Big Picture

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Avant-propos

To follow those slides... 📱📱💻

http://bit.ly/jmb-teaching

DevOps / Agile / Test / Requirements

- Plan, Test, OK
- But towards WHAT?

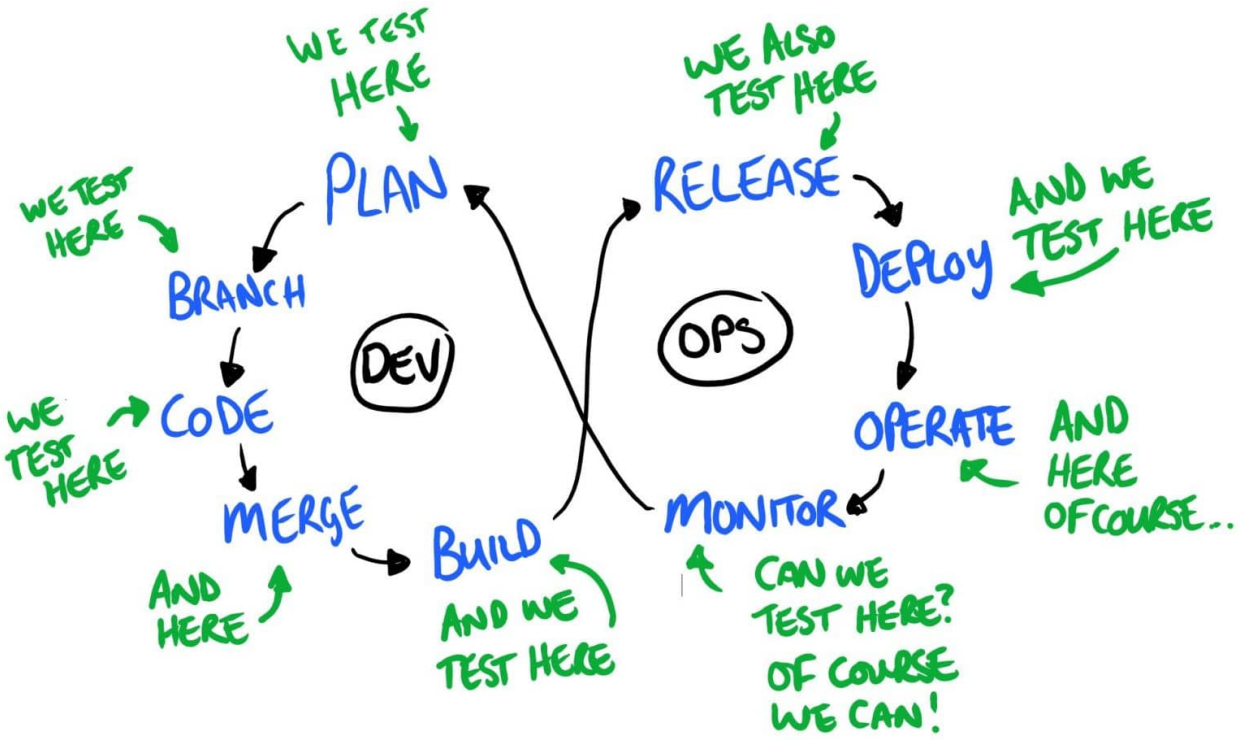

Figure 1. Tests in DevOps

Example of approach (RE'18 tutorial)

- Express requirements through User Stories
- Formally express US acceptance tests (BDD/TDD)
- Use CI/CD to ensure feature availability

Common situation

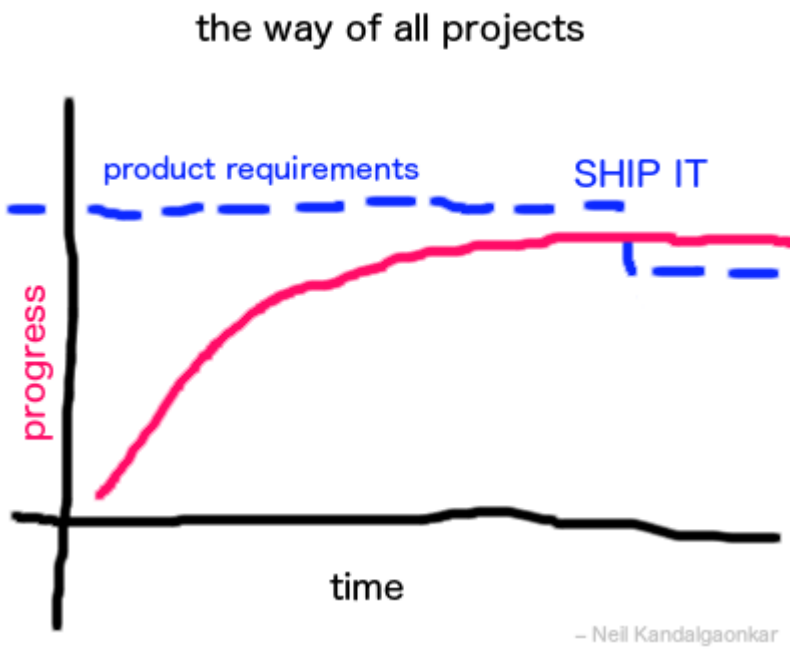

Figure 2. The way of all projects (source Twitter)

Requirements Engineering Process

- Requirements Elicitation
- Requirements Analysis & Negotiation
- Requirements Validation
- Requirements Documentation
- Requirements Management

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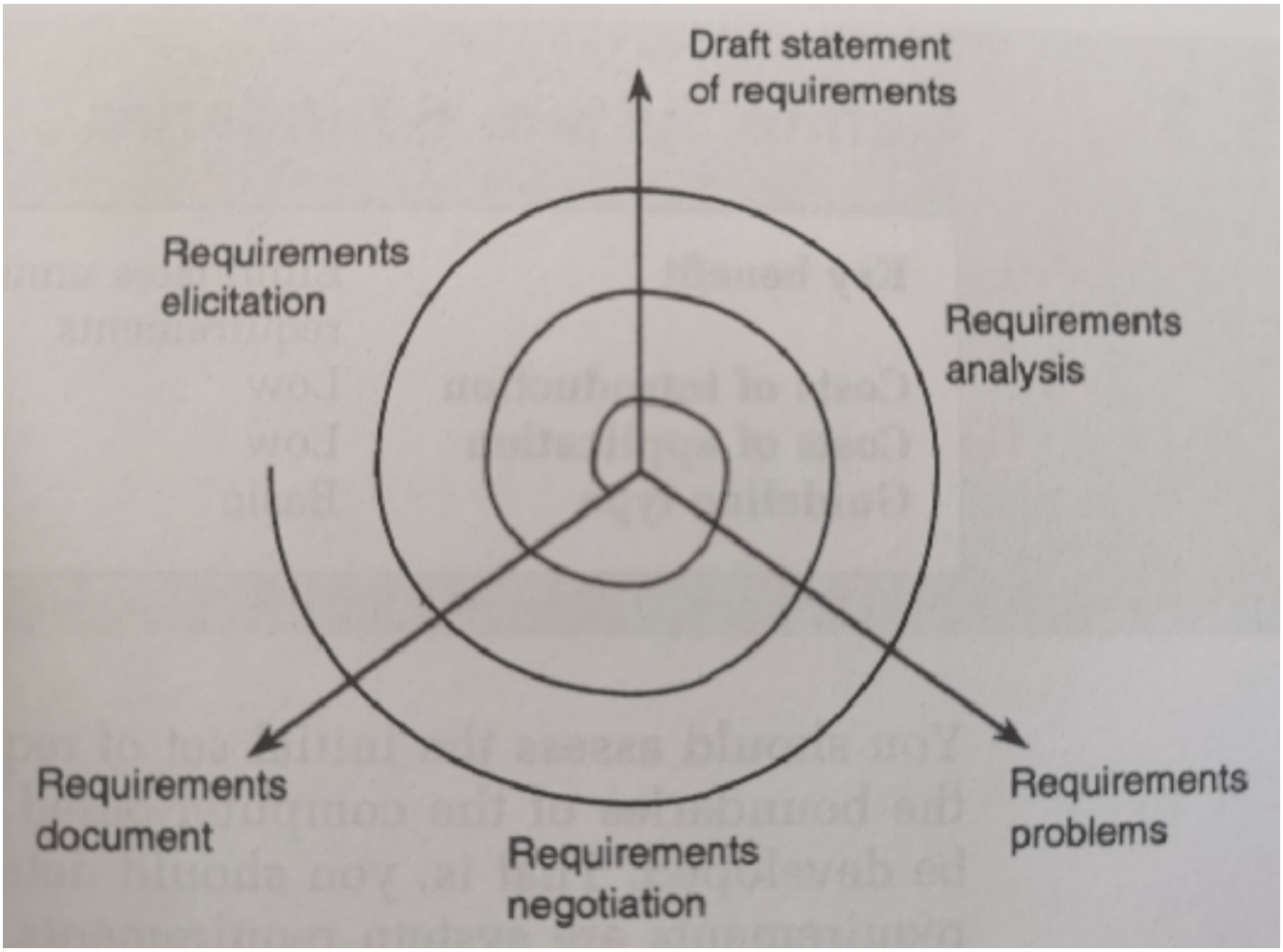

Figure 3. Requirements Engineering Process (source [Sommerville & Sawyer 1997])

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Expected properties vs. description

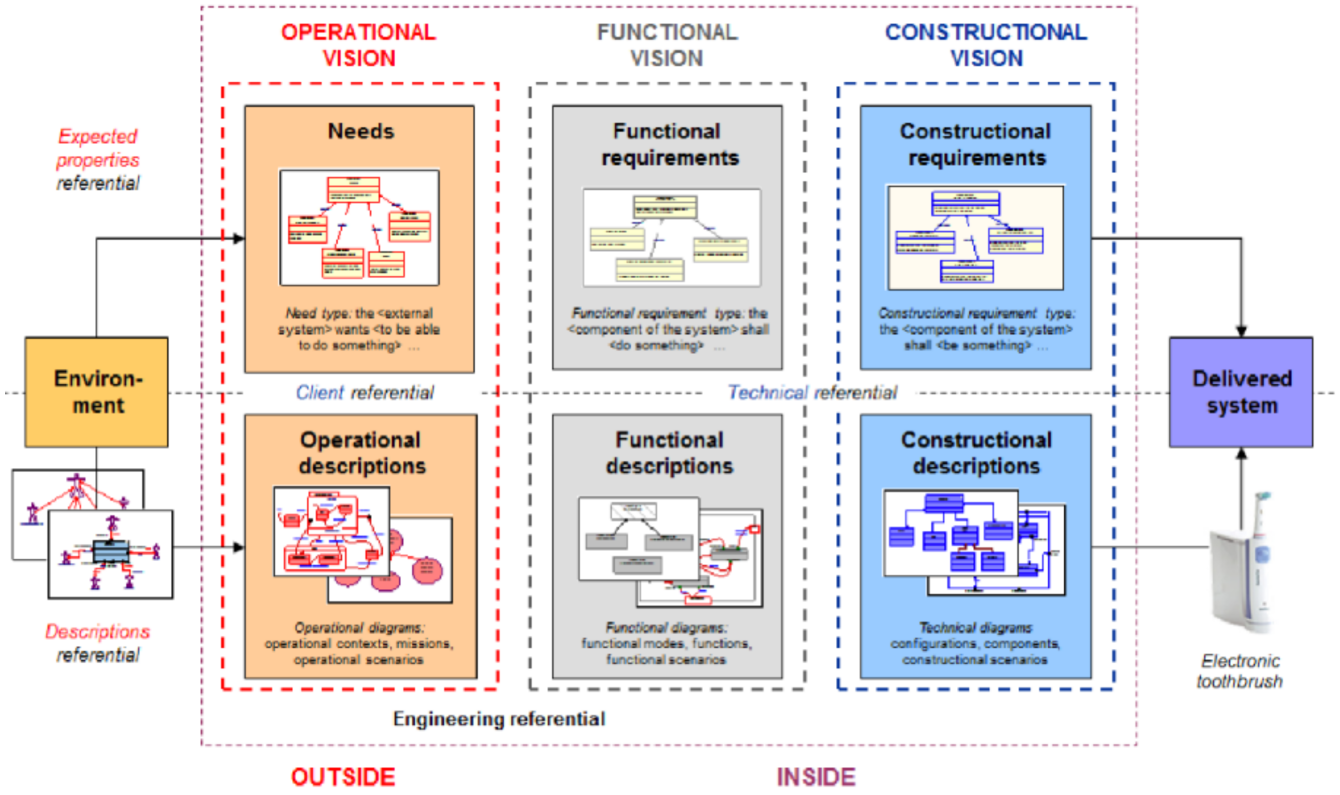


Figure 4. Expected properties vs. description (source CESAM)

Requirements in industry = ALM

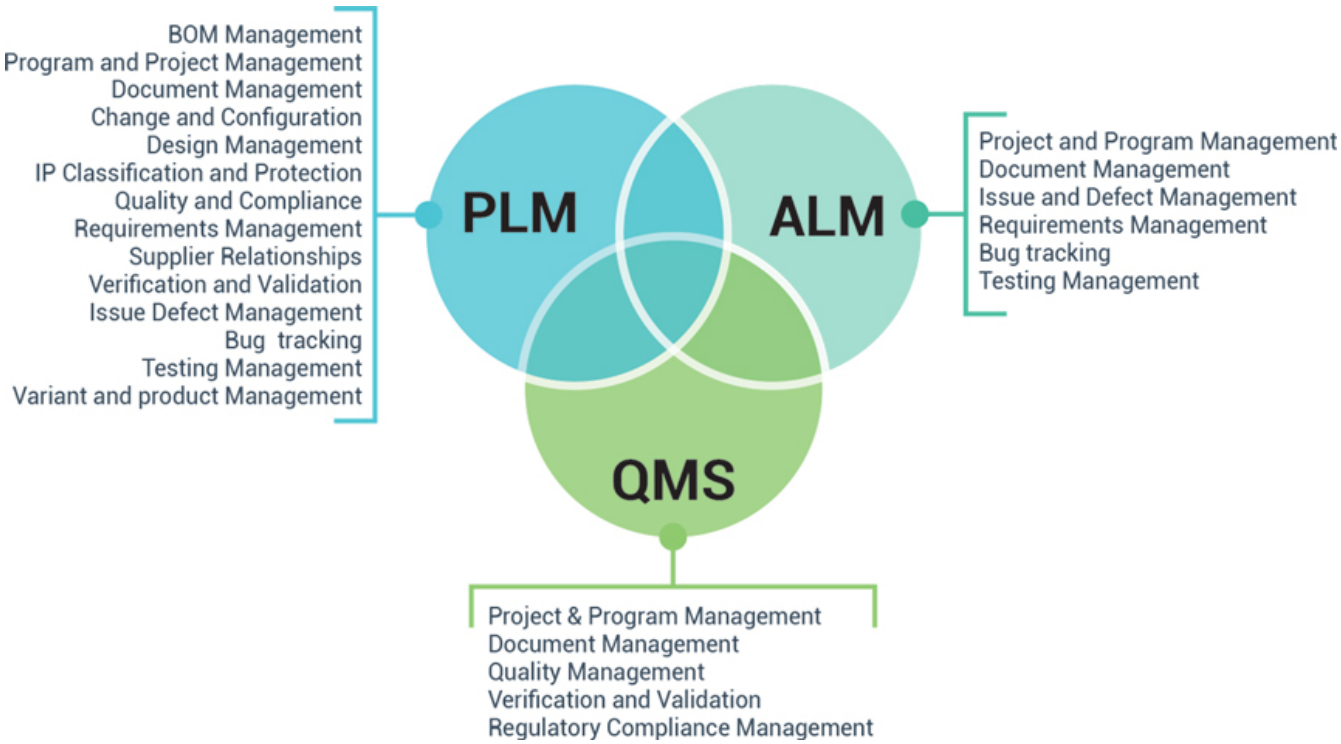


Figure 5. (source here)

Problems...

- Readability?
- Compliance with the specs?

- Maintainability?
- Extension to fulfill the specs?
- Testability?

Situation overview

Typical situation

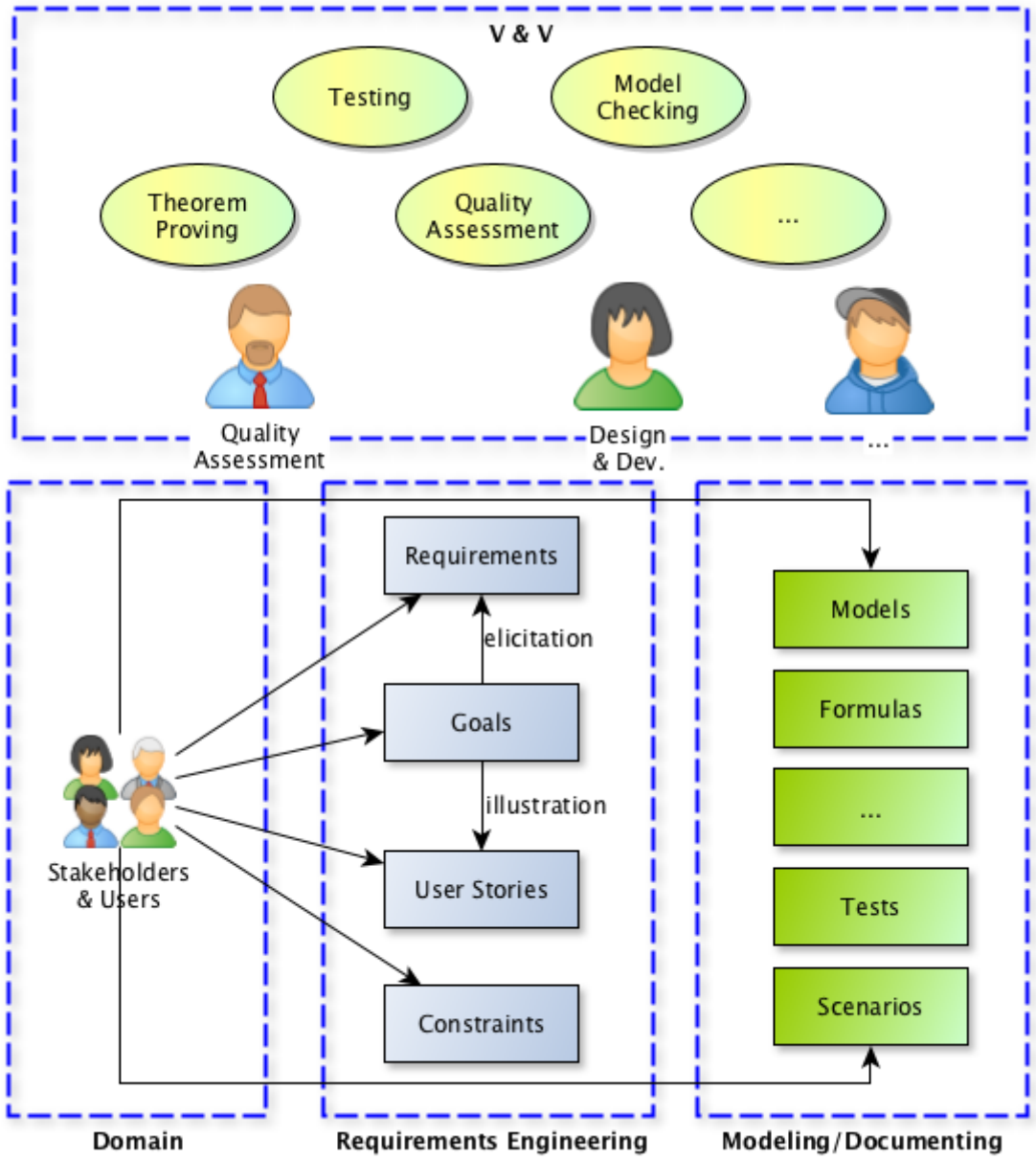


Figure 6. DevOps Quality Assessment

Who will use the product?

Persona = Name + Bio + Objectives

Writing Epics & Stories

Specifying in an agile way

Specifying with Stories

EPIC = Persona + Action + Benefits

Story = Epic + Acceptance criteria + Tests (+ Estimations)

Testing

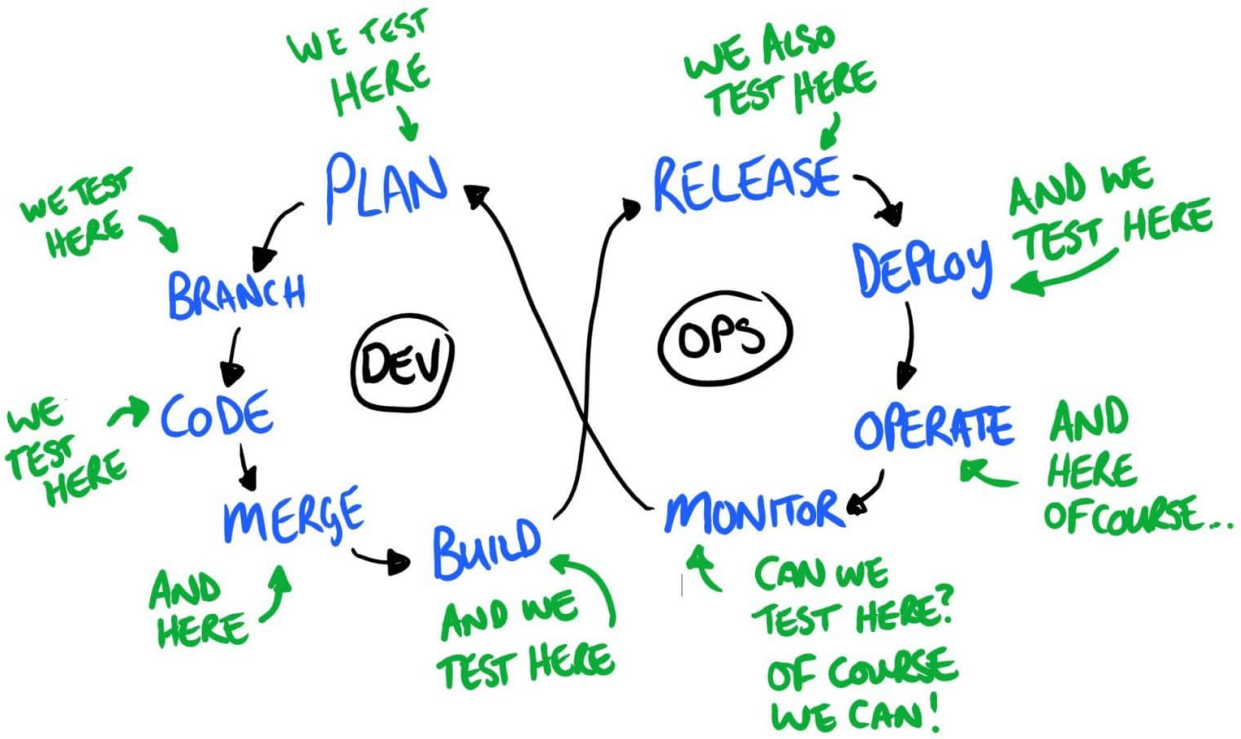


Figure 7. Tests in DevOps

Test-Driven Development

1. (Write an issue about the bug, with details)
2. Write a failing test (reproduce the bug)
3. Correct the bug
4. Make the test pass
5. (close the issue)

Behavior-Driven Development

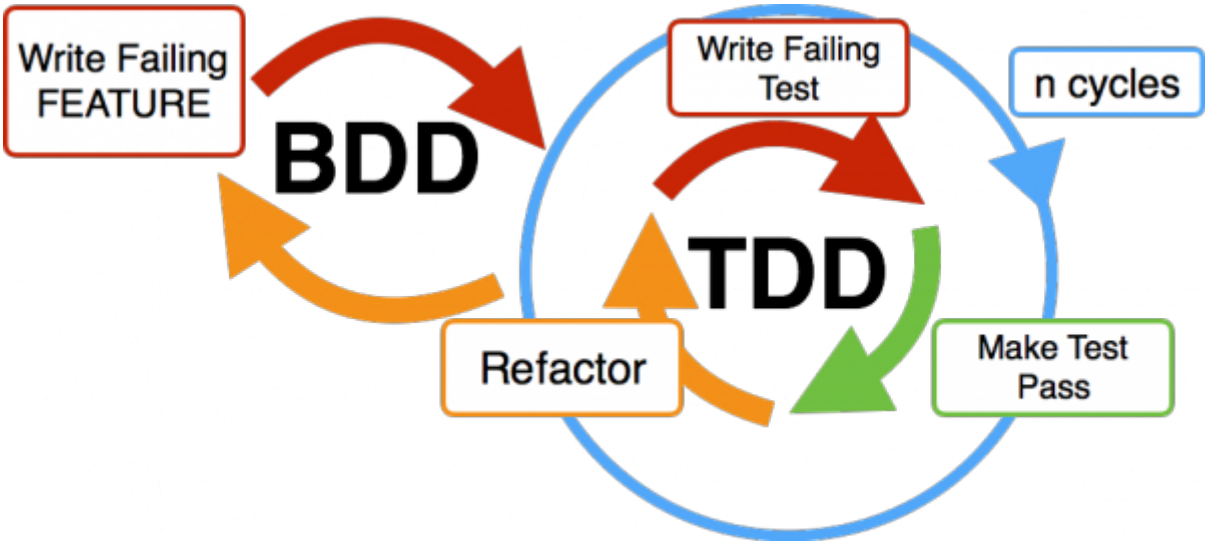
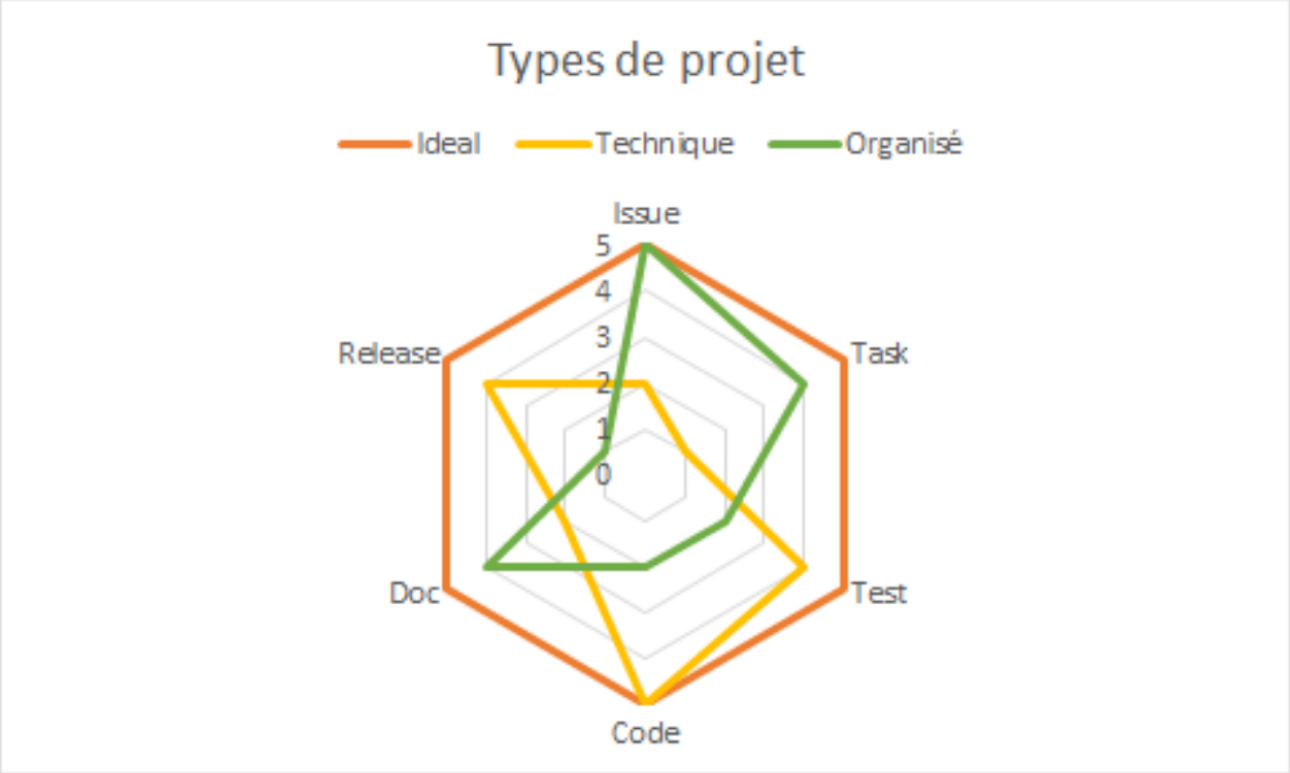


Figure 8. BDD vs TDD

Quality Assessment



Automation (and CI)

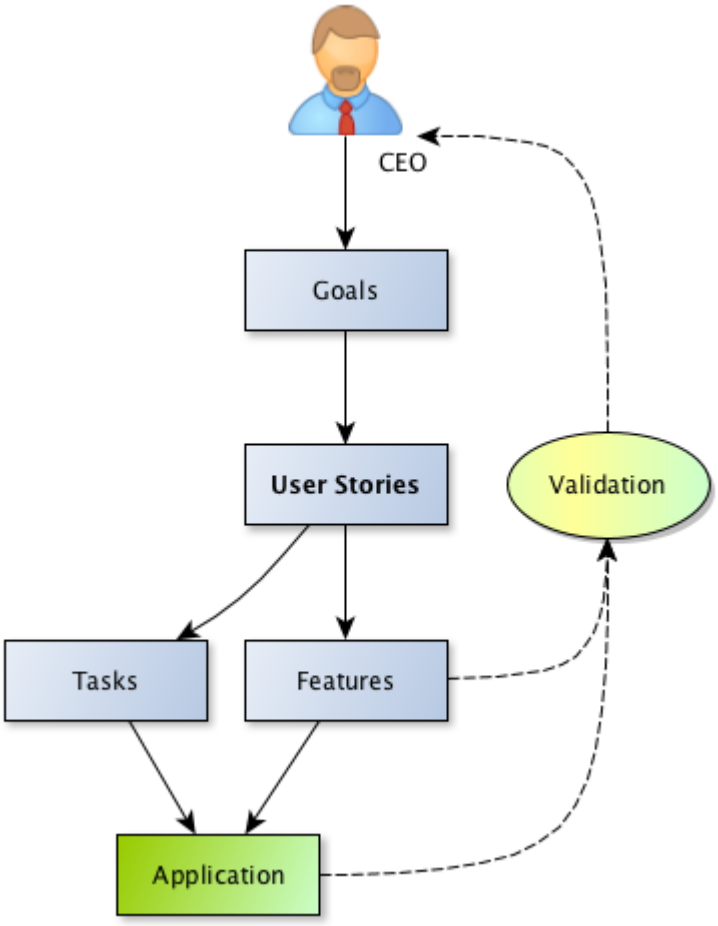
Running 0 Finished 327 All 327

List of finished builds from this project

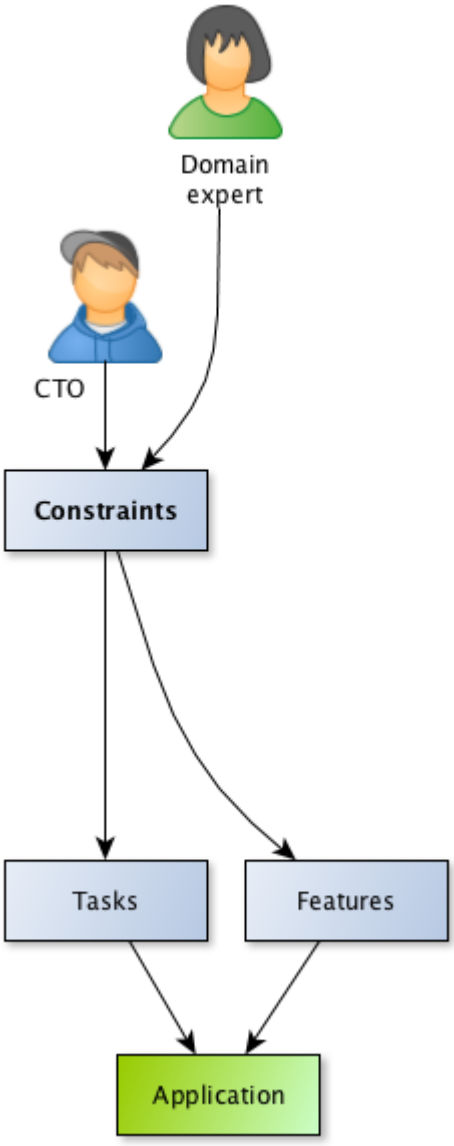
Status	Build ID	Commit	Ref	Runner	Name	Duration	Finished at
success	**Build #351965**	23b89d99	artifacts	golang-cross#1059	Bleeding Edge	6 minutes 4 seconds	about 19 hours ago
success	**Build #351548**	634b6f5e	artifacts	golang-cross#1059	Bleeding Edge	5 minutes 43 seconds	about 22 hours ago
success	**Build #349948**	56329a8e	artifacts	golang-cross#1059	Bleeding Edge	6 minutes 2 seconds	1 day ago
success	**Build #349883**	c01876c1	master	golang-cross#1059	Bleeding Edge	5 minutes 39 seconds	1 day ago
failed	**Build #349807**	623f3f5a	master	golang-cross#1059	Bleeding Edge	1 minute 50 seconds	1 day ago
failed	**Build #349804**	338d0a8b	artifacts	golang-cross#1059	Bleeding Edge	1 minute 35 seconds	1 day ago

Who are your clients?

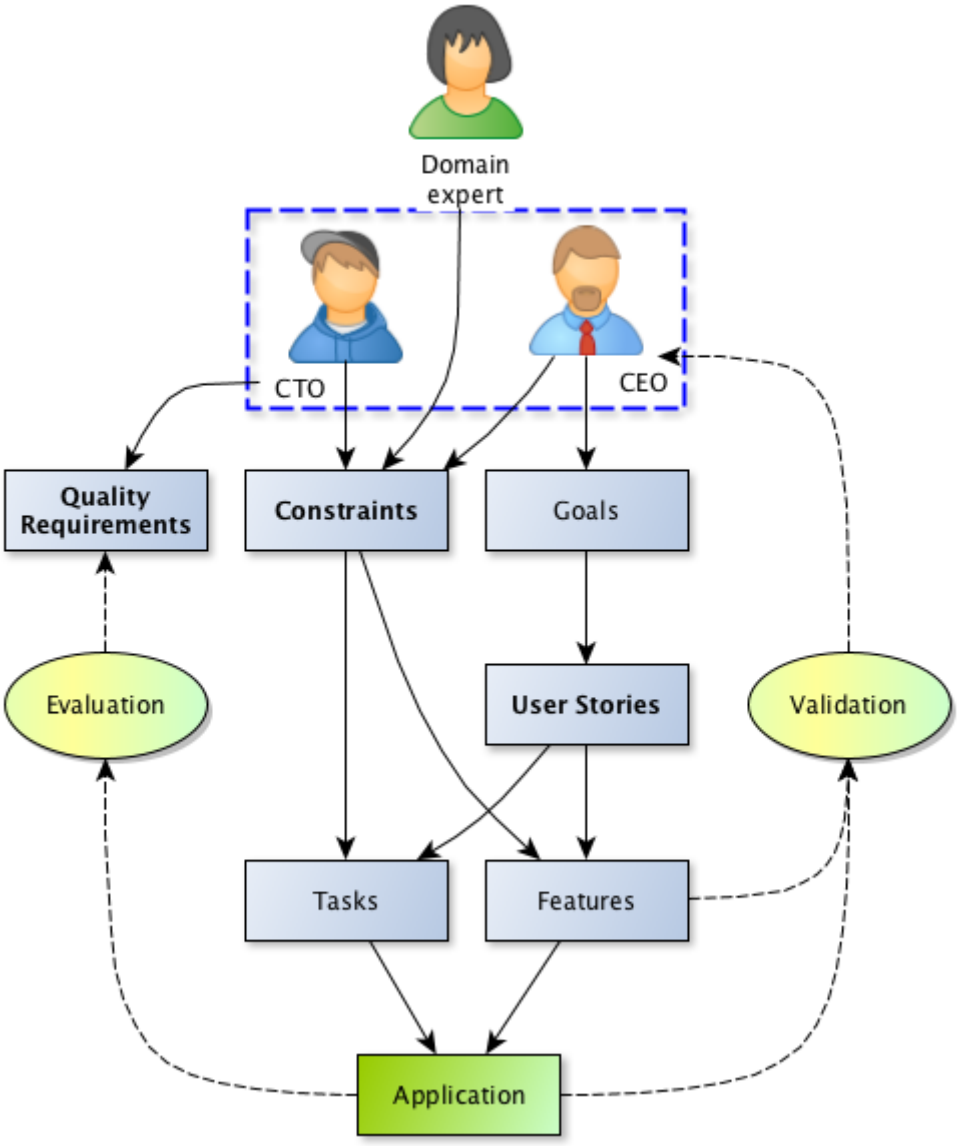
Your client(s)



Your teacher(s)



At the same time!



Minimal Viable Product (usual)

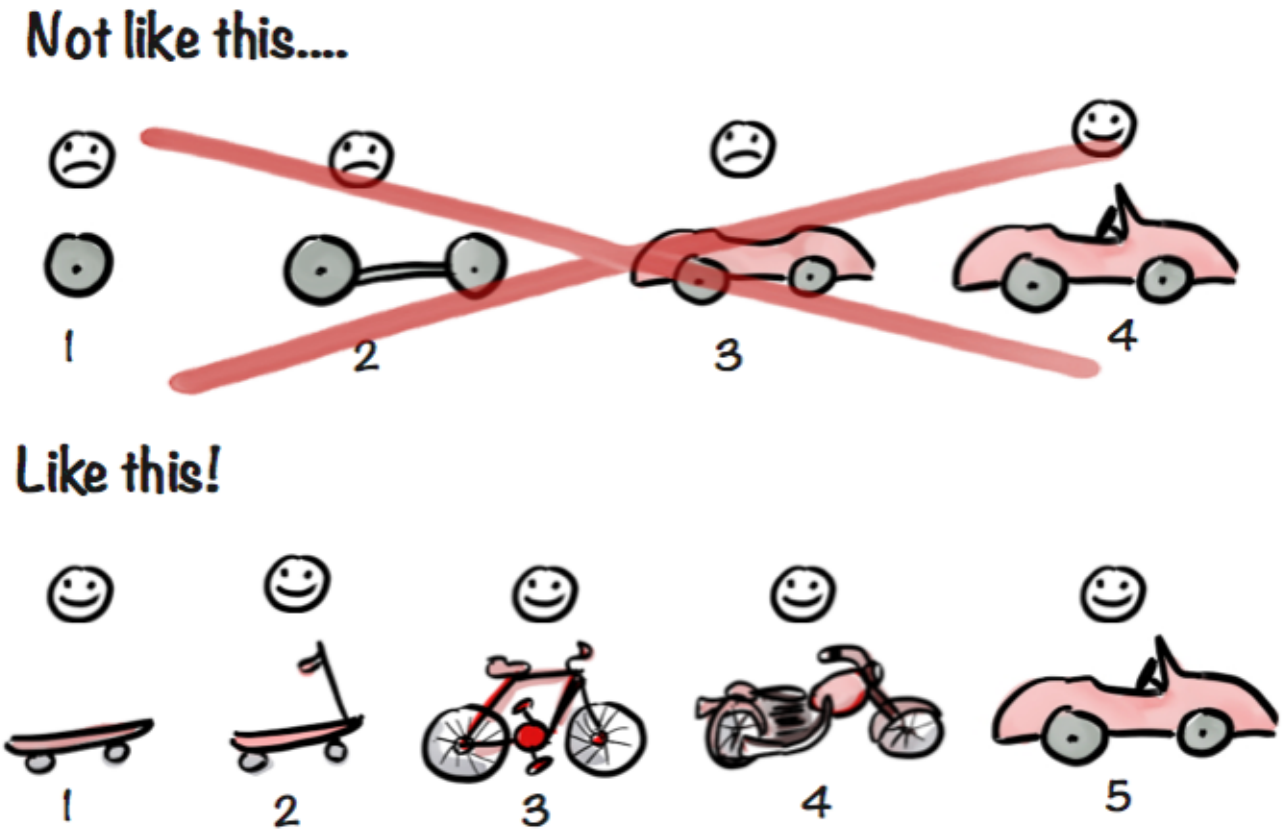


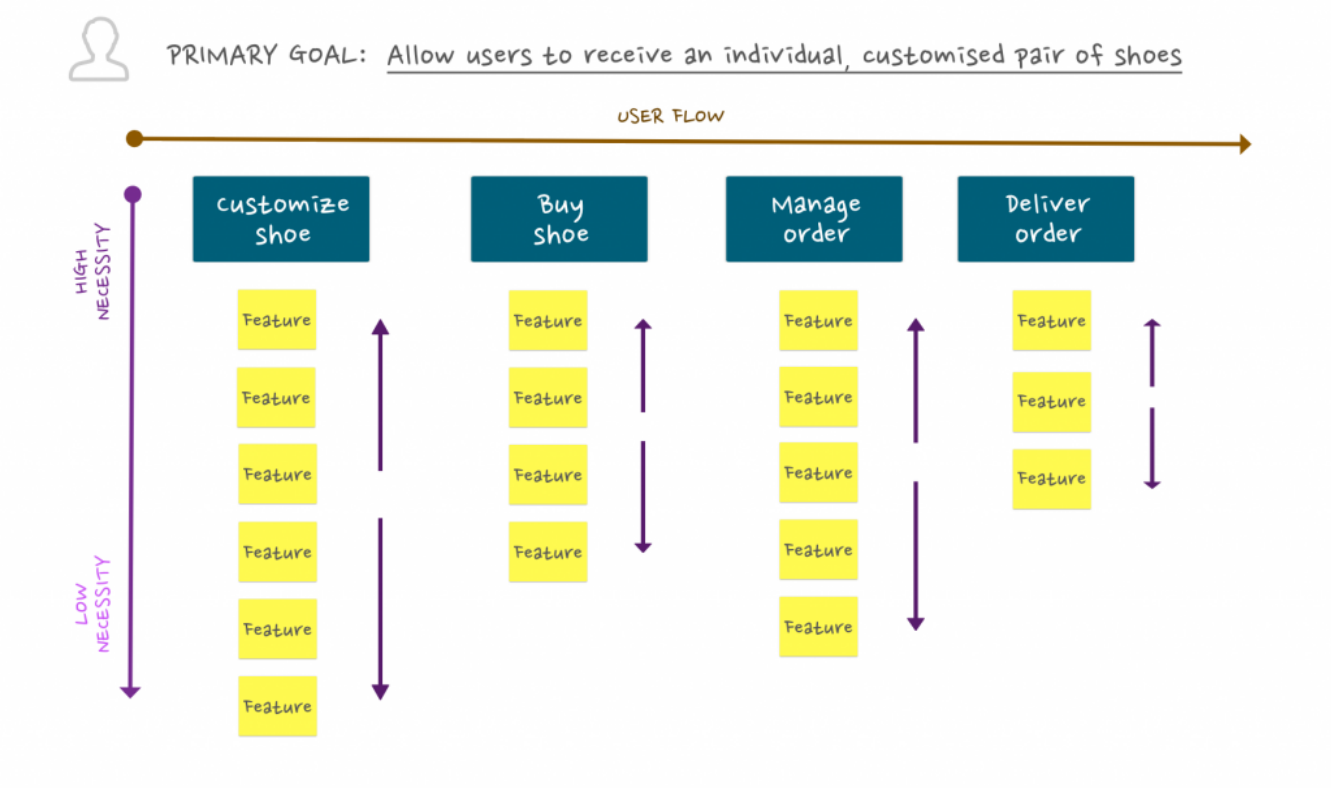
Figure 9. Minimal Viable Product (by Henrik Kniberg)

Minimal Viable Product (improved)

[minimum viable product] | *minimum-viable-product.png*

Figure 10. A more accurate representation (source https://altkomsoftware.pl/en/blog/mvp-insurance/)

MVP & EPICS



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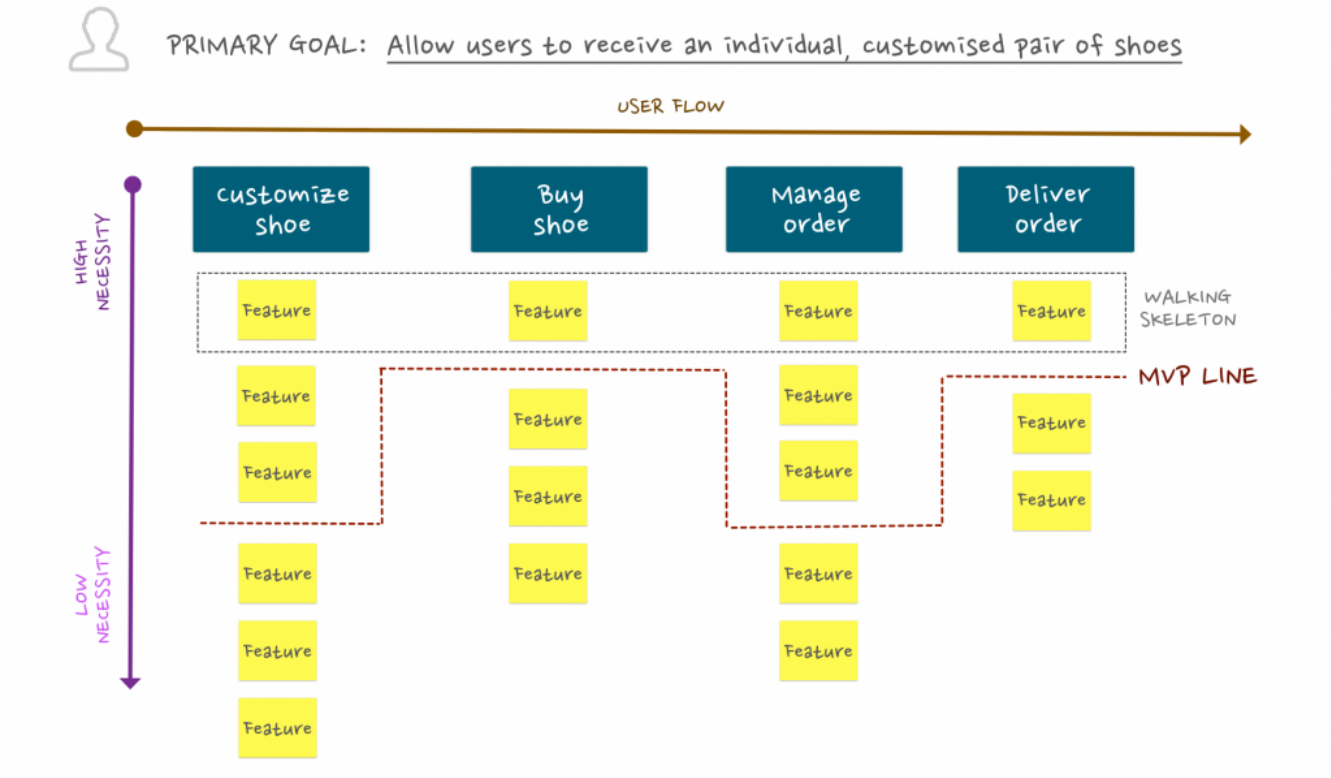


Back to the requirements

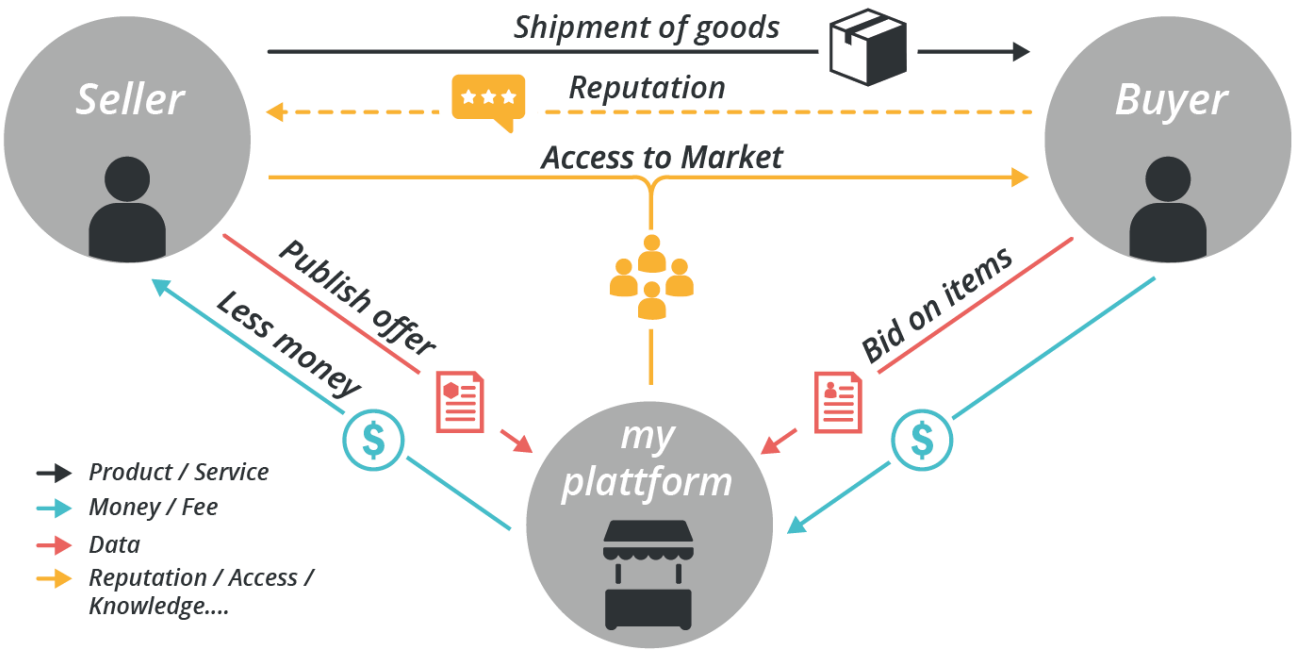
MOA

Req = *Stakeholders Needs*

MOE

Req = *Systems Needs*

Stakeholders Value Networks



Traceability

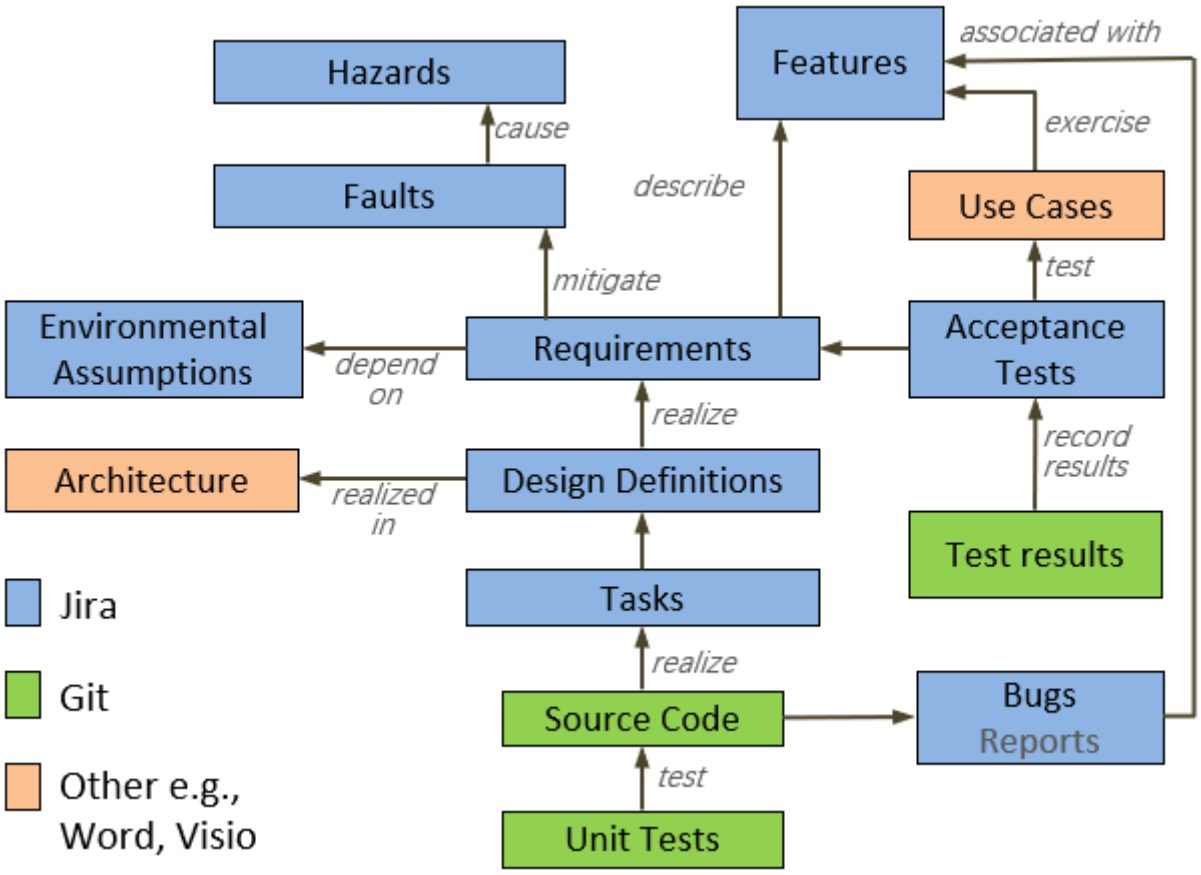


Figure 11. Example of traceability in the Dronology project (source here)

Appendix A: Useful links

Gail Murphy's keynote at RE'2018

https://www2.slideshare.net/murphygc/beyond-devops-finding-value-through-requirements

Appendix B: Credits

Images taken from:

- https://abstracta.us/blog/devops/testing-driver-devops-culture/
- http://meshfields.de/continuous-integration-testing-delivery-ionic2-hybrid-mobile-apps-buddybuild/
- https://altkomsoftware.pl/en/blog/mvp-insurance/
- http://www.cesames.net/wp-content/uploads/2017/05/CESAM-guide.pdf

The End