

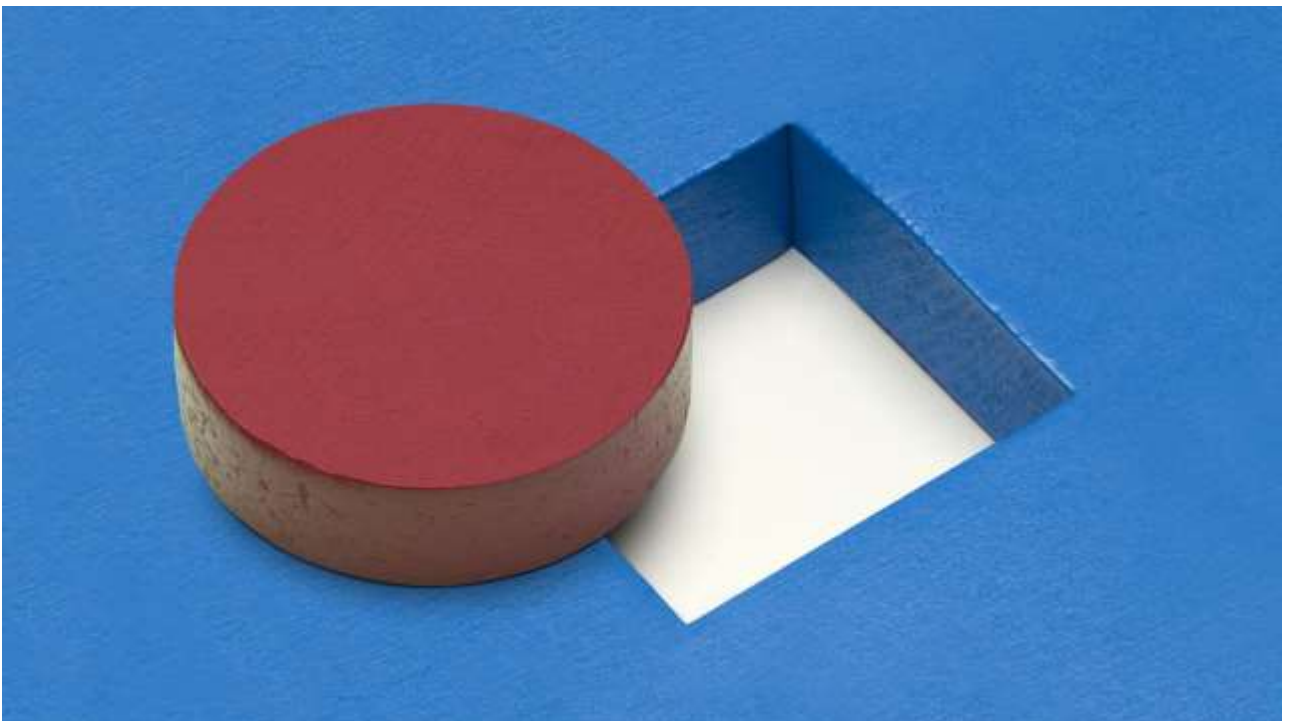
# Are you Anti-Agile?

Niall Cooling  
Feabhas Limited



**"something that displays  
opposite, reverse, or inverse  
characteristics of something  
else"**

The American Heritage Science Dictionary



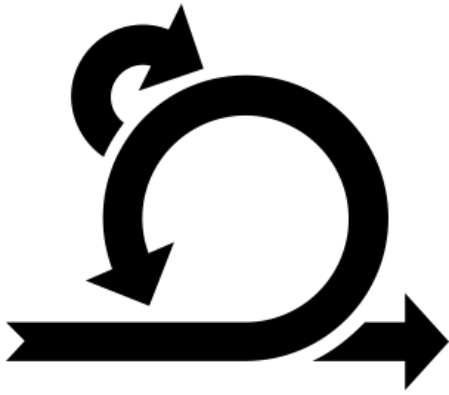


Manifesto

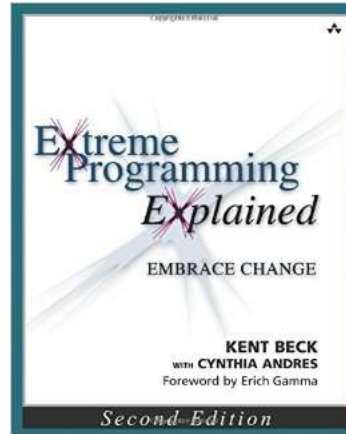


Principles

# What is Agile to you?



Scrum



XP



# Principles behind the Agile Manifesto

*We follow these principles:*

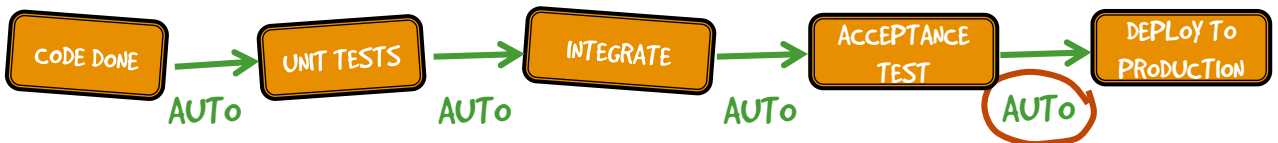
Our highest priority is to satisfy the customer through early and **continuous delivery** of valuable software.

<http://agilemanifesto.org/principle>

## CONTINUOUS DELIVERY



## CONTINUOUS DEPLOYMENT



<http://blog.crisp.se/2013/02/05/yassalsundman/continuous-delivery-vs-continuous-deployment>



# Amazon May Deployment Stats

(production hosts & environments only)

11.6 seconds

Mean time between deployments (weekday)

1,079

Max # of deployments in a single hour

10,000

Mean # of hosts simultaneously receiving a deployment

30,000

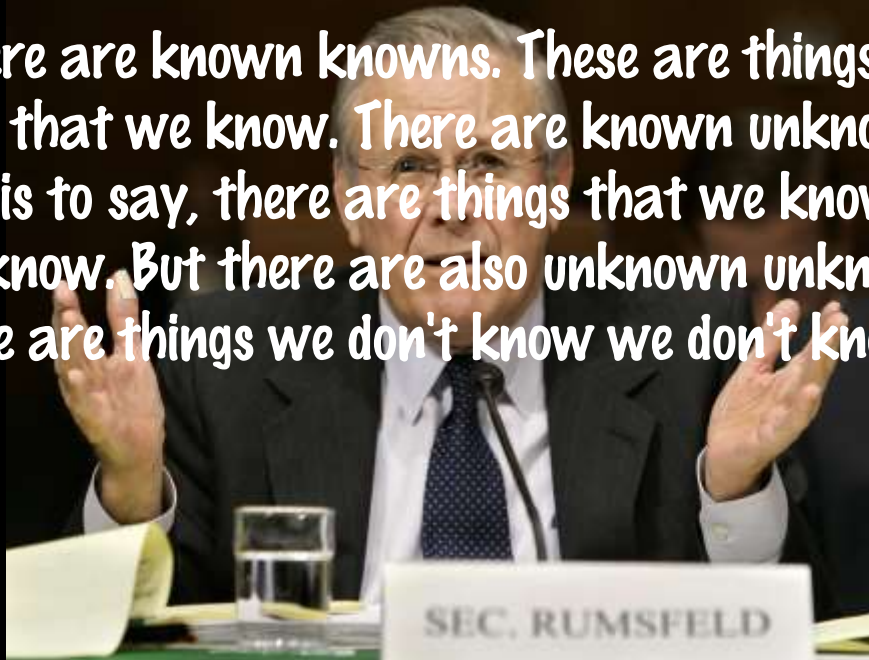
Max # of hosts simultaneously receiving a deployment

Jon Jenkins - Amazon.com (2017)

crossing the Rubicon...



“There are known knowns. These are things we know that we know. There are known unknowns. That is to say, there are things that we know we don't know. But there are also unknown unknowns. There are things we don't know we don't know.”



## Armour's Five orders of Ignorance

- 
- |          |  |  |
|----------|--|--|
| <b>4</b> | <b>Meta-ignorance</b><br>Not knowing there are orders of ignorance |  |
|----------|--|--|
- 
- |          |  |  |
|----------|--|--|
| <b>3</b> | <b>Lack of methodology</b><br>No tools or methods for reducing your ignorance levels |  |
|----------|--|--|
- 
- |          |  |                           |
|----------|--|---------------------------|
| <b>2</b> | <b>Lack of awareness</b><br>You don't even know the questions to ask | <i>"unknown unknowns"</i> |
|----------|--|---------------------------|
- 
- |          |   |                         |
|----------|---|-------------------------|
| <b>1</b> | <b>Lack of knowledge</b><br>Questions to which you do not know the answer | <i>"known unknowns"</i> |
|----------|---|-------------------------|
- 
- |          |  |                       |
|----------|--|-----------------------|
| <b>0</b> | <b>Lack of ignorance</b><br>codified knowledge that can be made to execute | <i>"known knowns"</i> |
|----------|--|-----------------------|

Communications of the ACM, Vol. 43 No. 10

# Estimating 2<sup>nd</sup>-order Ignorance

2<sup>nd</sup>-order  
ignorance  
(RISK)

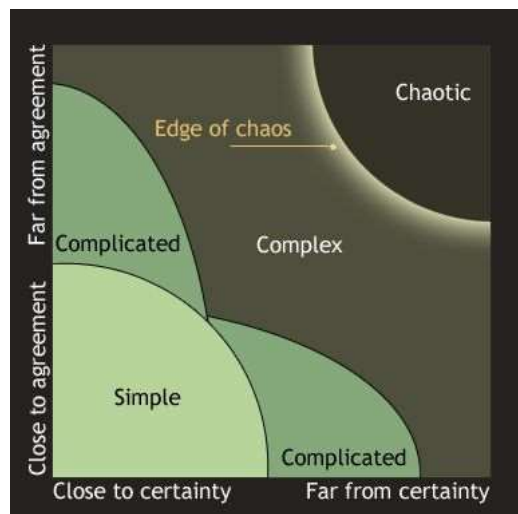
$\propto$

1

Stability  
Maturity  
Complexity  
Experience

*"INNOVATION"*

## THE STACEY MATRIX (1993)

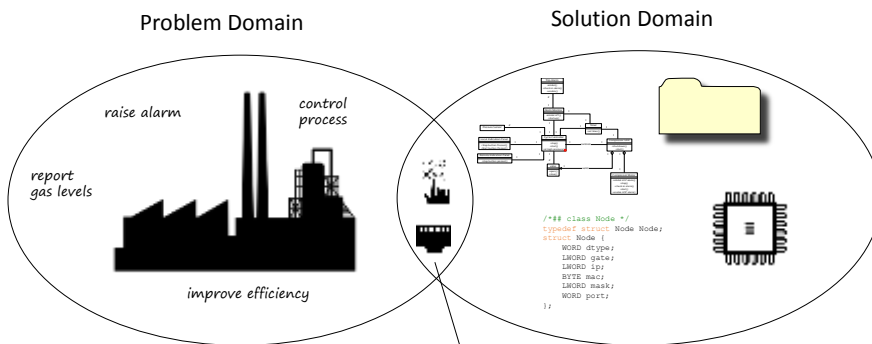




## CYNEFIN FRAMEWORK



## Domains



A system software *specification* is a design for how the system's I/O devices are to behave; an interface design.



Practical Software Requirements: A Manual of Content and Style  
Benjamin L. Kovitz

# obeng project types



"Painting by numbers"

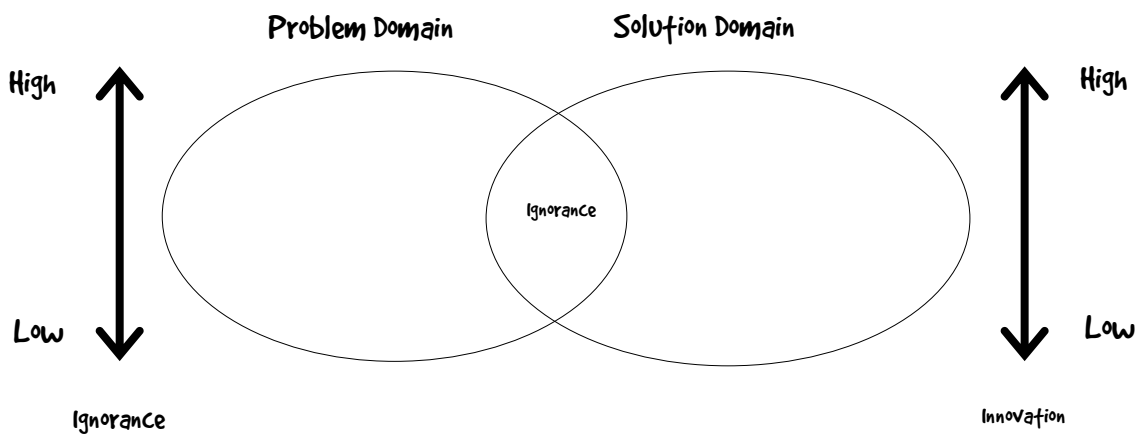
"Movie"

"Quest"

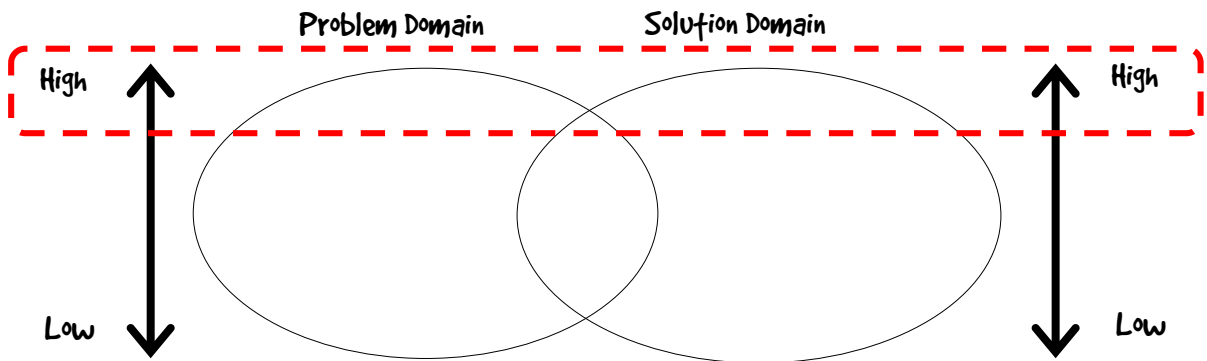
"Walking or Lost in the fog"

Slide 22

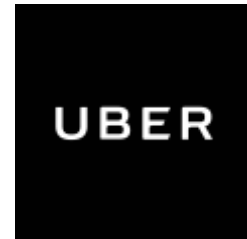
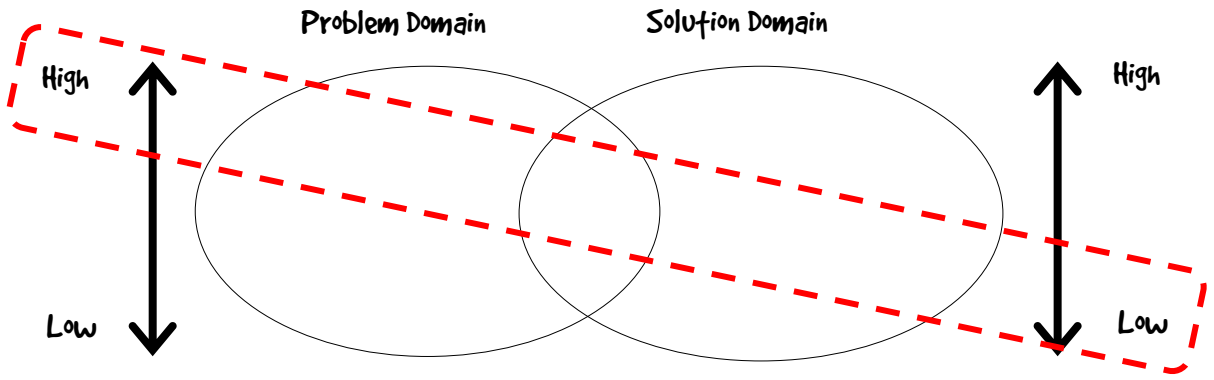
## Ignorance and Innovation



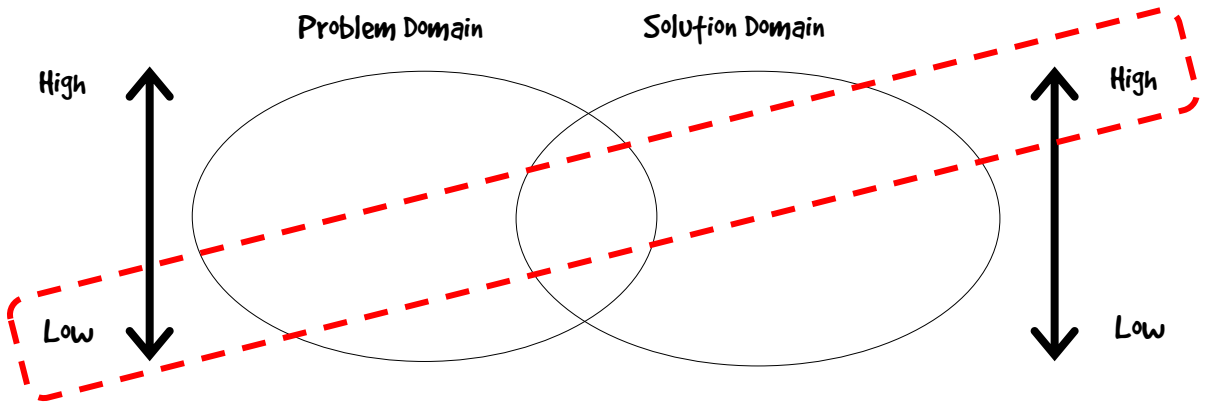
## Walking or Lost in the fog



# Movie



# Quest

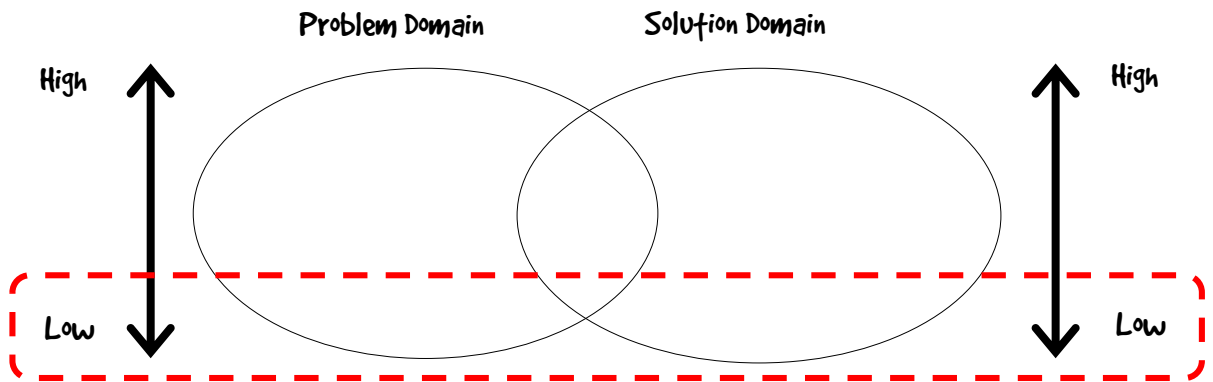


Hoover Model o 1908



Dyson DC01 1993

# Painting by numbers

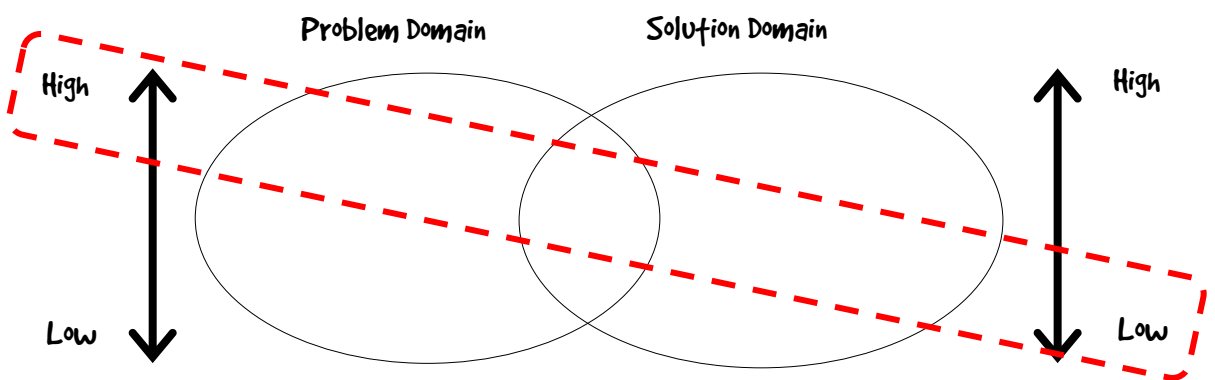


Shuanghuan CEO

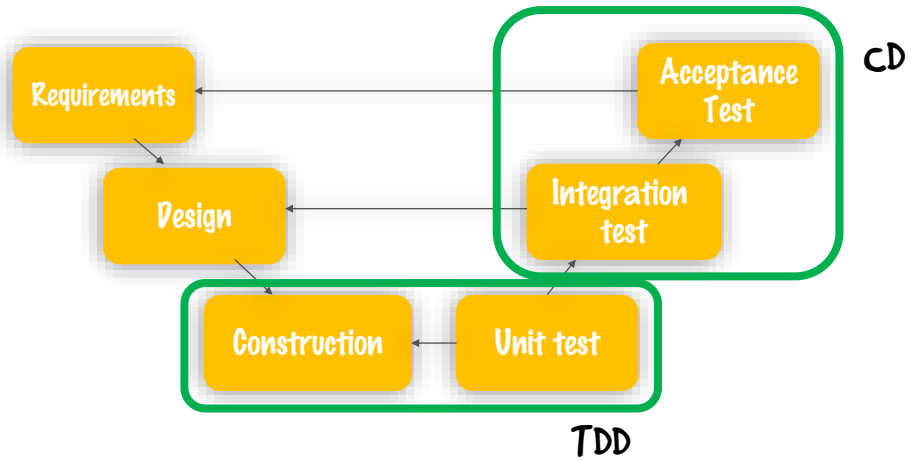


# What does Agile assume?

Movie



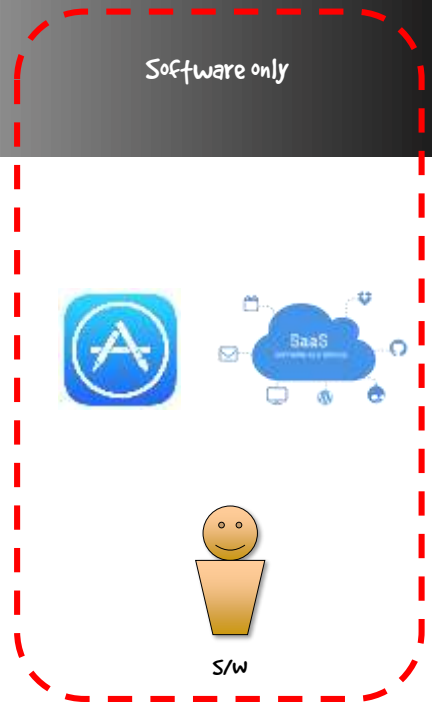
# TDD & Continuous Design



## Software only project

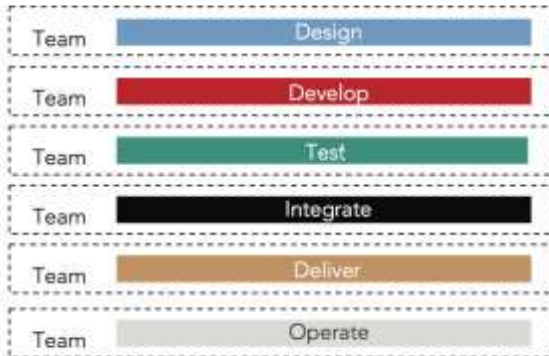


S/W

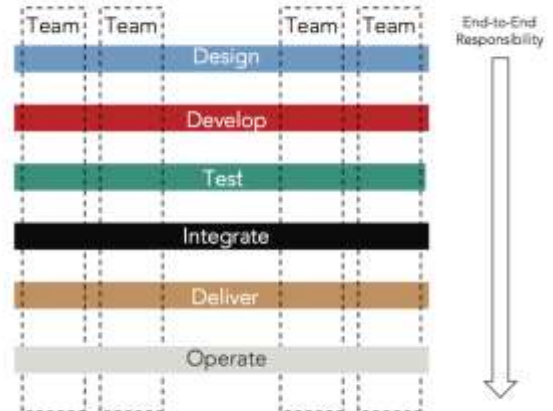


# Functional vs. Cross-Functional Organization

Functional Organization

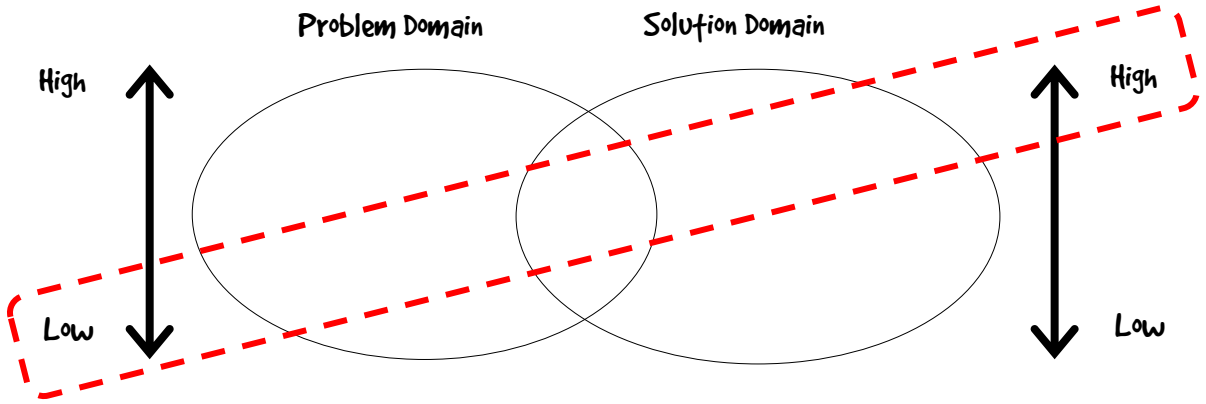


Cross-Functional Organization

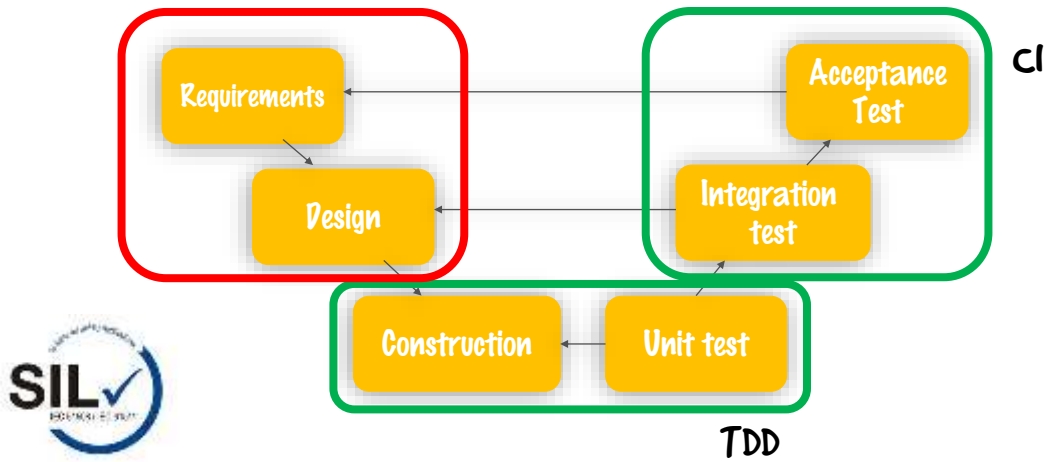


So what about embedded?

# Quest



# compliance



## Embedded Systems



S/W+H/W+Mech



S/W+H/W

# So can Embedded be Agile?



Agile "by the book"



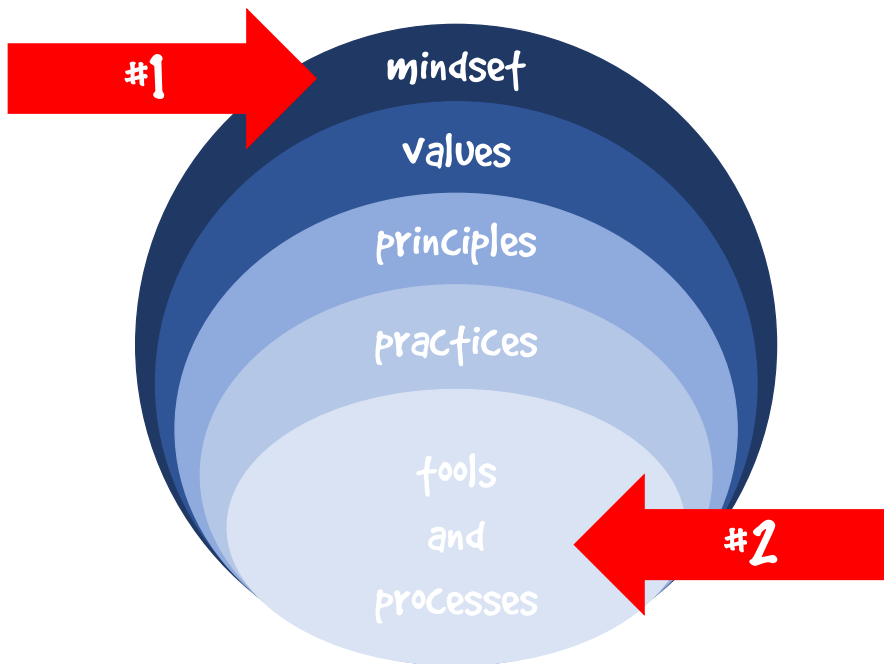
No, not really...

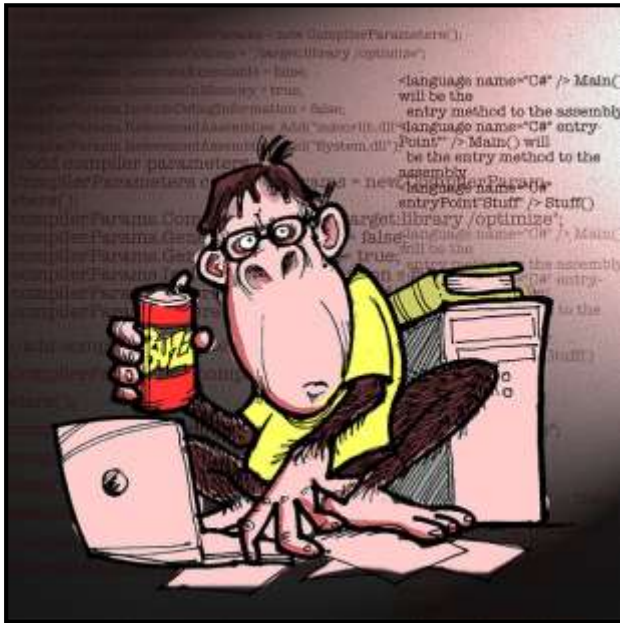
Fundamentally?

of course...



# So what's stopping you?





# Homework



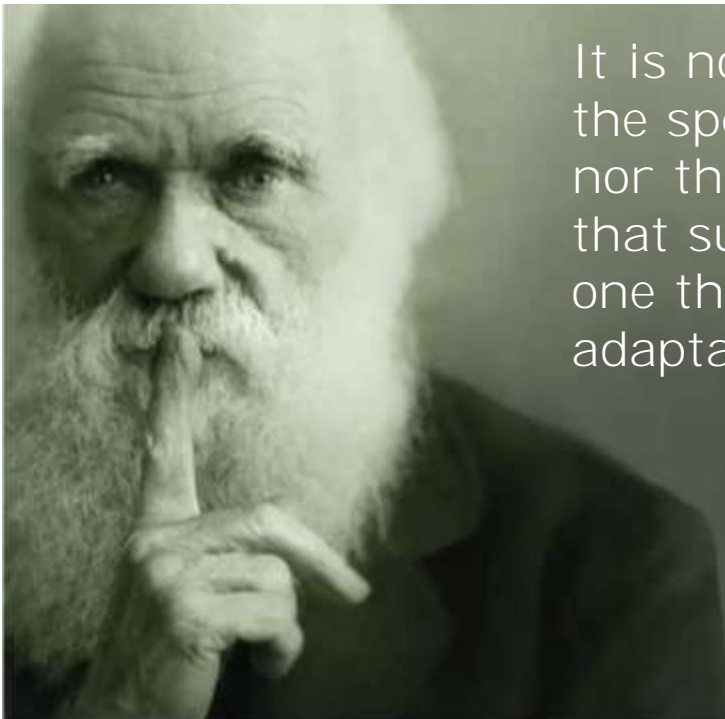
1. How long to make a change?

weeks, days, minutes, seconds?

2. How many manual steps?

all of them?

# Agile; what it's not...



It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is most adaptable to change.

Leon C. Megginson, 1963