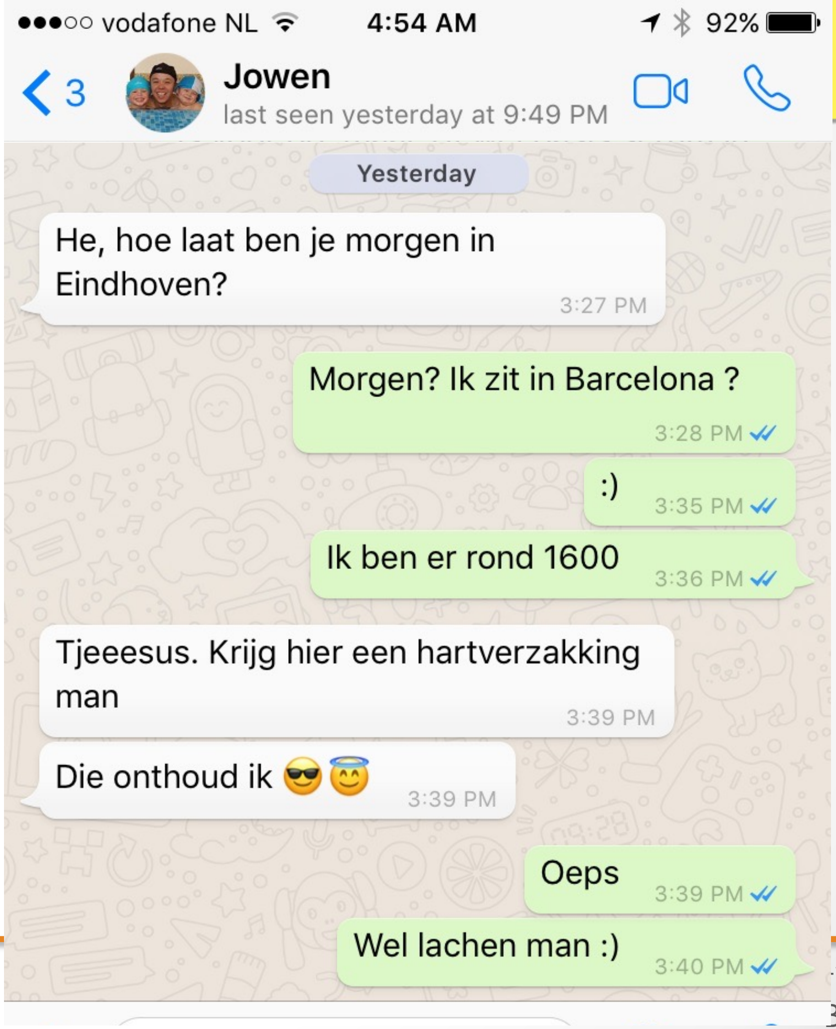
Agile Developer At Scale

Cesario Ramos



He, hoe laat ben je morgen in Eindhoven? 3:27 PM

Morgen? Ik zit in Barcelona ? 3:28 PM

:) 3:35 PM

Ik ben er rond 1600 3:36 PM

Tjeeesus. Krijg hier een hartverzakking man 3:39 PM

Die onthoud ik 😎😇 3:39 PM

Oeps 3:39 PM

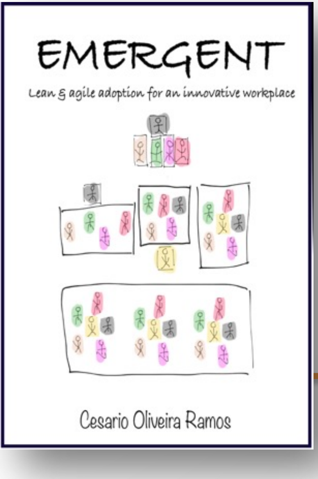
Wel lachen man :) 3:40 PM

SPEAKER CREDENTIALS

- Formerly: Multi-lingual programmer, CTO, Lead Architect, Product Manager, Scrum Master & Executive Agile Coach
- Currently: Coaching, training, speaking & writing.

CERTIFIED LeSS TRAINER

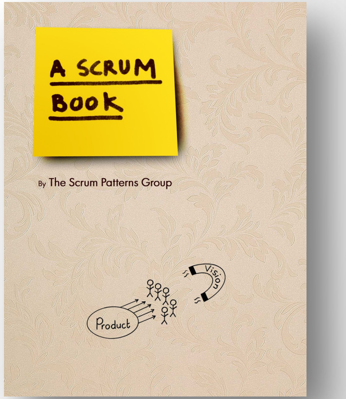
Professional Scrum Trainer
Scrum.org



EMERGENT

Lean & agile adoption for an innovative workplace

Cesario Oliveira Ramos



A SCRUM BOOK

By The Scrum Patterns Group

The Agile Developer at Scale

Topics

- Multiple team scrum
- Communicate in Code
- Cross Cutting Concerns
- Q&A

Multiple Team Scrum

Who works on 1 product with more than 4 development teams?

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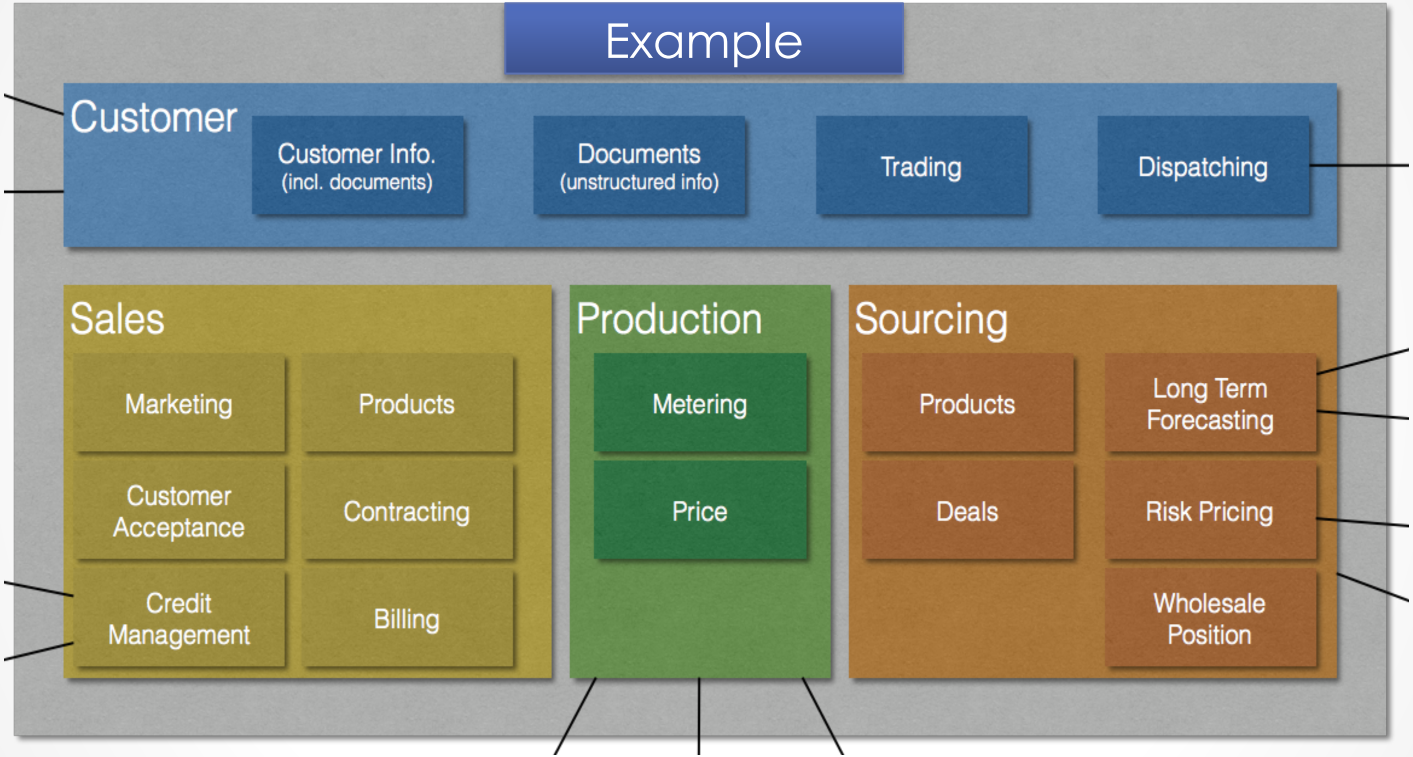
Example



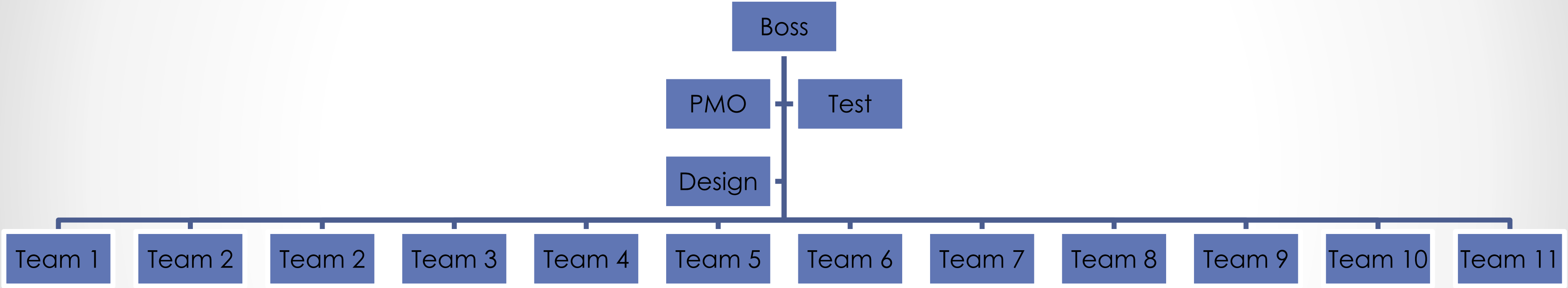
Customer
Customer Info. (incl. documents)
Documents (unstructured info)
Trading
Dispatching

Sales
Marketing
Products
Customer Acceptance
Contracting
Credit Management
Billing

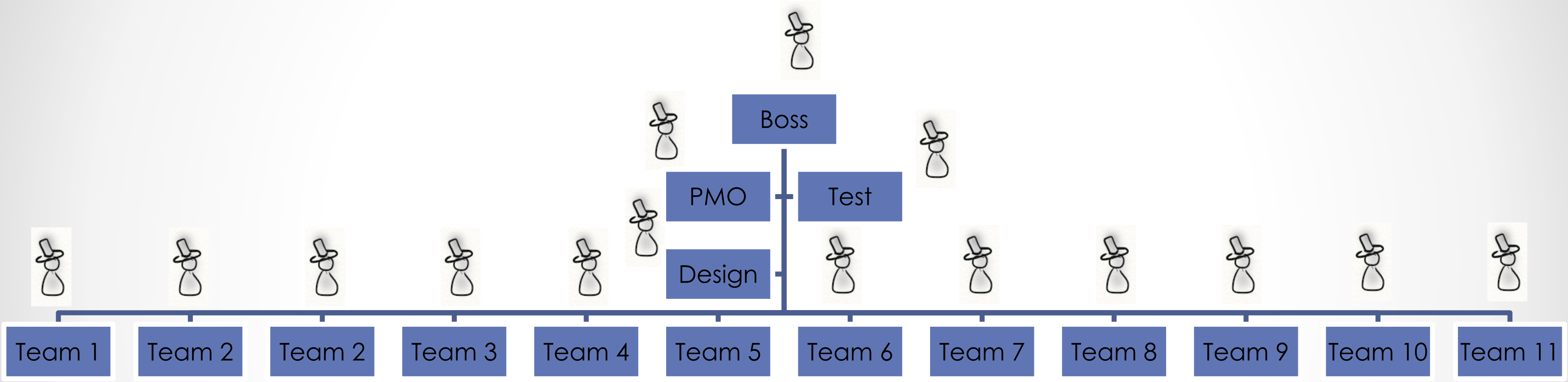
Production
Metering
Price

Sourcing
Products
Long Term Forecasting
Deals
Risk Pricing
Wholesale Position

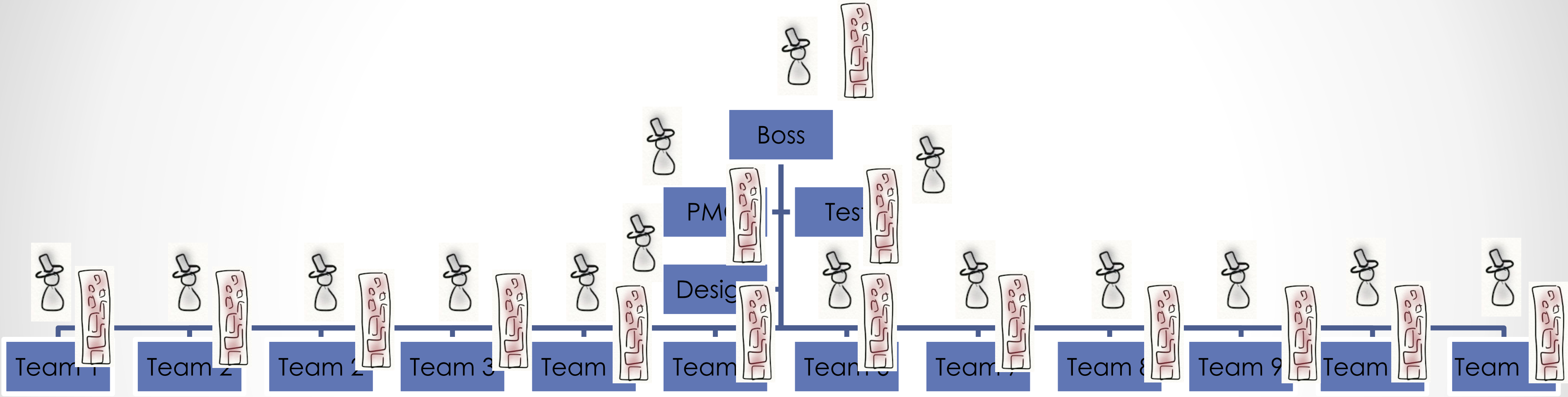
What I see typically….



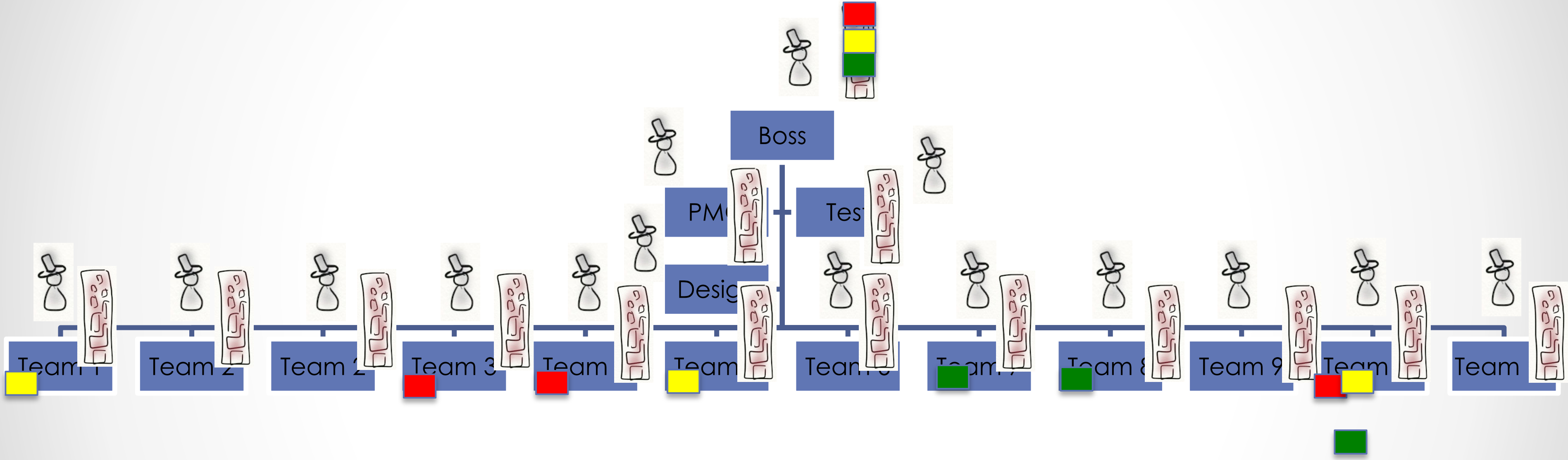
Copy Paste - whole lot of PO's



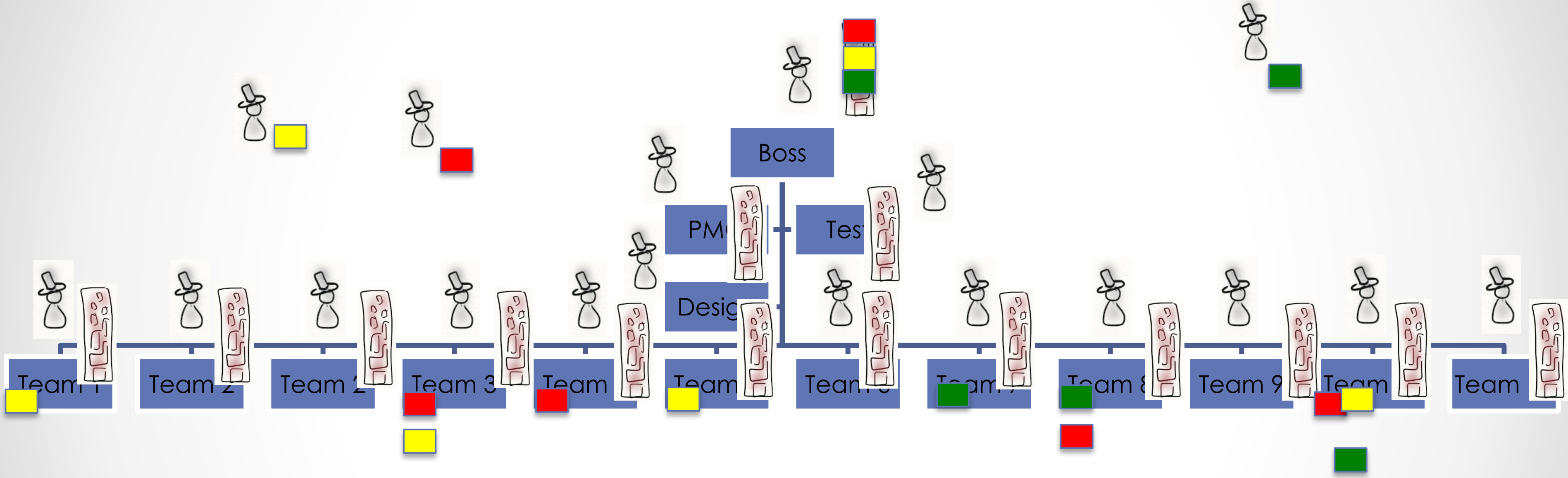
And lot's of 'product' backlogs



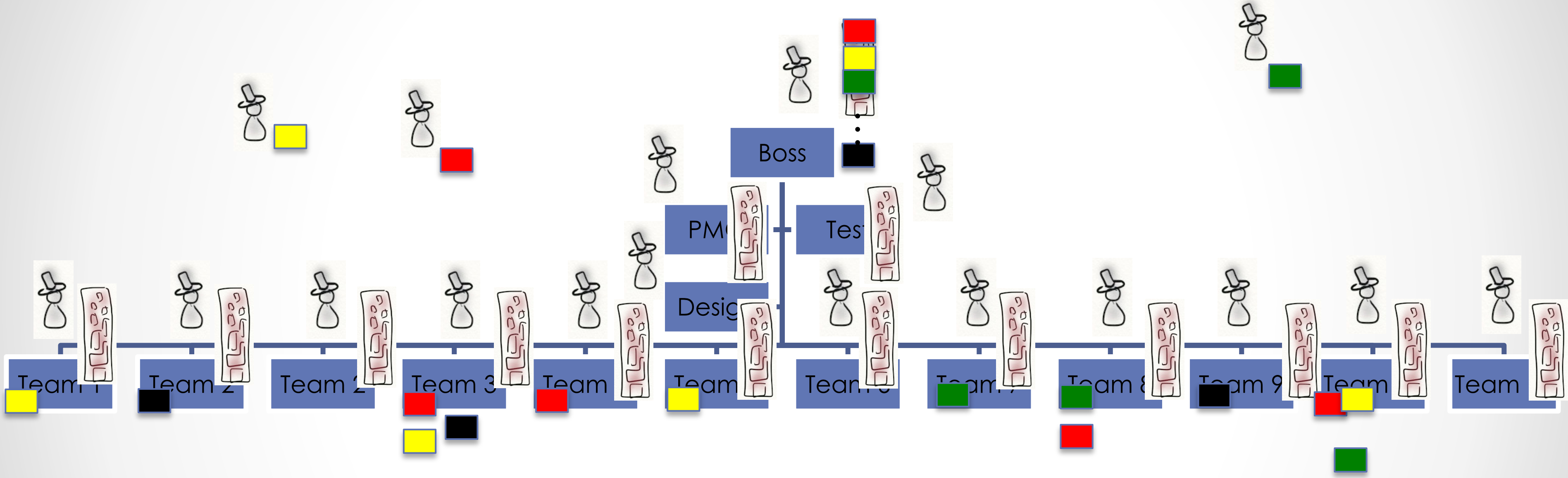
Results in working out of order…



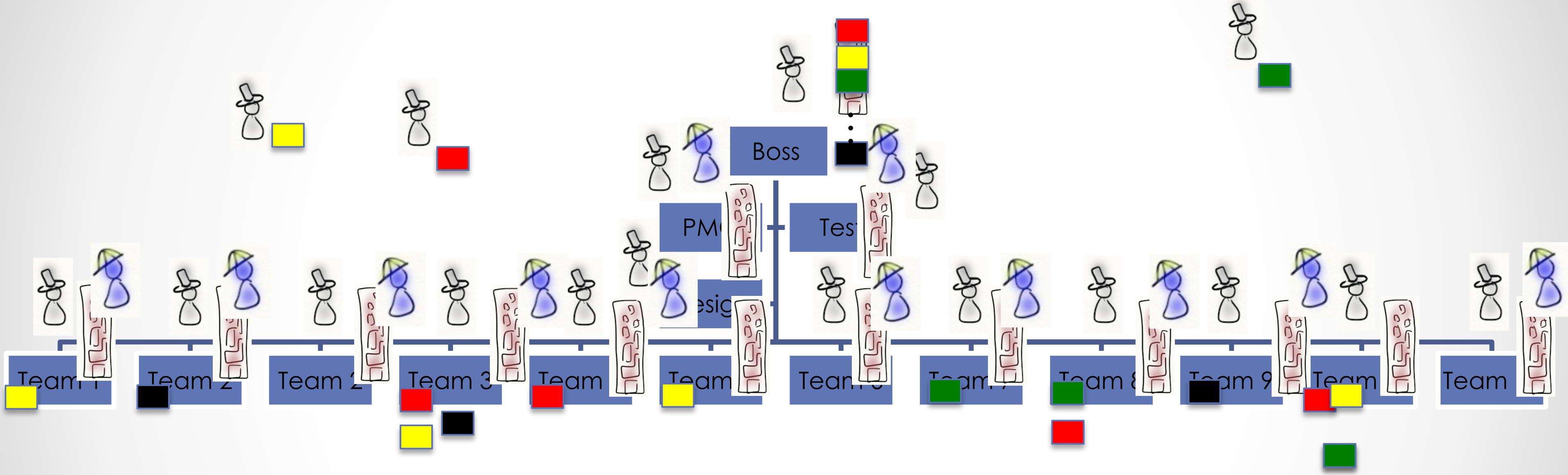
And special coordination roles



And working on low value items



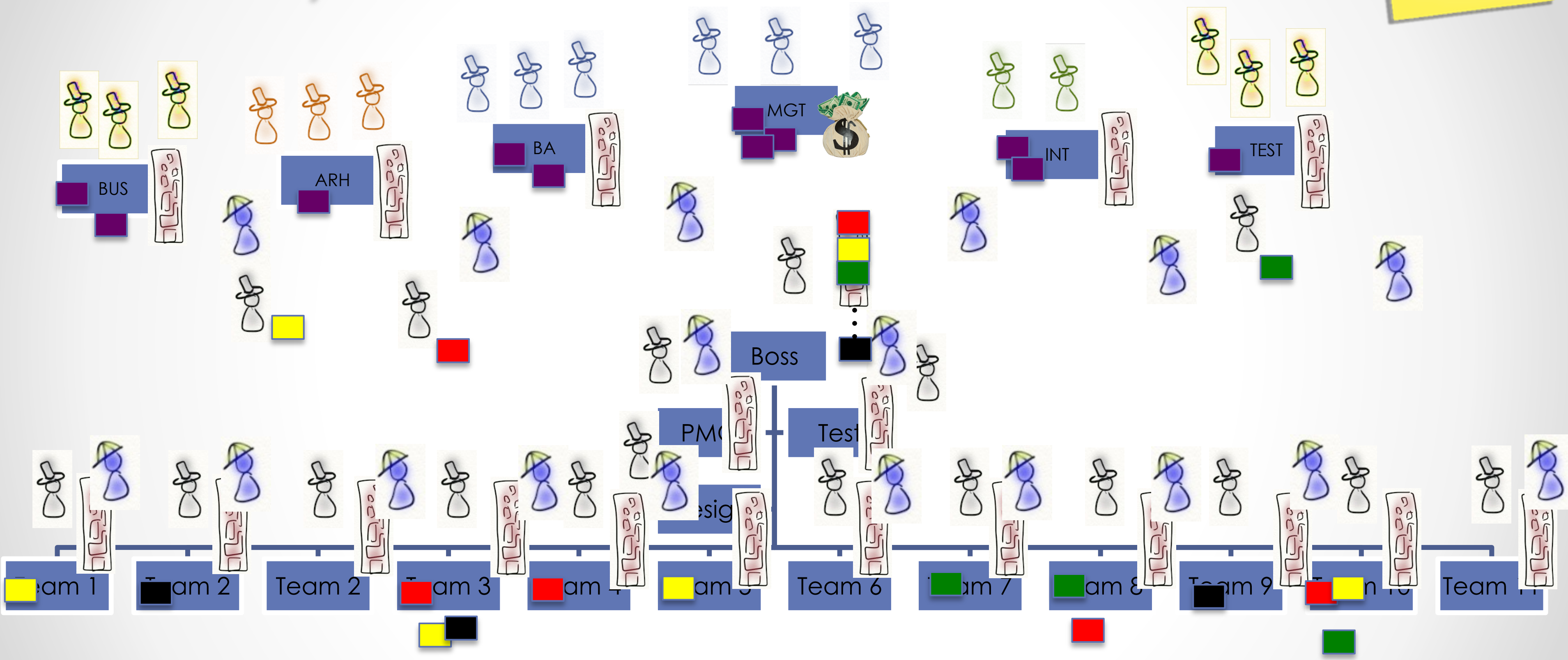
And of-course 'Scrum Masters'



And now?

- How do we manage dependencies?
- How do we measure progress?
- Who will do the analysis?
- Who will do the architecture?
- Who will do the testing?

Add layers to coordinate



What about the Agile Values?

"We build this six months ago and now other teams are going to use it..."

"Our tester is not in so we cannot test...."

"Why do I have 15 people in the PO meeting?..."

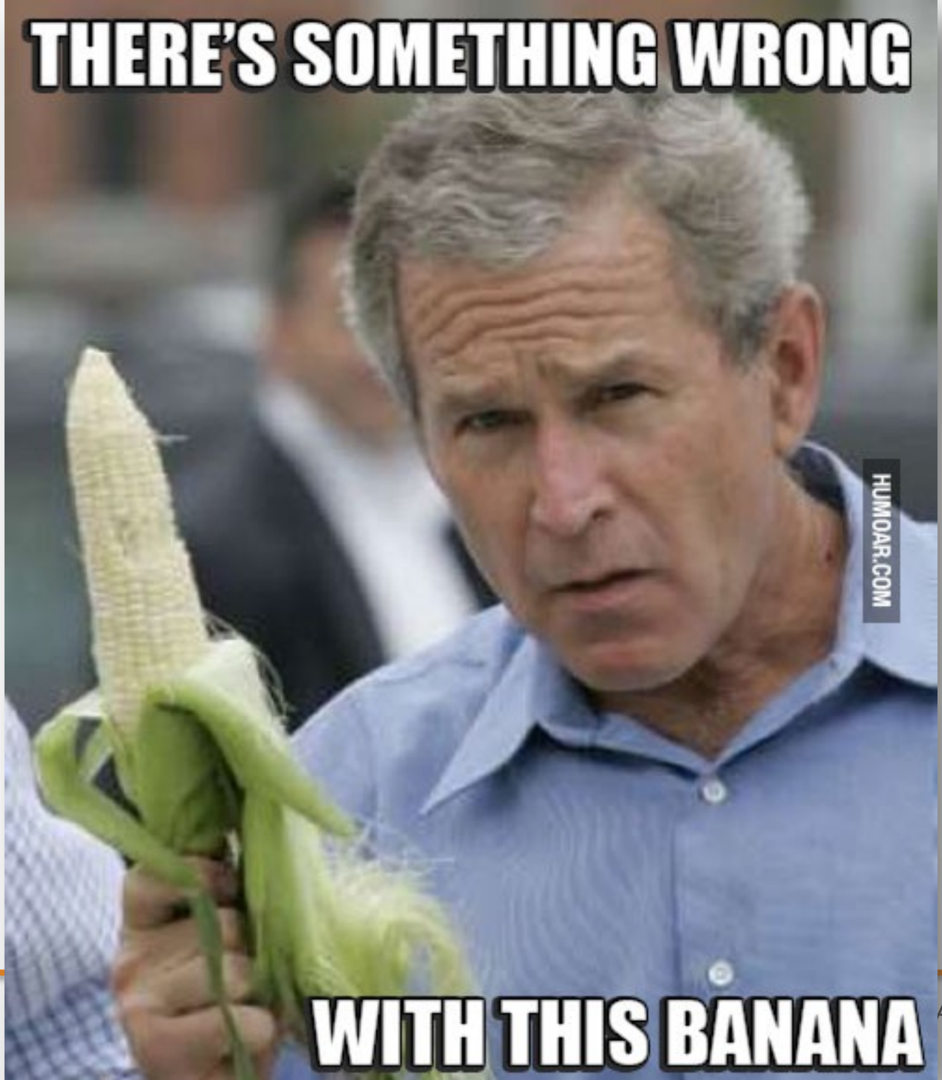
"I have been working here for a year and this is the first time that I talked to a user of the system..."

Some more quotes

“The teams do not have time to help other teams....”

“At then end of a Sprint when the testers start testing we already create a new branch to start working on stuff in the next Sprint…”

“Maintenance guy: I need to change code from teams after check in to ensure it meets my standards …”


THERE'S SOMETHING WRONG
WITH THIS BANANA
HUMOAR.COM

Component Teams Introduce Waste

AND

Discourage The Agile Values & Principles

MIN

Explore Feature Teams

In your group:

Divide the cards between Feature Teams & Component Teams

Some highlights

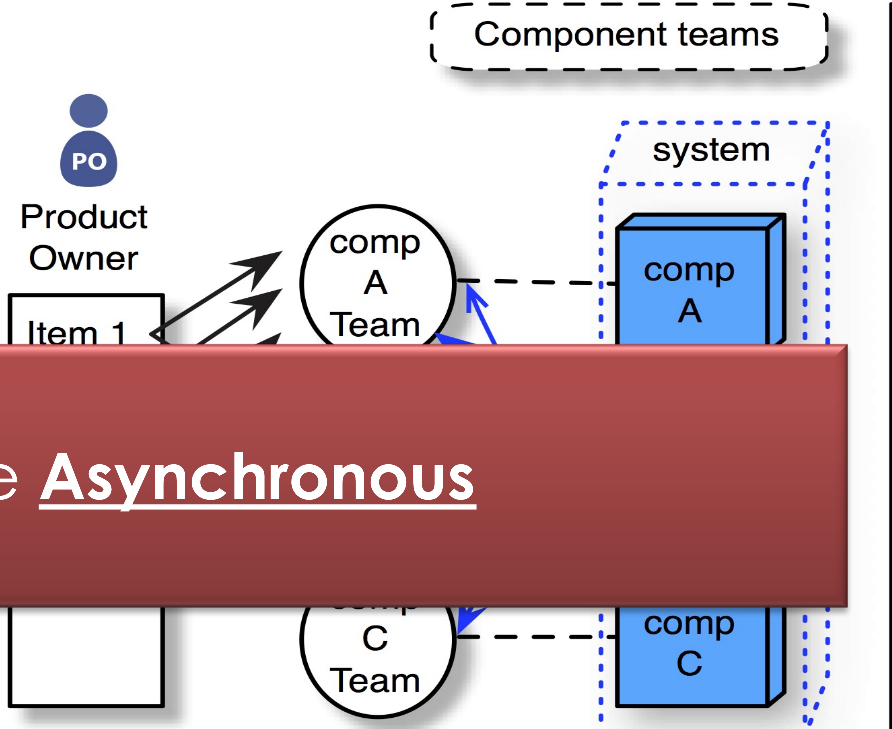
- Focus on lines of code
- Responsible for a part
- Need special coordination roles
- Often leads to Low quality code
- Restricts learning of new skills

- Focus on e2e features
- Responsible for value
- Requires skilled engineering practices
- Motivates to create great code
- Leads to higher motivation

Implications

- How do you optimise for value?
- Who does the testing?
- Who does the architecture?
- Who does integration?
- …

Dependencies are **Asynchronous**

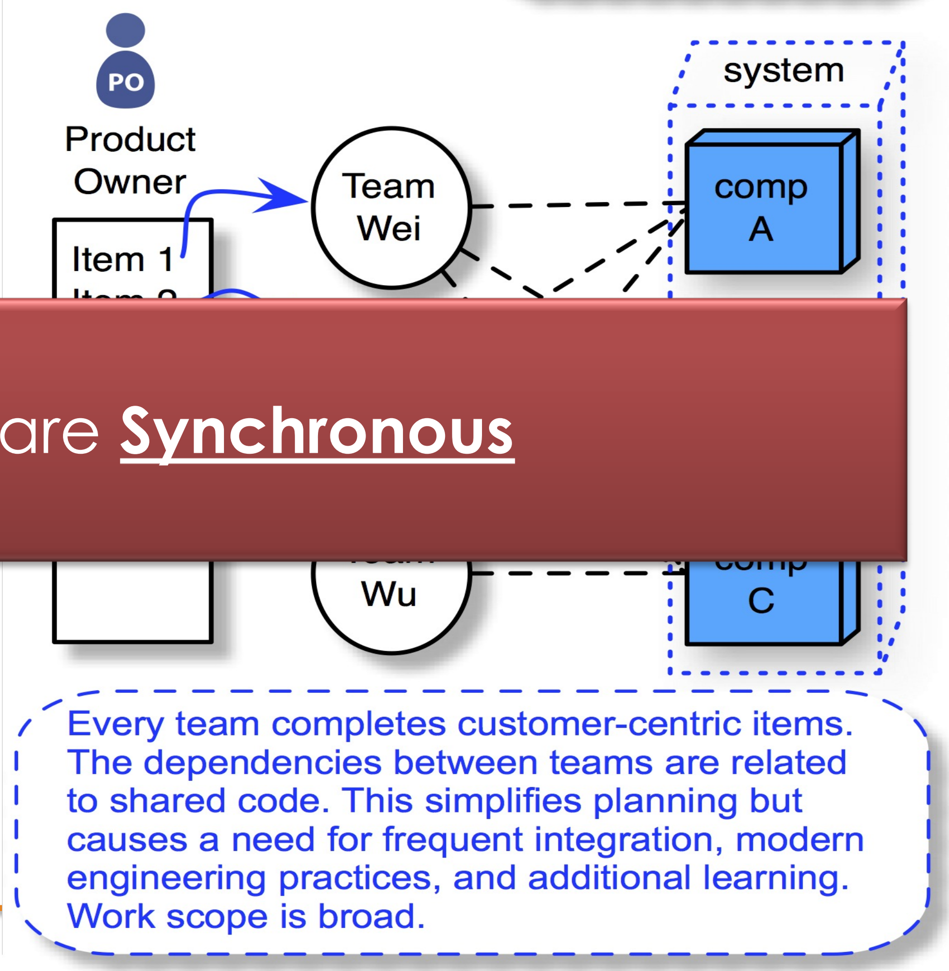


Work from multiple teams is required to finish a customer-centric feature. These dependencies cause waste such as additional planning and coordination work, hand-offs between teams, and delivery of low-value items.
Work scope is narrow.

Feature Teams

Dependencies are **Synchronous**

- Promotes Learning
- Clear Responsibilities



Every team completes customer-centric items. The dependencies between teams are related to shared code. This simplifies planning but causes a need for frequent integration, modern engineering practices, and additional learning. Work scope is broad.

Communicate in Code

Communication in CODE

Continuous Integration

means to

have a Build Server(s)

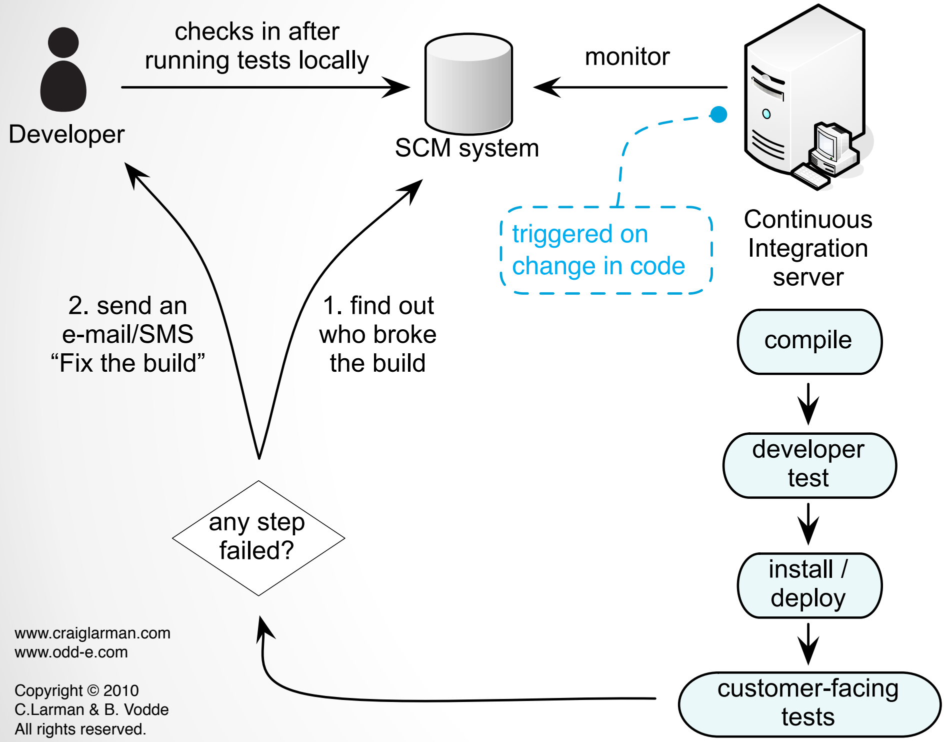
Communicate in Code

- Coordination matches integration
- Update regularly, check

INTEGRATION SUPPORTS COORDINATION

- Use social coding tools (github/gitlab)
- Avoid barriers to integration

CI - Avoid Feature Branches



checks in after running tests locally
Developer
SCM system
monitor
triggered on change in code
Continuous Integration server
compile
developer test
install / deploy
customer-facing tests
any step failed?
1. find out who broke the build
2. send an e-mail/SMS "Fix the build"
www.craiglarman.com
www.odd-e.com
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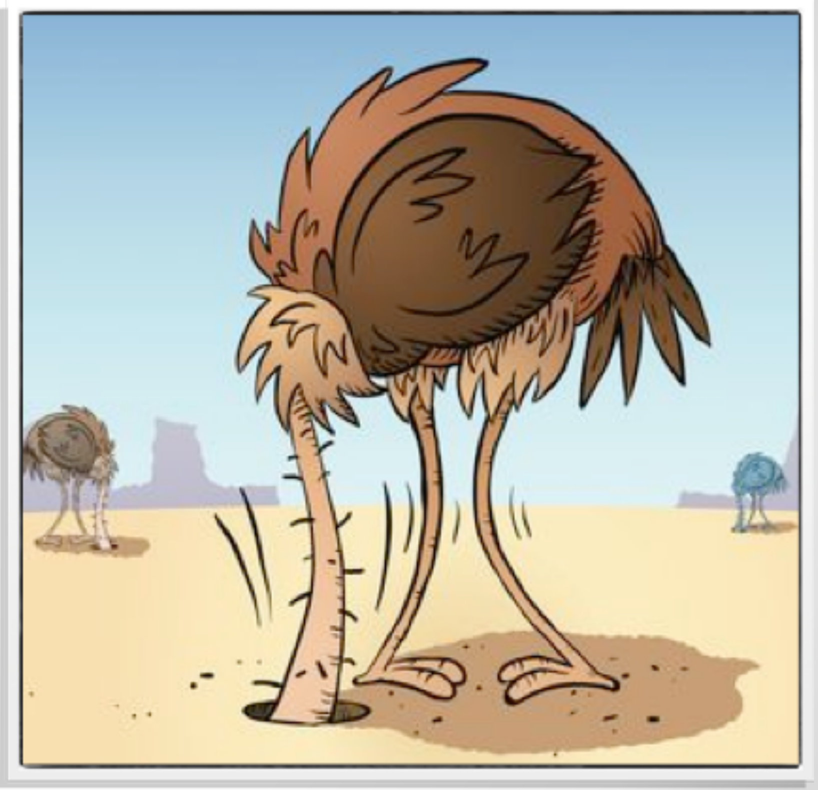


Integration at Very Large Scale

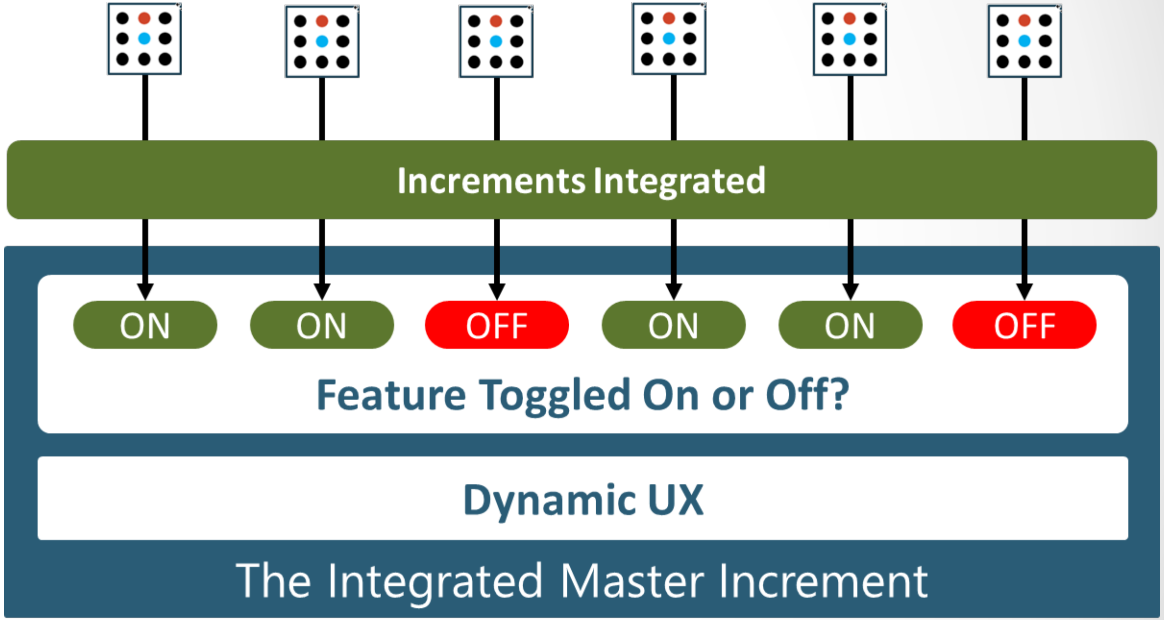
- A full time integration team who help to coordinate

Google has 10,000 developers checking into trunk – no branches.
5500+ submissions per day.

http://bit.ly/LnYc0L

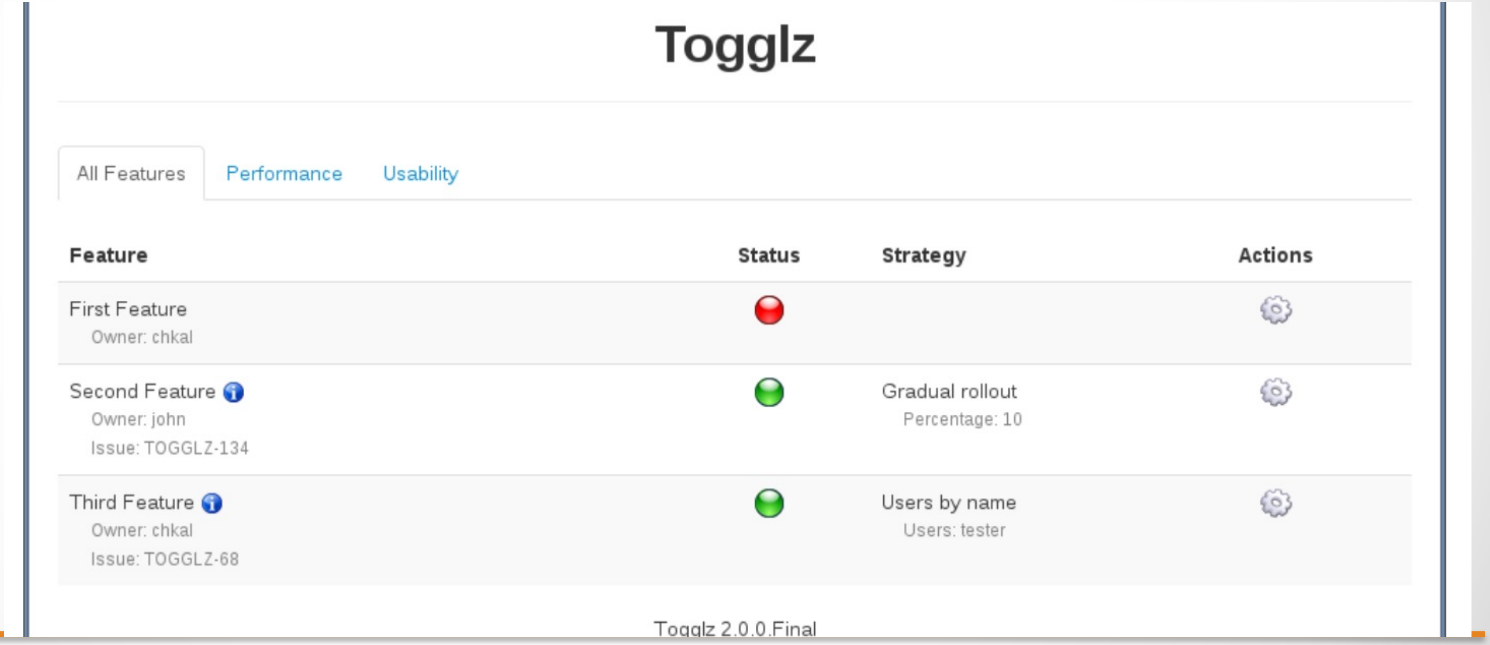
Integrate All Work Regardless Readiness

Separate the concept of Undone Work and Feature Ready



```
public enum MyFeatures implements Feature {

    @EnabledByDefault
    @Label("First Feature")
       FEATURE_ONE,

     @Label("Second Feature”)
       FEATURE_TWO;

    public boolean isActive() {
        return FeatureContext.getFeatureManager().isActive(this);
   }

}
```

```
if( MyFeatures.FEATURE_ONE.isActive() ) {
  // new stuff here
}
```

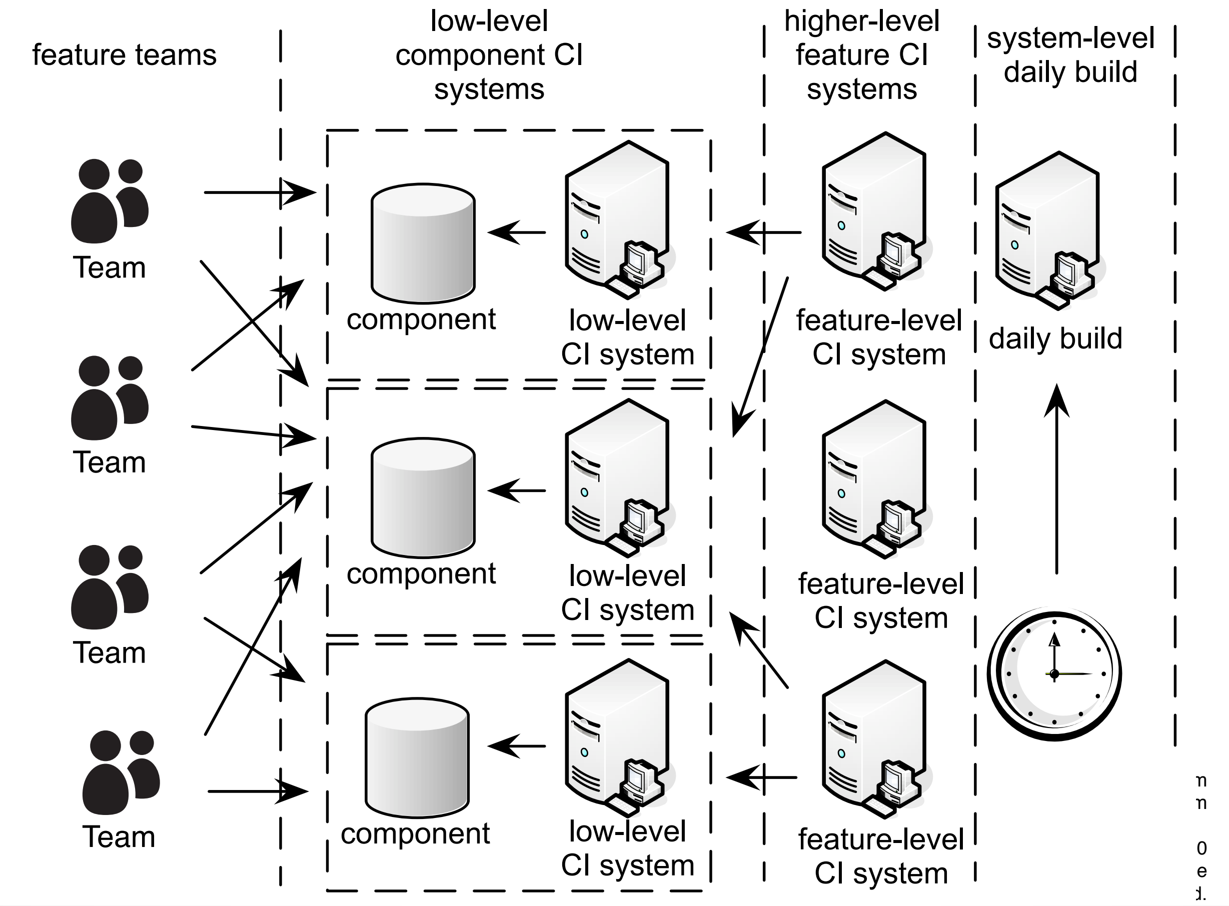


Togglz

Feature	Status	Strategy	Actions
First Feature ℹ Owner: chkal	🔴		⚙
Second Feature ℹ Owner: john Issue: TOGGLZ-134	🟢	Gradual rollout Percentage: 10	⚙
Third Feature ℹ Owner: chkal Issue: TOGGLZ-68	🟢	Users by name Users: tester	⚙

Togglz 2.0.0.Final

Scaling CI


feature teams
low-level component CI systems
higher-level feature CI systems
system-level daily build
Team
Team
Team
Team
component
component
component
low-level CI system
low-level CI system
low-level CI system
feature-level CI system
feature-level CI system
feature-level CI system
daily build
n
n
0
e
d.

Code Quality

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Software has three functions

1. Provide the functionality it is intended to
2. The ability to be changed efficiently
3. To be easily understandable by it readers

"Any fool can write code that a computer can understand. Good programmers write code that humans can understand."
– Martin Fowler

Le Indie Game Labz
Indies or Super hot Girls Only

Cross cutting concerns

Now that we do not have any single function teams and no component teams, how do we handle cross cutting concerns?

Architecture?

UIX?

Specialists?

Architecture Community

- Members? regular feature team c
- not loaded with ex-'Architects'

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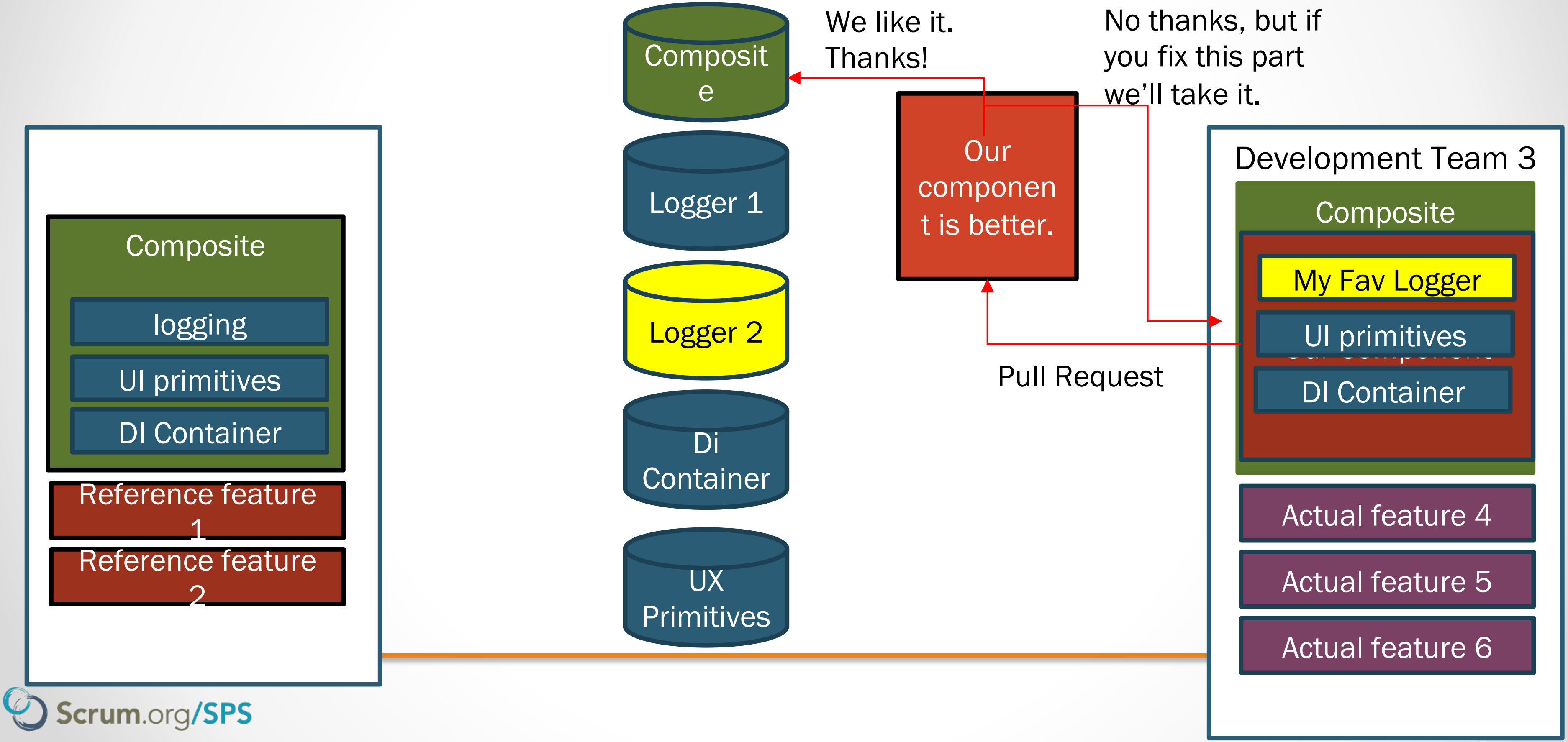
Can you be a component mentor

Internal Open Source



Composite

logging

UI primitives

DI Container

Reference feature 1

Reference feature 2

Composite

Logger 1

Logger 2

Di Container

UX Primitives

We like it. Thanks!

Our component is better.

No thanks, but if you fix this part we'll take it.

Pull Request

Development Team 3

Composite

My Fav Logger

UI primitives

DI Container

Actual feature 4

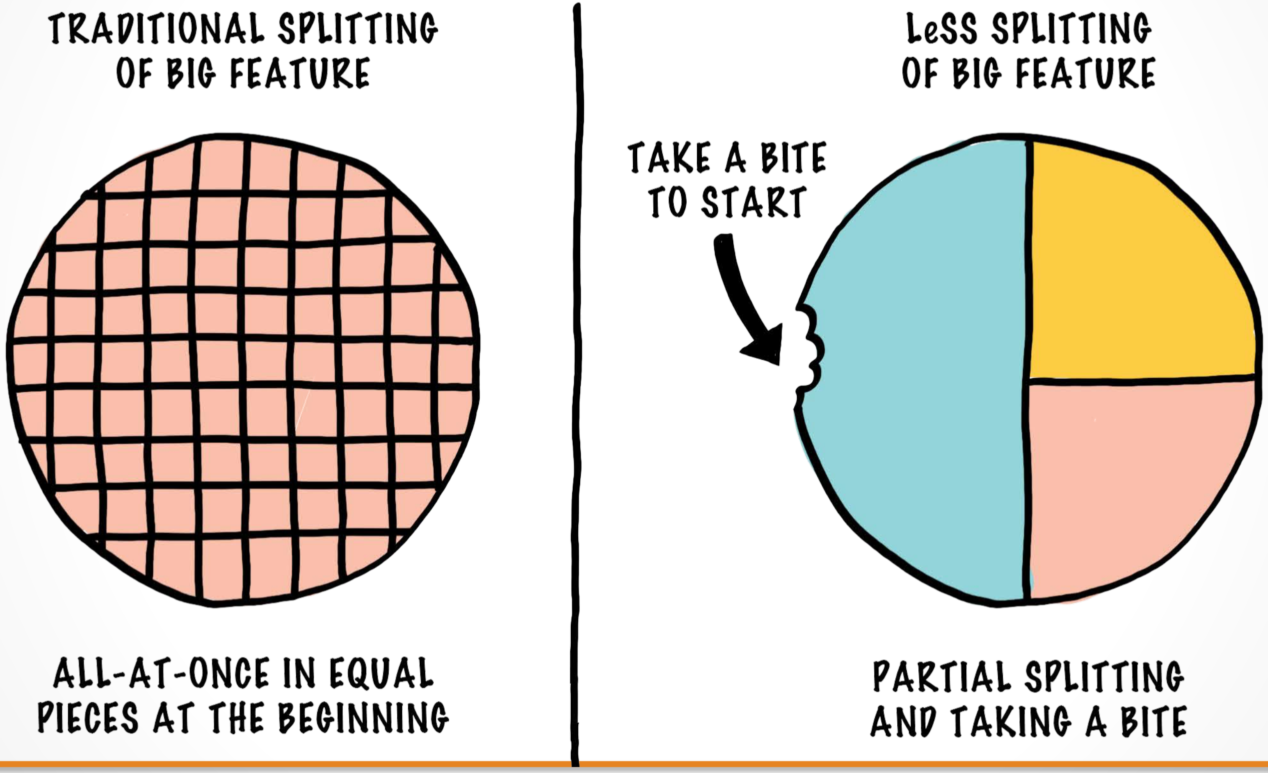
Actual feature 5

Actual feature 6

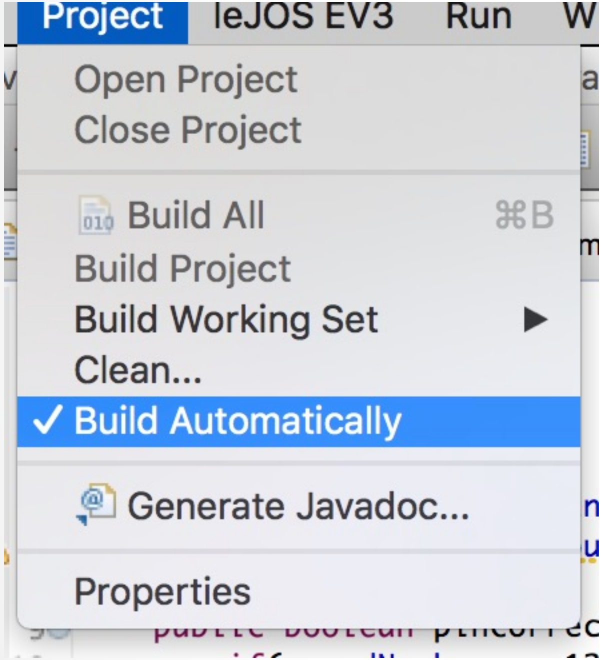
Can you be a traveller?

How do we handle Big Requirements
&
Big Architectural Work?

Take a Bite

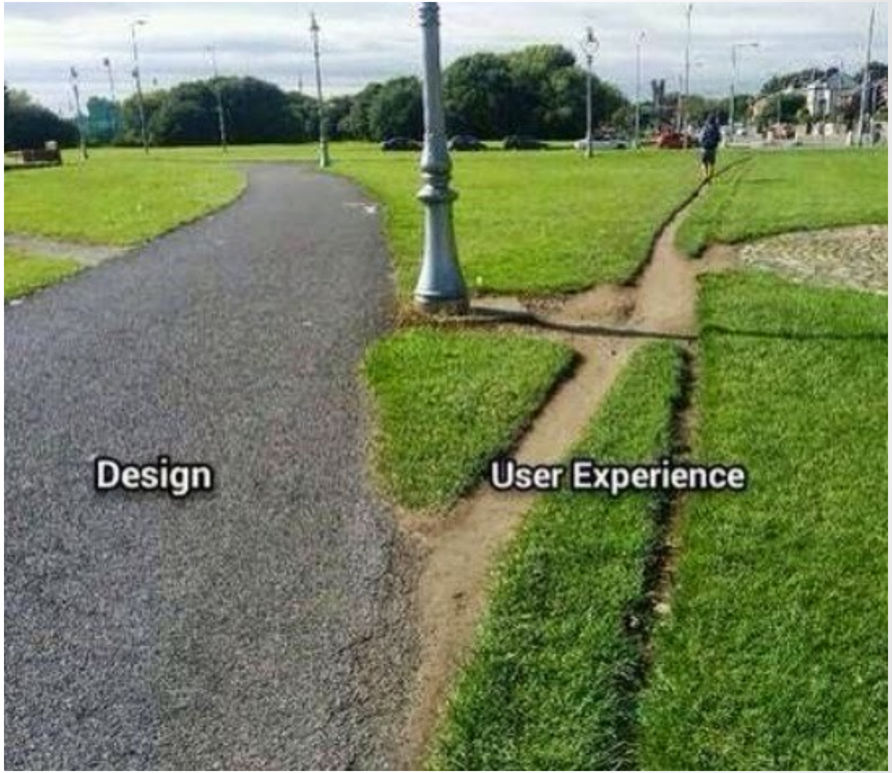

TRADITIONAL SPLITTING OF BIG FEATURE
ALL-AT-ONCE IN EQUAL PIECES AT THE BEGINNING
LeSS SPLITTING OF BIG FEATURE
TAKE A BITE TO START
PARTIAL SPLITTING AND TAKING A BITE

Architecture ?



Desire Lines

Trace of use or wear that indicate preferred methods of interaction



Agile Modelling Design Workshops

team members, and those who are in the "**Architecture** design community"

agile modelling 1 day to 3 weeks!

"model to have a conversation"

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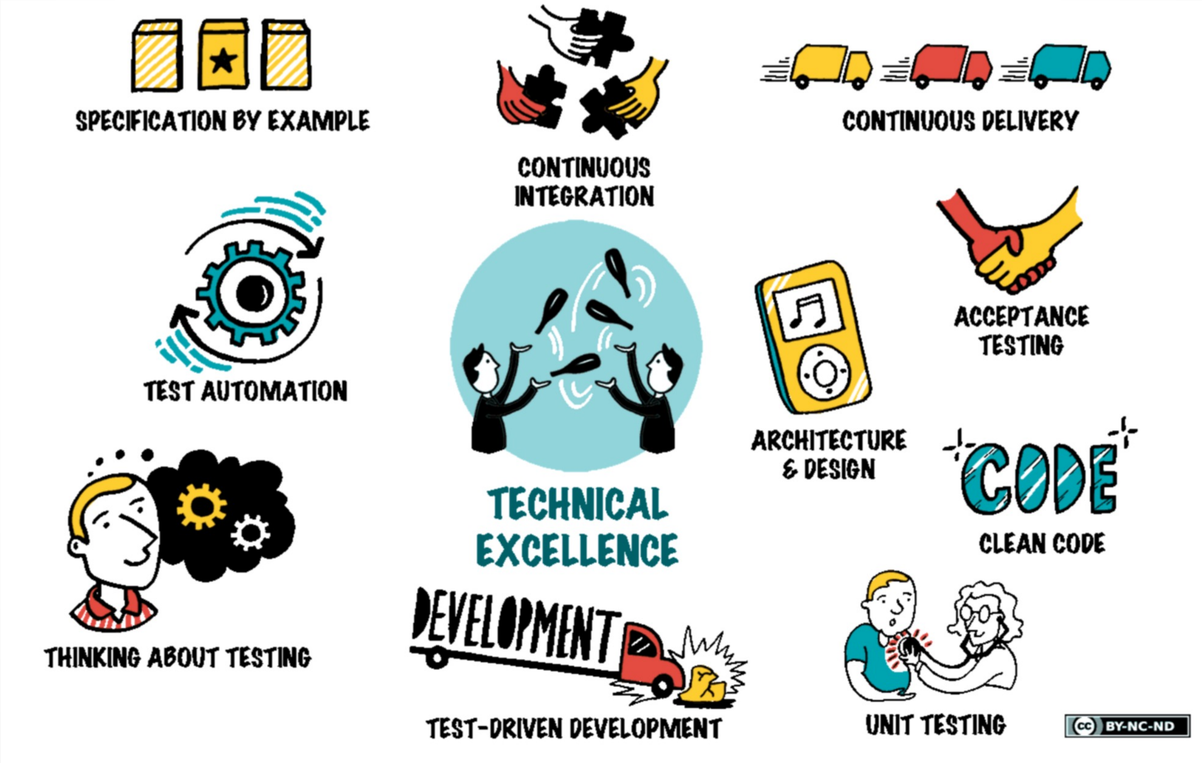
No Flaccid Scrum



Agile Developer at Scale

MORE	LESS
Customer Understanding	Understanding just a single part
Teaching & Learning	Being the bottleneck
Working working across technology stacks	It works on my machine
Coaching & Teaching	Telling and showing
Good Code, Refactoring & Testing	Code only your team understands.
Optimizing your group	Optimising your team.

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centric
connect.engage.succeed.

TRUELIME

BDO

aviva
solutions
embracing digital

QNH
PARTNERSHIP IN IT

April 22nd: Global Azure bootcamp @mStack

2017

Global Azure
BOOTCAMP

May 30th: Microsoft's Agile Transformation Story

By Donovan Brown!

Thank You!

AgiliX CONSULTING

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