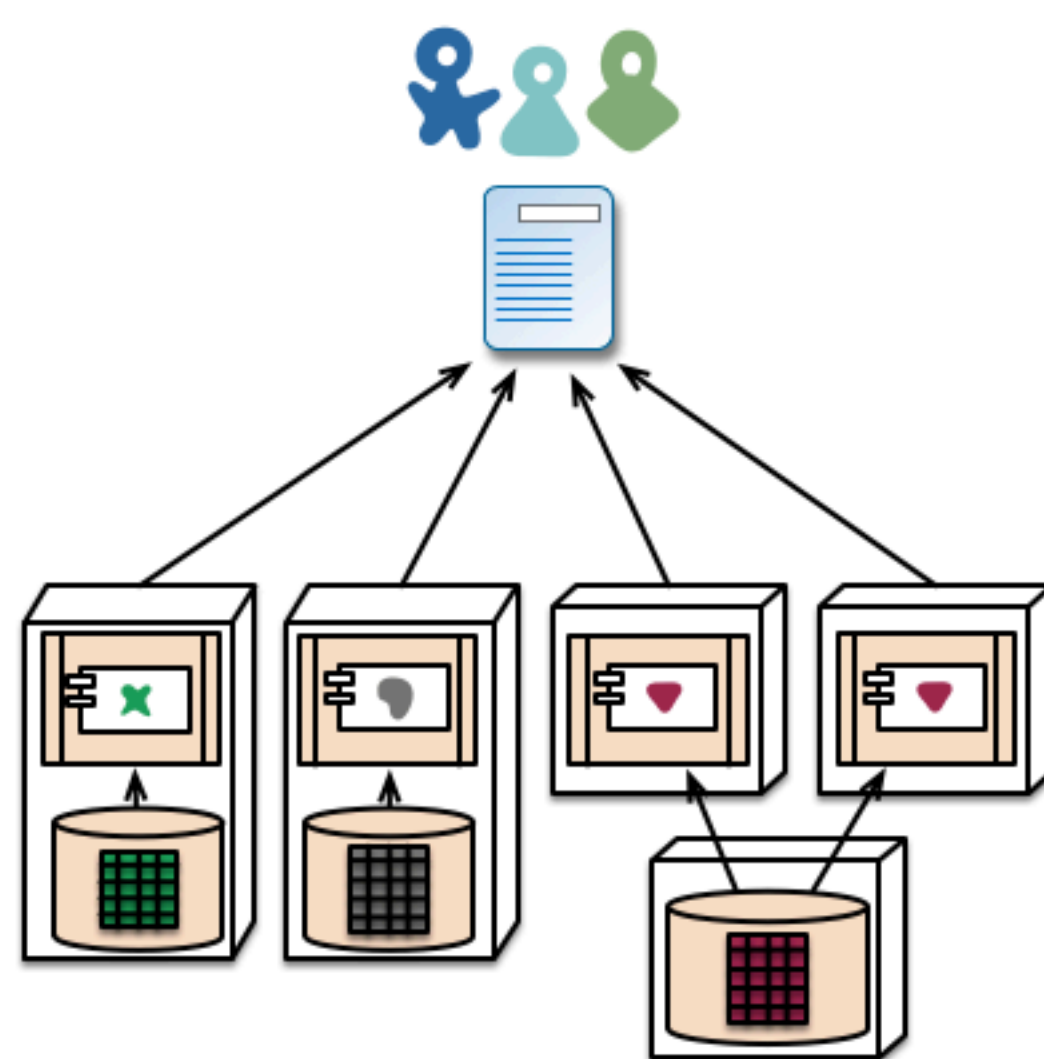
Benefits



Technology Heterogeneity



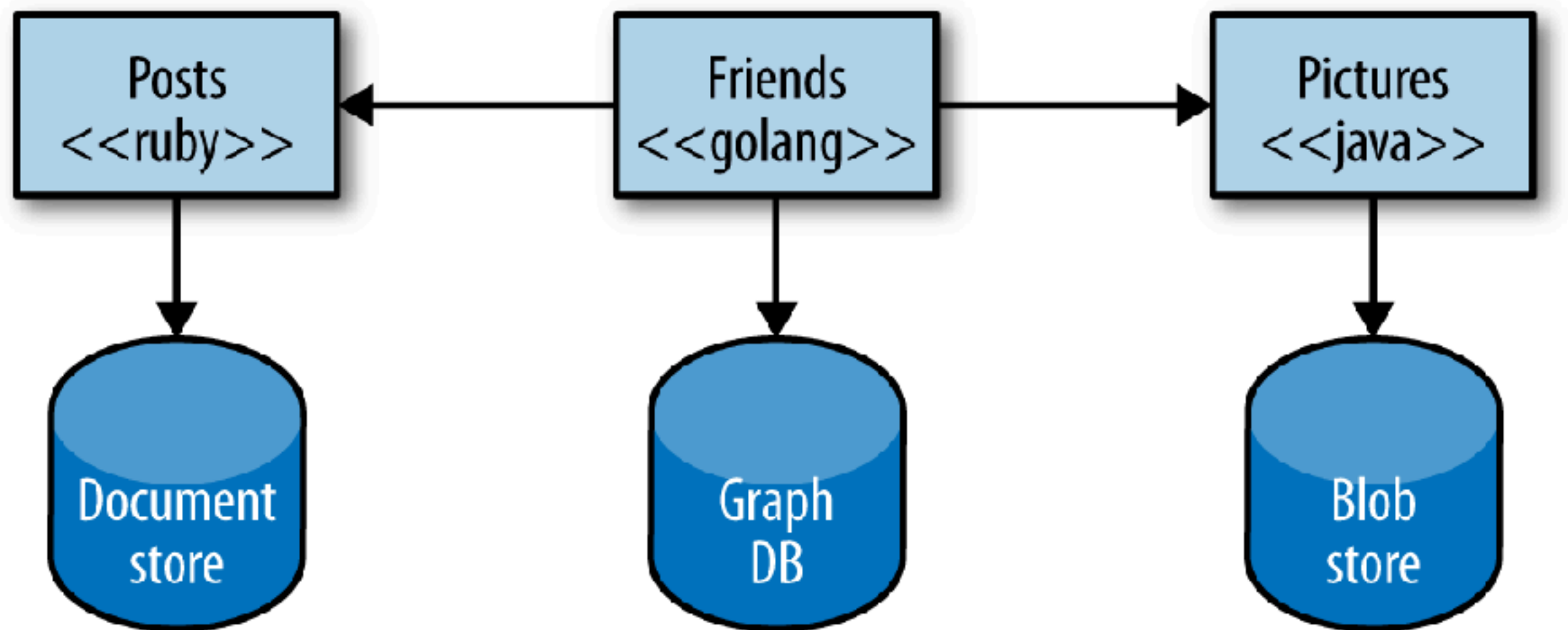
monolith - single database



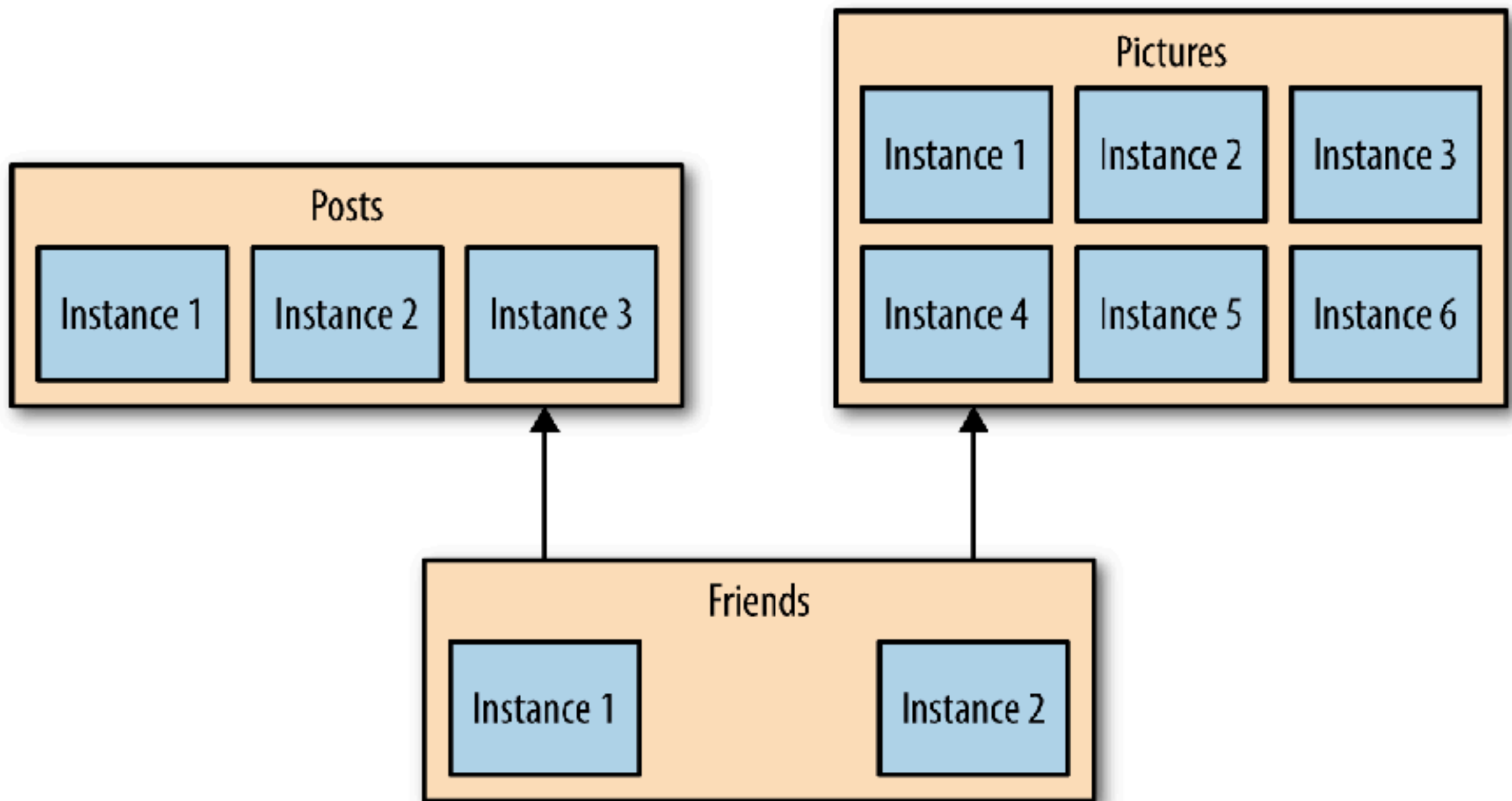
microservices - application databases



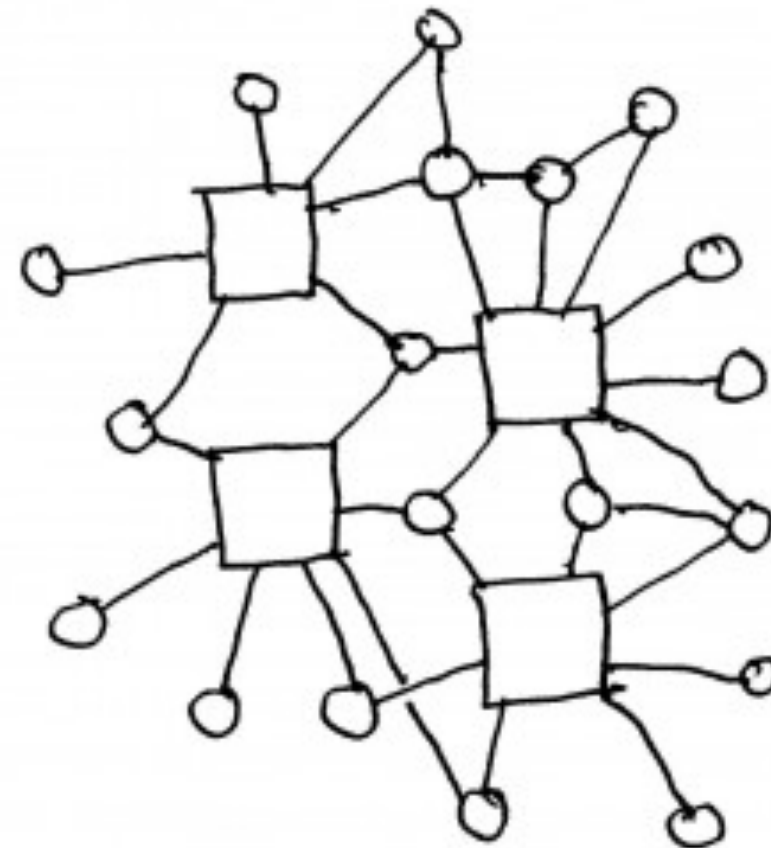
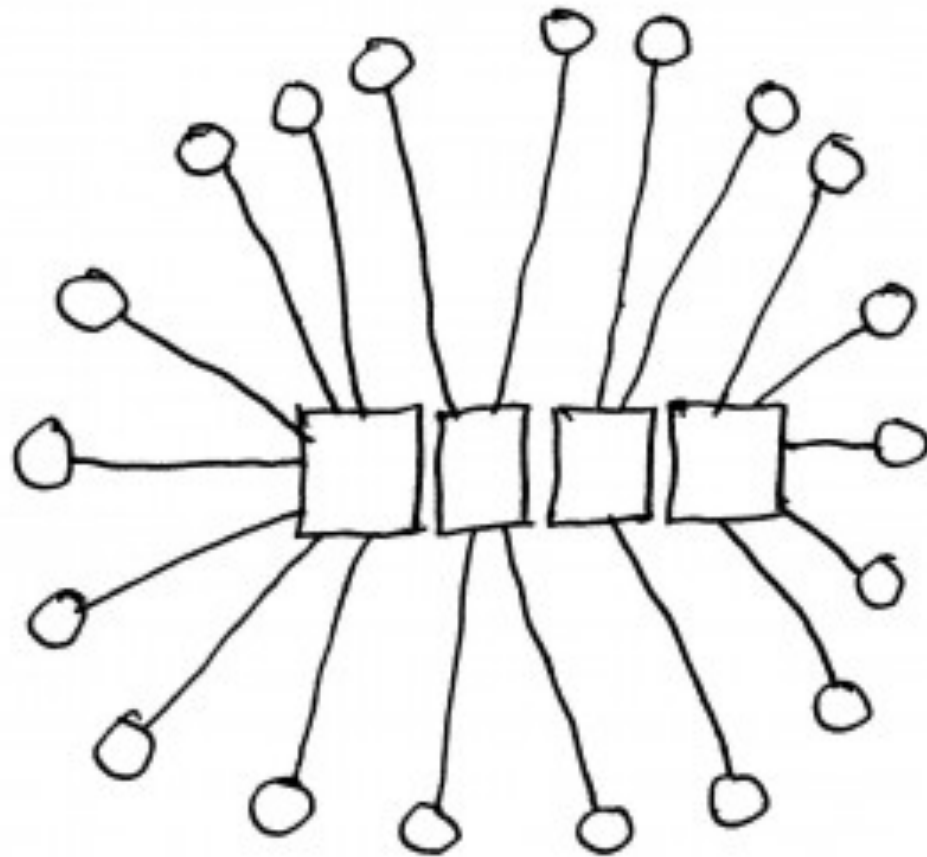
Technology Heterogeneity



Scaling

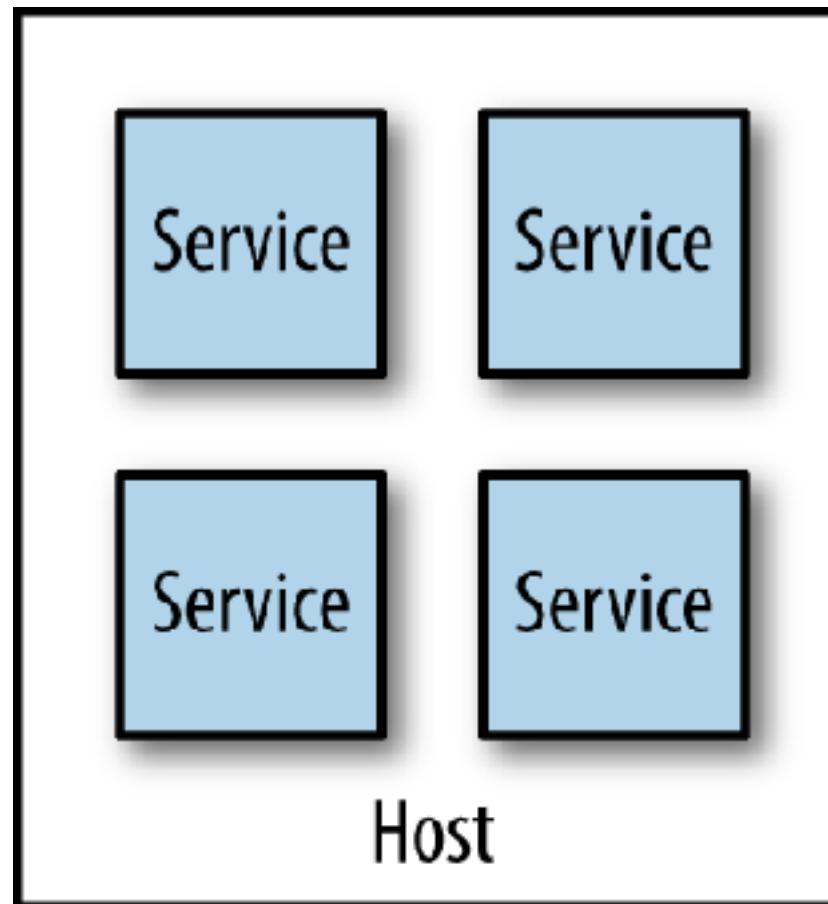


Resilience



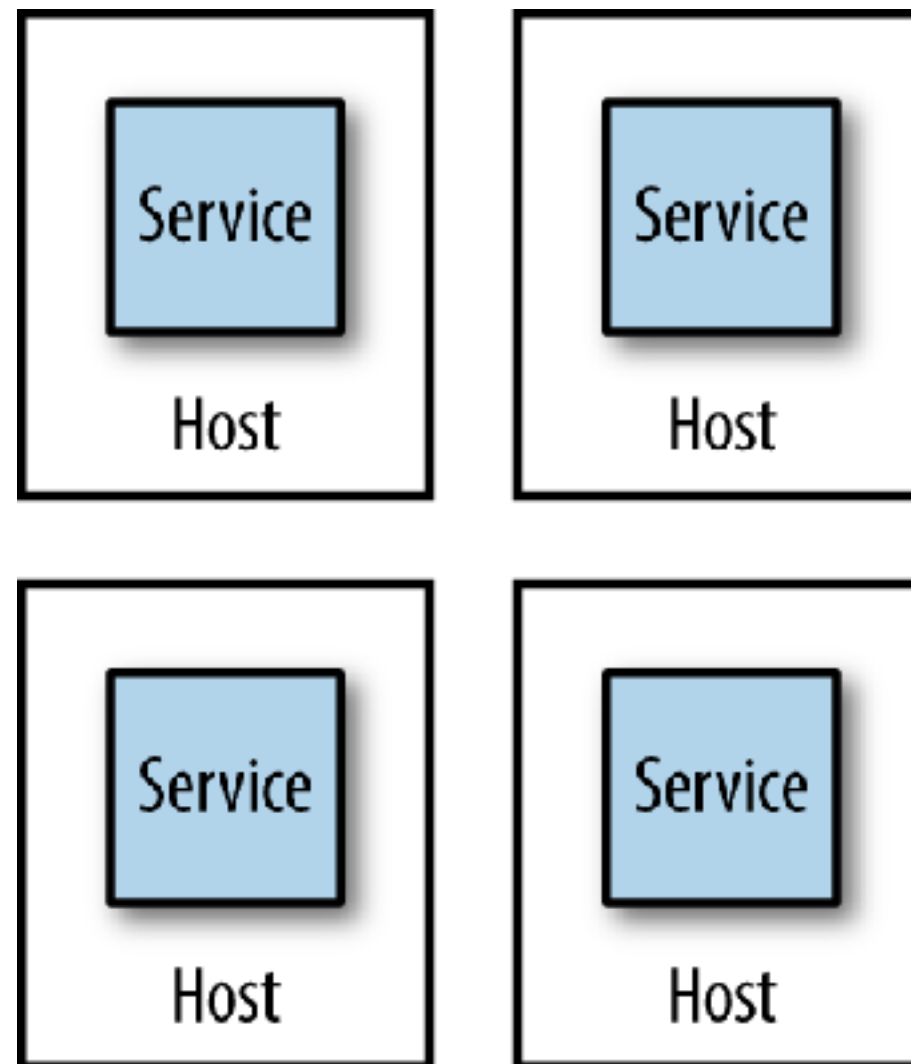
Ease of Deployment

Multiple services per host



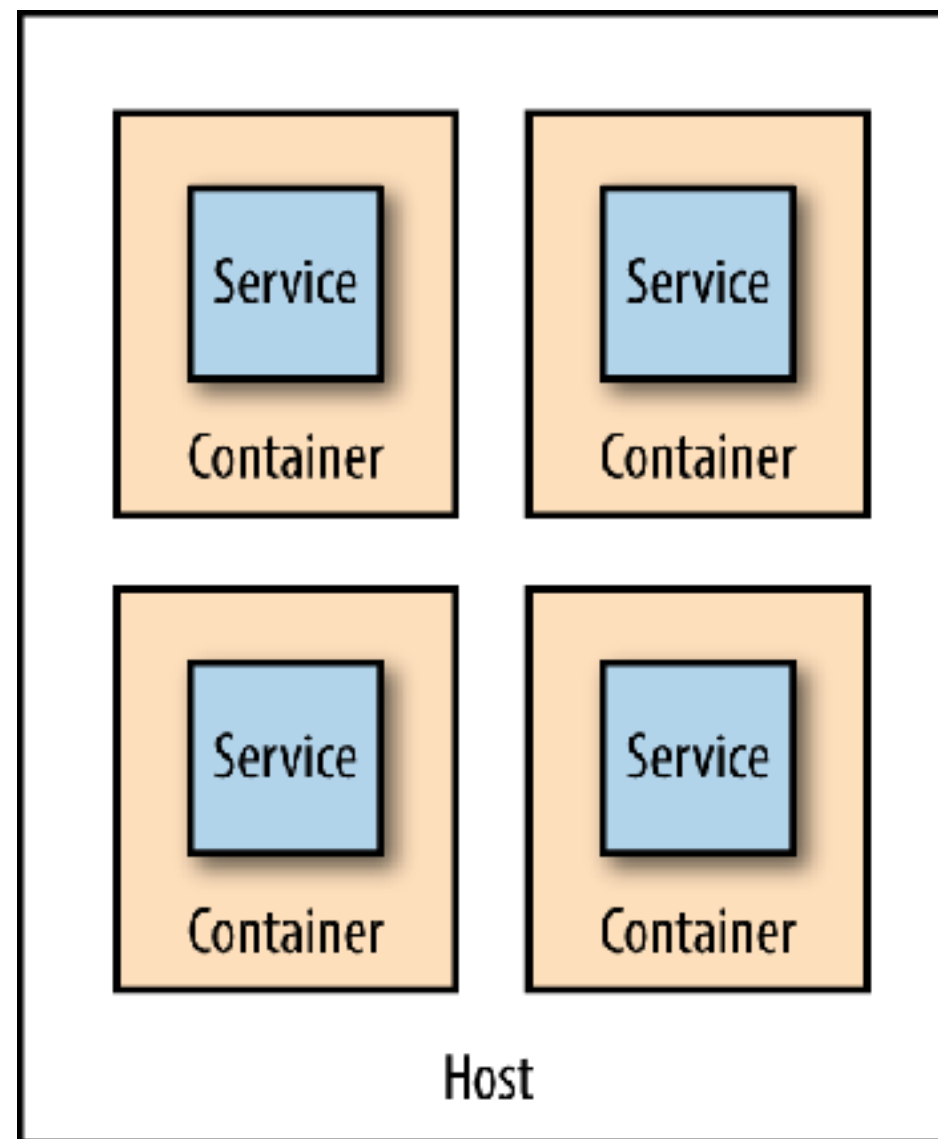
Ease of Deployment

Single services per host



Ease of Deployment

Running services in separate containers



How to model services ?



Good service ?

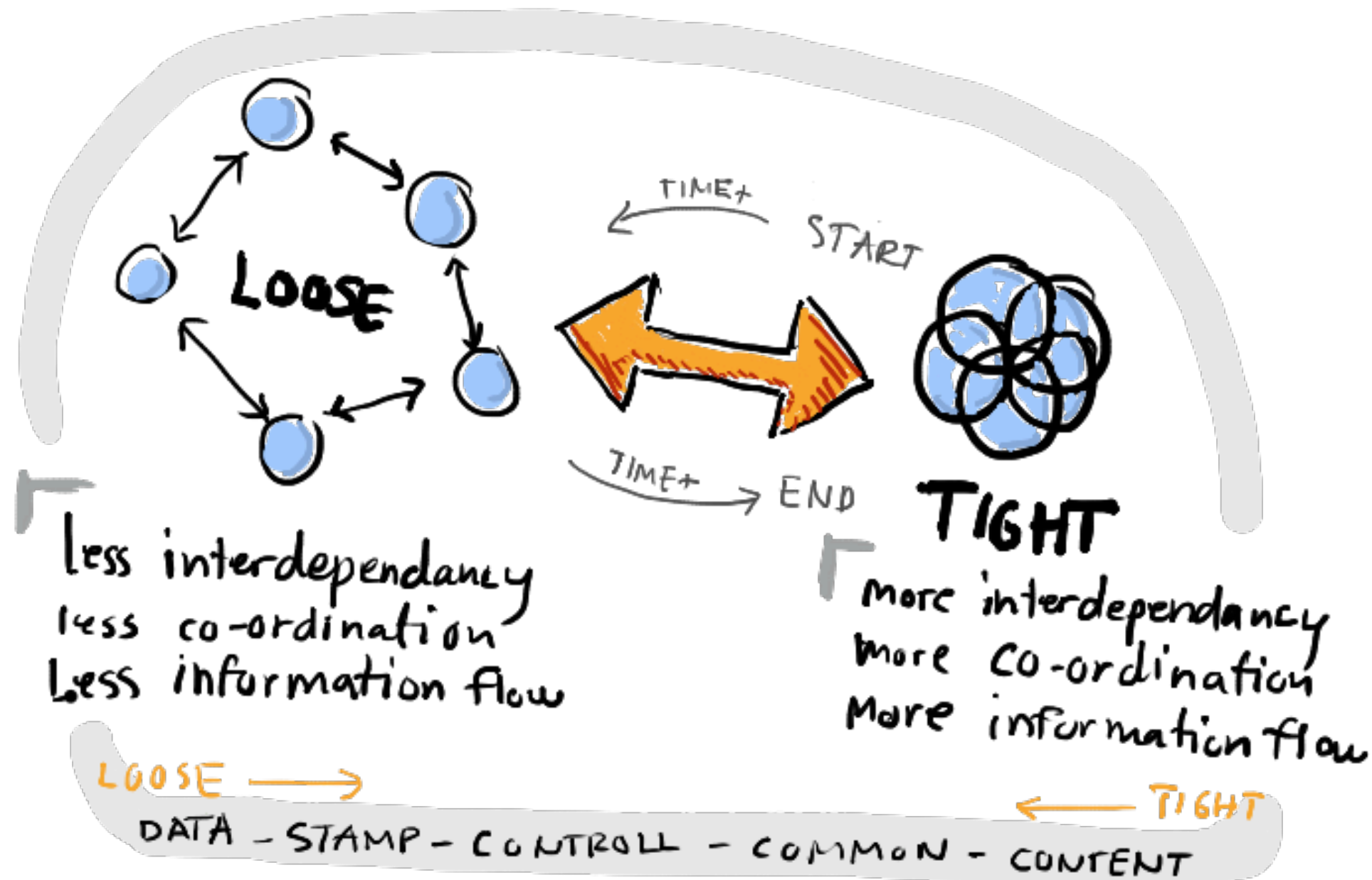
Loose coupling
High cohesion



Loose coupling



Loose coupling



<https://infomgmt.wordpress.com/2010/02/18/a-visual-respresentation-of-coupling/>



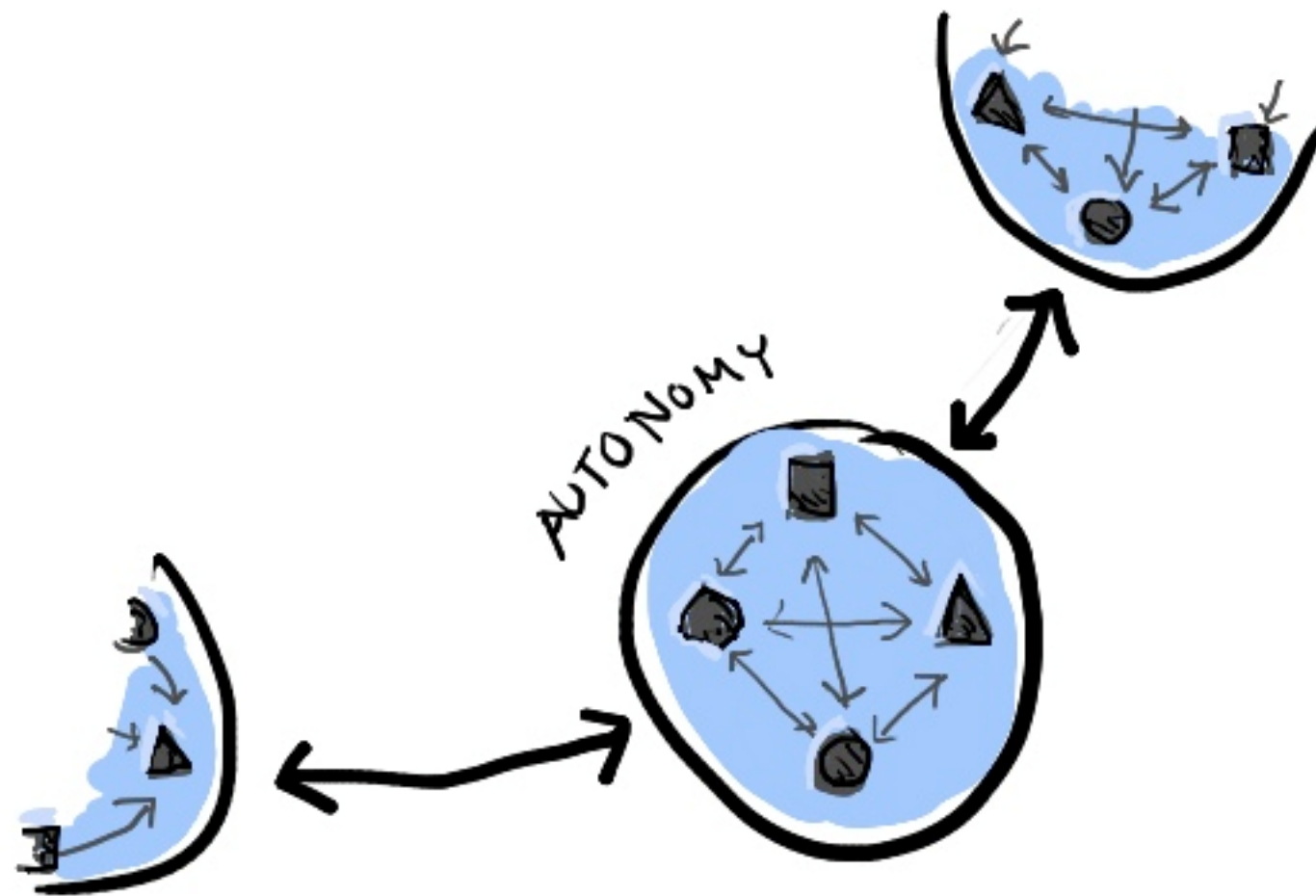
Loose coupling



<https://infomgmt.wordpress.com/2010/02/18/a-visual-respresentation-of-coupling/>



Loose coupling



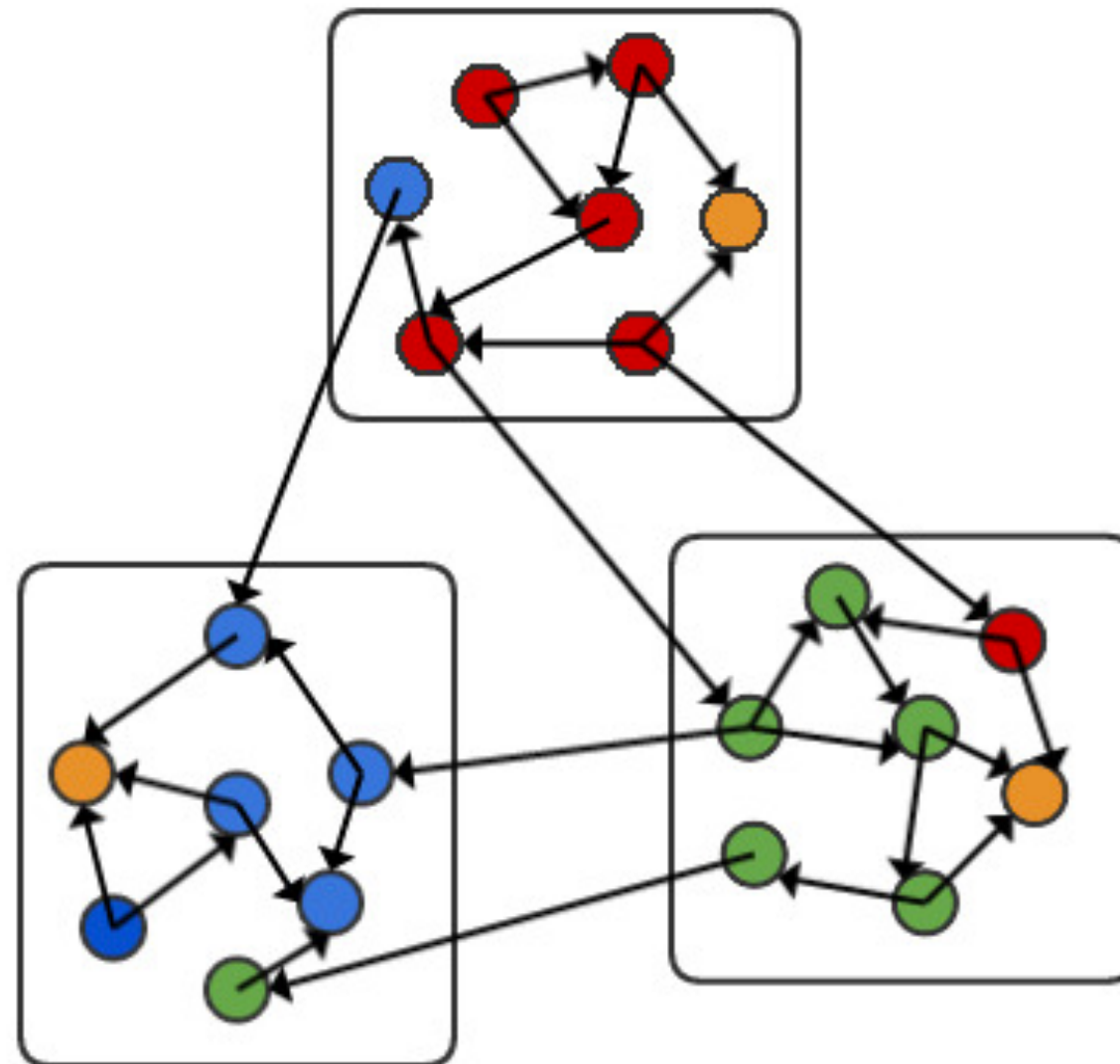
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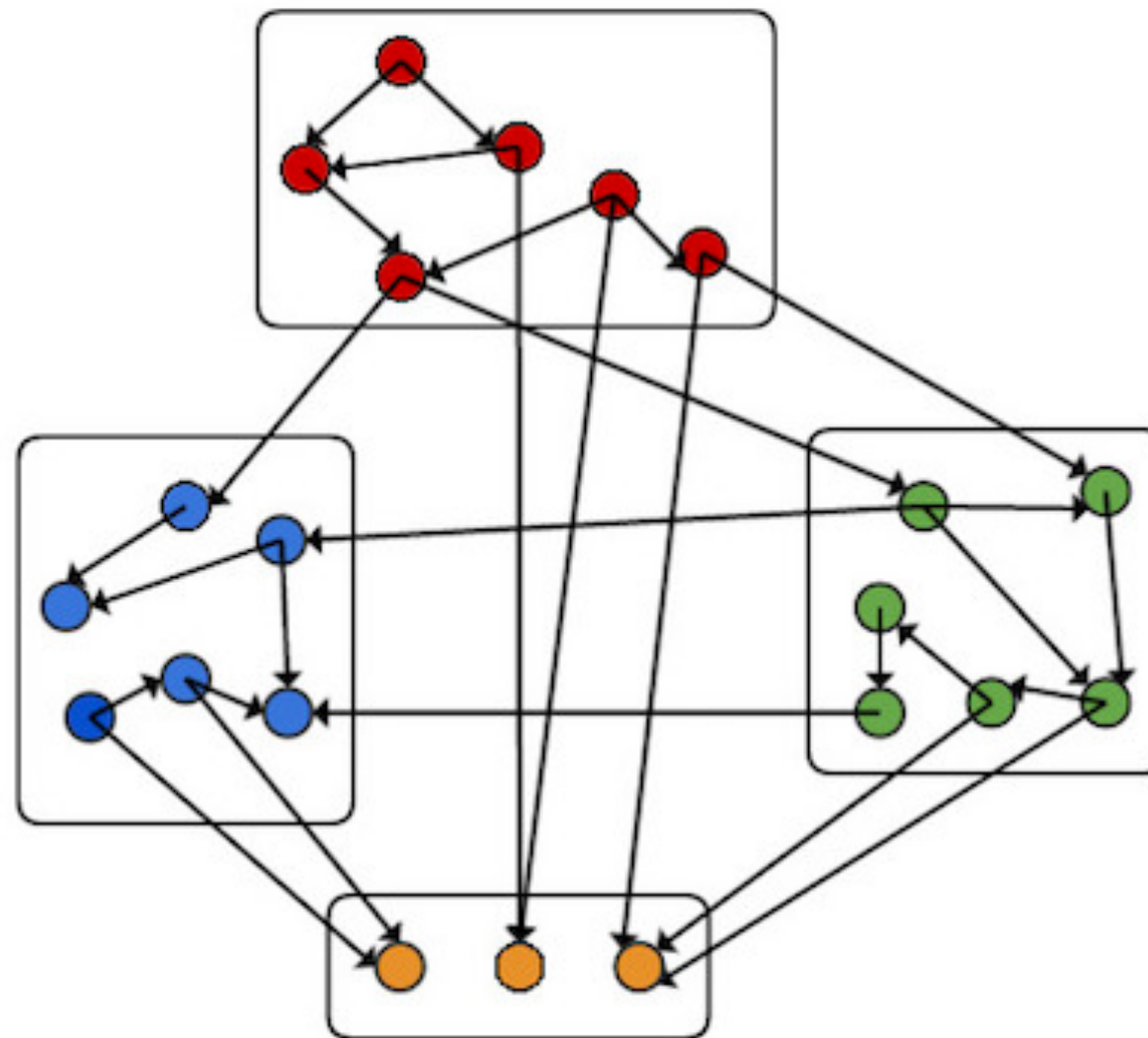
High cohesion



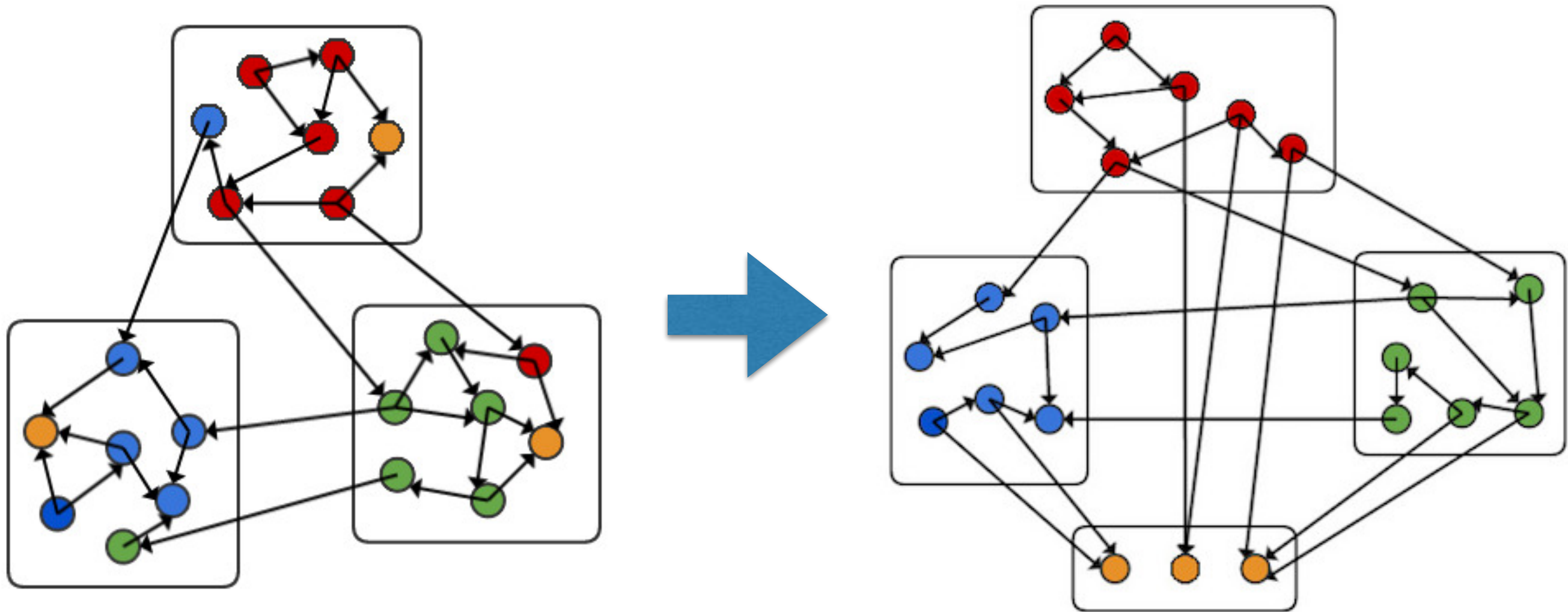
High cohesion



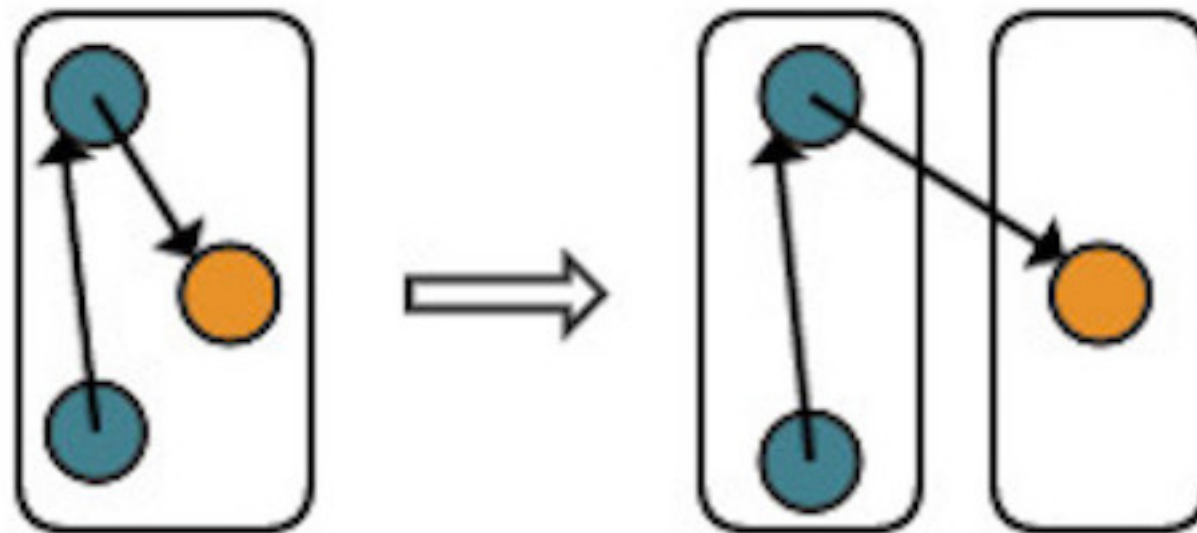
High cohesion



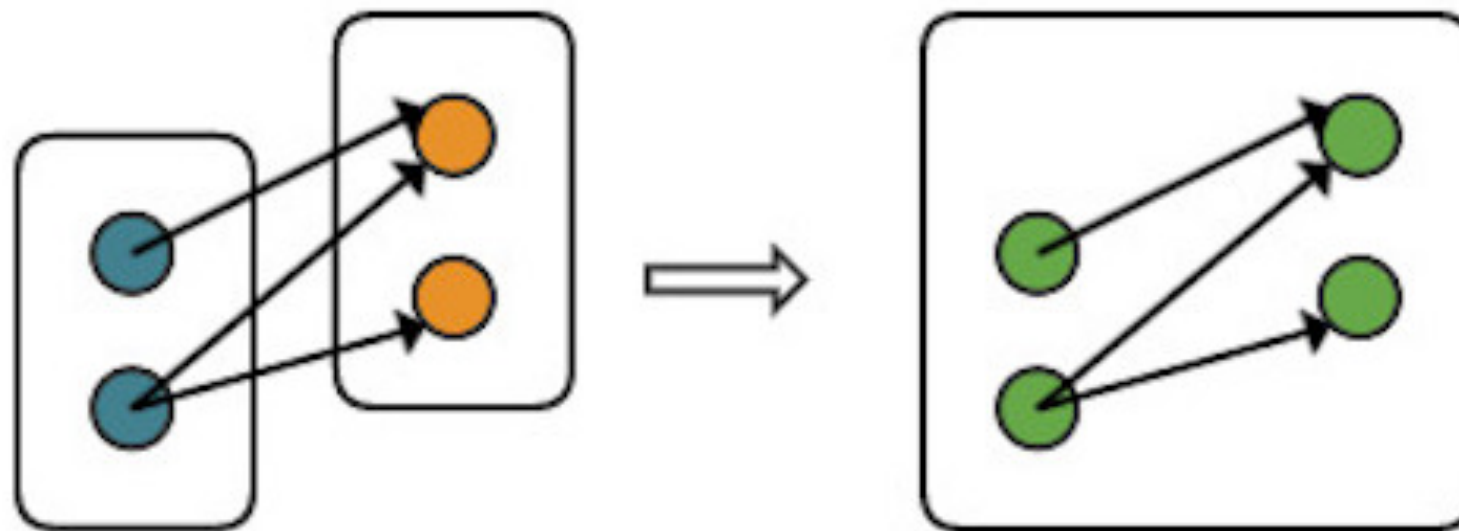
High cohesion



Same responsibility together



Grouping



Quiz



Let's workshop

