

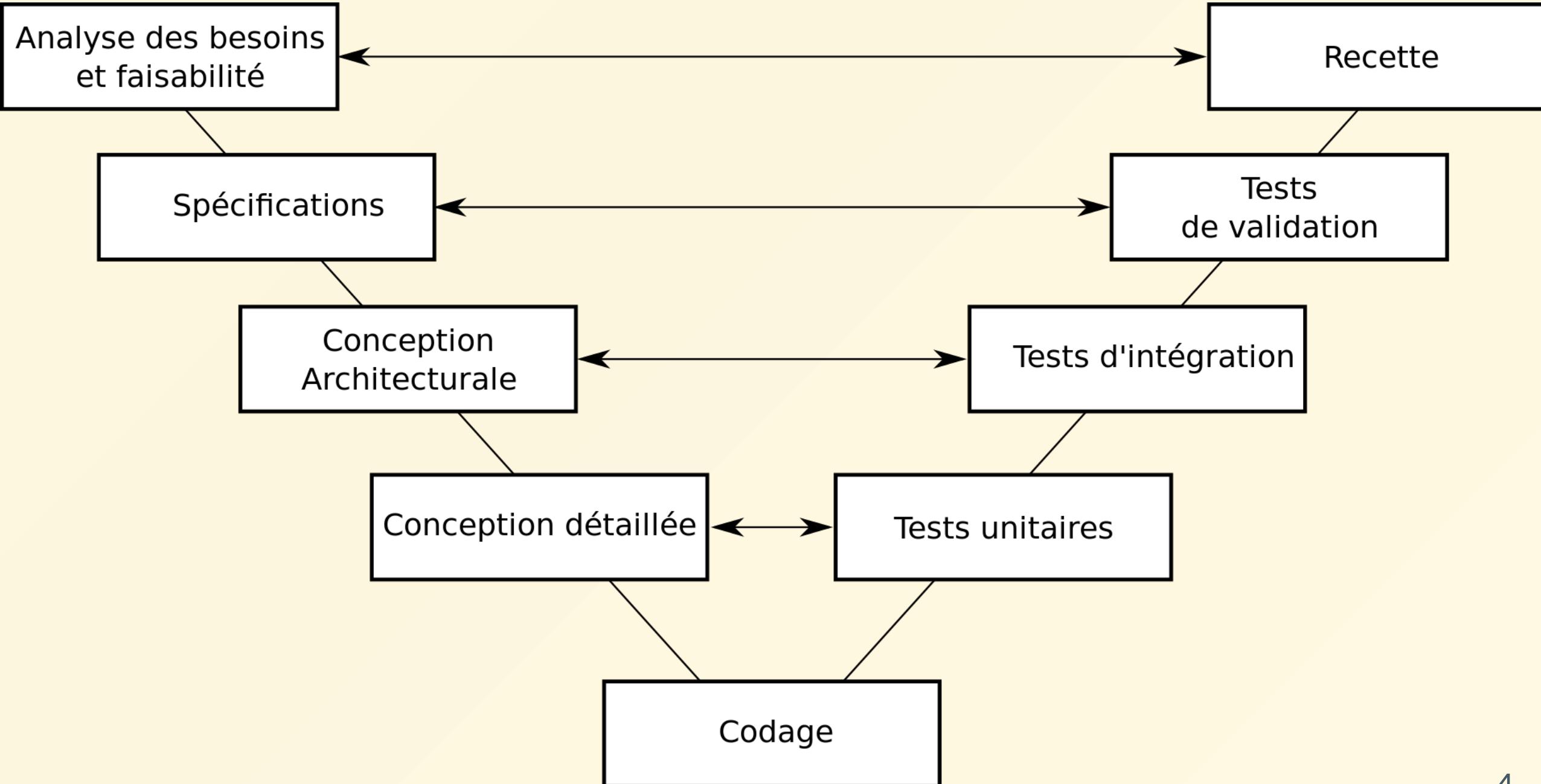


Software Craftsmanship

whoami

```
fn main() {  
  
    let lastname = "Moreau";  
    let firstname = "David";  
    let company = "Thales Alenia Space";  
    let mut email:String = "david.moreau".to_owned();  
    email.push_str("@jxdm.fr");  
  
    println!("I'm {} {} email:{}", firstname, lastname, email);  
}
```

Software Development Project?



Does not work!

WHY?



Agile Manifesto (2001)

Individuals and Interactions over processes and tools

Working Software over comprehensive documentation

Customer Collaboration over contract negotiation

Responding to Change over following a plan



What

- Accept change
- Learn to ride

How

- Feedback loop providing data
- Business Value Oriented

Agility is eating the world

The Hangover

Requirements
not well
understood

Stagnant
Skillset

Low Moral
and
Motivation

Mountain
of
Technical
Debt

Lack of
technical
expertise

Long
running
builds

Unreliable
Release
Process

Inefficient
Develop/
Debug/Deploy
cycles

Unreliable and
costly tests

Late
discovery
of bugs

Unstable
system



What's Wrong?

What's Missing?

What's Software Development?







Proficient With Your Tools





In a software product, the most important deliverable is the software itself



A Naive Approach to Software Projects

- Well-defined industrial process
- Engineers and Architects
- Developers as factory workers
- More developers, more production
- Monitoring
 - number of lines
 - % comments



Manifesto (2009)

Not only working software, but also **well-crafted software**

Not only responding to change, but also **steadily adding value**

Not only individuals and interactions, but also a **community of professionals**

Not only customer collaboration, but also **productive partnerships**

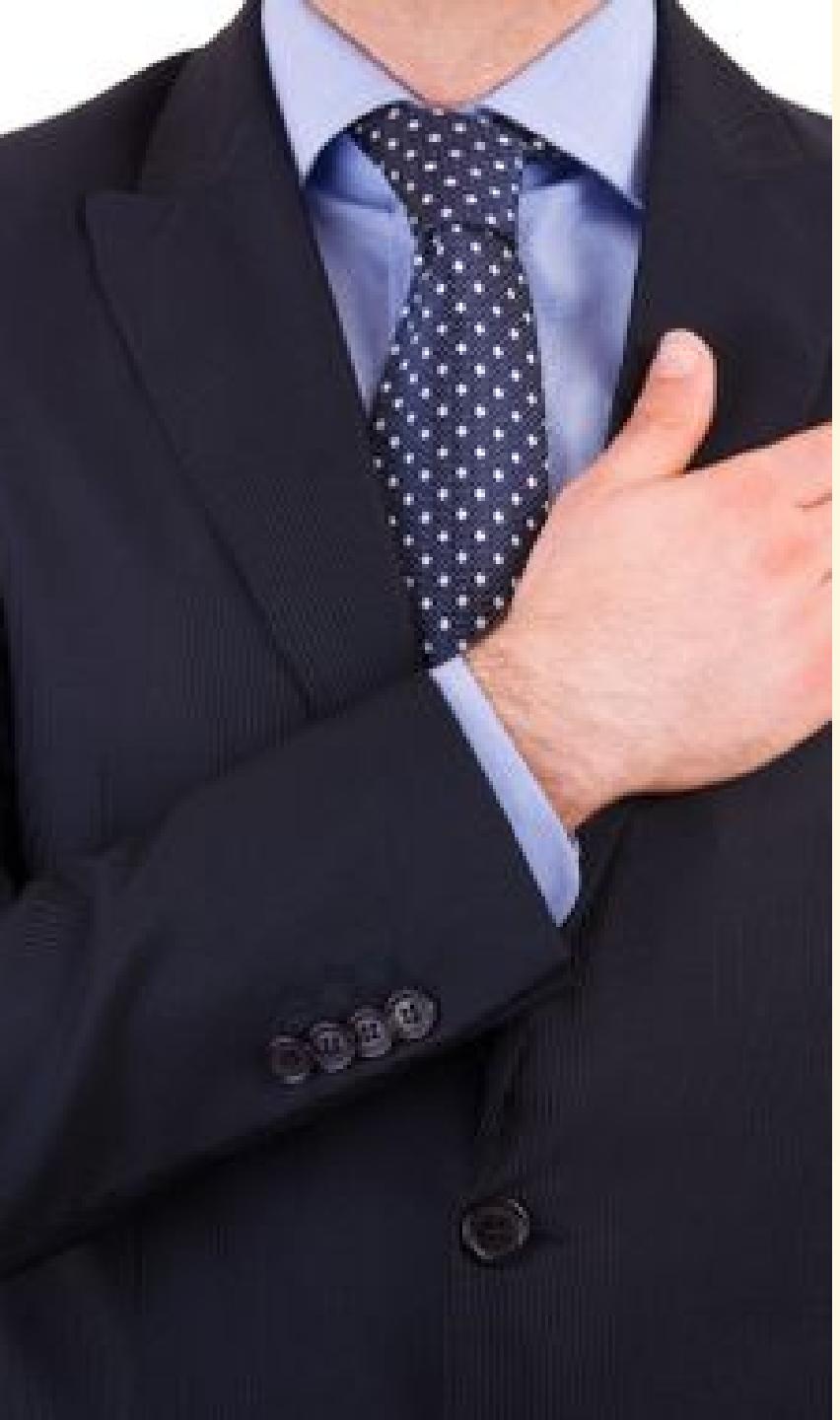


Software Craftsmanship: A Mindset

“ Software Craftsmanship is all about putting responsibility, professionalism, pragmatism, and pride back into software development.

Sandro Mancuso, The Software Craftsman, 2014

”

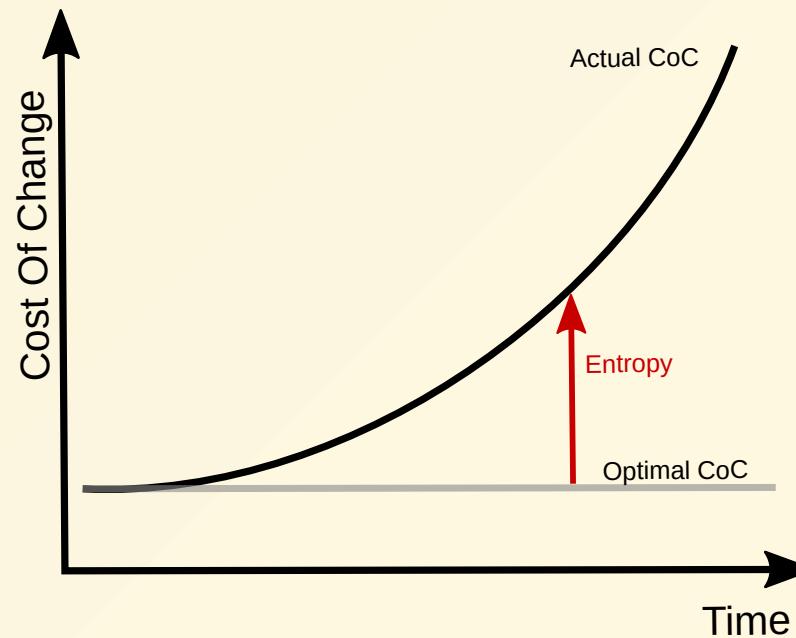


Mindset and Behaviors

- Never stop learning
- Never stop improving his craft
- Learn how to say no
- Provide options
- Be responsible
- Share your knowledges



The Invisible Threat



- Software Entropy
 - Complexity
 - Technical Debt

TECHNICAL DEBT





Technical Practices

- Clean Code
 - Keep It Simple, Stupid (KISS)
 - Boy Scout Rule
 - YAGNI
 - Naming, Coupling...
 - Refactoring
- TDD (Test Driven Developpement)
- Pair Programming

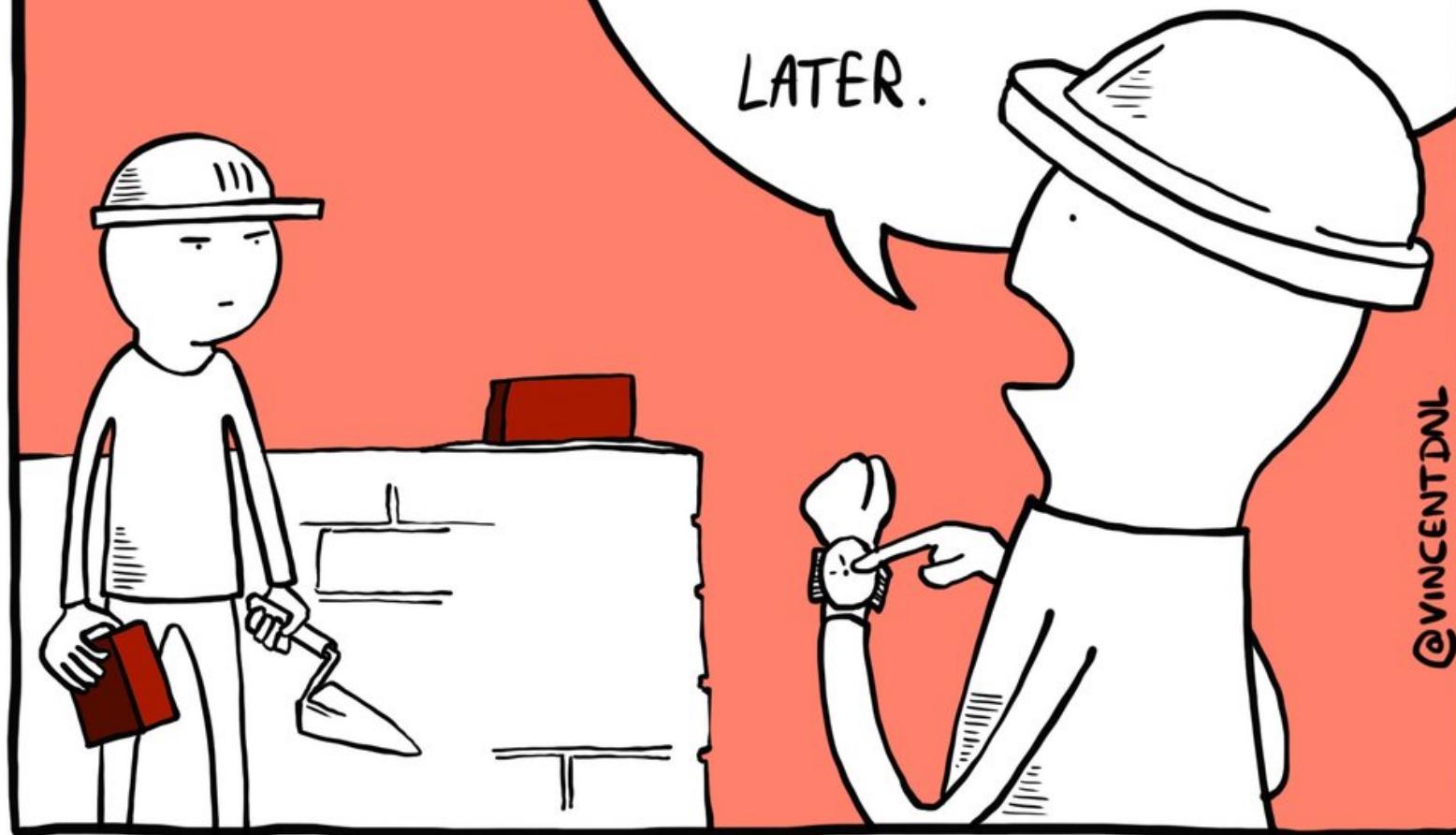
PAIR - PROGRAMMING

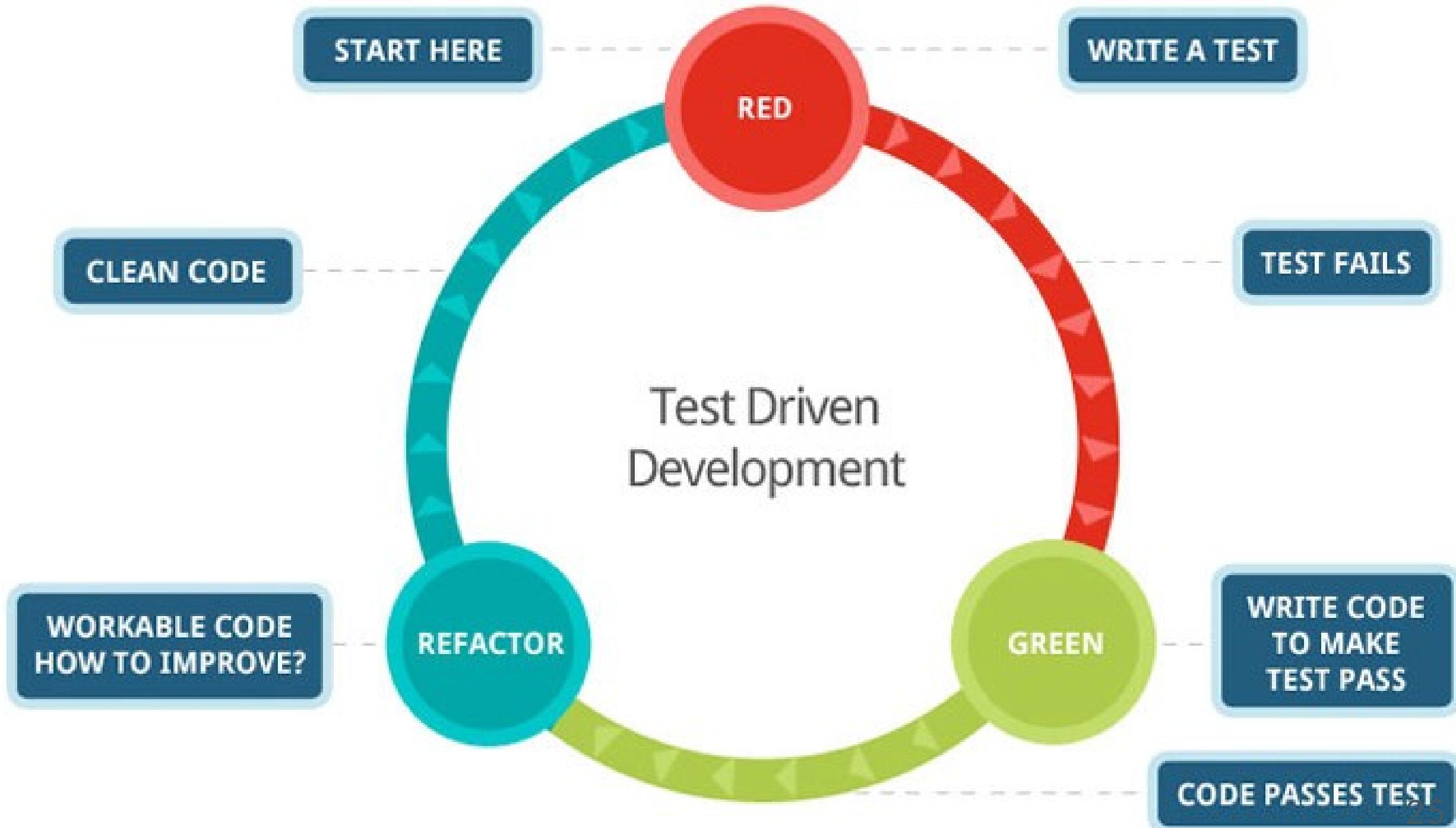
IT WOULD
GO FASTER IF
EACH ONE OF YOU
TOOK ONE.



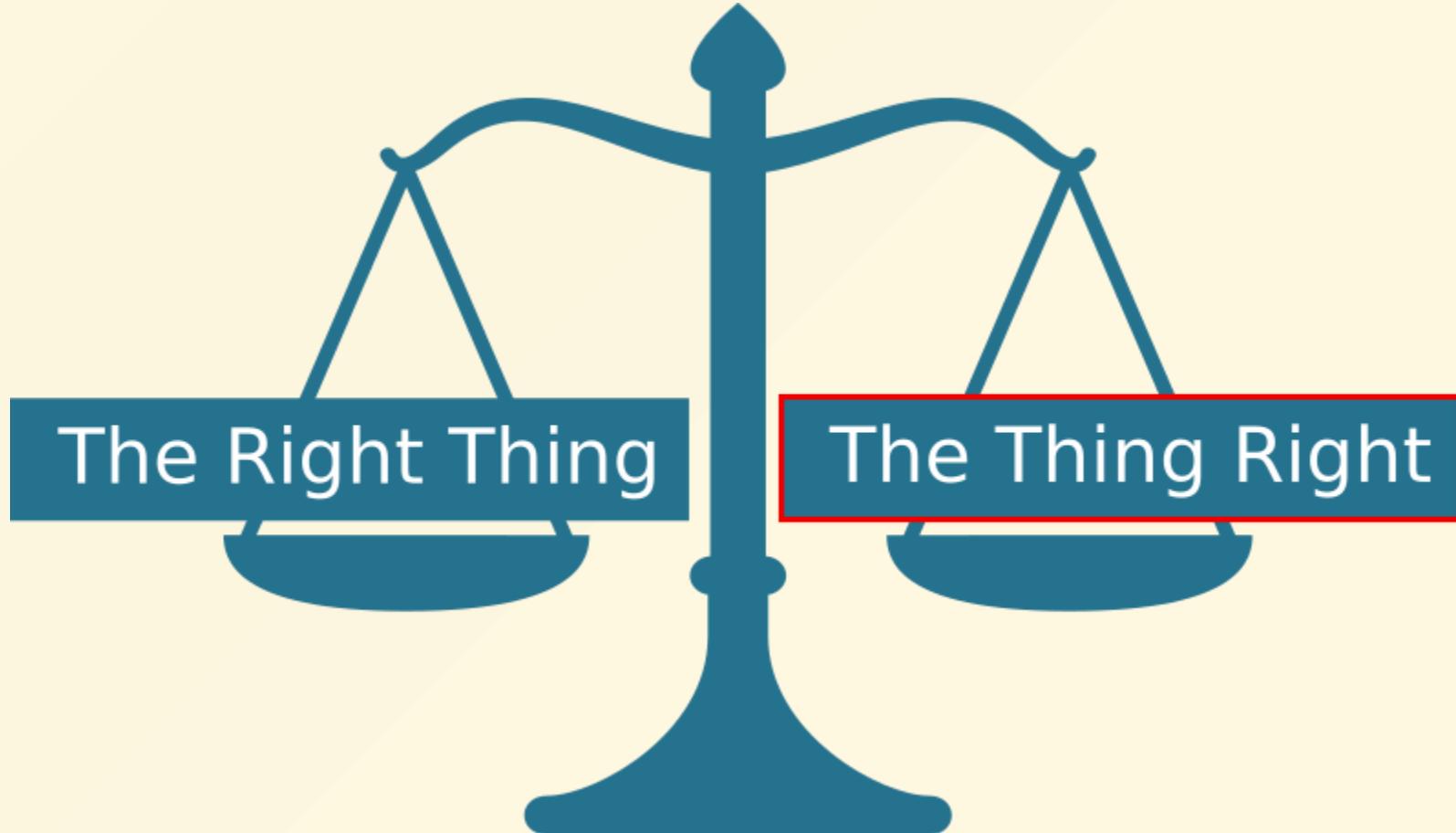
TESTING & TDD

WE ARE BEHIND SCHEDULE
SO JUST LAY THE BRICKS
DOWN AS FAST AS POSSIBLE,
WE WILL ADD THE CEMENT
LATER.





TL;DR



“ Software Craftsmanship promises to take our industry to the next level, promoting professionalism, technical excellence, the death of the production line and factory workers attitude.”

Sandro Mancuso

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Ressources

- Book "Clean Code: A Handbook of Agile Software Craftsmanship", Robert S. Martin, 2008
- Book "Software Craftsmanship : Professionalism Pragmatism Pride", Sandro Mancuso, 2014
- Conference "The Craftsman's Oath", Robert S. Martin - SCLConf 2018