

# THE ARCHITECT?

@ARIALDOMARTINI

@NICOLABALDI

even by our industry's  
standards, "architect" and  
"architecture" are terribly  
overloaded words.

MARTIN FOWLER

THOUGHTWORKS

CHIEF TECHNOLOGY SCIENTIST

**“THE HIGHEST LEVEL  
CONCEPT OF A SYSTEM  
IN ITS ENVIRONMENT”**



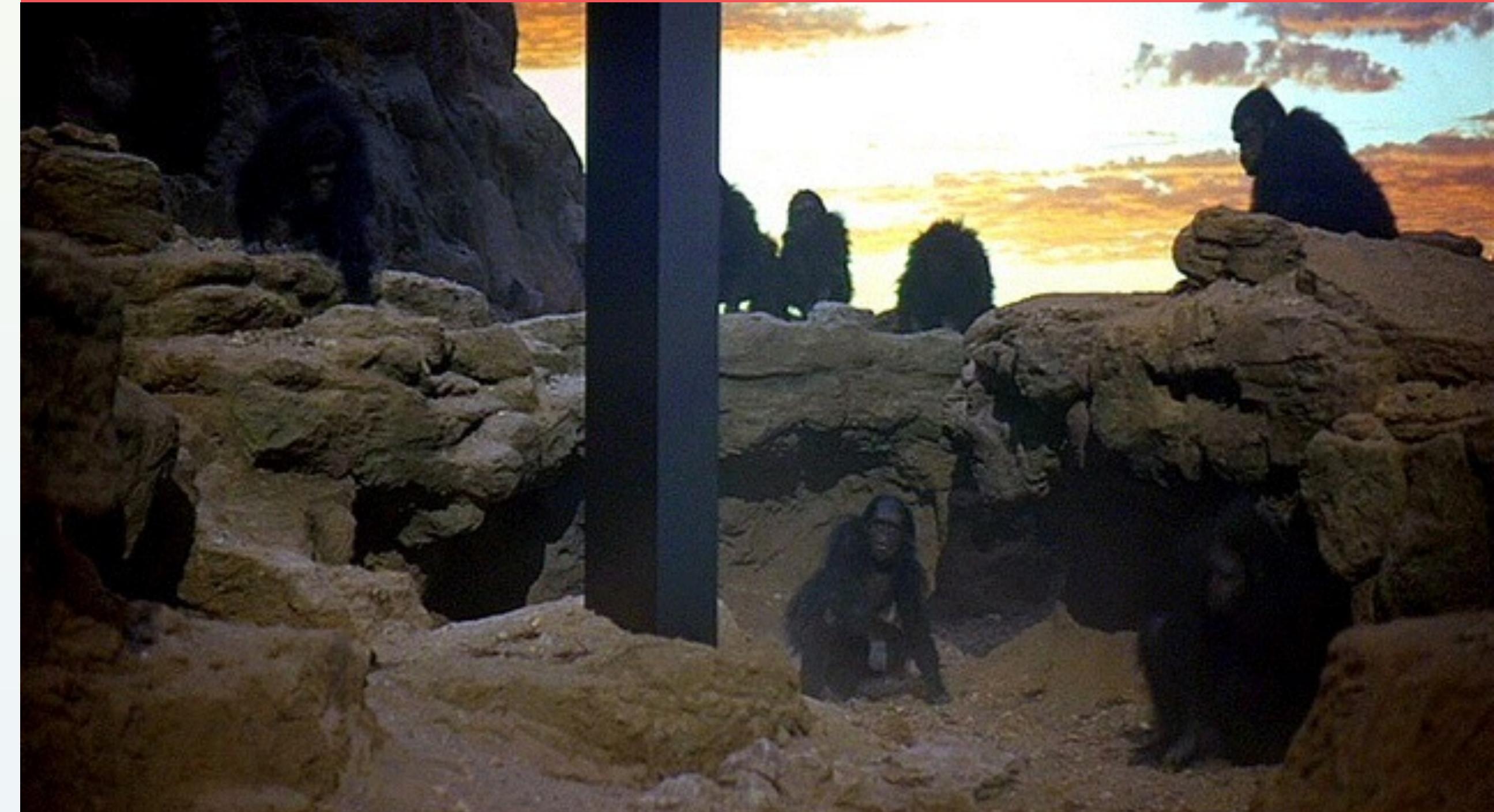
**IEEE**

**“THE HIGHEST LEVEL  
CONCEPT OF A SYSTEM  
IN ITS ENVIRONMENT”**



**IEEE**

**DEVELOPERS WHO  
TRANSCENDED THEIR  
OWN NATURE**



A  
**SINGLE MIND**

IS NEEDED TO  
ENSURE A SYSTEM'S

**CONCEPTUAL  
INTEGRITY**

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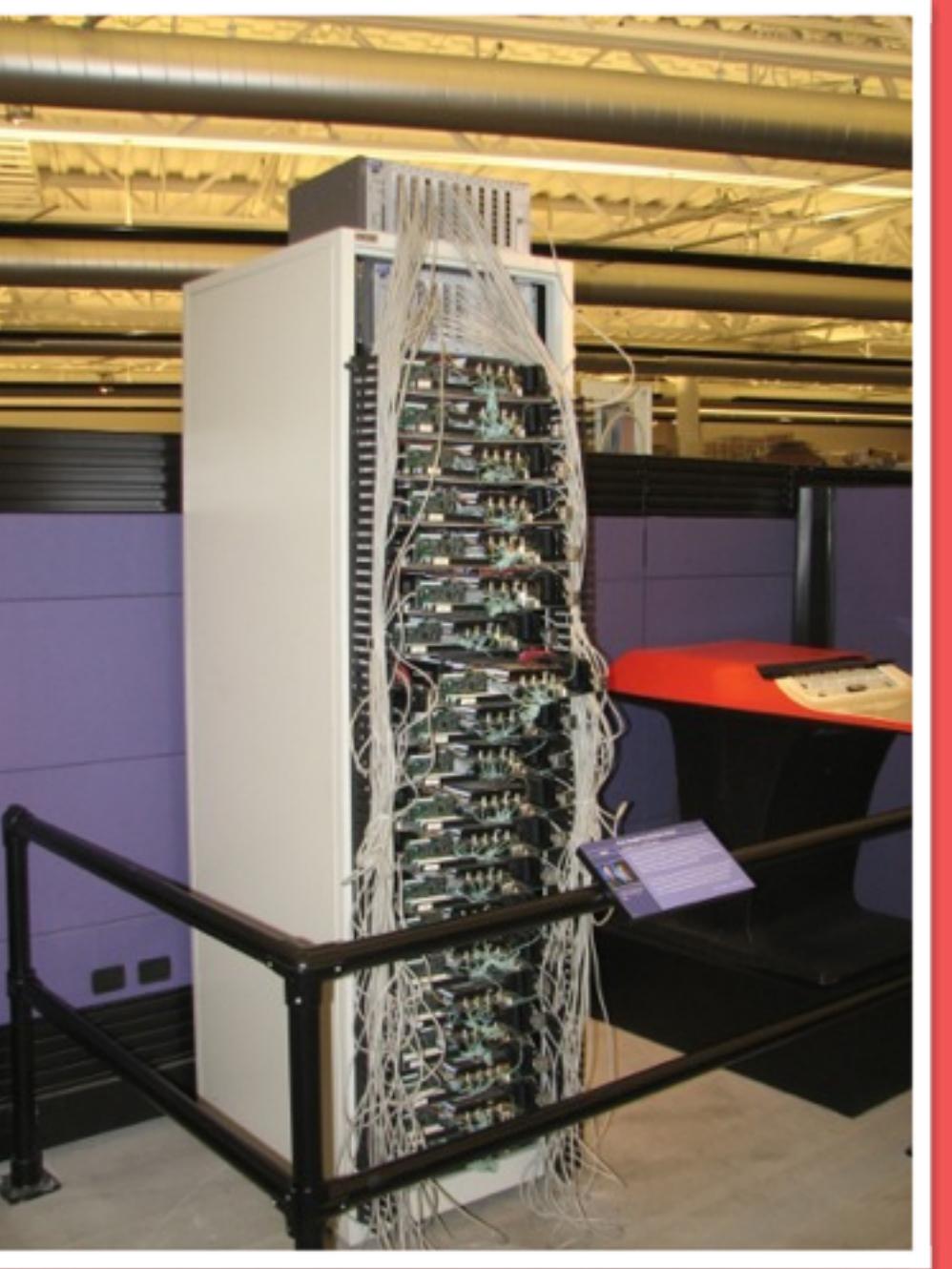
WE MEASURE THE  
QUALITY OF A CAKE BY  
**TASTING IT**

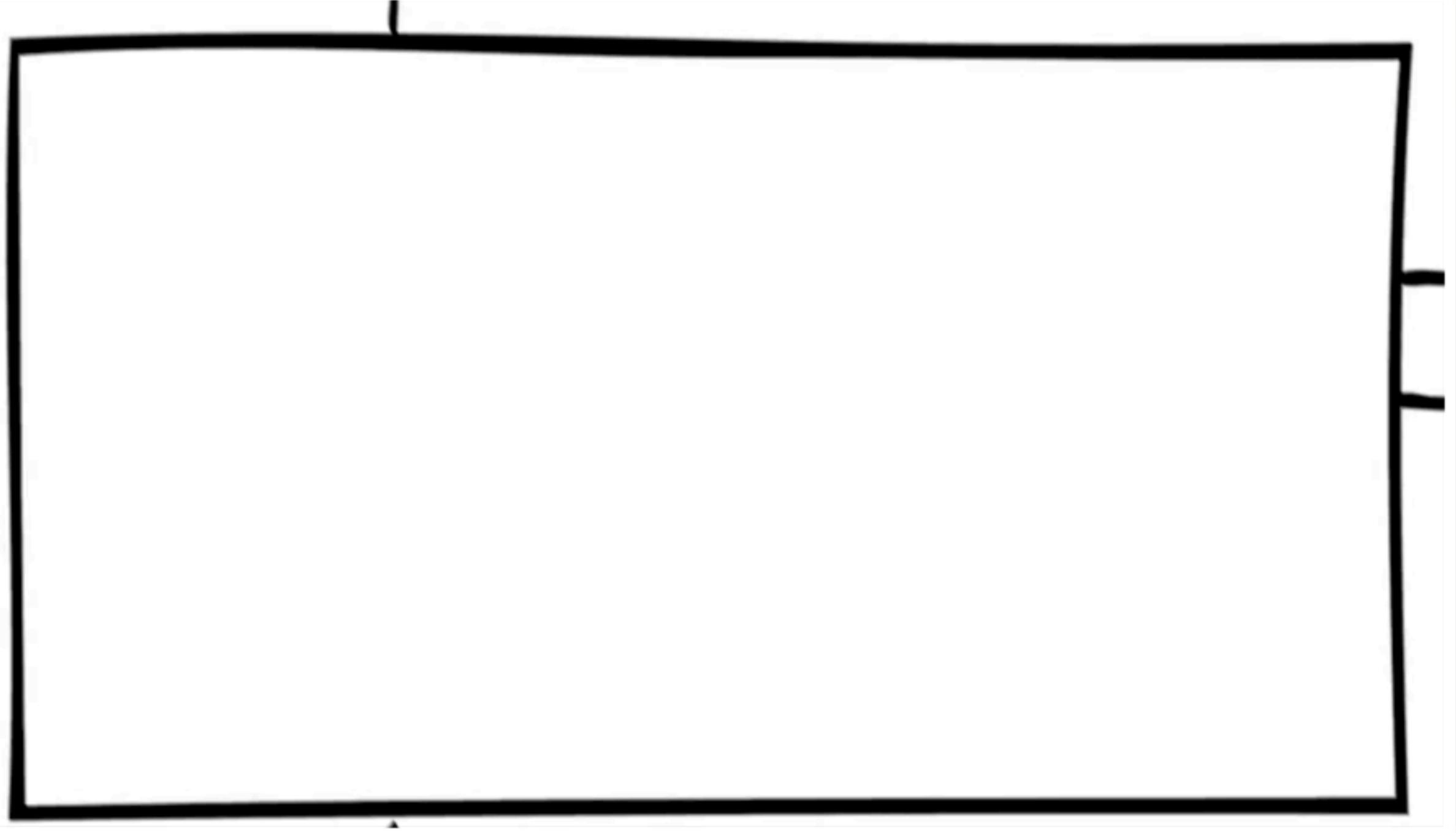
CONFORMANCE  
TO THE RECIPE  
IS A POOR METRIC

@JASONGORMAN





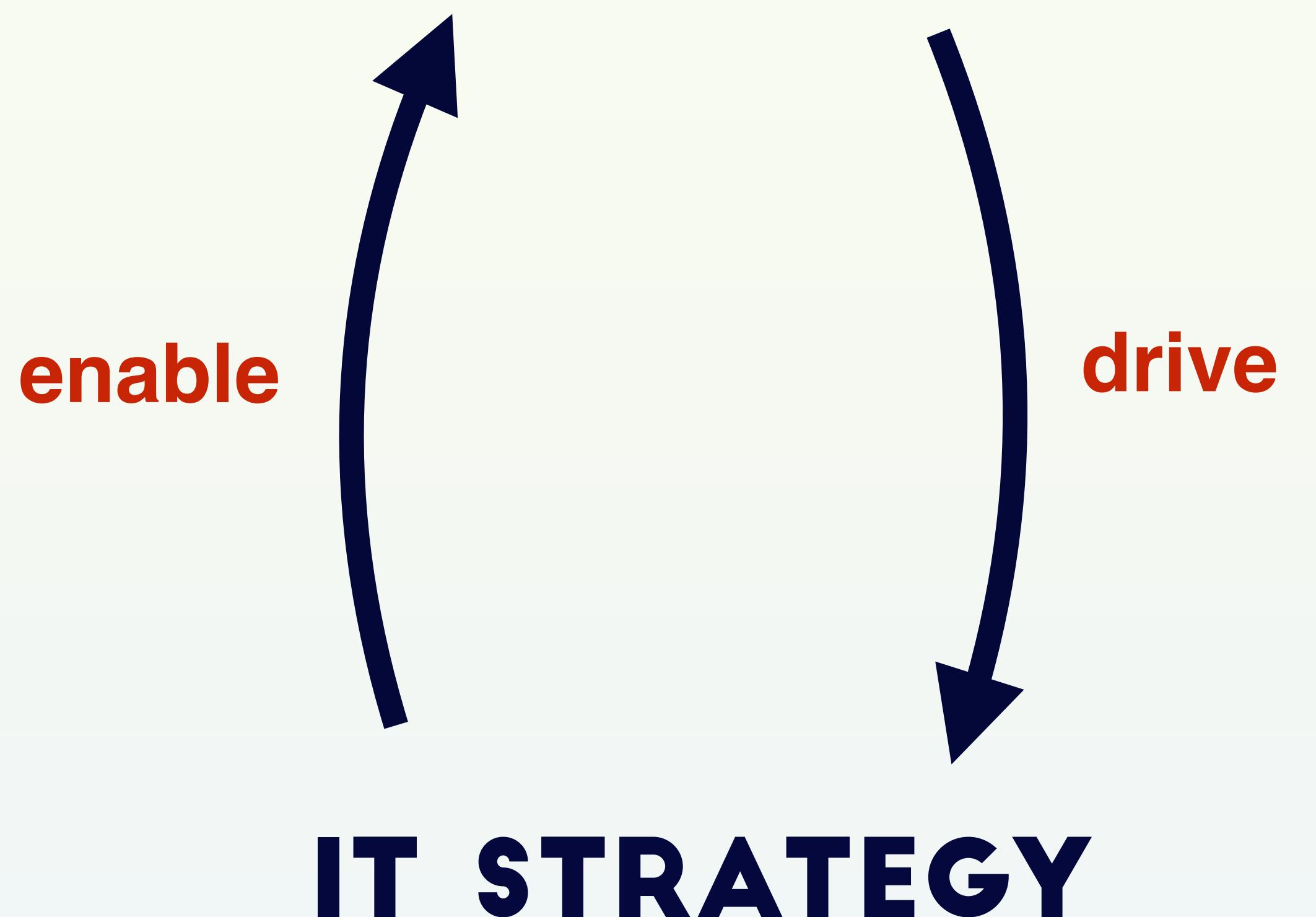




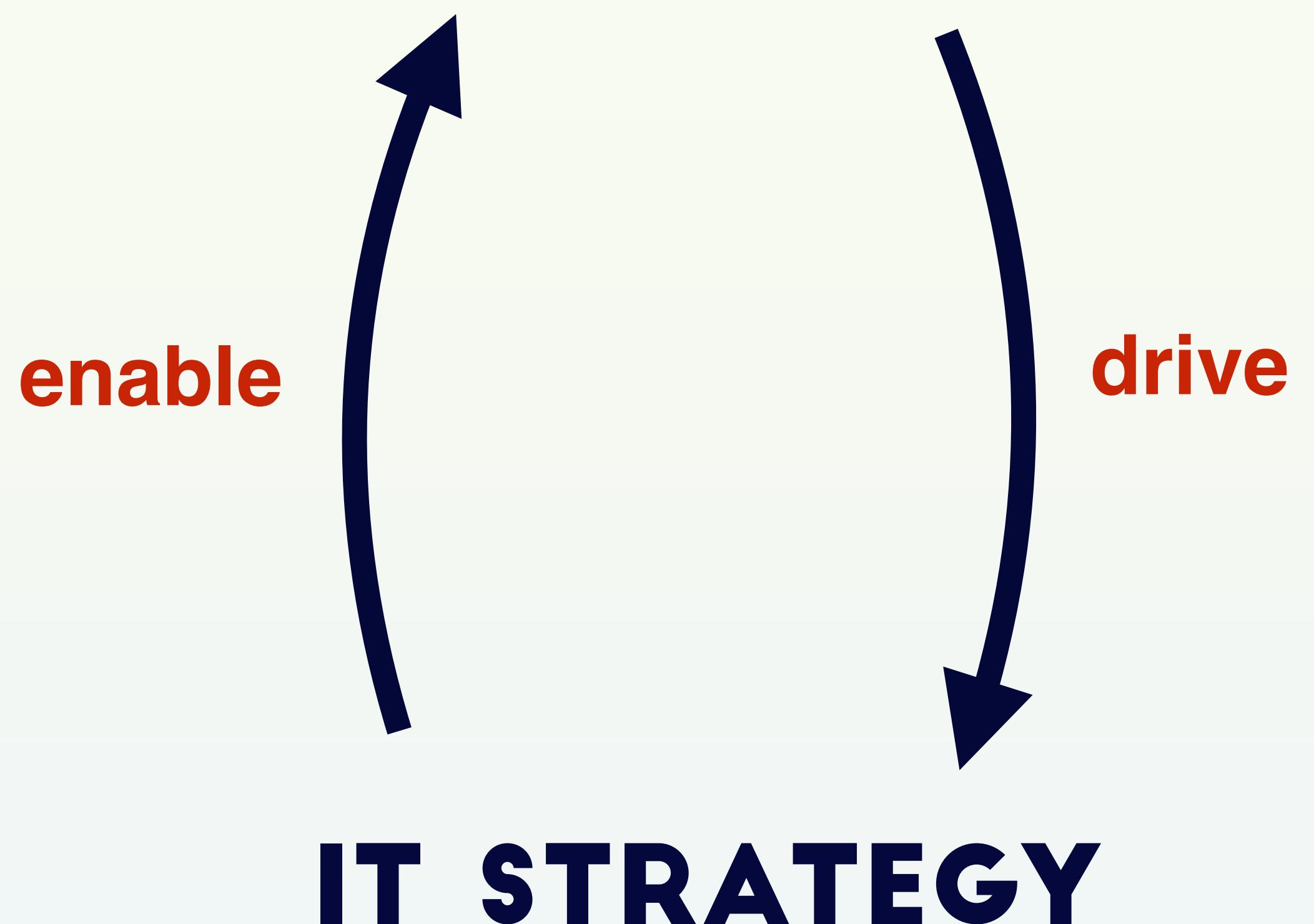


HAIR BALL  
ARCHITECTURE

# BUSINESS STRATEGY

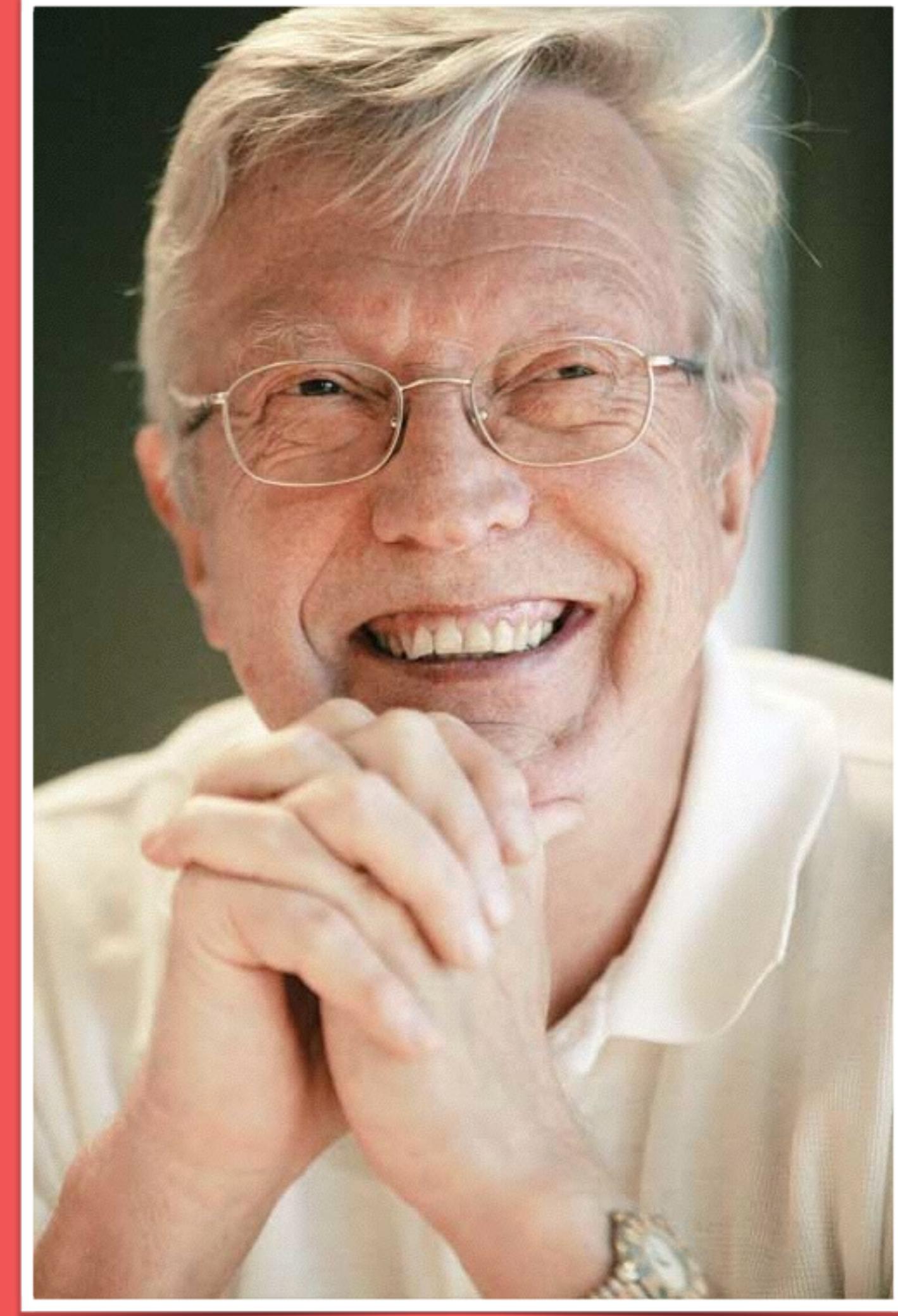
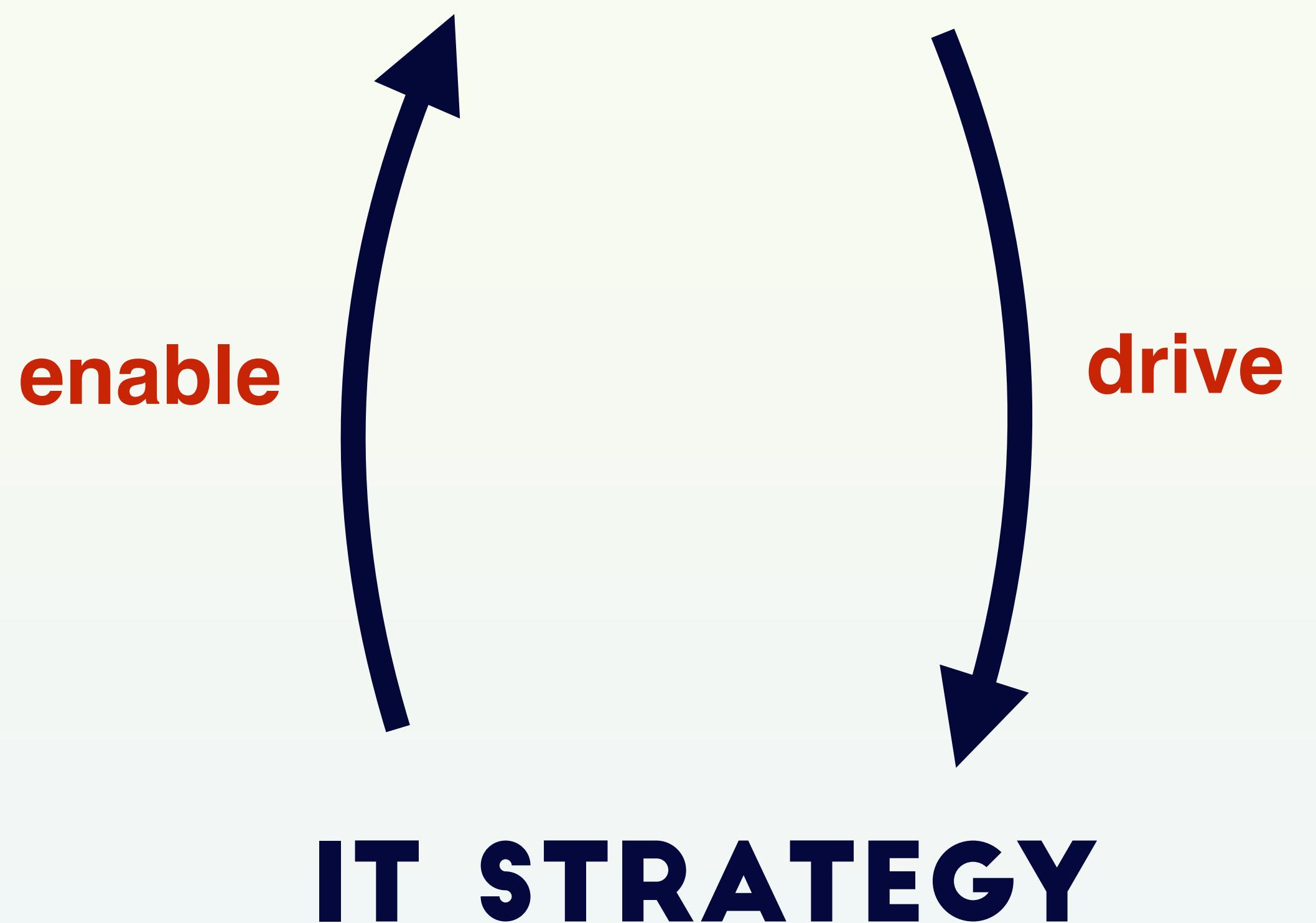


# BUSINESS STRATEGY



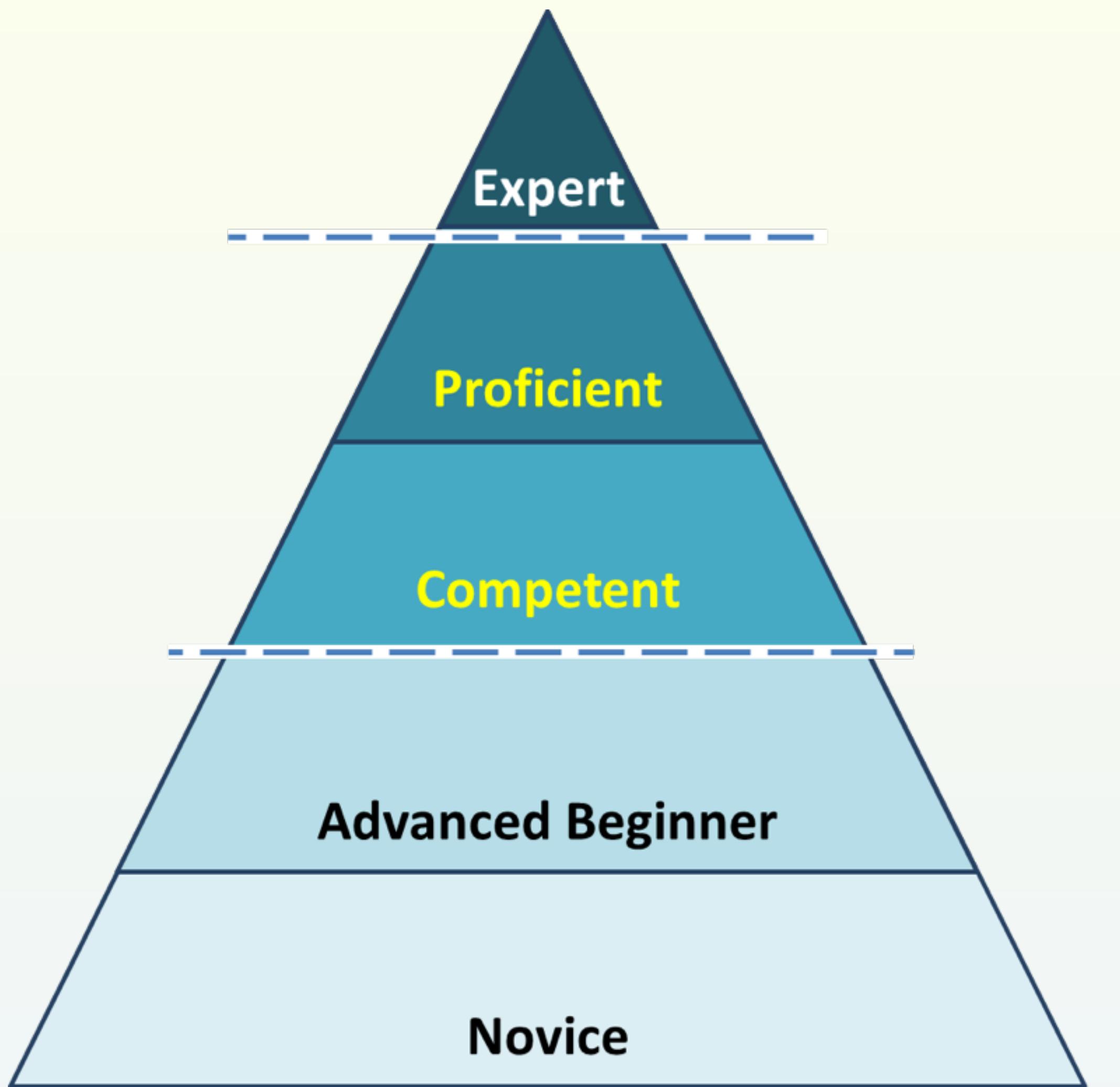
**90%  
JUST FAILED**

# BUSINESS STRATEGY



Mr.UML

# DREYFUS MODEL



# DREYFUS MODEL

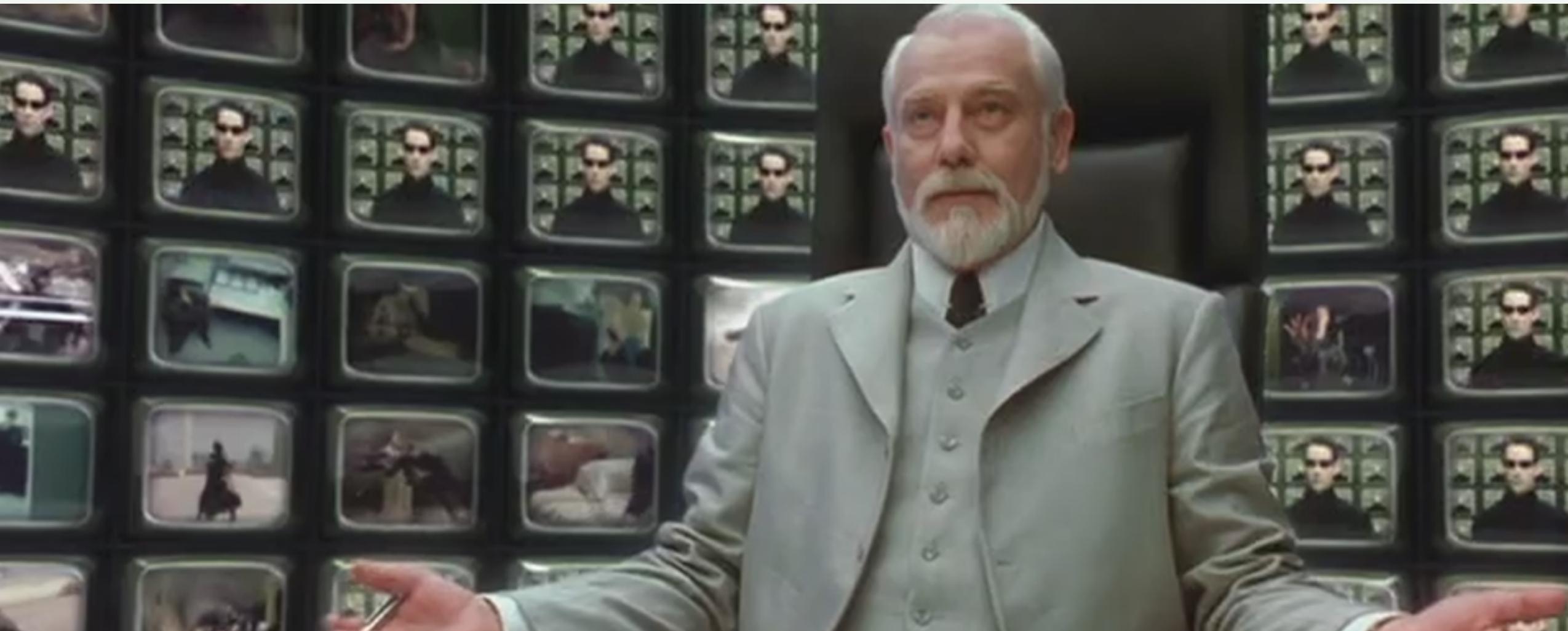


```
balance = database.read("account-number")  
  
new_balance = balance - amount  
  
database.write("account-number", new_balance)  
  
dispense_cash(amount)
```

WHO MAKES  
**IMPORTANT**  
DECISIONS



WHO MAKES  
**IMPORTANT**  
DECISIONS



WHO IS  
**AWARE**  
OF WHAT'S GOING ON



# MENTOR

# A GUIDE



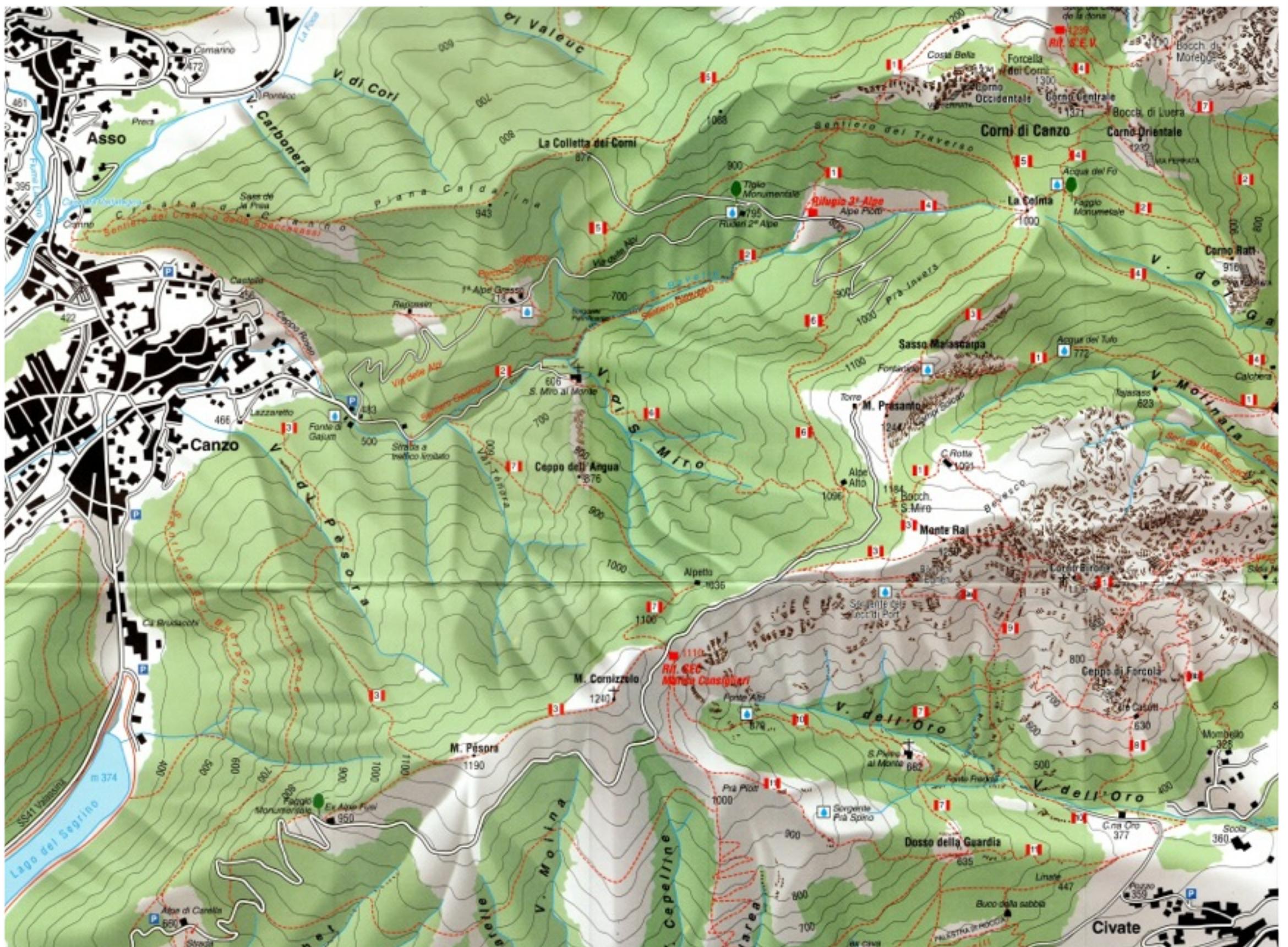
**AN ARCHITECT'S  
VALUE IS**

**INVERSELY  
PROPORTIONAL**

**TO THE NUMBER  
OF DECISIONS HE  
OR SHE MAKES.**

**WHAT'S BETTER  
THAN AN  
ARCHITECT?**

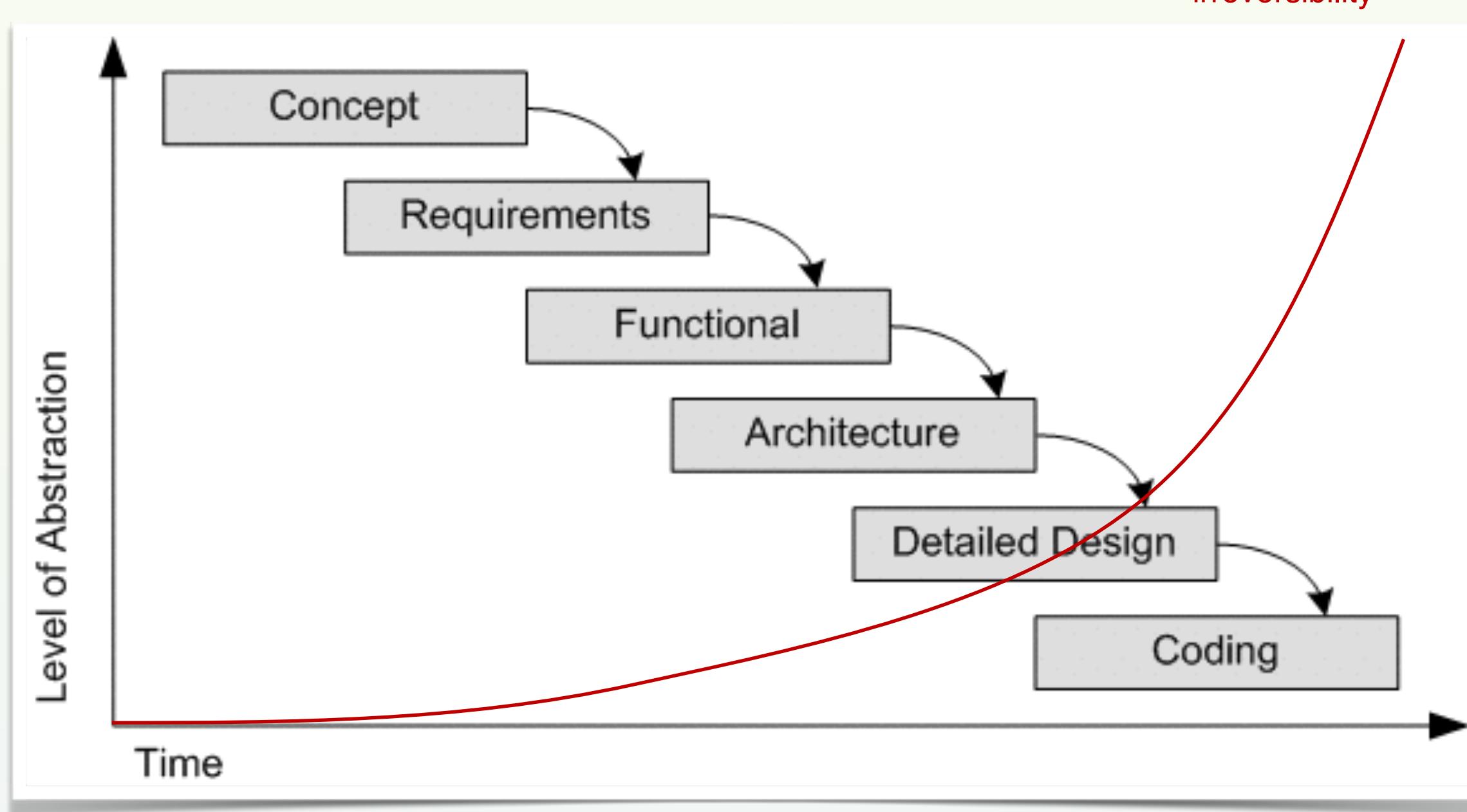
**NO ARCHITECTS**



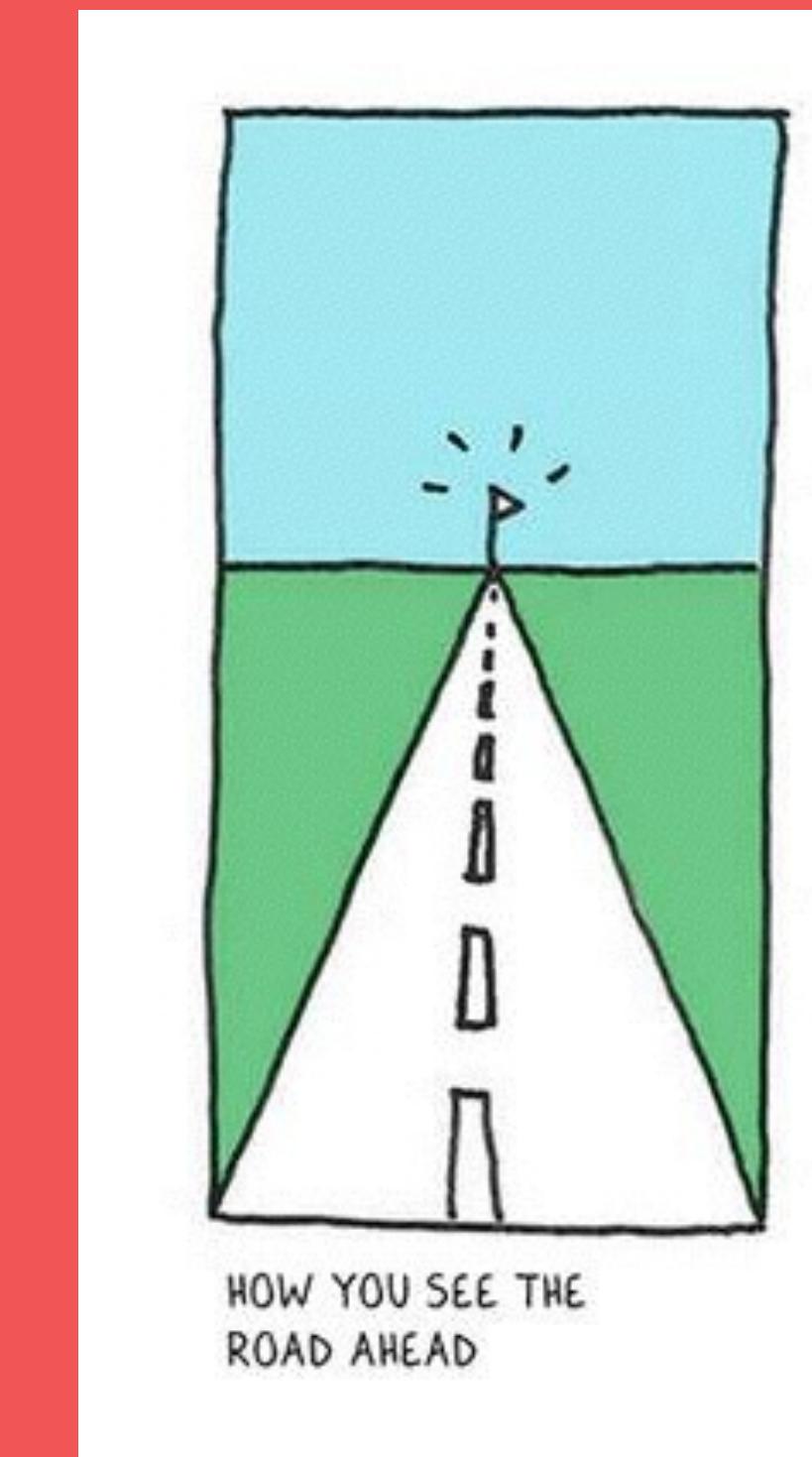
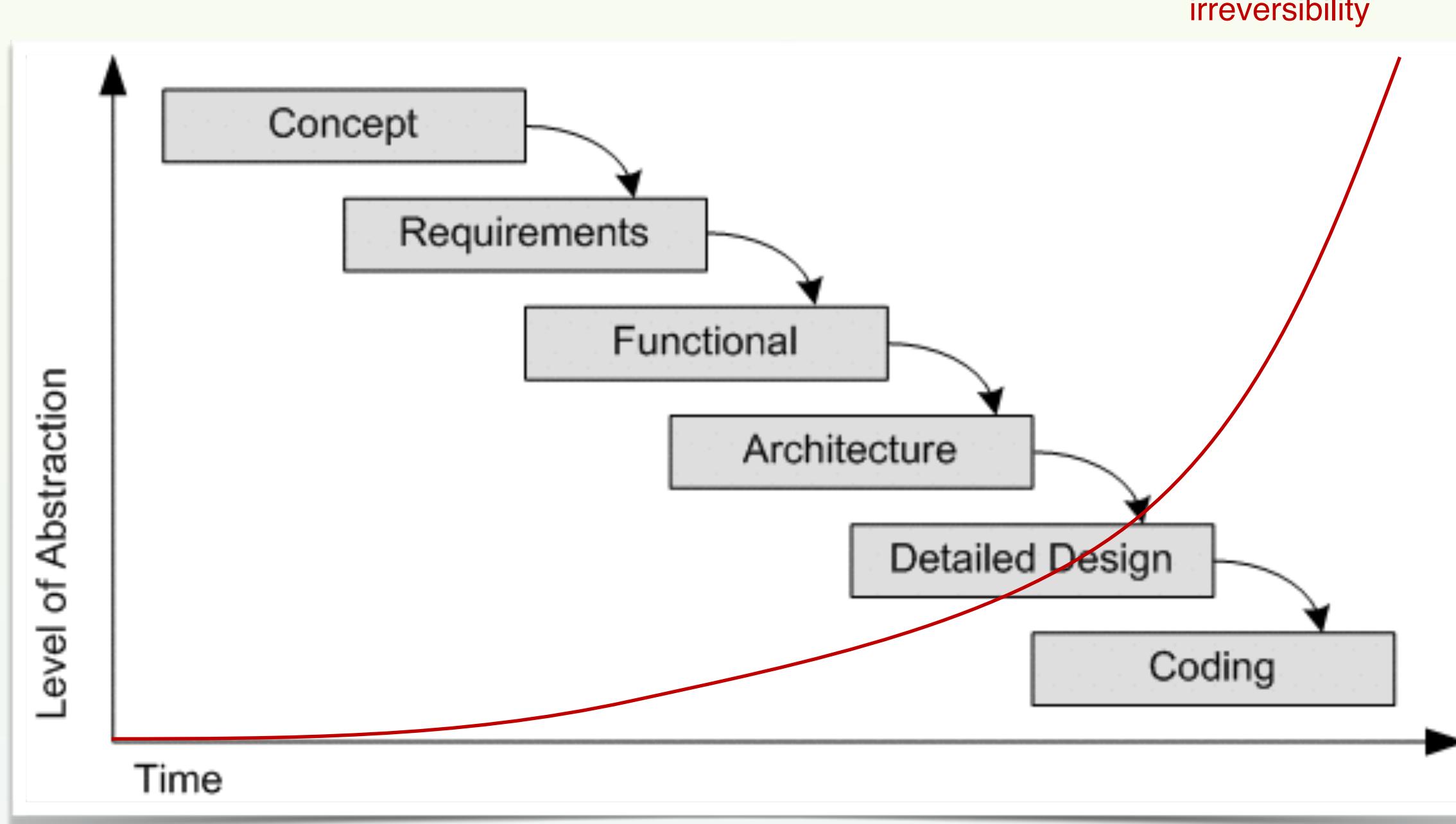
WHAT'S BETTER  
THAN AN  
ARCHITECT?

NO ARCHITECTS

# ABSTRACTION IRREVERSIBILITY

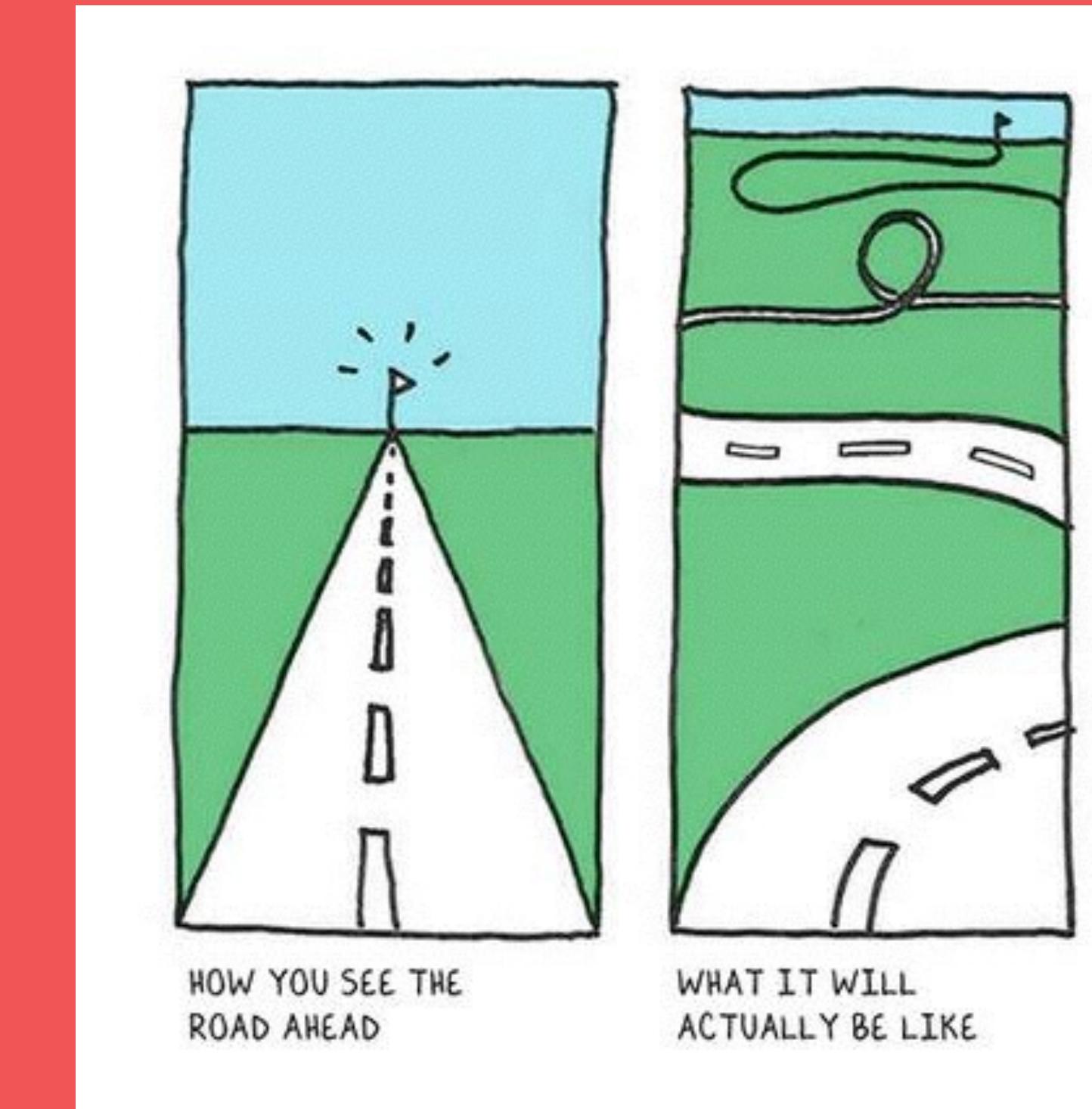
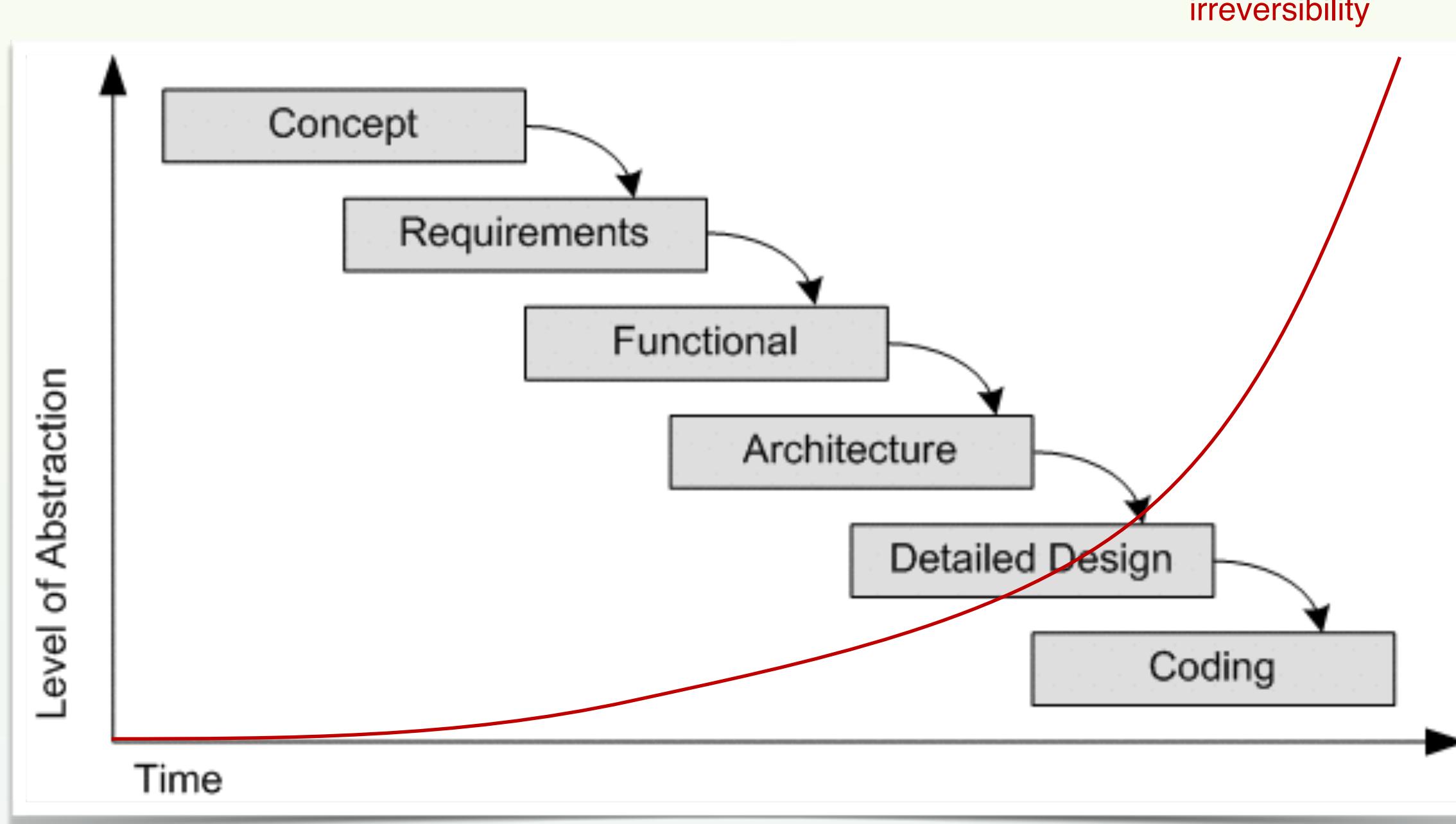


# ABSTRACTION IRREVERSIBILITY



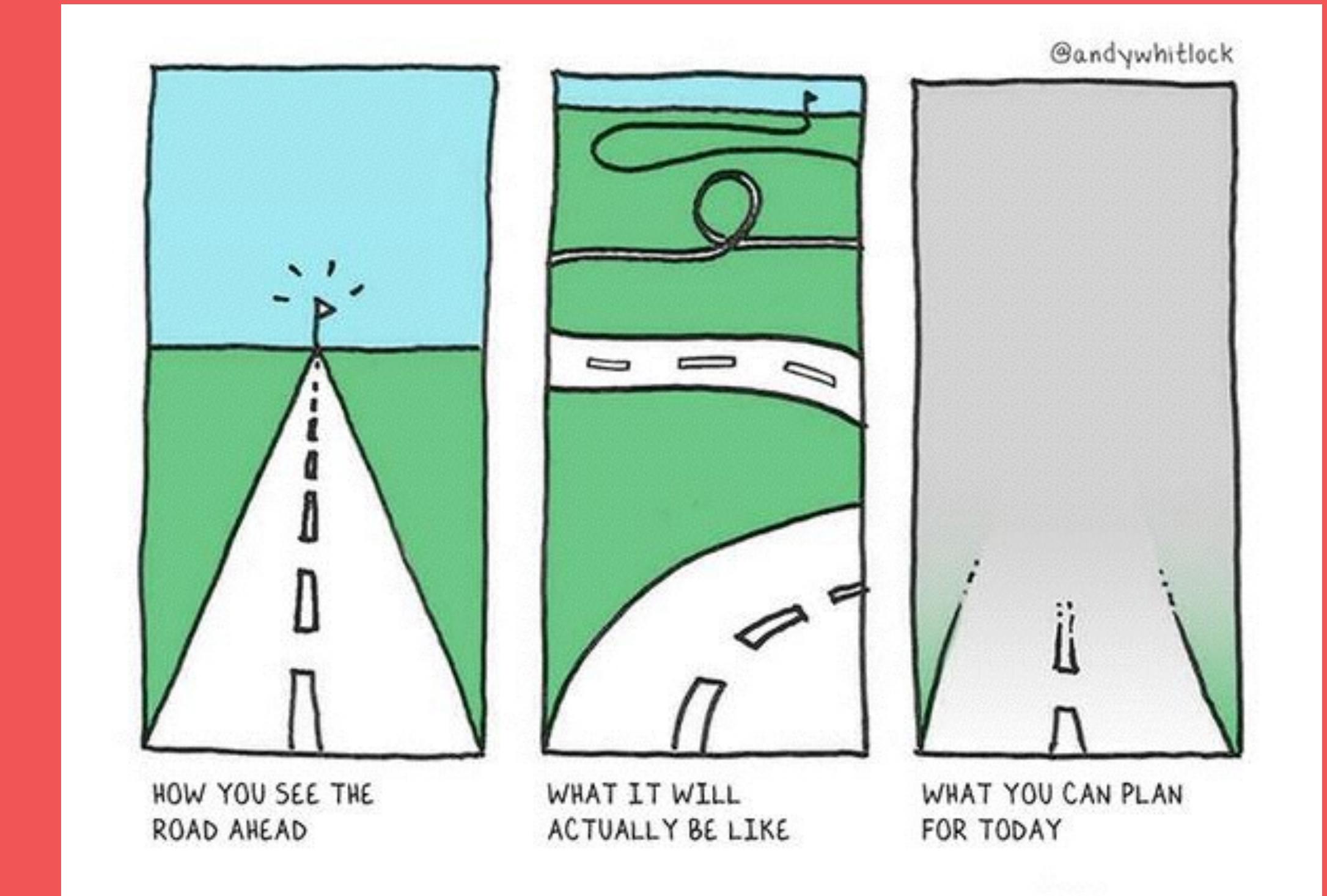
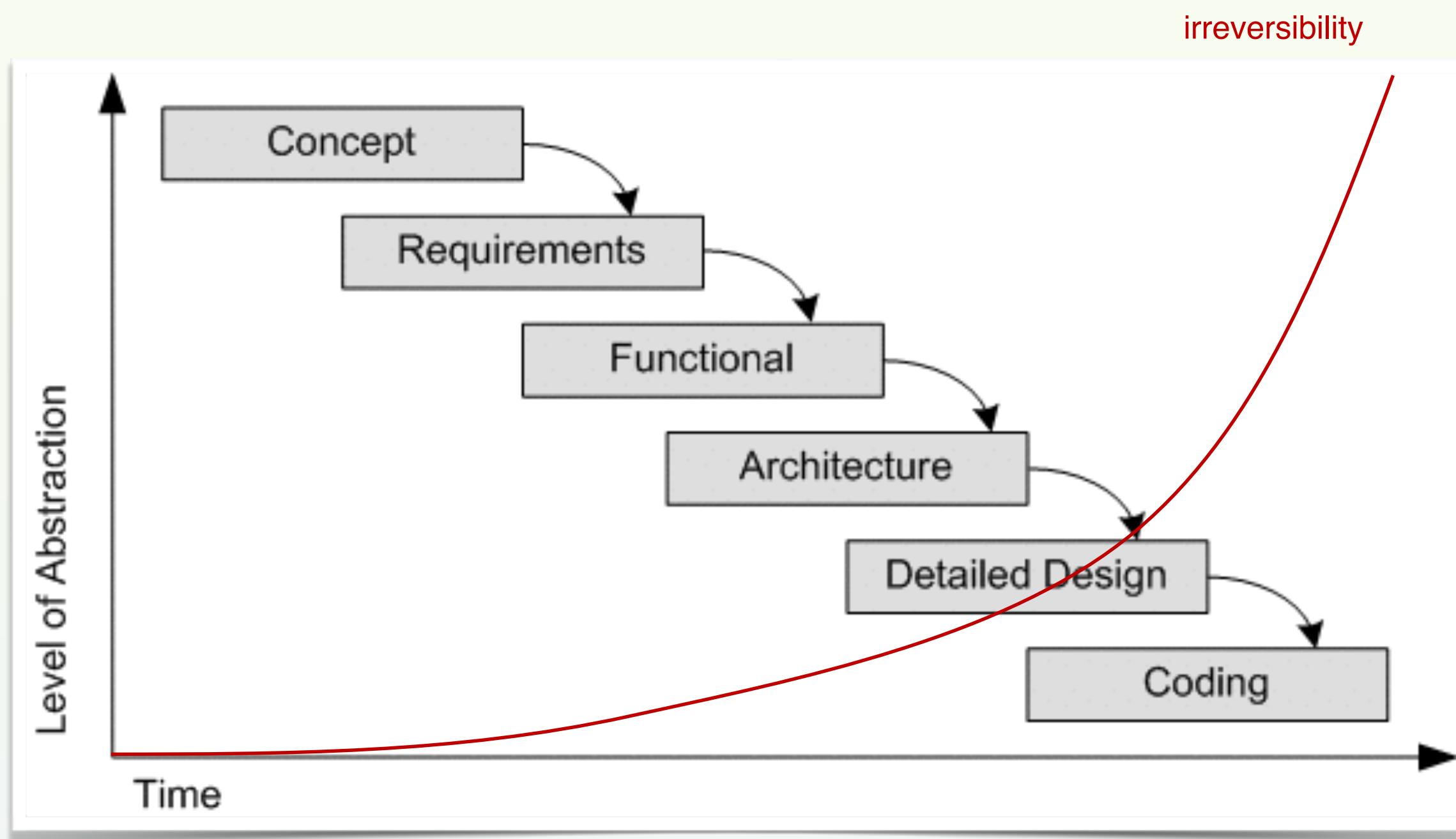
BY @ANDYWHITLOCK

# ABSTRACTION IRREVERSIBILITY



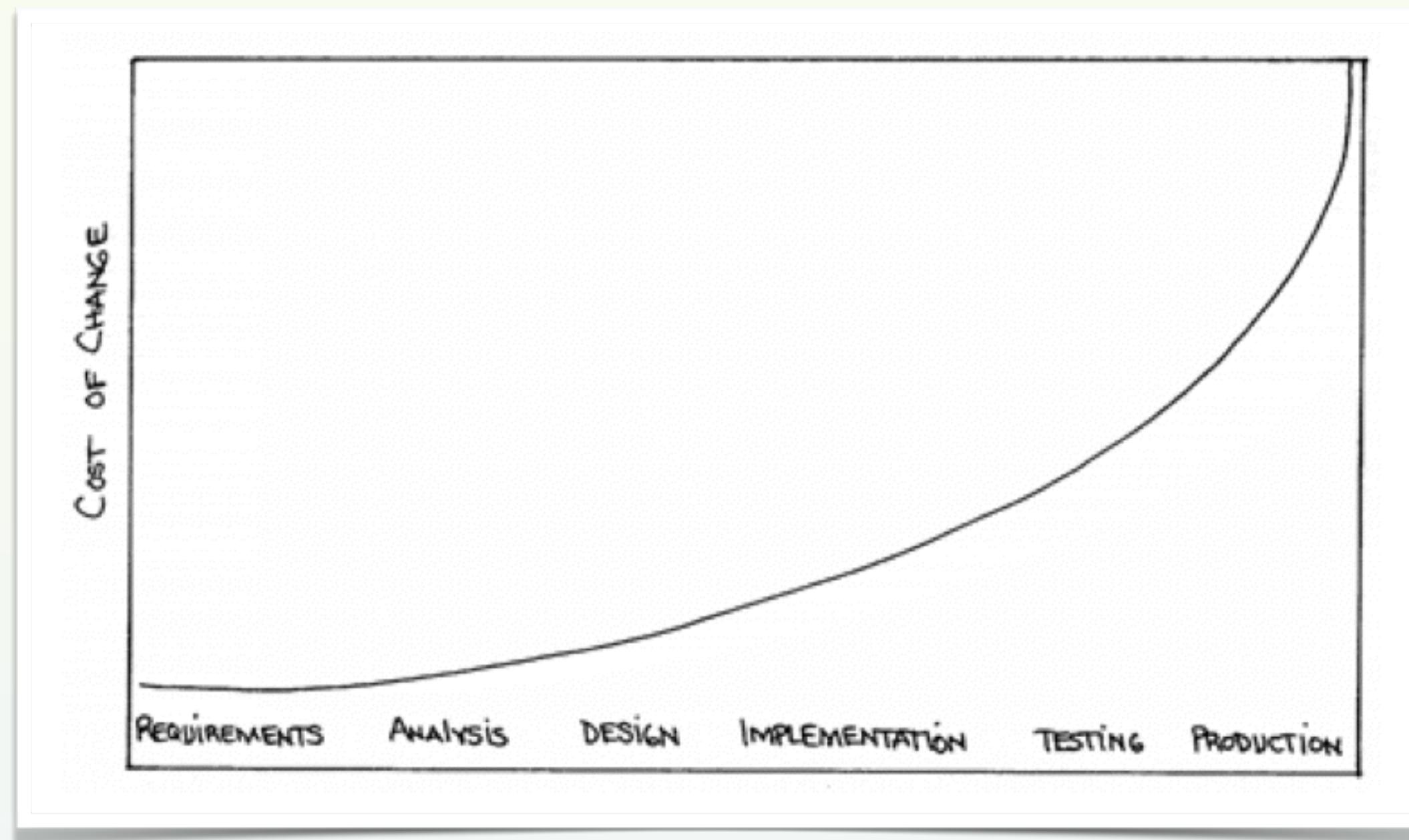
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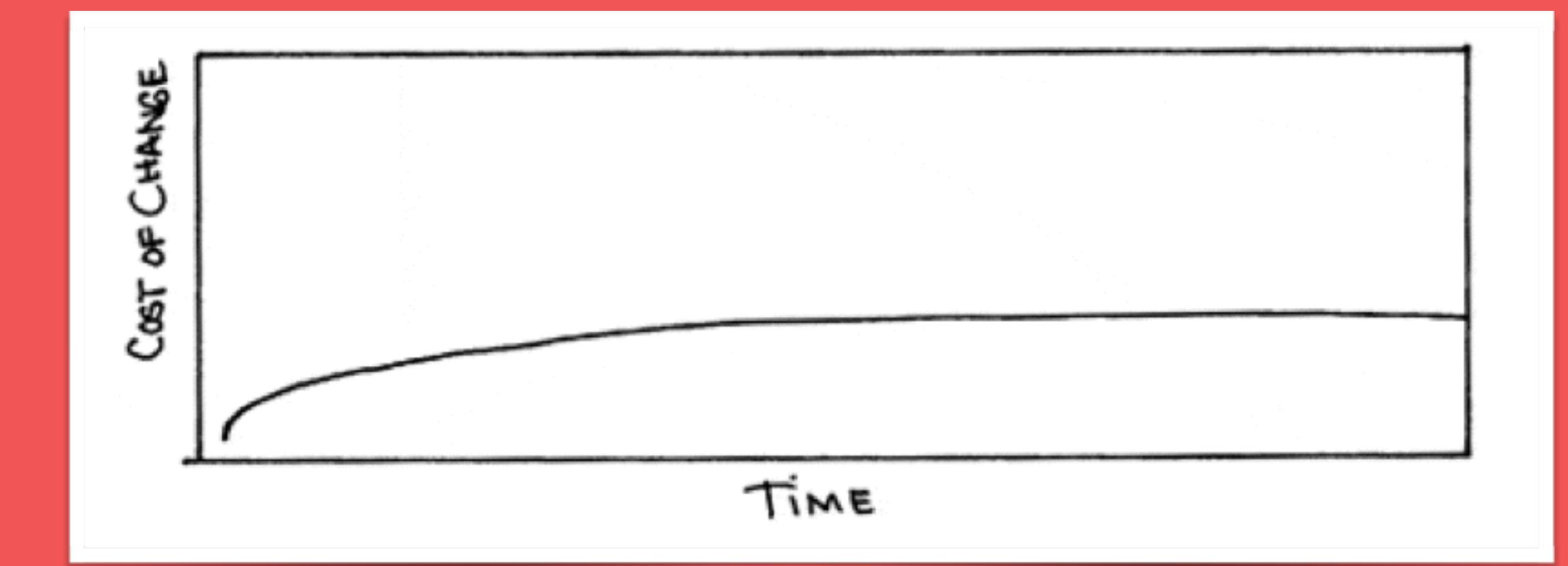
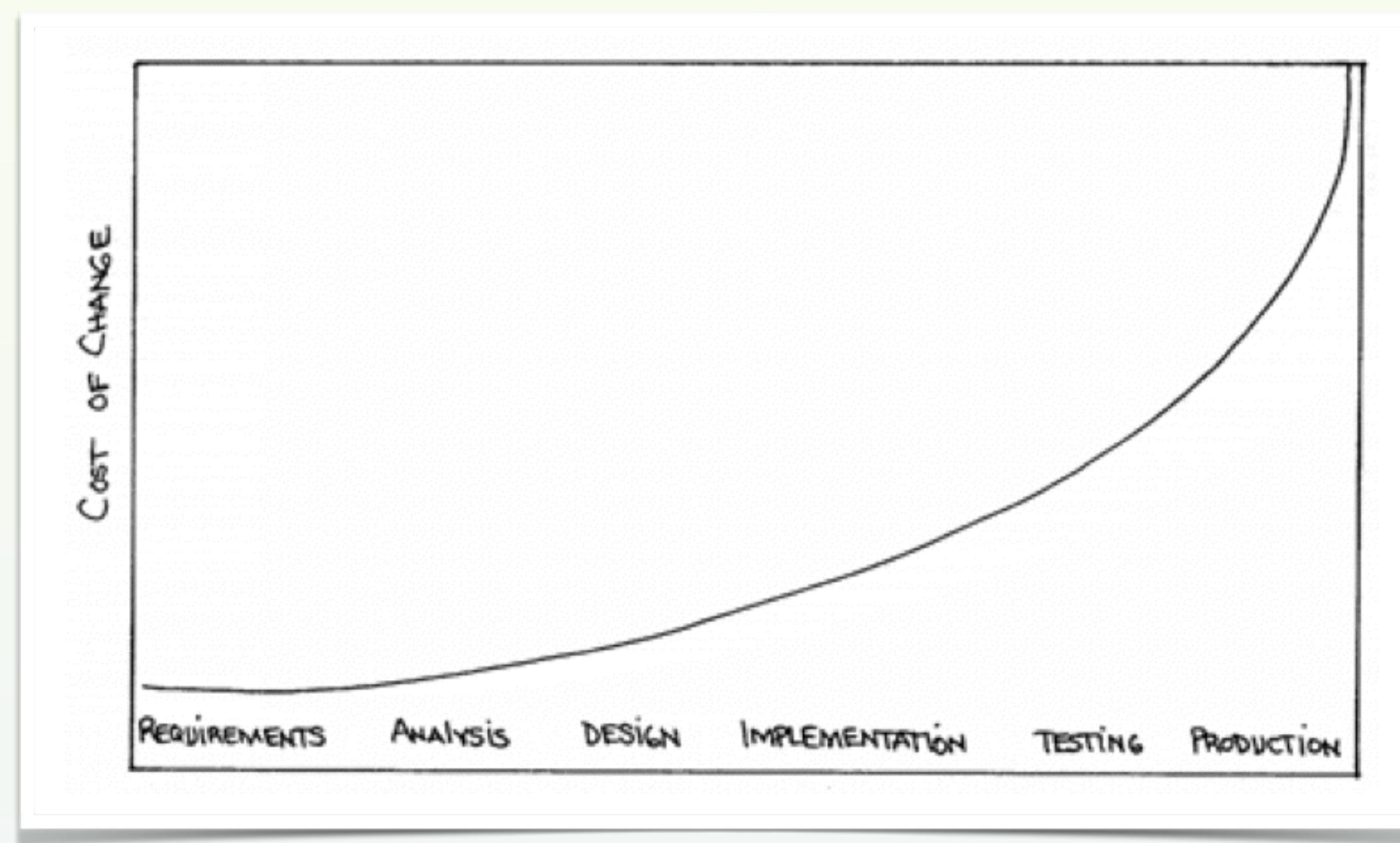


BY @ANDYWHITLOCK

# COST OF CHANGE



# COST OF CHANGE



# PROBLEM

BUILD + DEBUG + MAINTAIN

LARGE

COMPLICATED

# SOLUTION



Experts, usually an **AUTHORITY**, will architect the system. They won't be bothered with technical implementation details because **THEIR TIME IS VALUABLE**.

The team will be required to **FOLLOW** the architecture so that the good qualities of the system are assured.

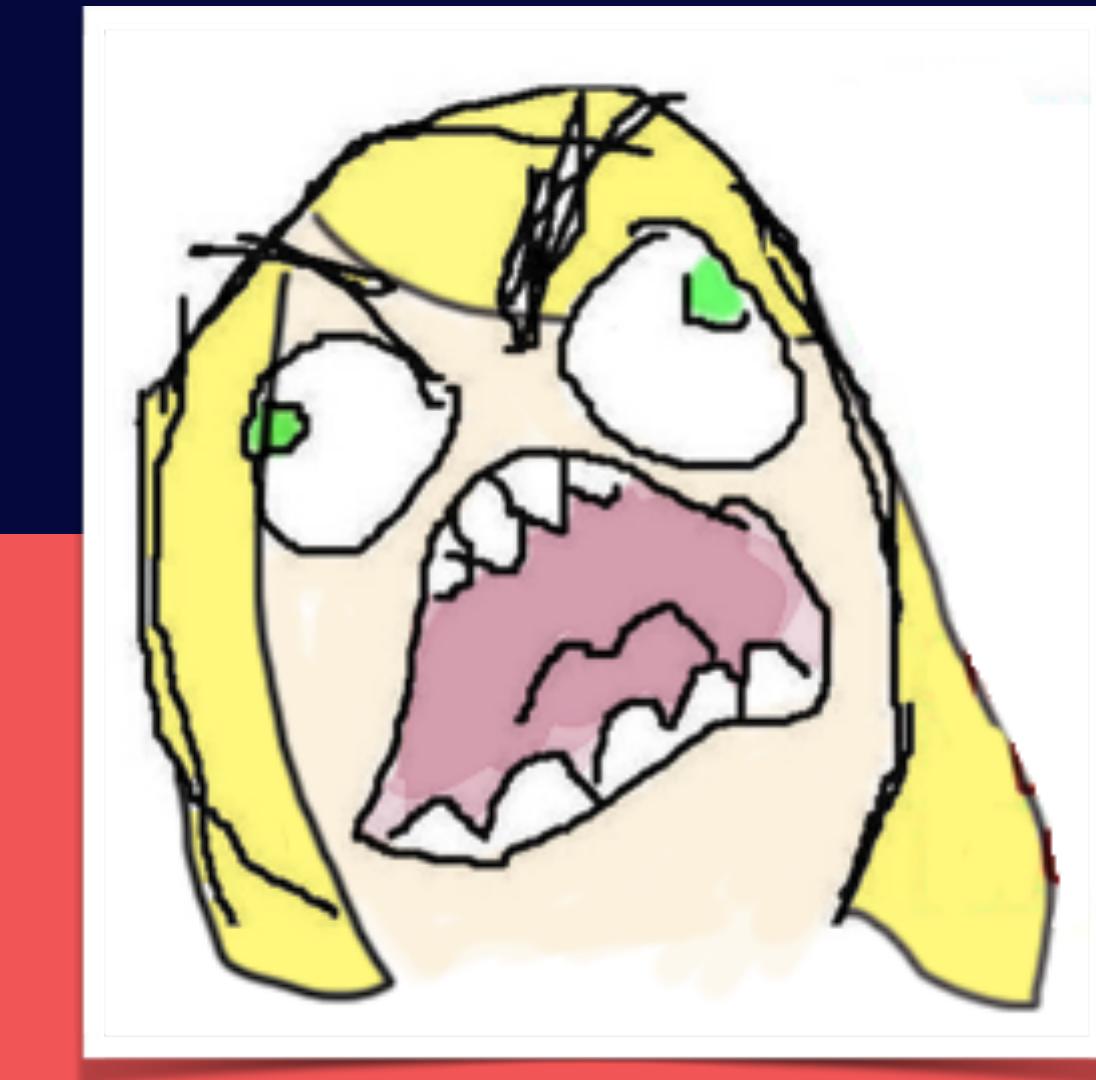
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# RESULT



Implementation lags and finger pointings.

Whoever has the most **AUTHORITY** wins

The programmers deemed not to be "team players" because of arguing with the architect.

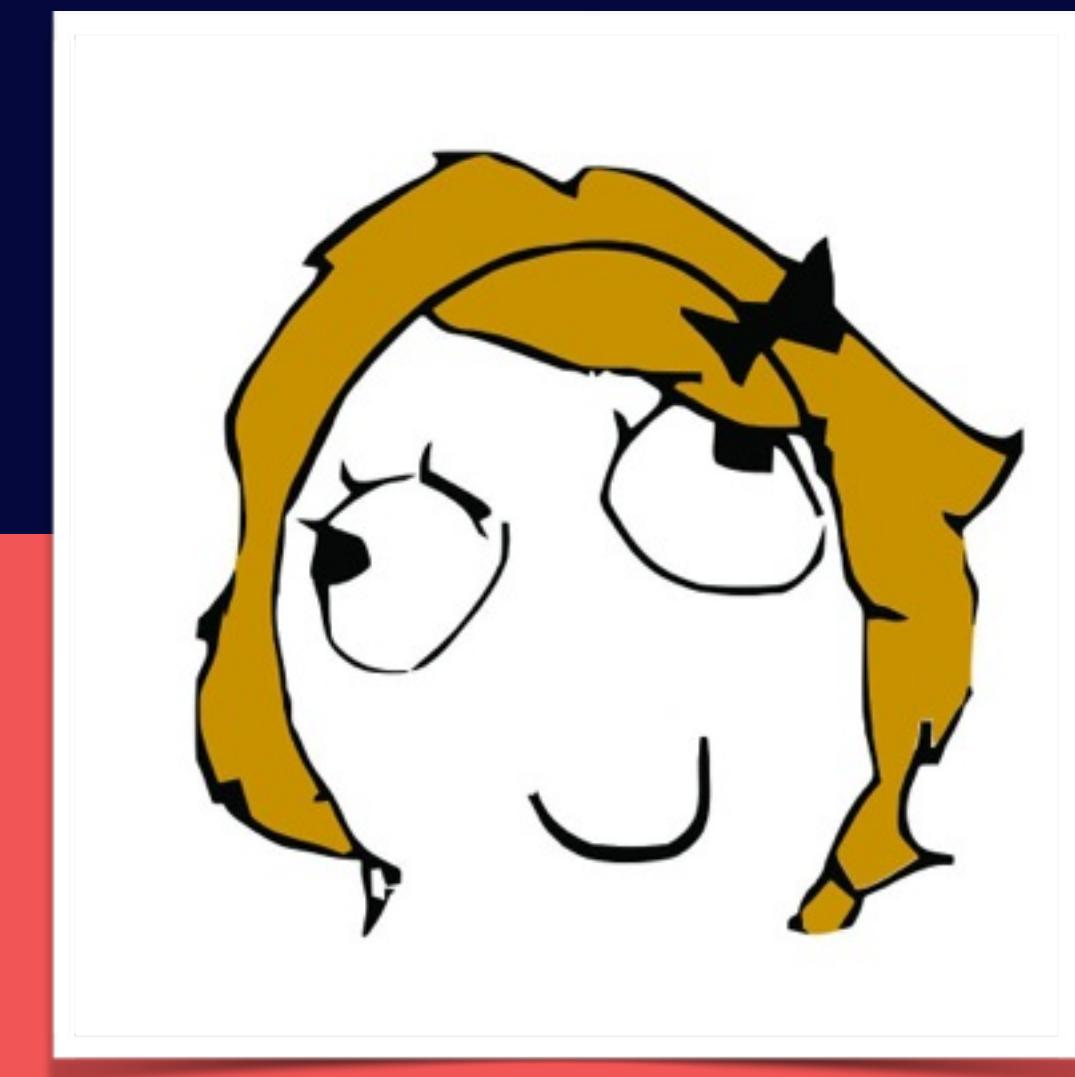
# SOLUTION



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# SOLUTION



Get architects

INVOLVED AT AN  
IMPLEMENTATION LEVEL.

They need to be **AWARE** of how changes in their design affect the project.

# DEDICATED ARCHITECT



SINGLE POINT OF  
RESPONSIBILITY

# DEDICATED ARCHITECT



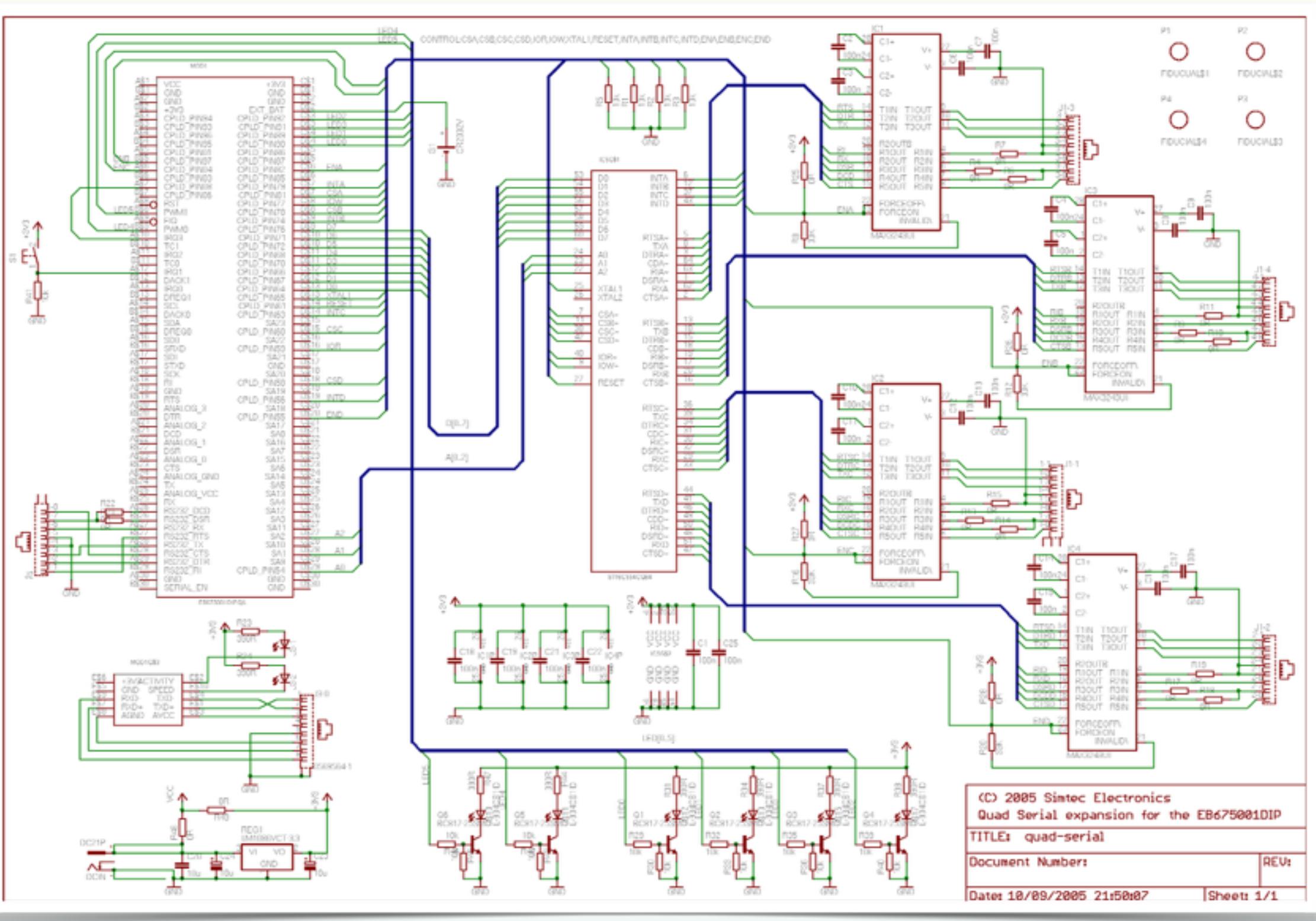
SINGLE POINT OF  
RESPONSIBILITY

# EVERYBODY IS AN ARCHITECT



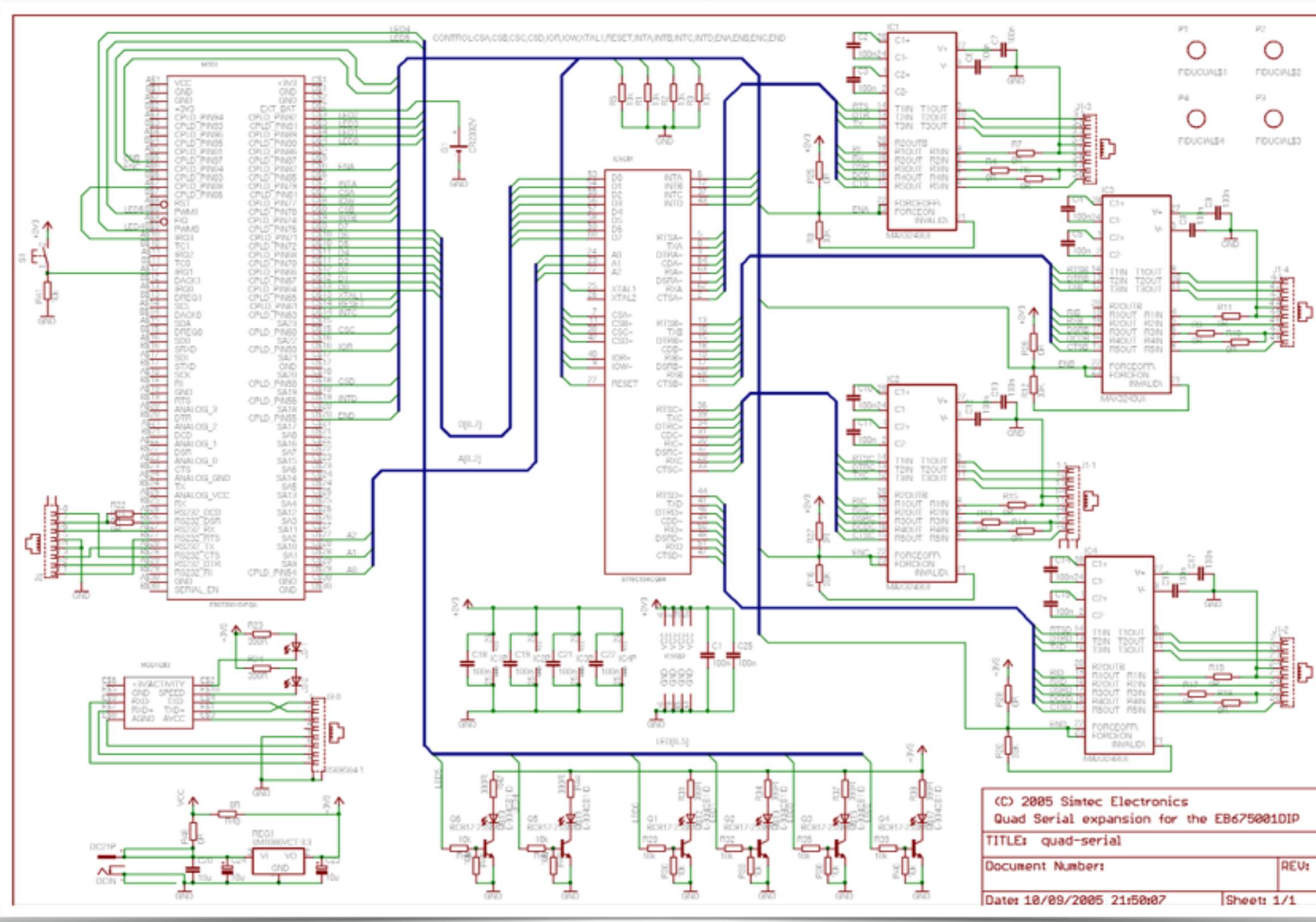
JOINT  
RESPONSIBILITY

# CONFLICT IN PROCESS



# UP-FRONT DESIGN

# CONFFLICT IN PROCESS



UP-FRONT DESIGN

```
(defun repl-fun (noprint)
  (/show0 "entering REPL").
  (loop
    ( unwind-protect
      (progn
        (scrub-control-stack).
        (sb!thread::get-foreground).
        (unless noprint.
          (flush-standard-output-streams).
          (funcall *repl-prompt-fun* *standard-output*).
          (force-output *standard-output*)).
        (let* ((form (funcall *repl-read-form-fun*
                               *standard-input*.
                               *standard-output*))
               (results (multiple-value-list (interactive-eval form))).
               (unless noprint.
                 (dolist (result results).
                   (fresh-line).
                   (prin1 result))))).
      (enable-stepping))).
  (disable-stepping))))
```

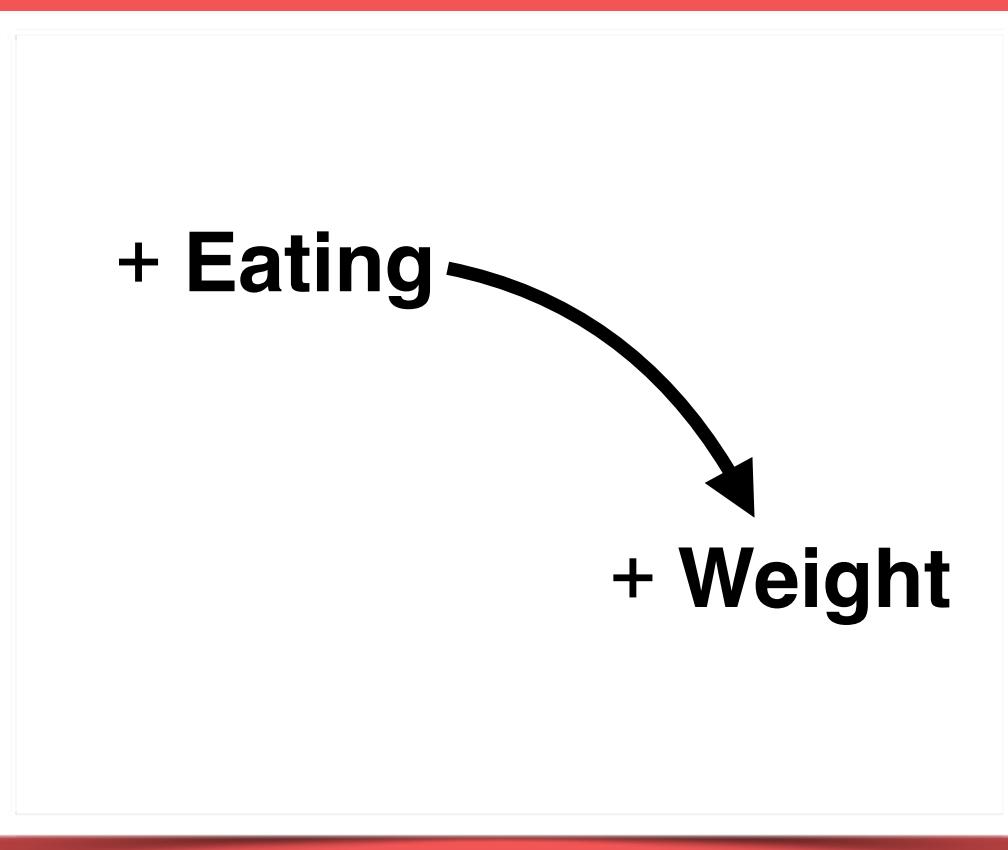
EVOLUTIONARY ARCHITECTURE

# CONFLICT IN PROCESS

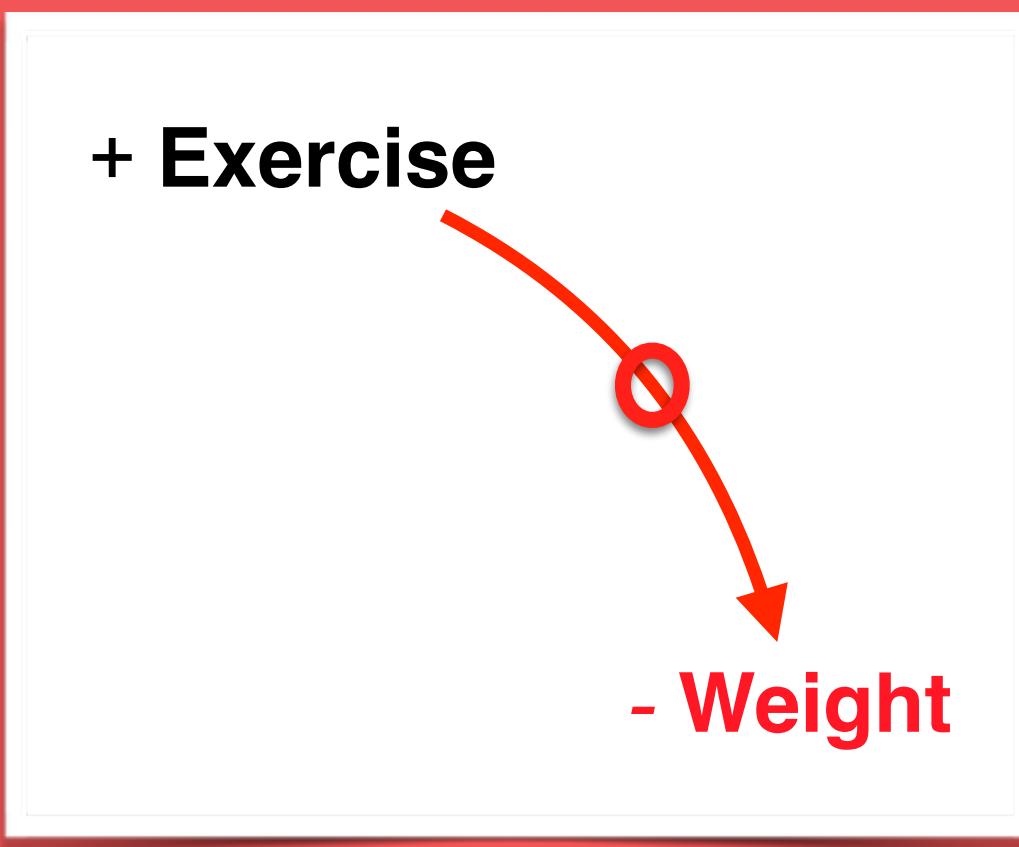
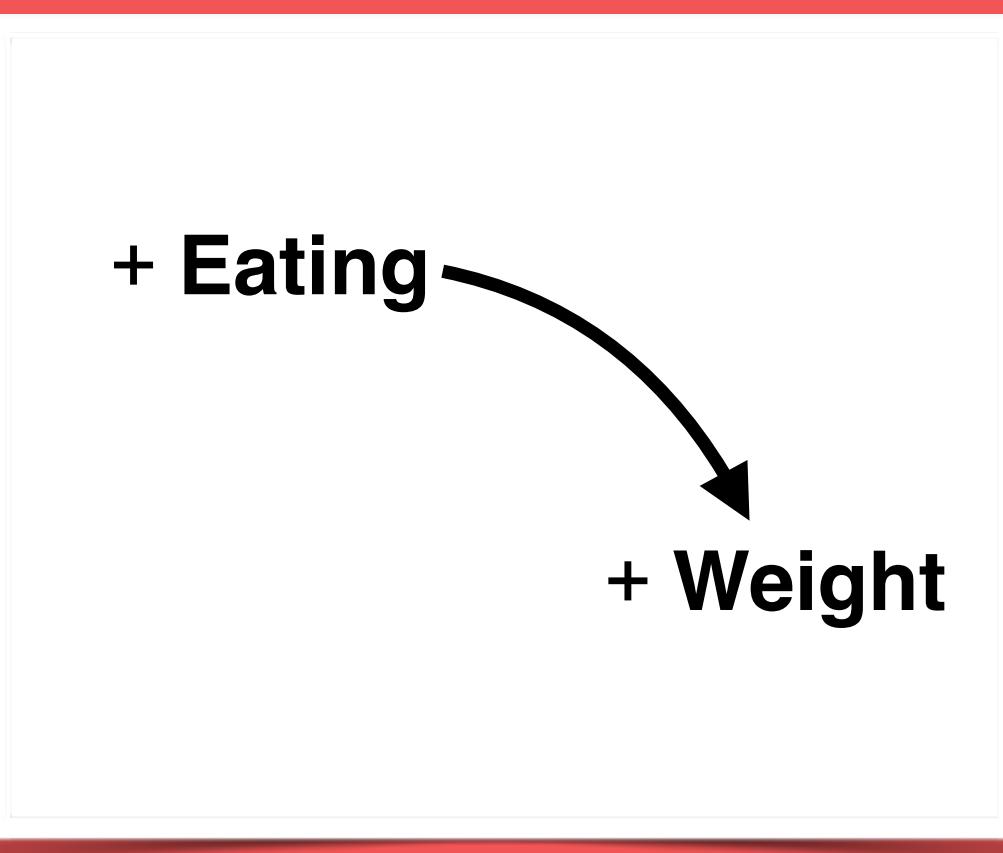
COMPREHENSIVE DOCUMENTATION

WORKING SOFTWARE

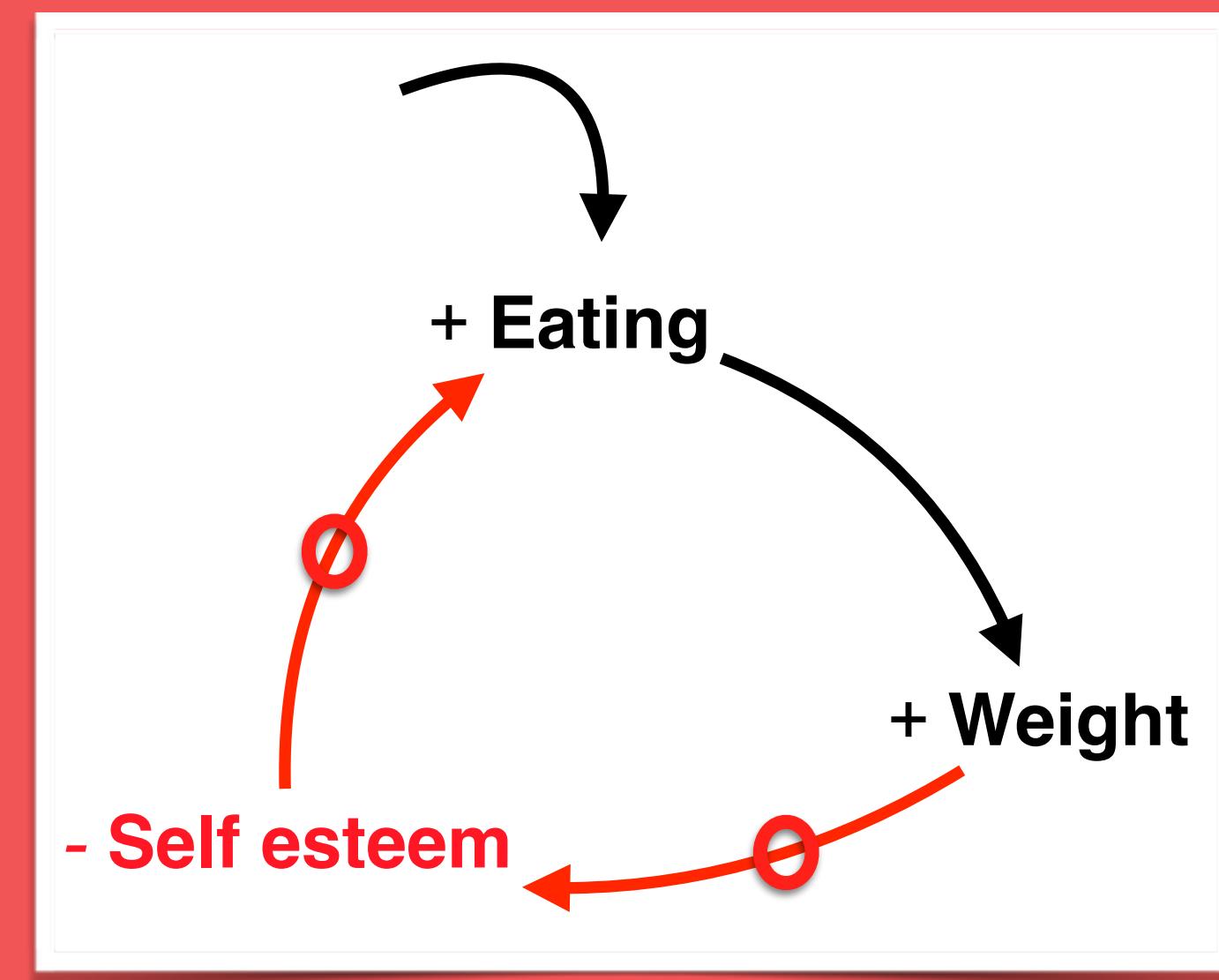
# INFLUENCE DIAGRAMS



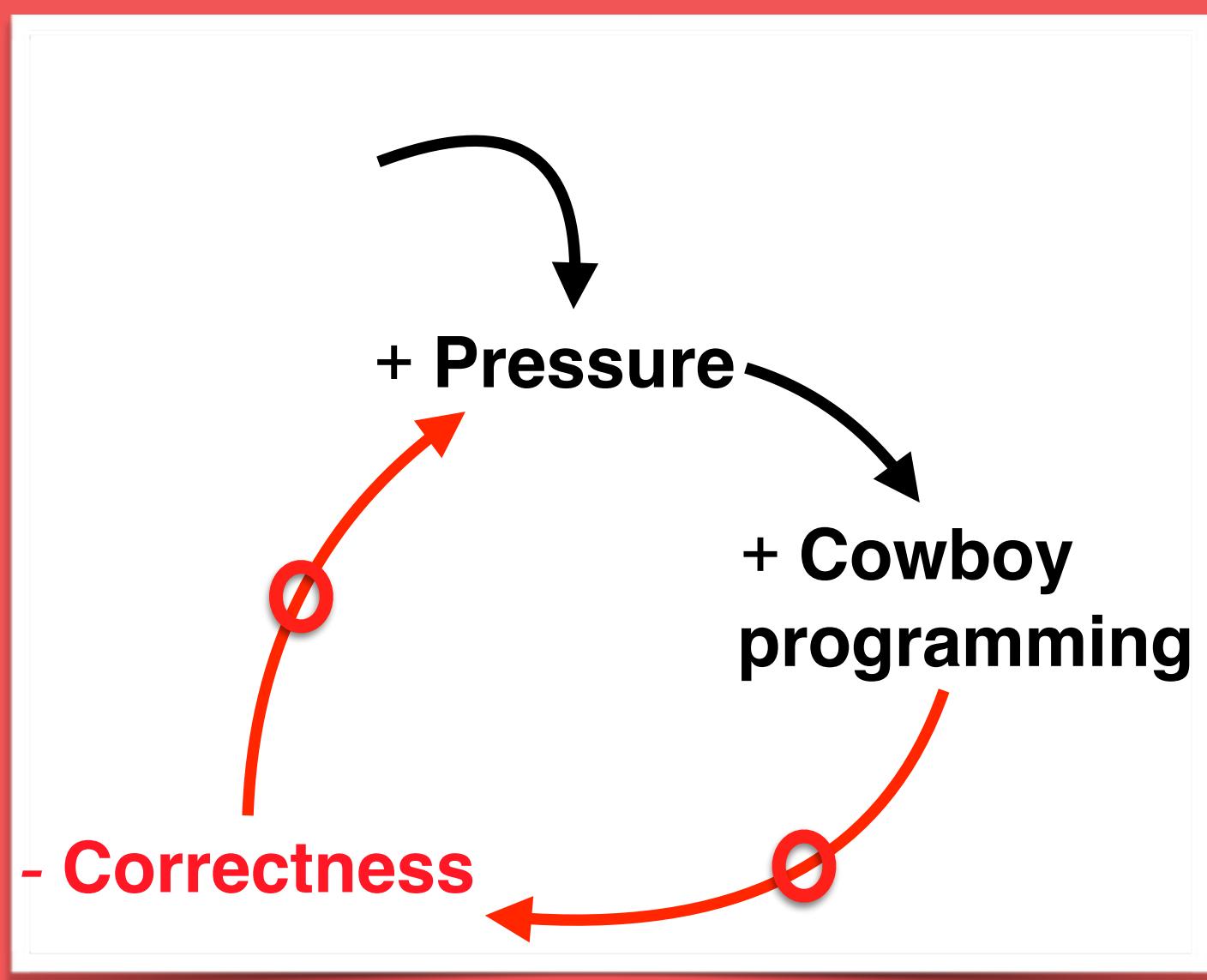
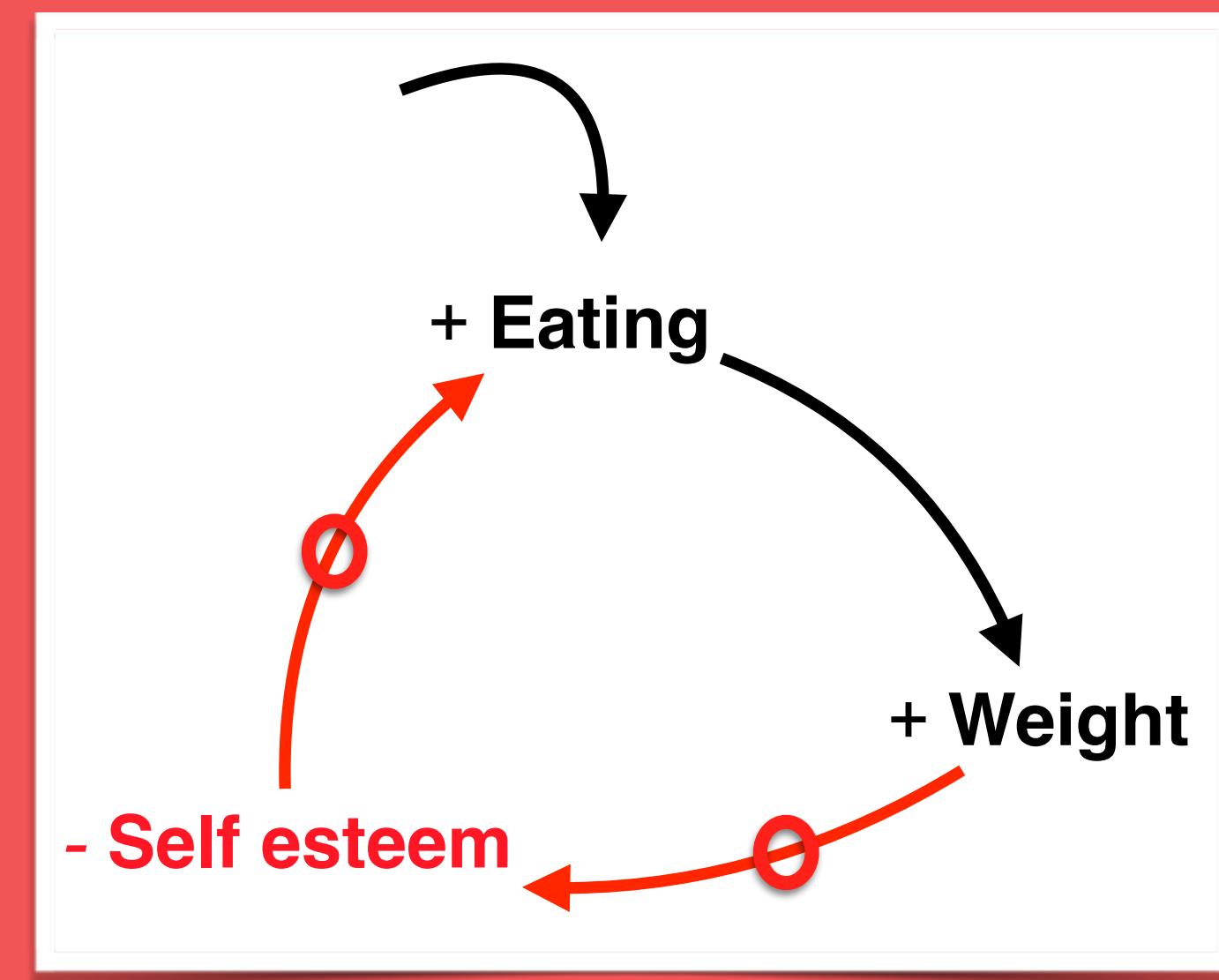
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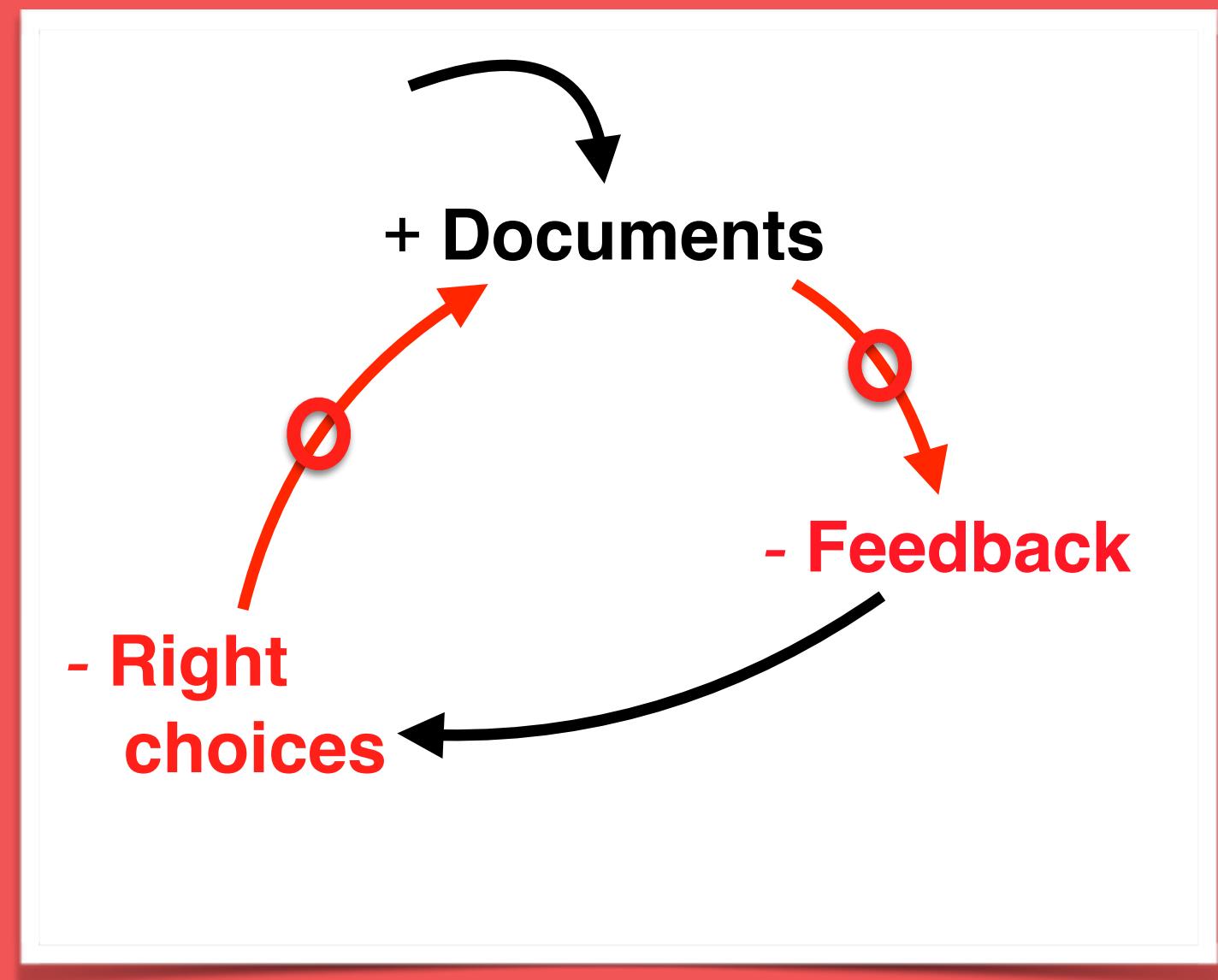
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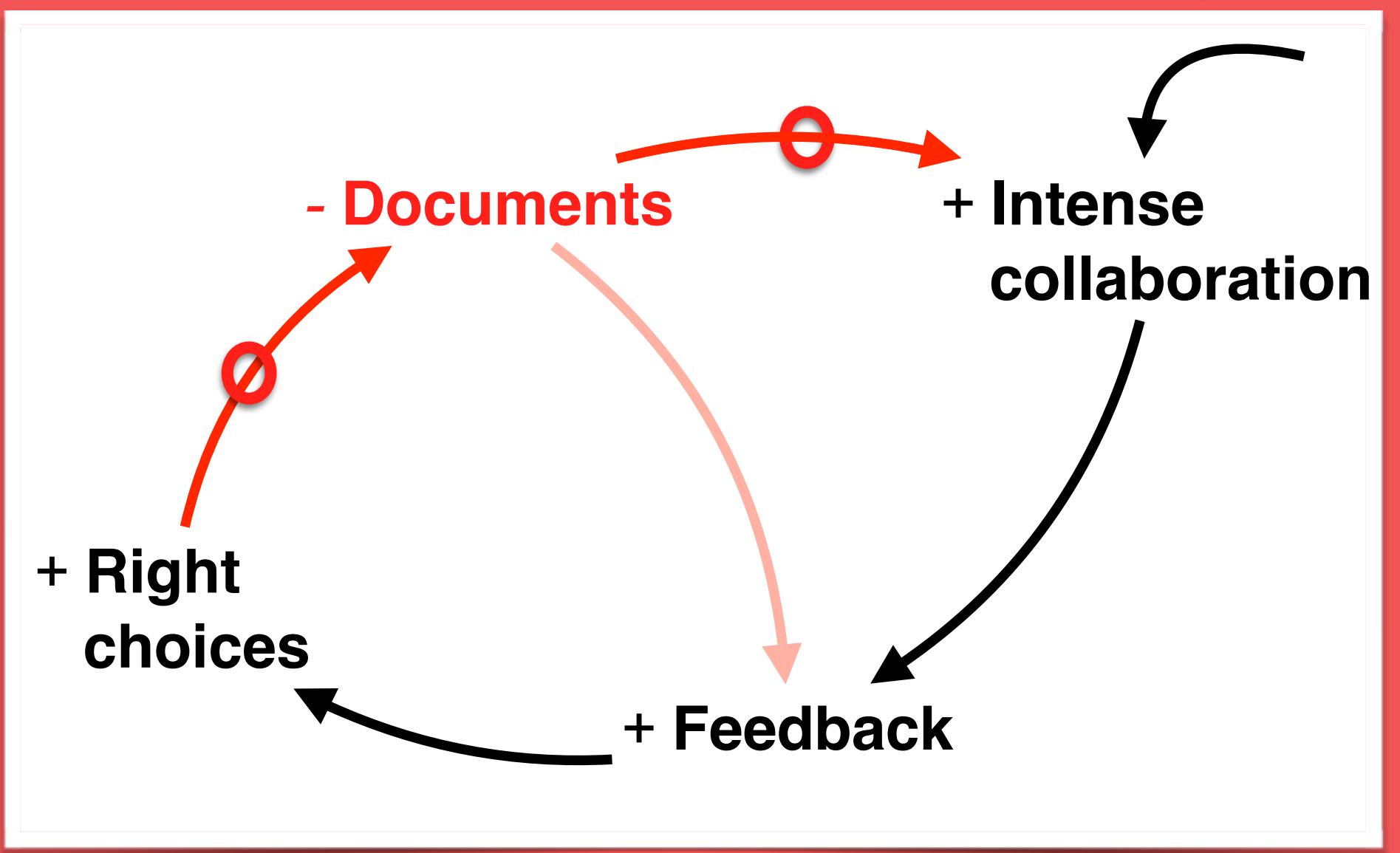
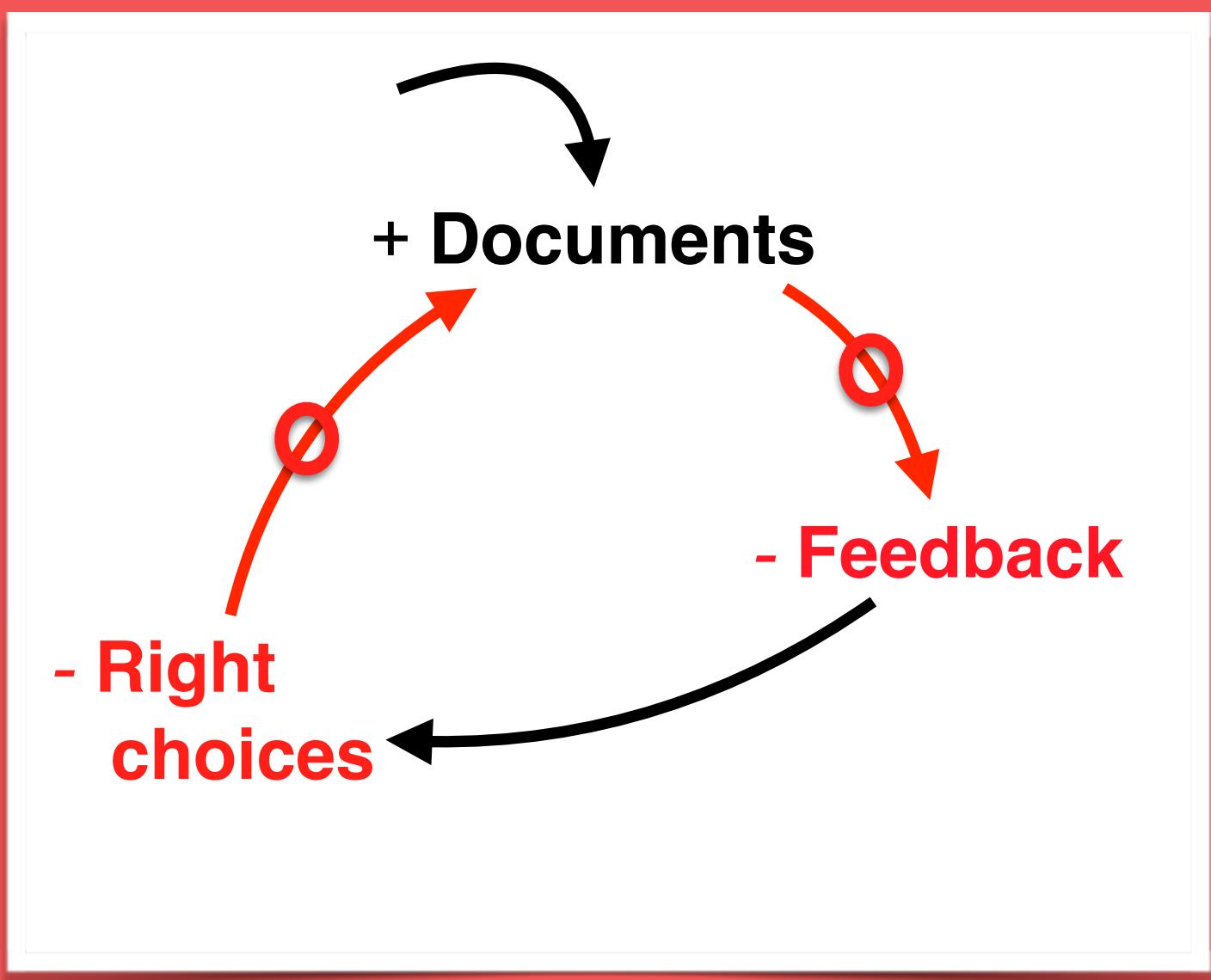
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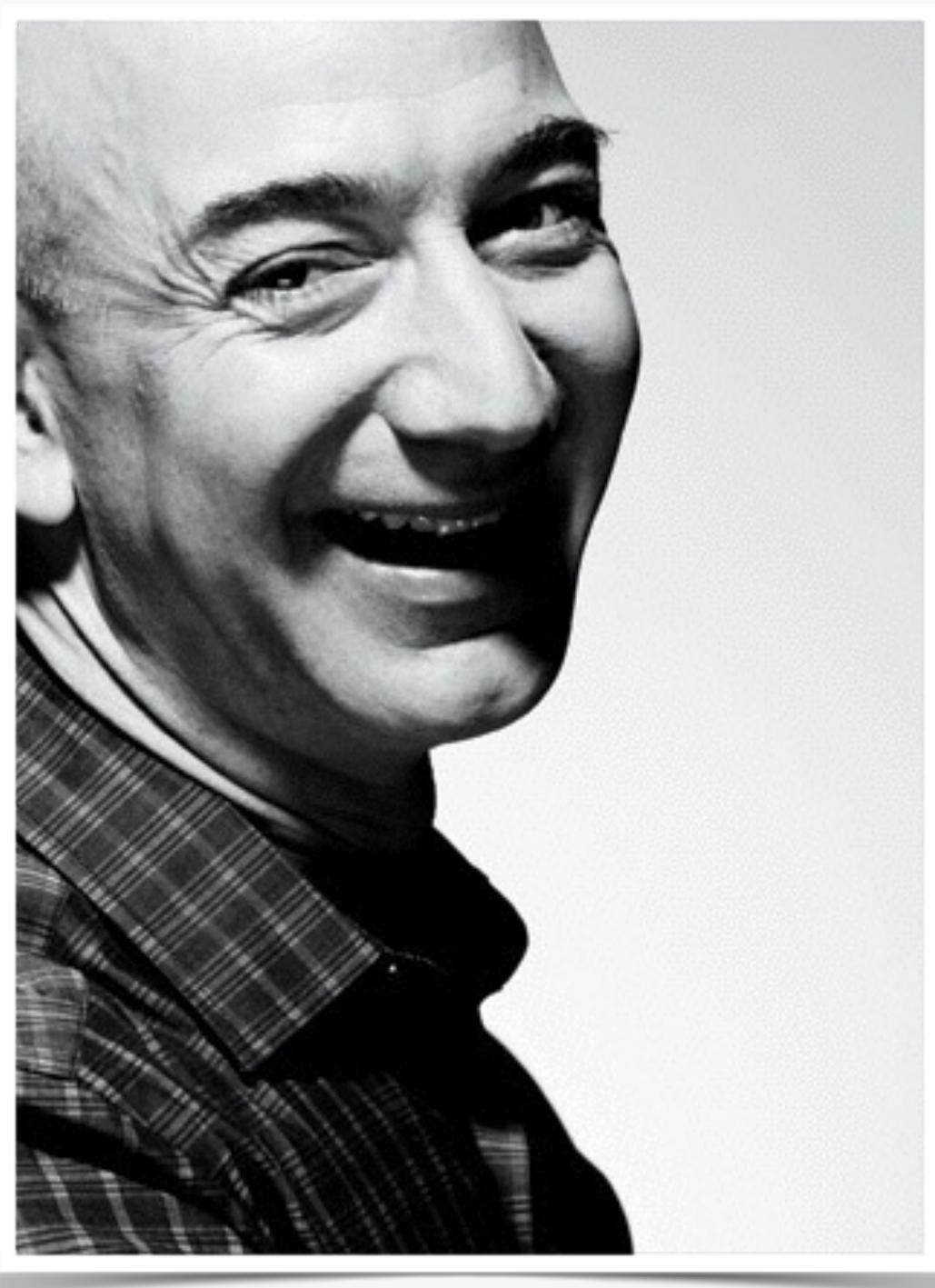
# INFLUENCEDIAGRAMS



# MICROSERVICE



# MICROSERVICE



# THE ARCHITECT?



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