Architecting for Quality

PV260 Software Quality

Ondřej “Ondra” Krajíček
ondrej.krajicek@ysoft.com
@OndrejKrajicek

The absolute minimum to remeber (from the primer).

https://www.menti.com/alue4knn56wp

Architecture is a servant of **high priority stakeholder values**.

Architecture is a servant of **high priority stakeholder values**.

Is as simple as possible, but not simpler.

Architecture is a servant of **high priority stakeholder values**.

Is as simple as possible, but not simpler.

Is designed to be **replaceable**.

Software Architecture is a **Strategy**.

Software Architecture is a **Strategy**.

Software Architecture is **Communication**.

Software Architecture is a **Strategy**.

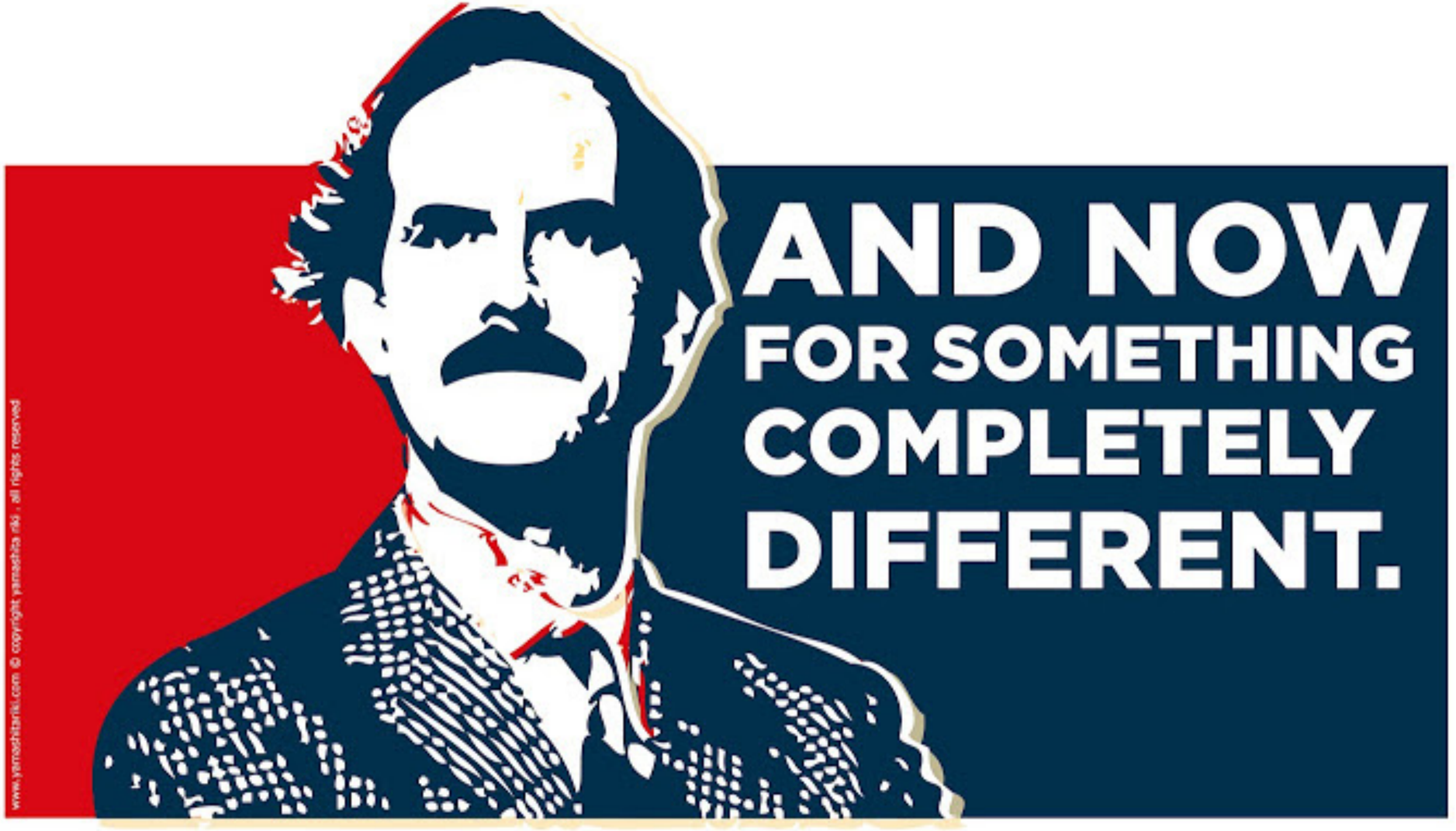
Software Architecture is **Communication**.

Software Architect is a **Teacher**.

Microservices

also known as the *current silver bullet*.

https://www.cgl.ucsf.edu/Outreach/pc204/NoSilverBullet.html



Microservices

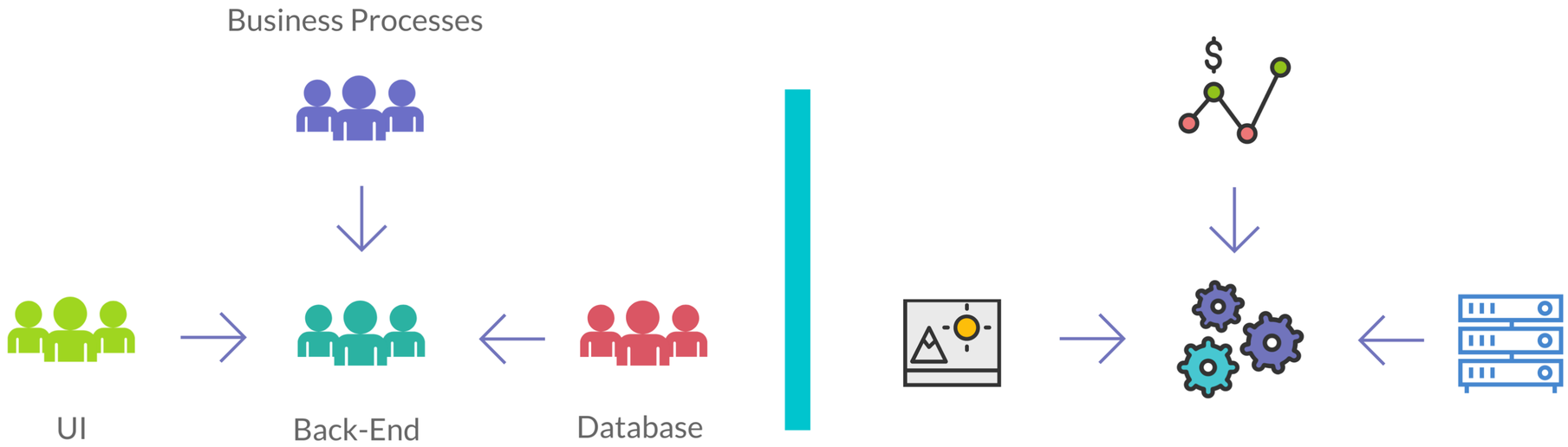
also known as the *current silver bullet*.

https://www.cgl.ucsf.edu/Outreach/pc204/NoSilverBullet.html

Microservices

https://www.menti.com/al88o1x19bsz

Conway's Law



Company Structure

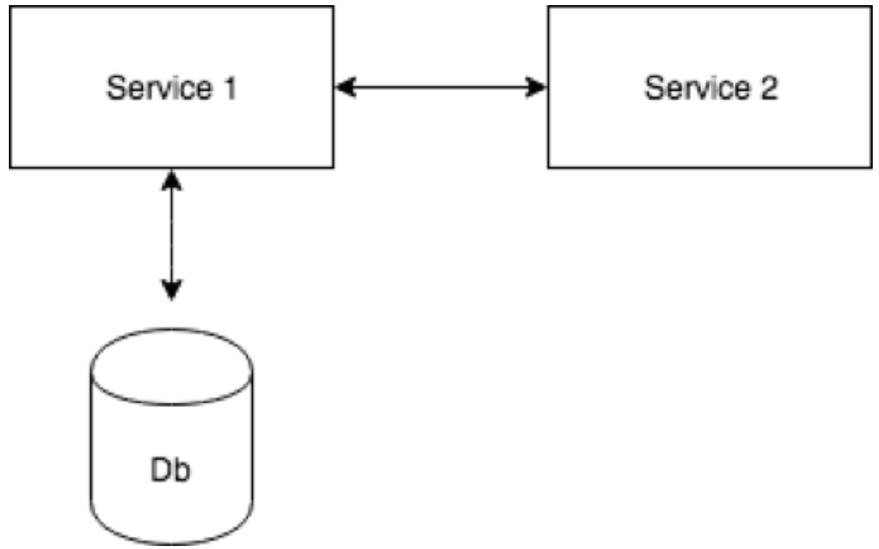
System Design

LEARN stuff IO

Organization structure determines system architecture / design.

https://medium.com/@learnstuff.io/conways-law-in-software-dev-3aa6324ead52

- **Independent Deployability.** Each microservice can be deployed, scaled and operated **independently** from others.
- **Data Sovereignity.** Within its well-defined domain, each microservice has **sole ownership** of its data.



https://medium.com/hashmapinc/the-what-why-and-how-of-a-microservices-architecture-4179579423a9

Managing Microservices Architecture

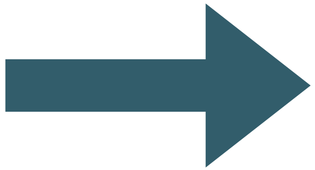
- **Consistency**

- **Consistency**
- **Cohesion**

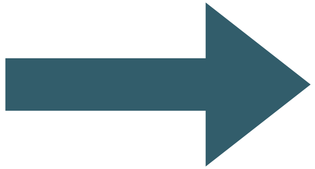
- **Consistency**
- **Cohesion**
- **Coupling**

- **Consistency**
- **Cohesion**
- **Coupling**
- **Clarity**

- **Consistency**
- **Cohesion**
- **Coupling**
- **Clarity**



- **Consistency**
- **Cohesion**
- **Coupling**
- **Clarity**



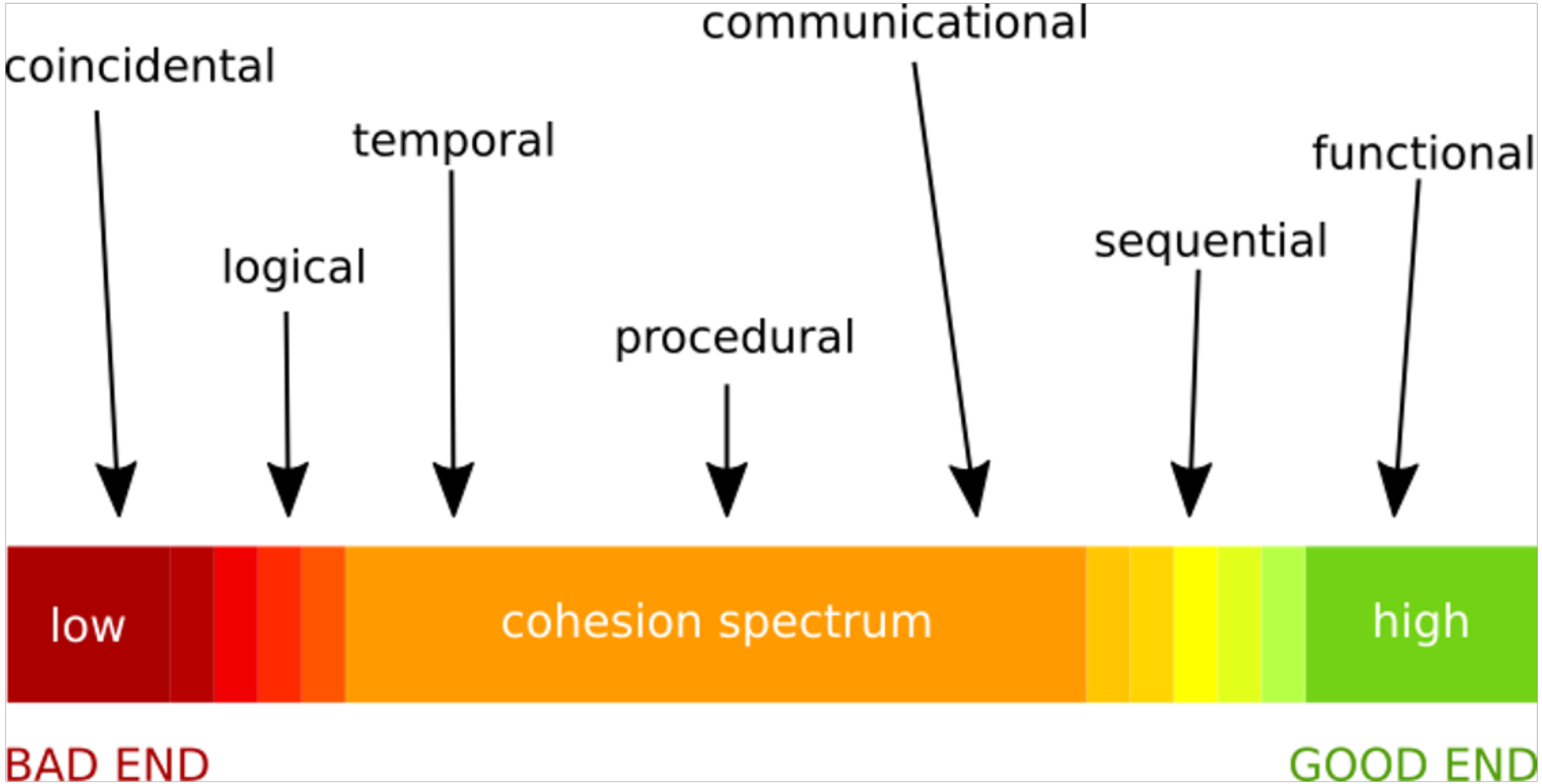
Cost of Change

CONSISTENCY

Applying first principles of Microservices consistently. https://www.menti.com/al1c6echda8c

COUPLING

Applying first principles of Microservices scalably. https://www.menti.com/almma19ub2u5



Cohesion - why and how do things stick together?

In interface and implementation.

COHESION

Applying first principles of Microservices maintainably. https://www.menti.com/alpyxai6bjuz

CLARITY

Applying first principles of Microservices clearly.
https://www.menti.com/al2hz66hfpav

What to remember?

https://www.menti.com/alg9uxm767ku