Mob Programming

Learn together. Deliver together!

Thomas Much
@thmuch

07.10.2020

Software developer

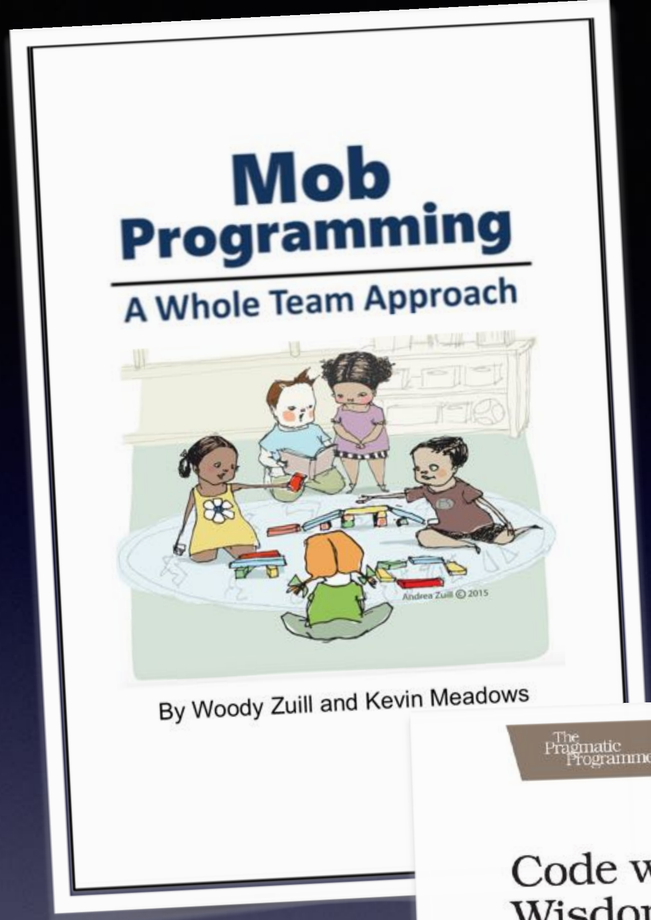
Agile developer coach

Mob Programming
since 2016

Remote Mob Programming
since 2020

… on the shoulders of giants …

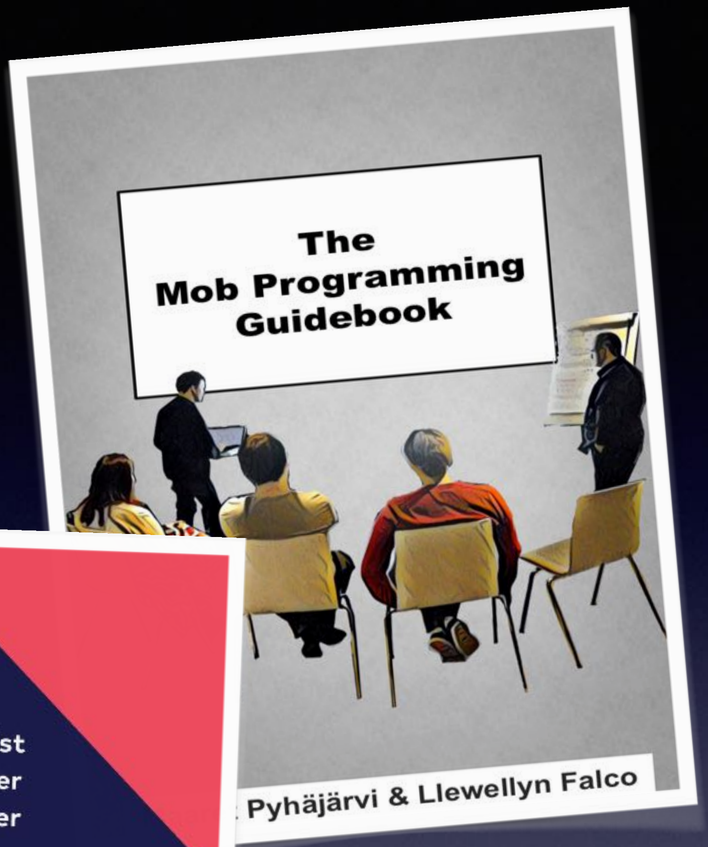
@thmuch

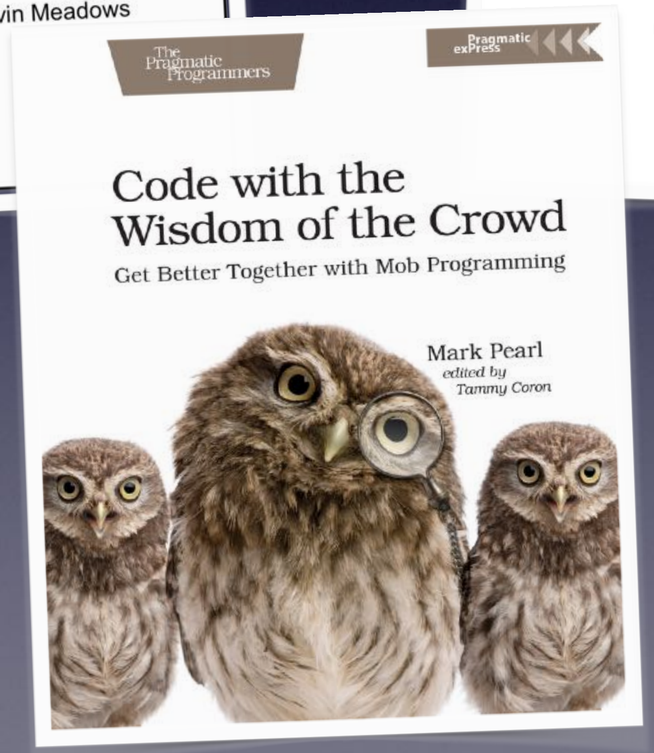


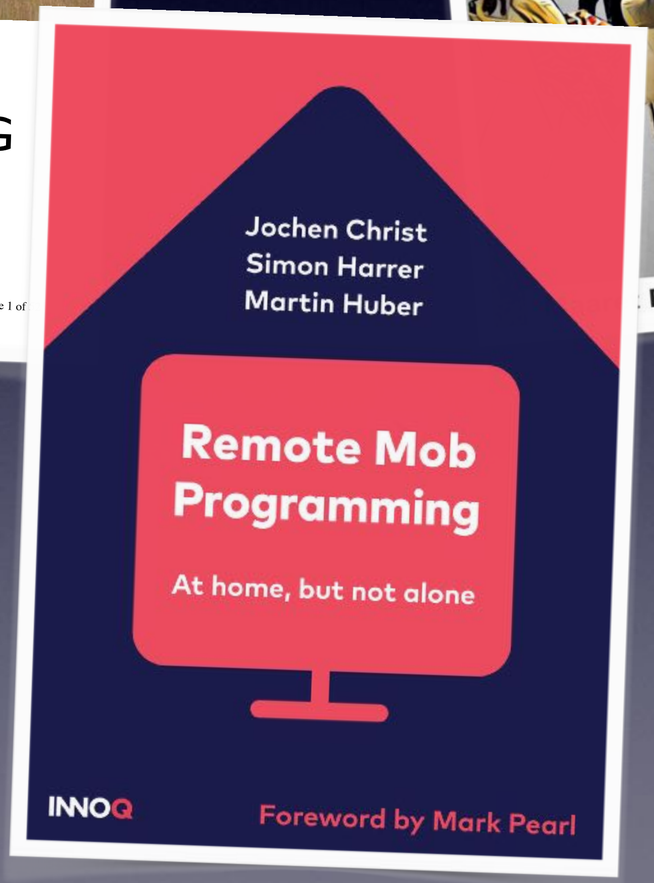
MOB PROGRAMMING GUIDEBOOK

MAARET PYHÄJÄRVI

Page 1 of







Marcus Hammarberg
@marcusoftnet

#MobProgramming gets another well deserved shoutout and excellent quick intro by @lisihocke #agrs2018

This is the most important improvement I've seen the last couple of years.

Please get hold of me if you want to
Especially if you think it's ineffective

Tweet übersetzen
11:33 vorm. · 20. Sep. 2018 · Twitter for iPhone

Allen Holub
@allenholub

4/6 I've had a lot of experience with mob programming. I've introduced it to many teams, run workshops, seen its impact. It's one of the most significant improvements that a team can adopt. Most of the teams I've worked with love it, though not all.

Tweet übersetzen
12:24 vorm. · 23. Aug. 2019 · Little Pork Chop

https://twitter.com/marcusoftnet/status/1042708243544514560

https://twitter.com/allenholub/status/1164664754947919872

XP

Agile

Scrum

Software Craft

Kanban

~ 20 years old

User Stories

Pair Programming

Refactoring

TDD

Iterations

Continuous Integration

Mob Programming

Emerged ~2011 en passant

Used by teams around the globe since 2014

(similar older ideas never took off)

Woody Zuill

https://woodyzuill.com/

https://twitter.com/woodyzuill

Mob Programming

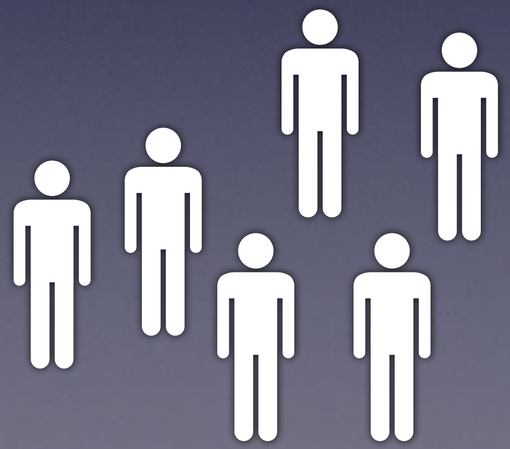
„Mobbing“ 🤔😐

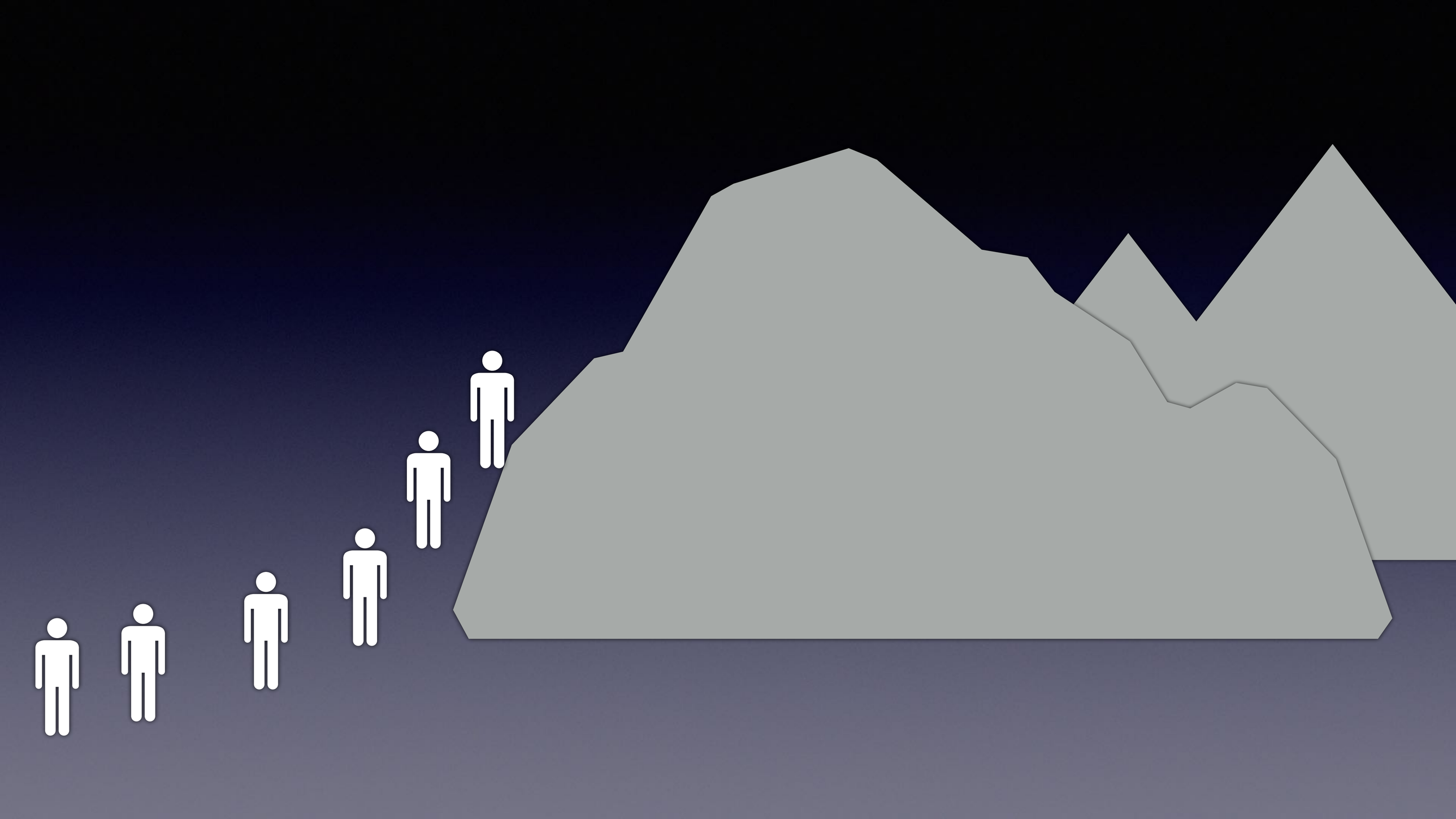
Group Programming
Team Programming

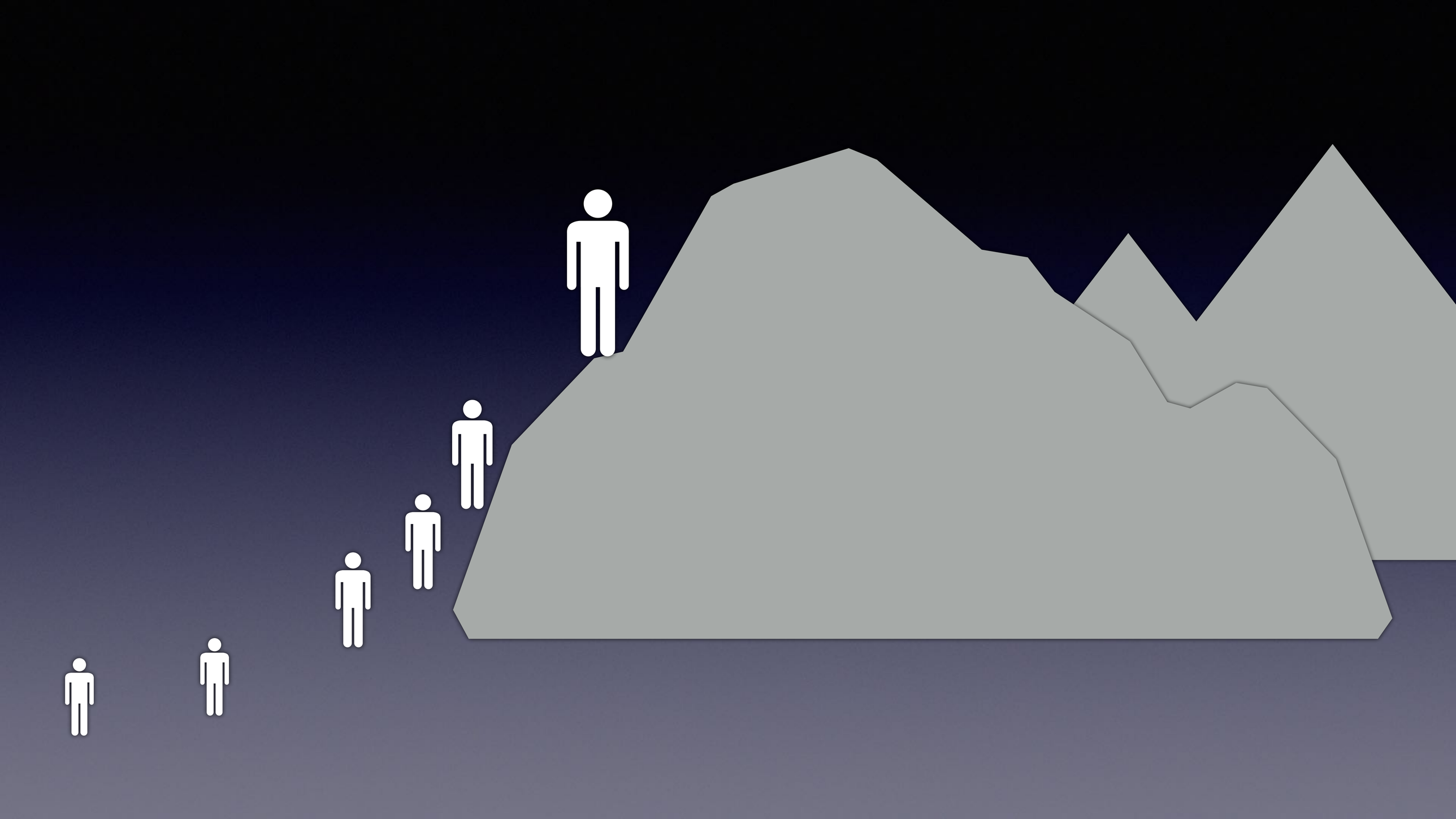
Ensemble Programming*
(like, in a jazz combo)

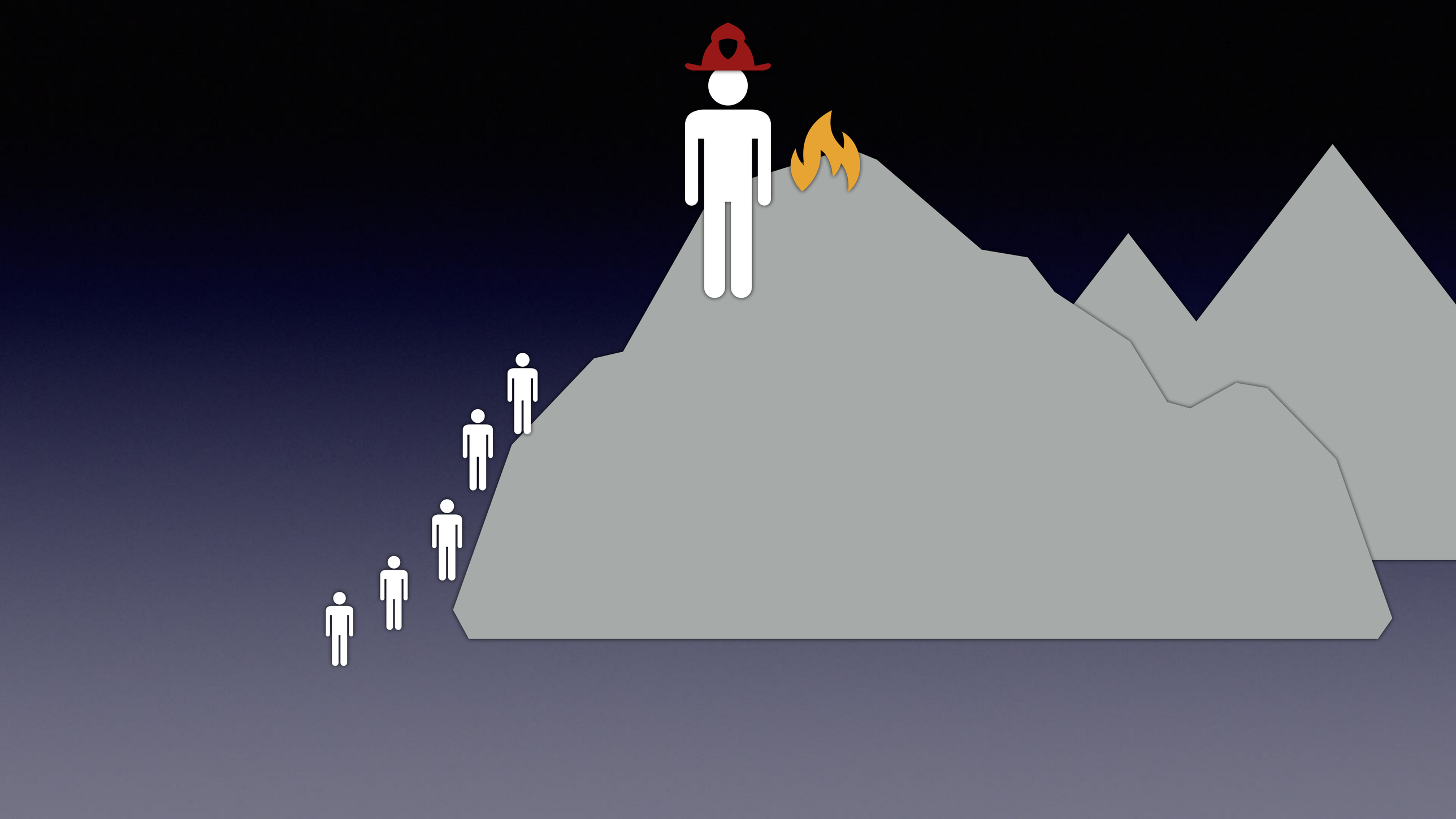
*) https://visible-quality.blogspot.com/2020/05/five-years-of-mob-testing-hello-to.html

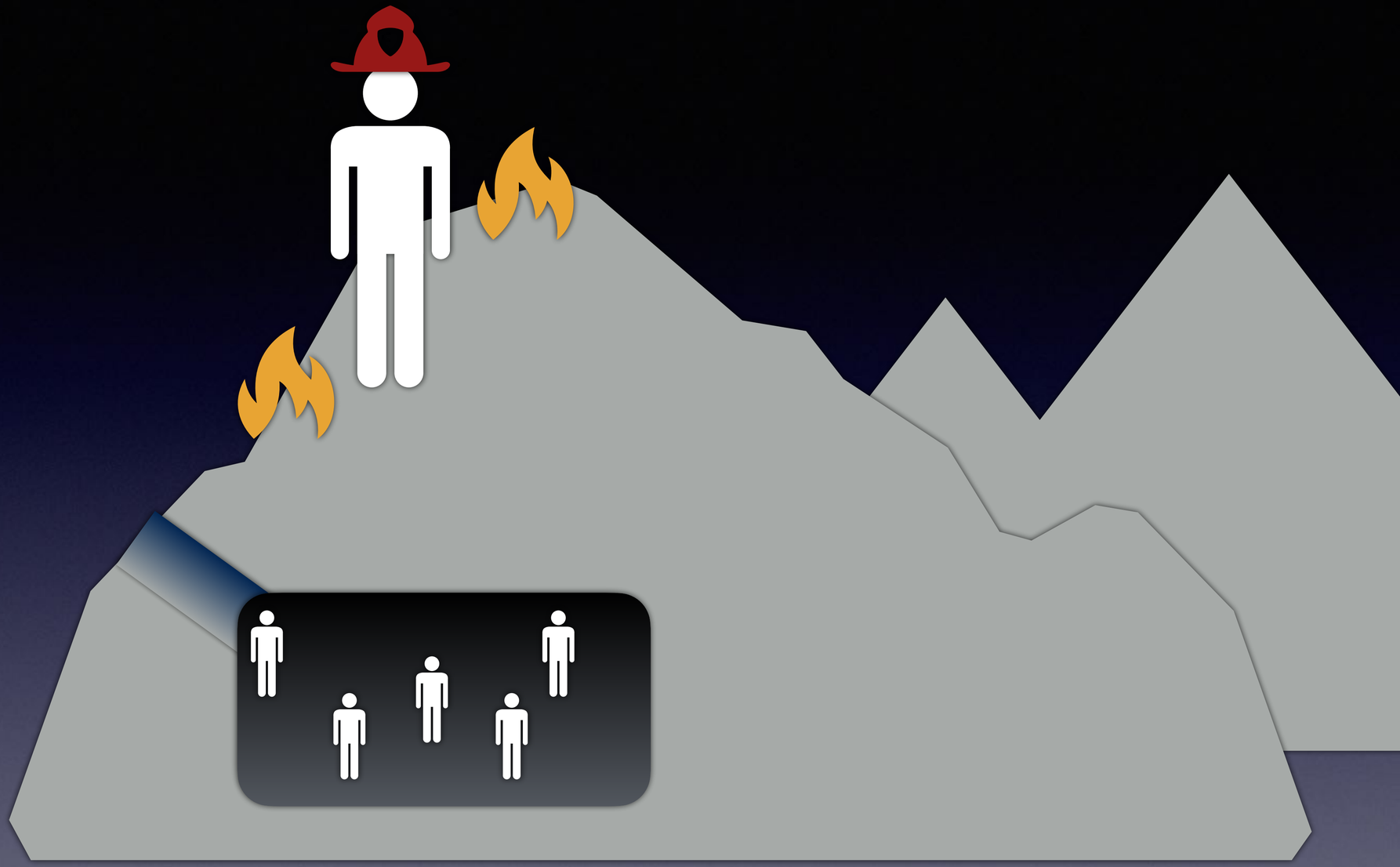
How's your team working?

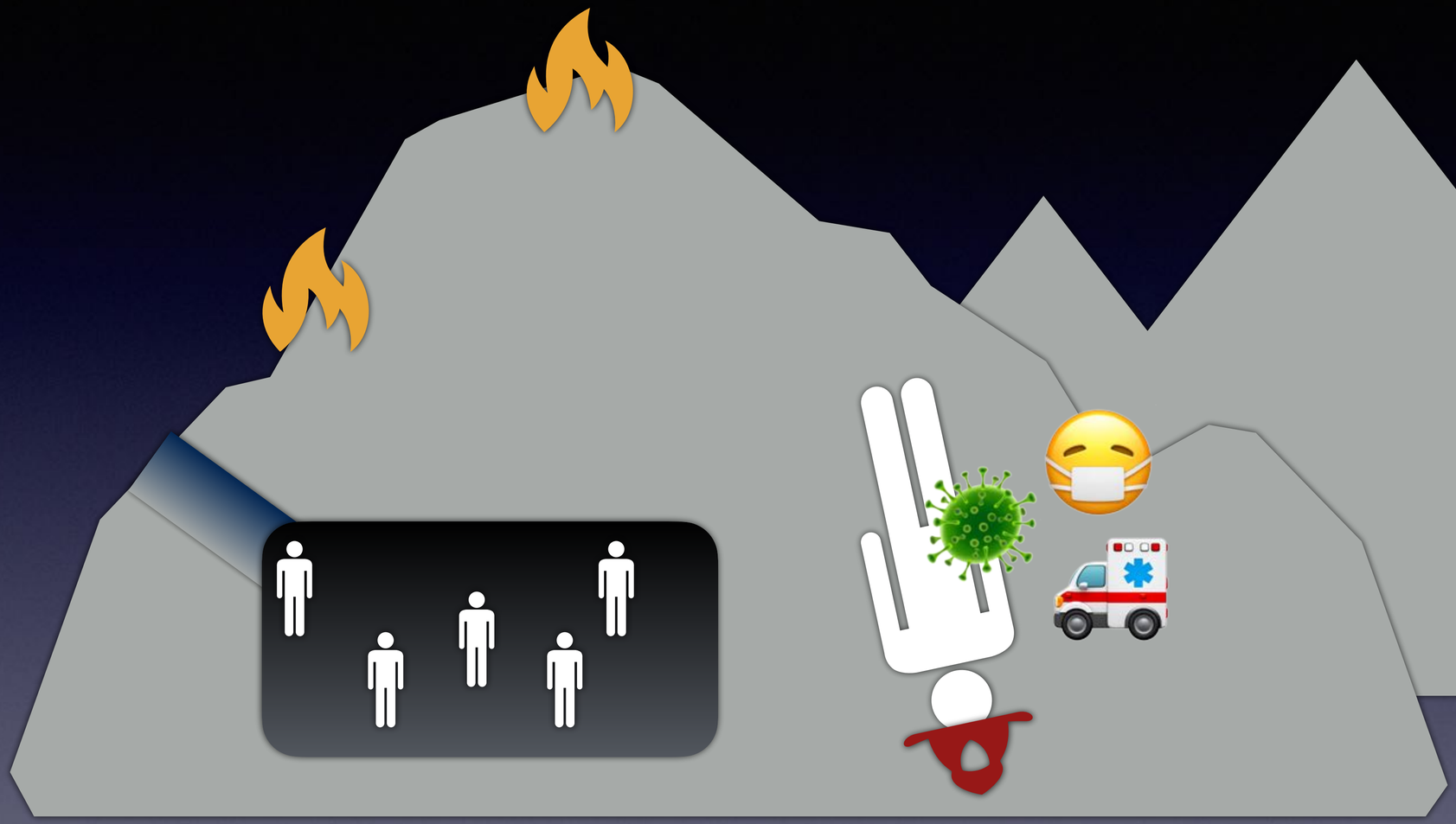


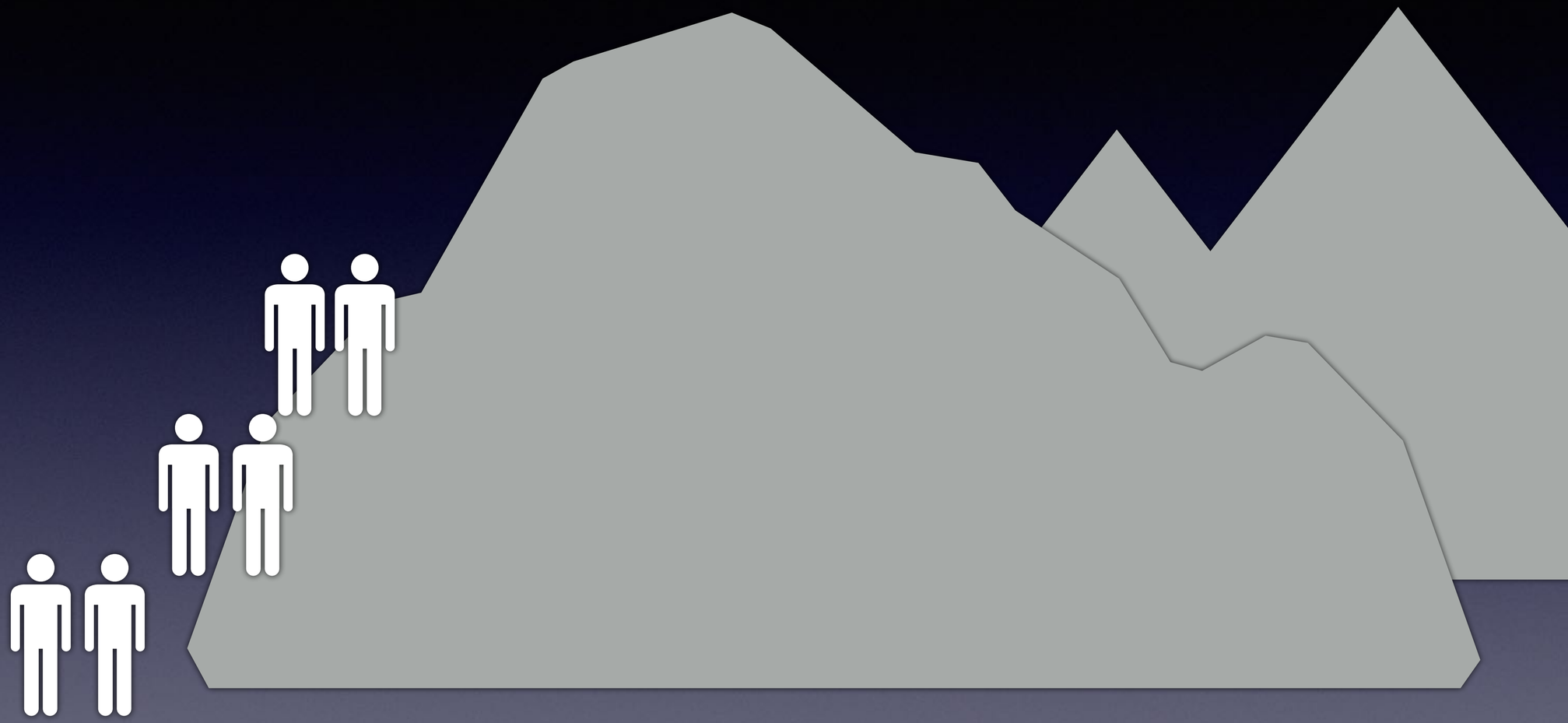




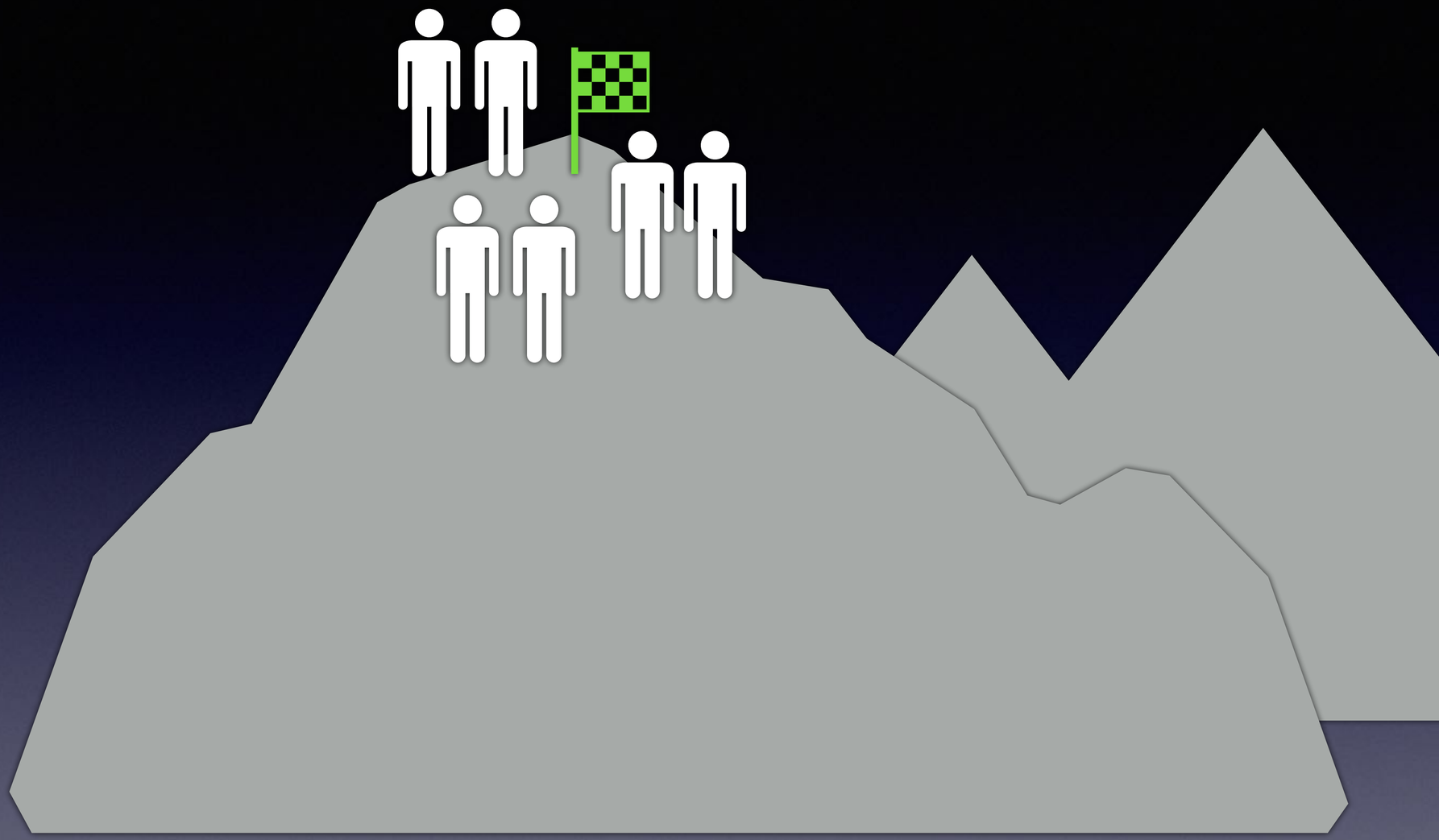




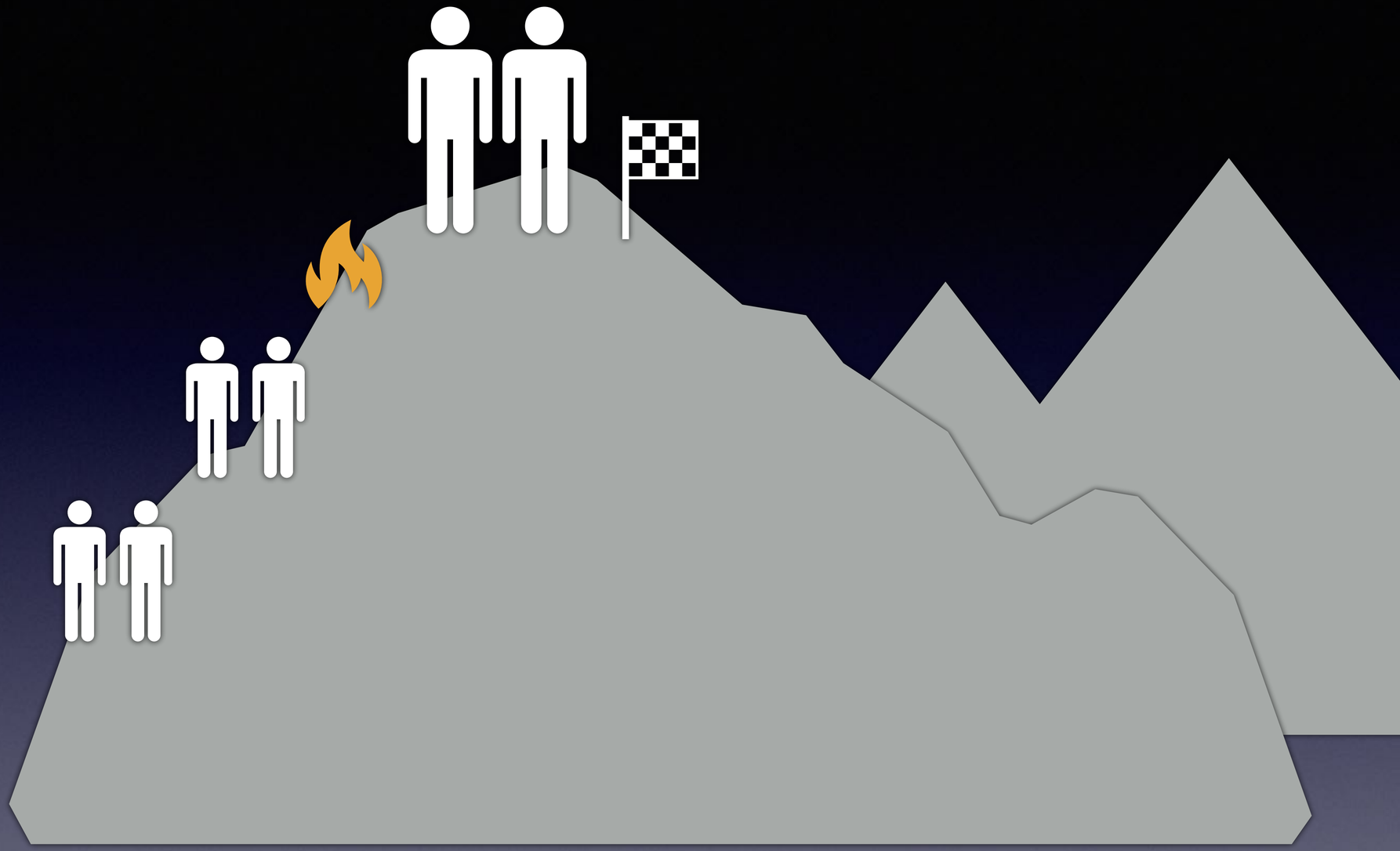




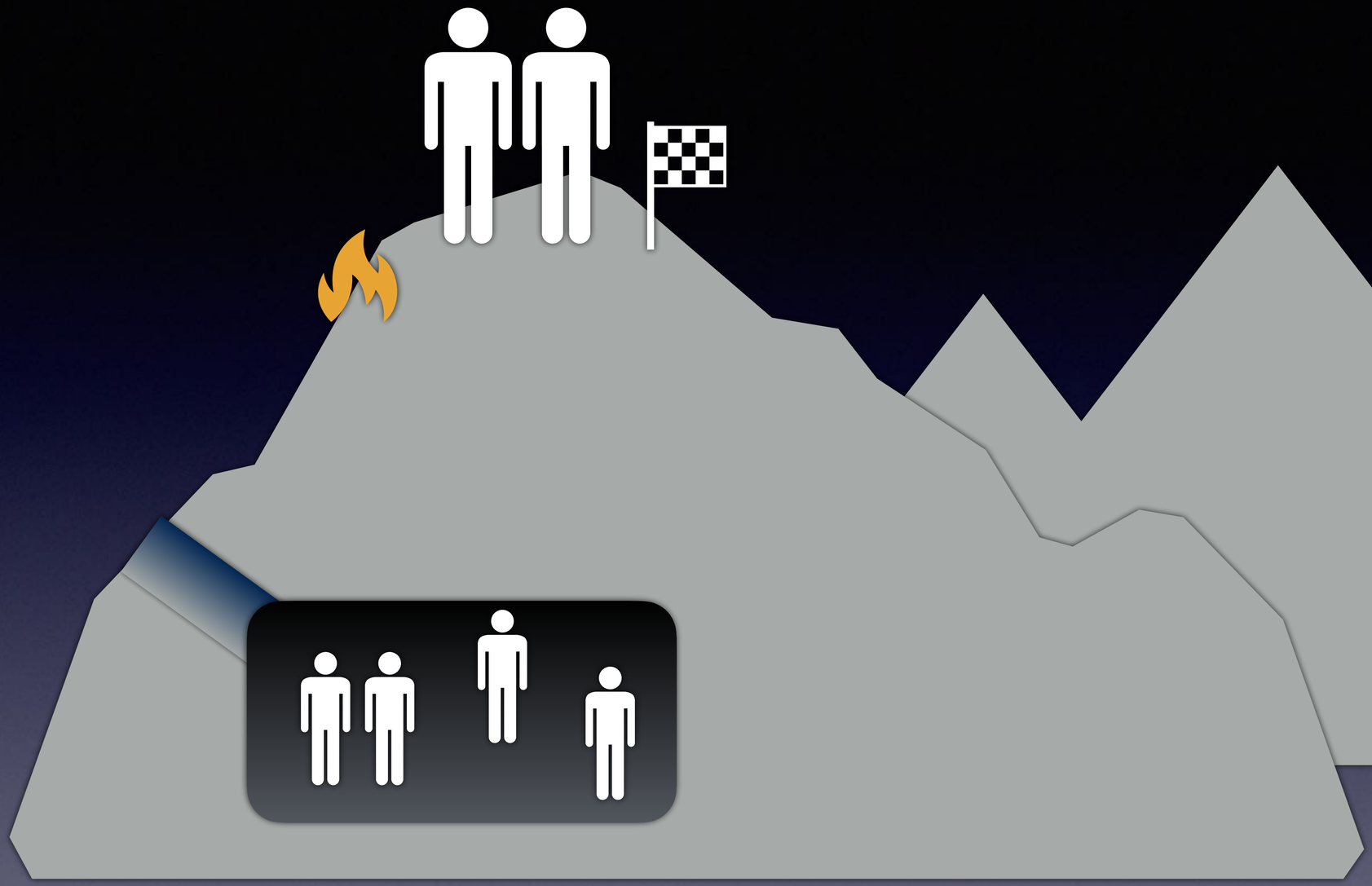
Pair Programming



Pair Programming



Pair Programming



Pair Programming

Problem

You have to
share knowledge & experience
afterwards.

That's pretty difficult!

Why this architecture?
Why is some code *missing* here?

Collaborate? Co-author, co-create!

Why not

build knowledge and experience together

instead,

right from the start?

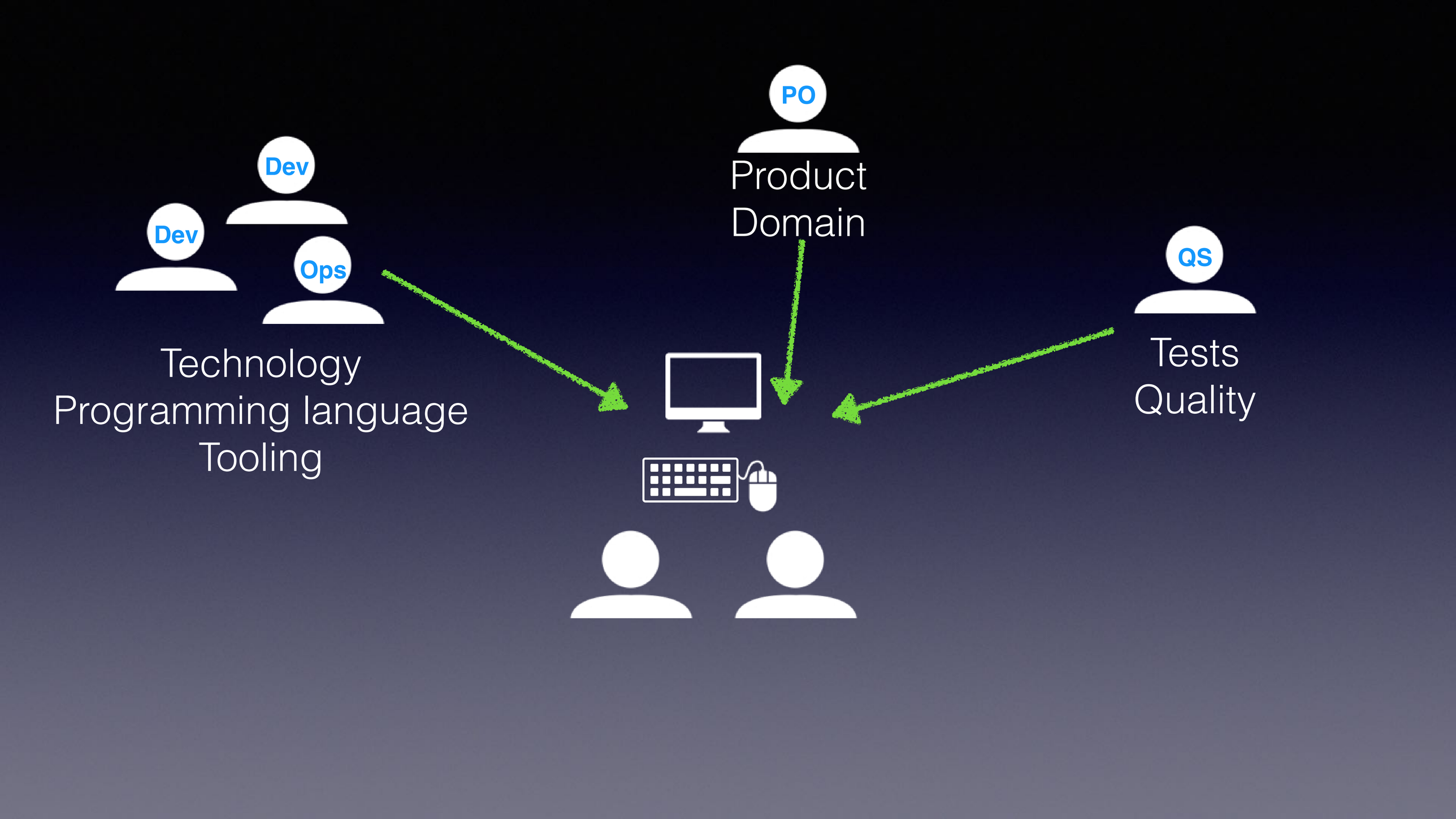
Knowledge **and skills**

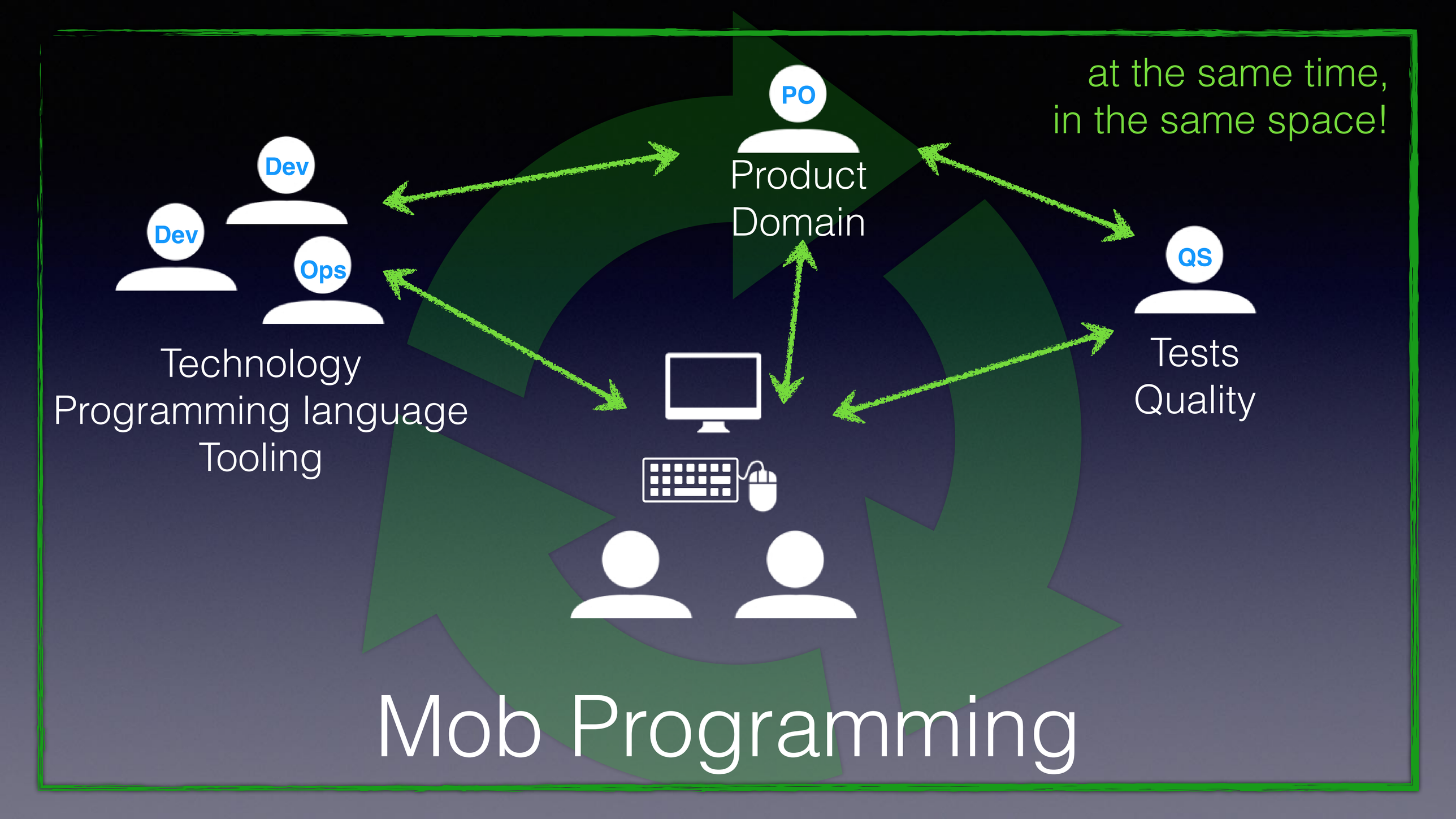
*Know **how***

Product
Domain

Technology
Programming language
Tooling

Tests
Quality


Dev
Dev
Ops
Technology
Programming language
Tooling
PO
Product
Domain
QS
Tests
Quality


at the same time,
in the same space!
PO
Product
Domain
Dev
Dev
Ops
Technology
Programming language
Tooling
QS
Tests
Quality
Mob Programming

Mob Programming

"It’s about getting the **BEST** (not the **most**) from your team."

– Llewellyn Falco

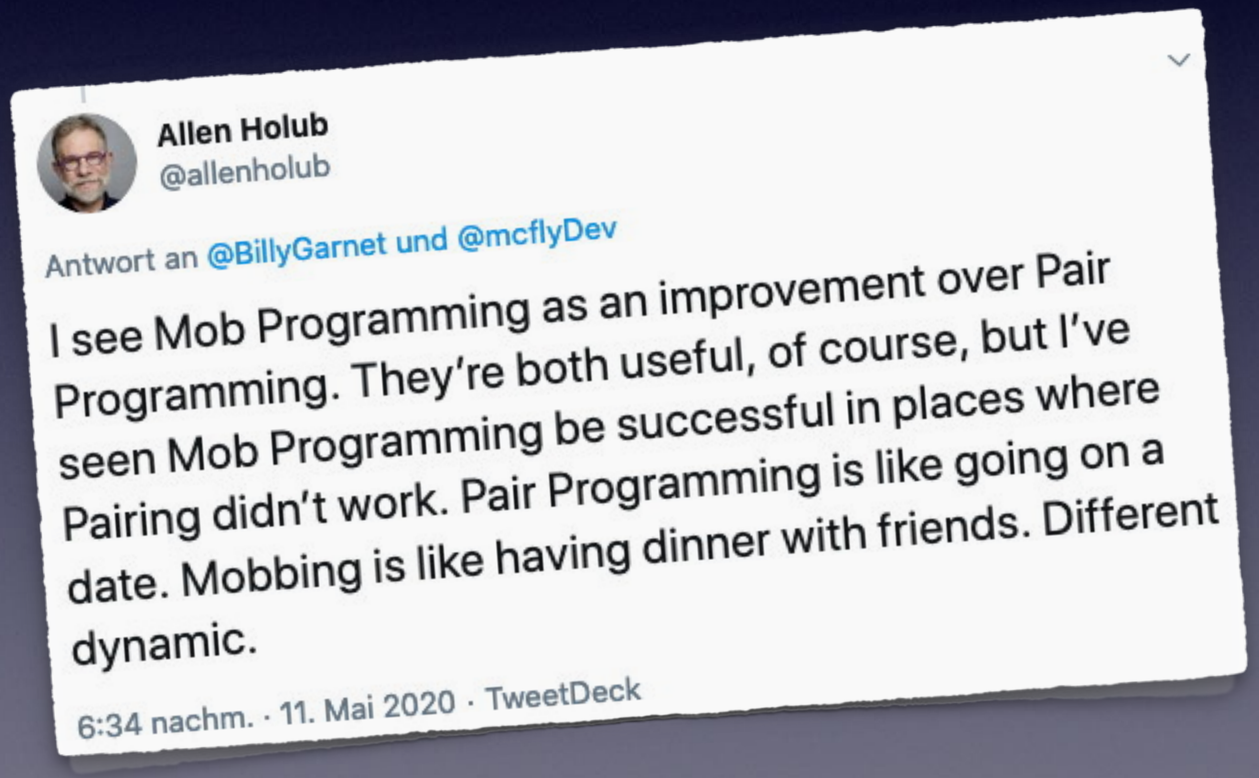
"All the brilliant minds working on the same thing,
at the same time, on the same computer."

– Woody Zuill

"Continuous Integration of Ideas"

– Joshua Kerievsky

"Pair Programming is like going on a date.
Mobbing is like having dinner with friends.
Different dynamic."

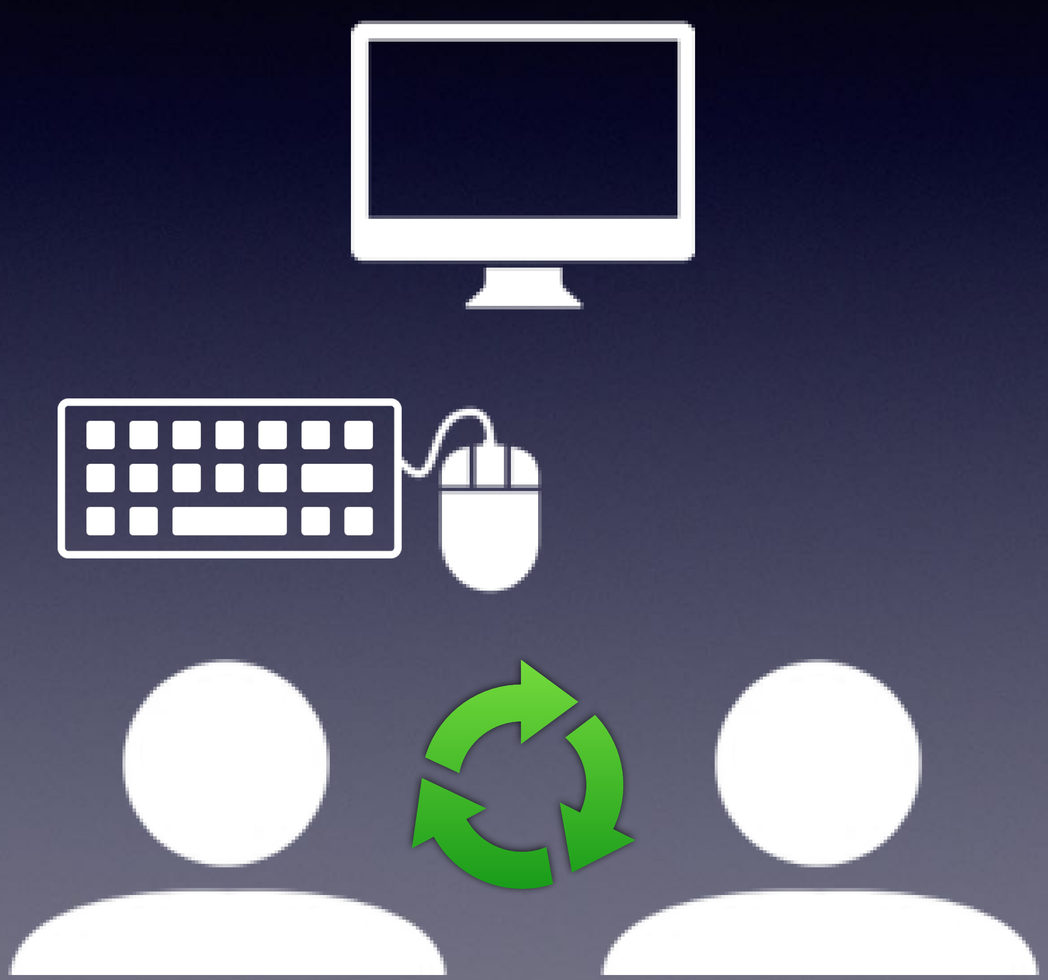


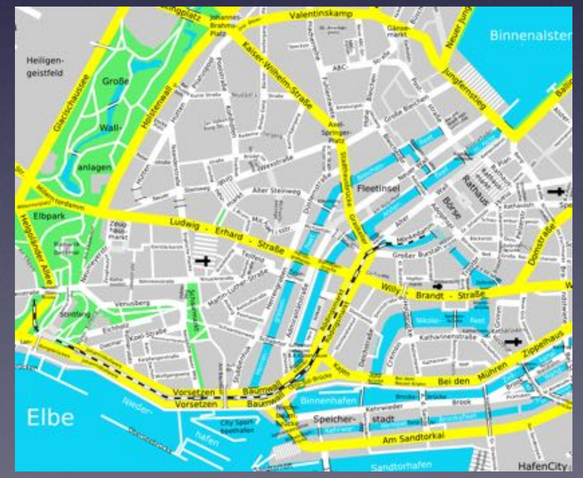
https://twitter.com/allenholub/status/1259884517516443651

How does Mob Programming work?

NB:
There is no "right" or "wrong"!

Driver & Navigator





https://commons.wikimedia.org/wiki/File:FORD_Taunus_17M_P2_deLuxe_Steering_wheel.jpg

http://www.marcusvenzke.de/HamburgKarte/

Driver-Observer Anti-Pattern

Worker

Watcher

Rotation for attentiveness

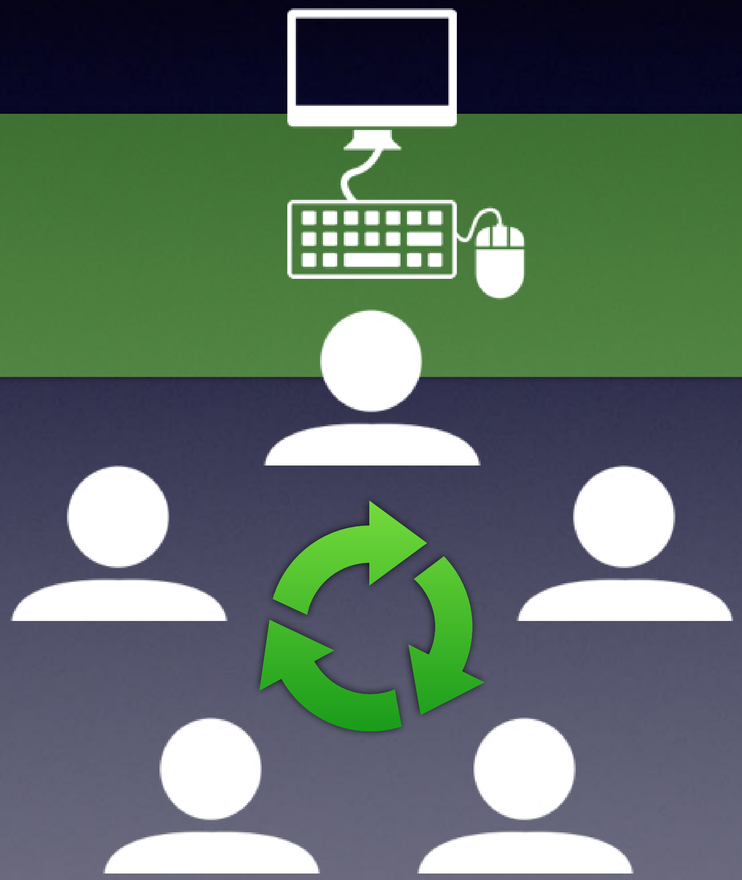
Switch roles!

Fixed timebox → pass keyboard (every 5-10 min.)

Use timer app, e.g.

* http://mobster.cc/
* https://cuckoo.team/
* https://mobti.me/

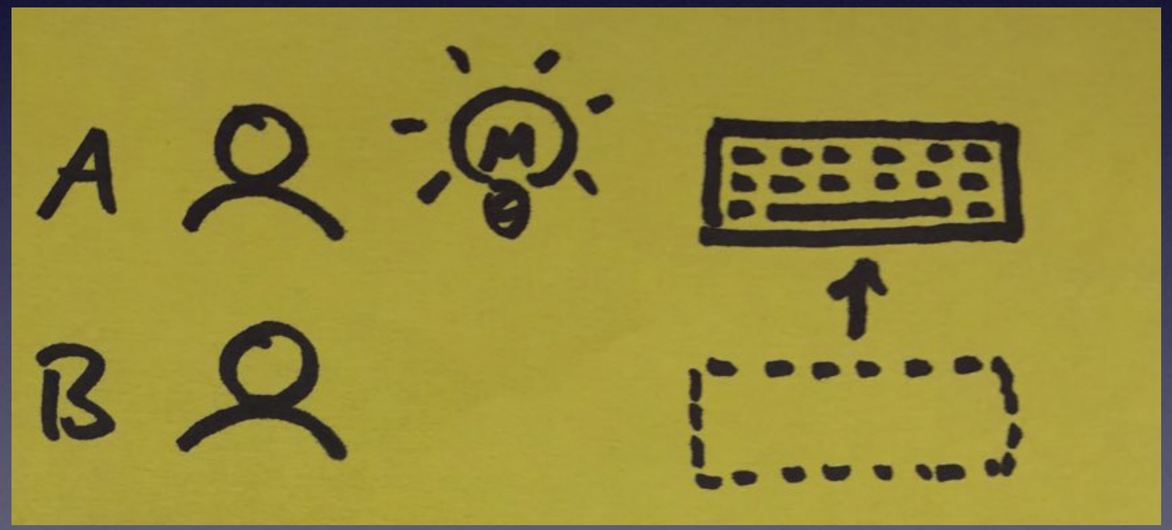
or smartphone timer app



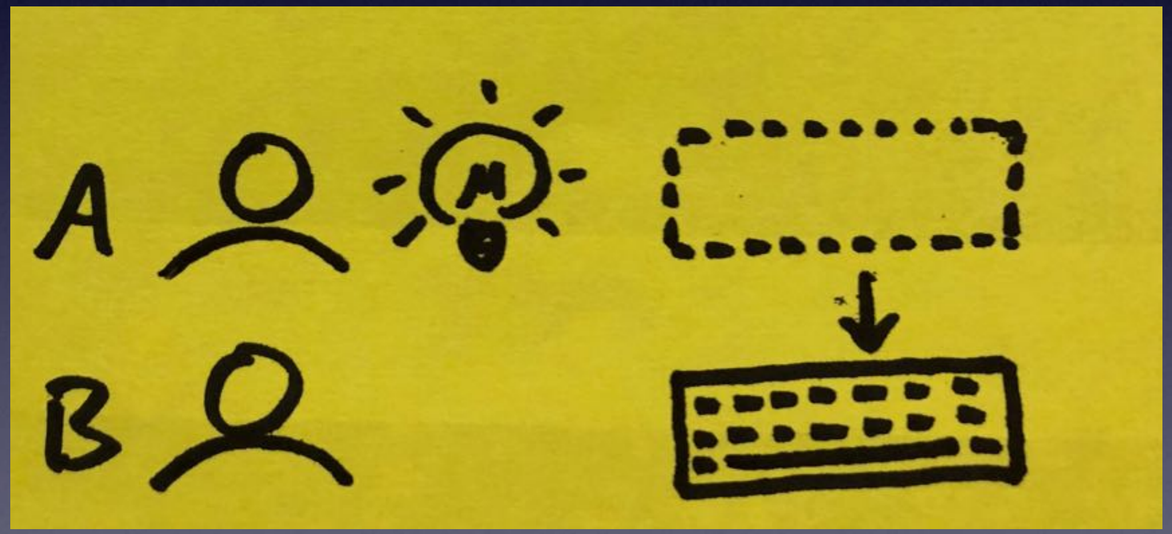
Strong style navigation!

default for mob programming

“traditional”



“strong style”



@LlewellynFalco

https://twitter.com/thmuch/status/959456902877974528

All the brilliant minds

Switch roles across the whole team!

Fixed timebox → pass keyboard (every 5-10 min.)

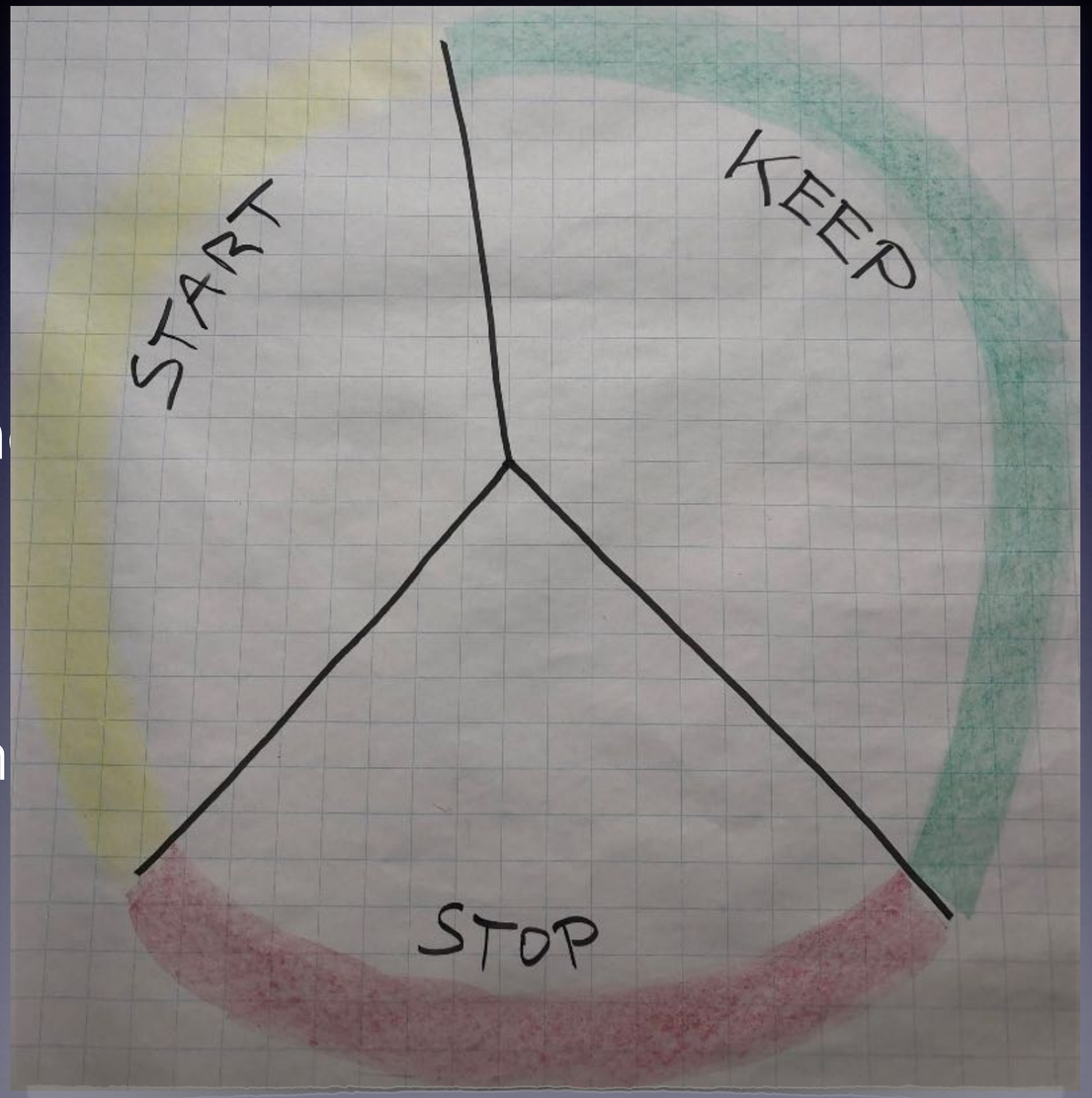
Getting the **most important** task done first.

Mob session agenda

- Agree guidelines for this mob session (timebox, navigator? etc.)
- Short introduction to the task
- Discovery/~~estimation~~/planning/implementation
- Break ca. 1x per hour
- Duration of the mob session? 2h, …, half day, whole day

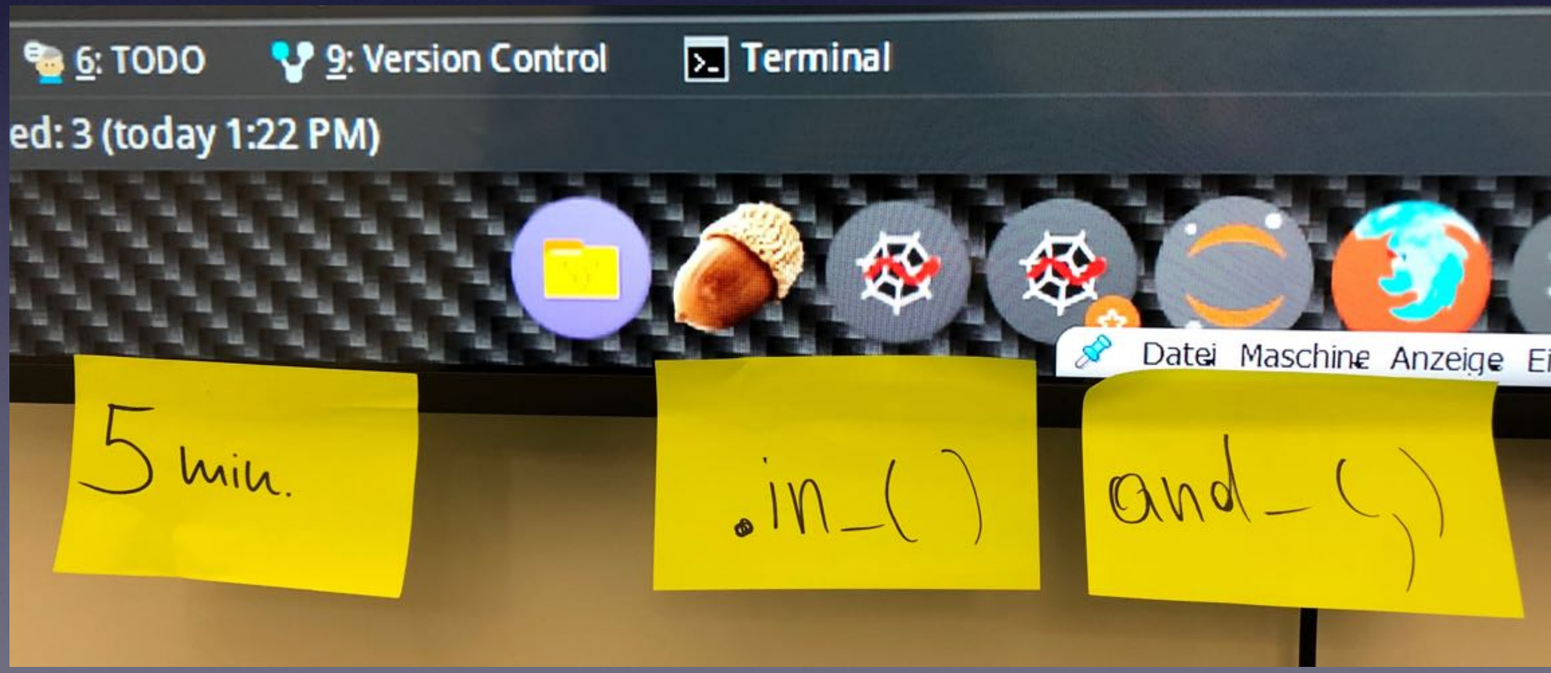
Mob session agenda

- Agree guidelines for this mob session
- Short introduction to the task
- Discovery/~~estimation~~/planning/implem
- Break ca. 1x per hour
- Duration of the mob session? 2h, …, h
- Short retrospective (start/stop/keep)



Helpful

- Note down guidelines & insights clearly visible
  (timebox, ideas, shortcuts …)
- Use *all* media!
  (flip chart,
  whiteboard,
  wallpaper,
  writable wall,
  sticky notes …)

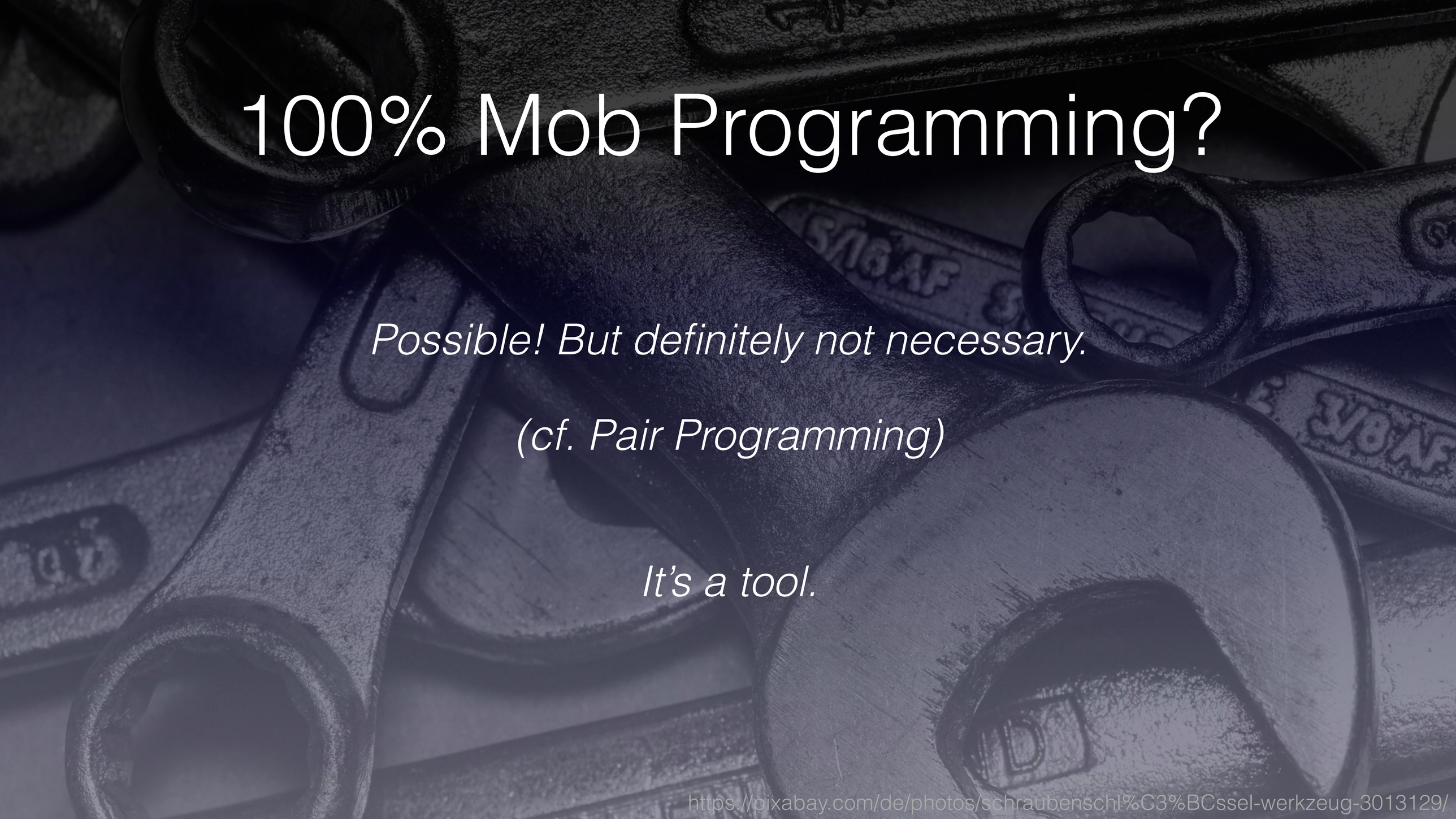


100% Mob Programming?

Possible! But definitely not necessary.

(cf. Pair Programming)

It’s a tool.



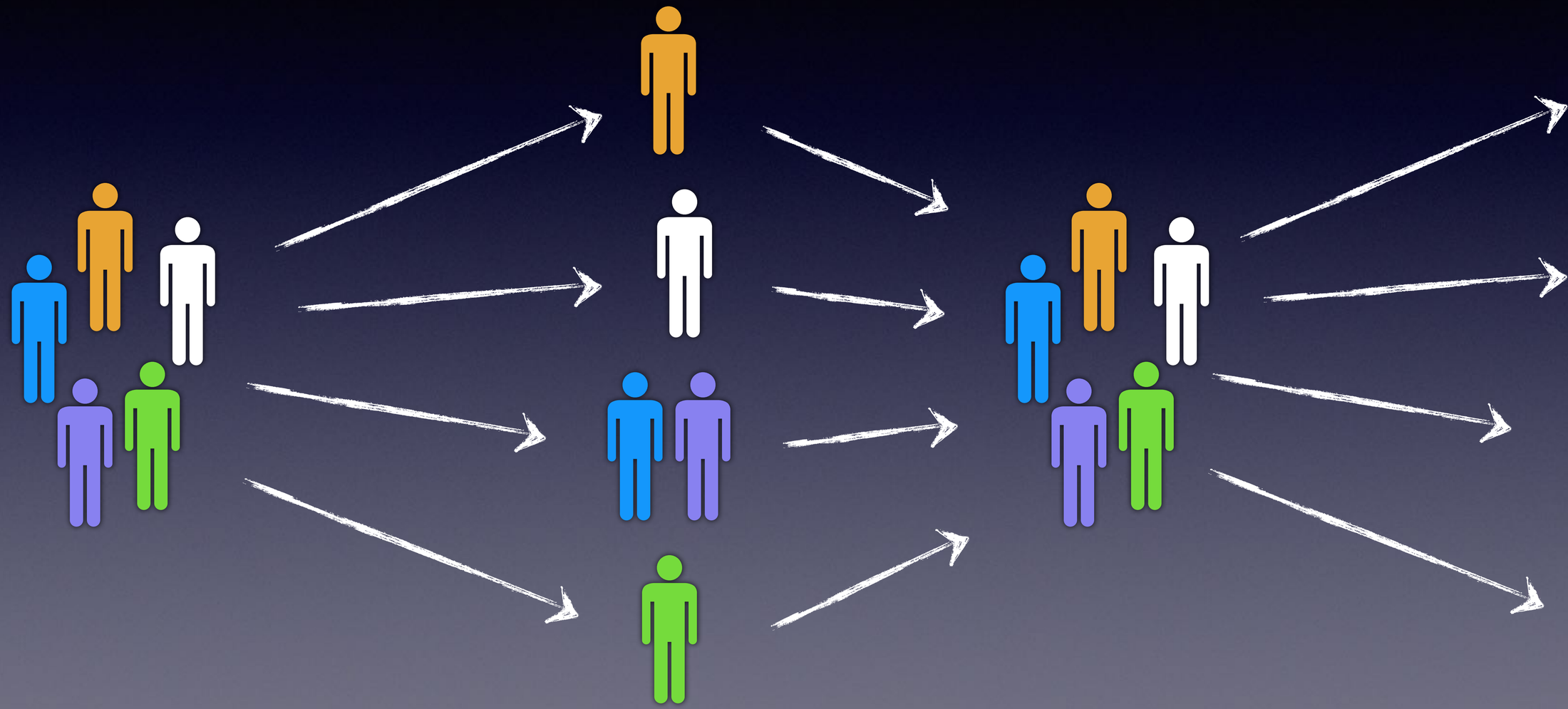
https://pixabay.com/de/photos/schraubenschl%C3%BCssel-werkzeug-3013129/

100% for the most important task

… but not everybody has to be there 100% of the time!

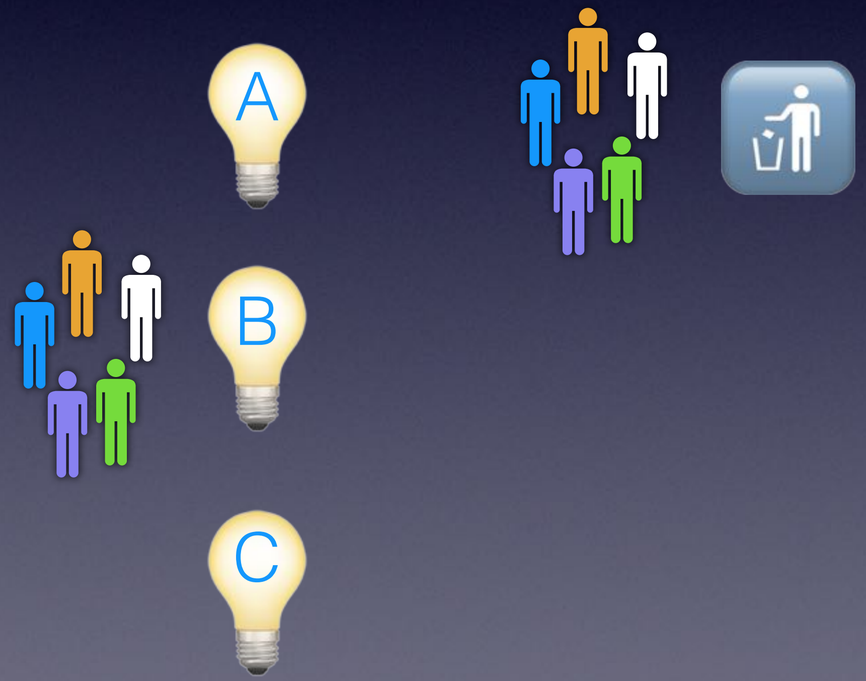
Dynamic mob: come and go

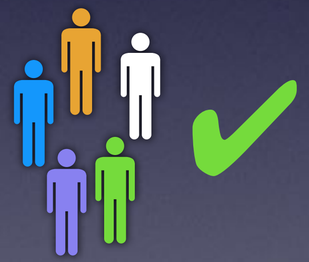
Start together!



Team decisions

More than one idea? *Try them all!*

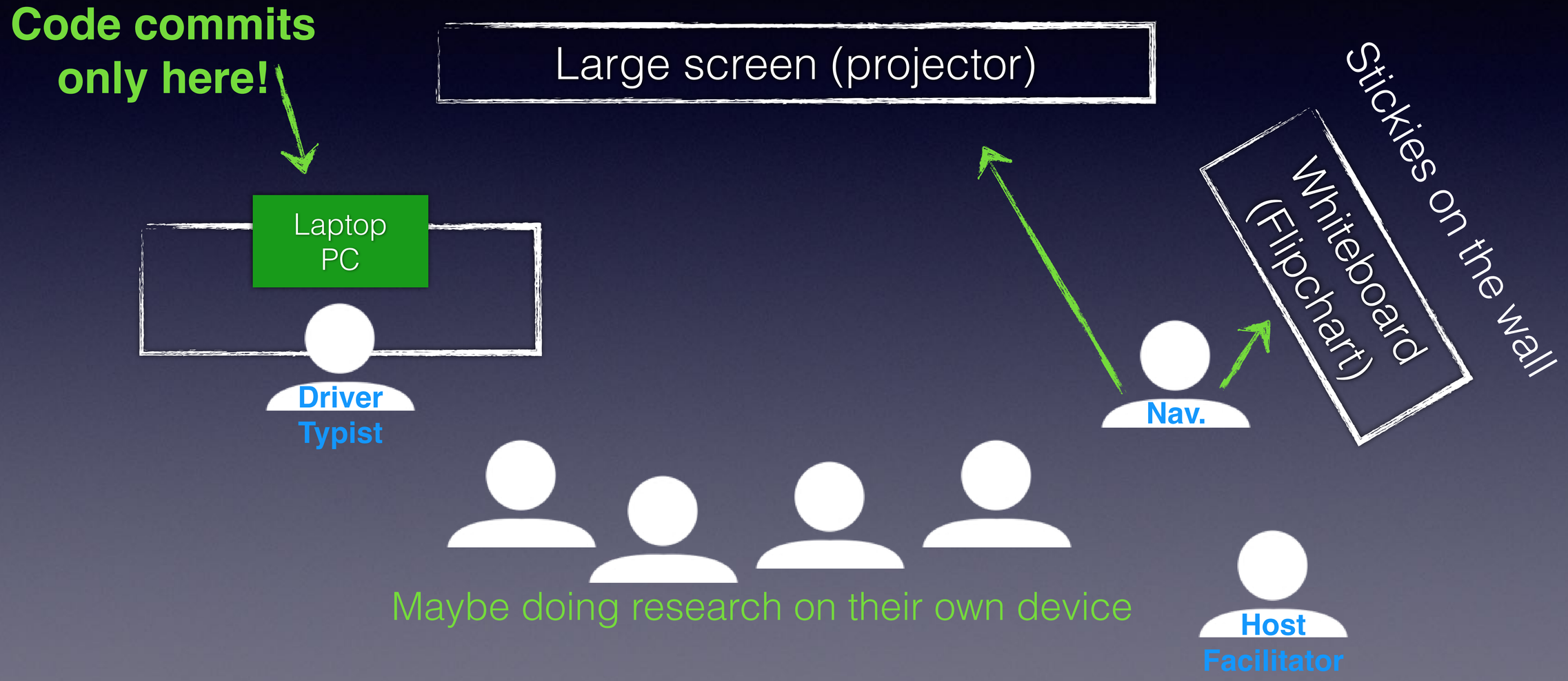




do & decide

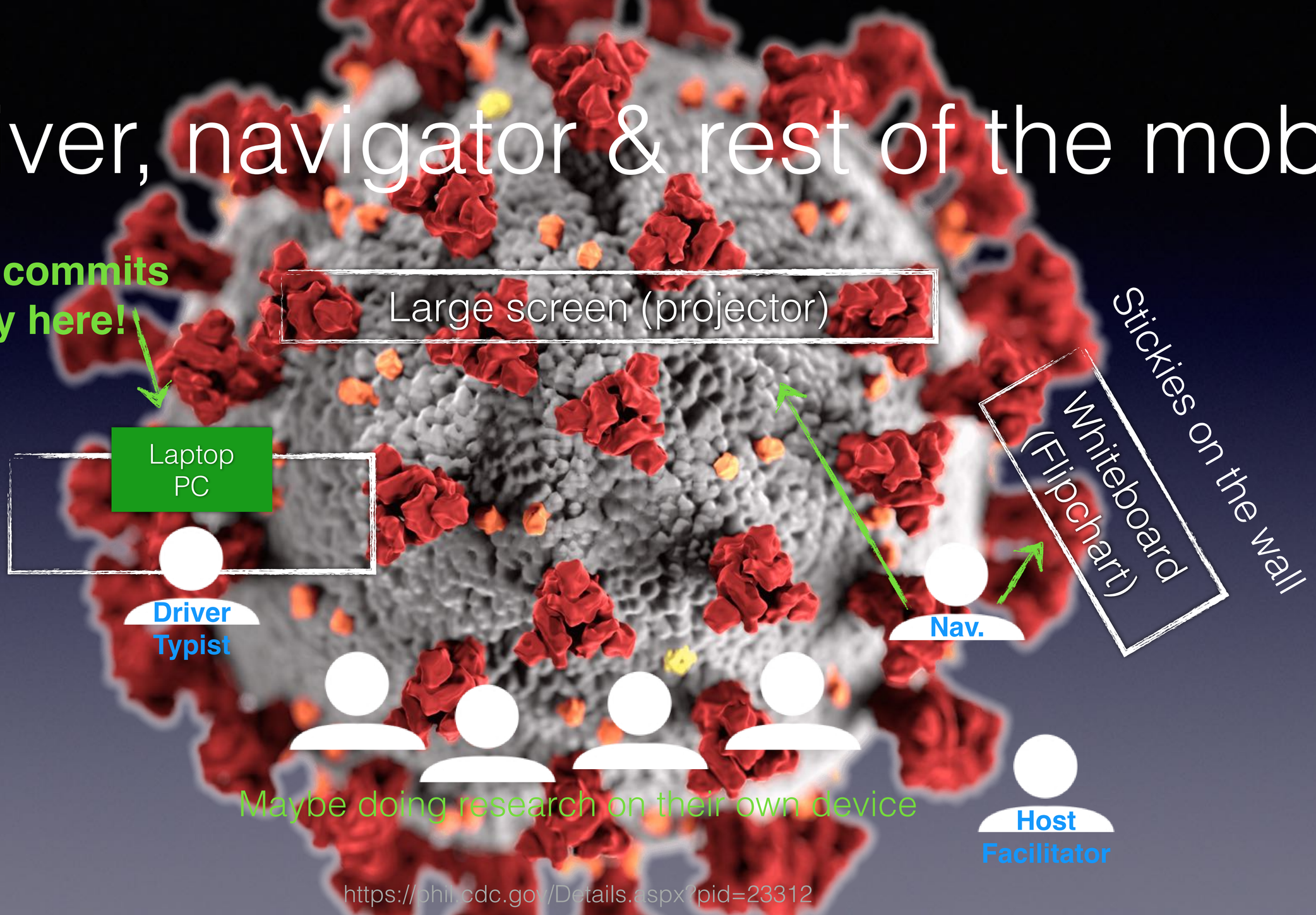
no more
discuss & defer

Driver, navigator & rest of the mob



based on the „Mob Programming Guidebook“

Driver, navigator & rest of the mob



https://phil.cdc.gov/Details.aspx?pid=23312

Remote Mob Programming

Remote Everybody
Camera Always On
Regular On-Site Meetings
Small Team
Same Time
Typist and the Rest of the Mob
Screen Sharing
10 Minute Intervals
Git Handover
Group Decisions
Constant Momentum
Learn from the Team
Trust
Save the Planet
Dine with your Family

https://www.remotemobprogramming.org

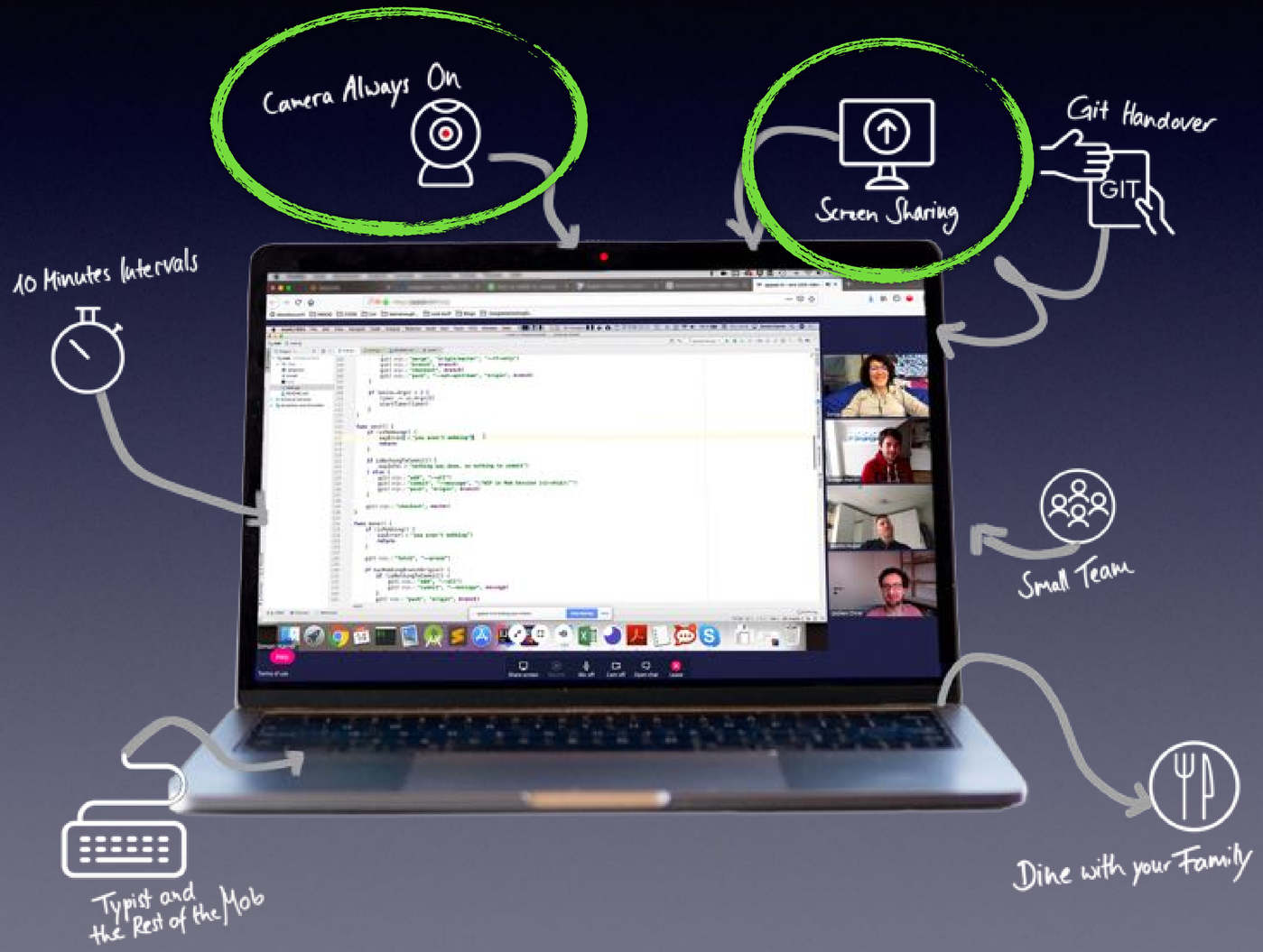
Remote Mob Programming

More than just remote, distributed teams!

(GitLab) Remote Manifesto ↔ Remote Mob Programming

"Asynchronous communication
over
synchronous communication."

How to see each other?



"remote everybody"

How to code together?

```
# simon begins the mob session as typist
simon$ mob start 10
# WORK
# after 10 minutes...
simon$ mob next
# carola takes over as the second typist
carola$ mob start 10
# WORK
# after 10 minutes...
carola$ mob next
simon$ mob start 10
# WORK
# After 6 minutes the work is done.
simon$ mob done
simon$ git commit --message "describe what the mob session was all about"
```

mob

https://mob.sh/

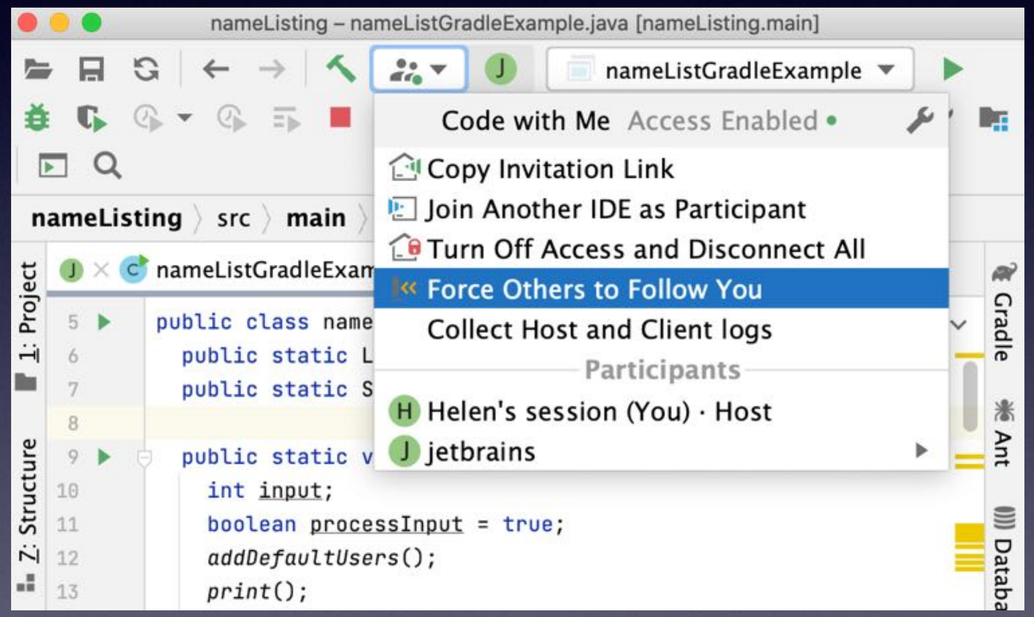
… many other tools like *https://github.com/otto-de/rstash*

How to code together?

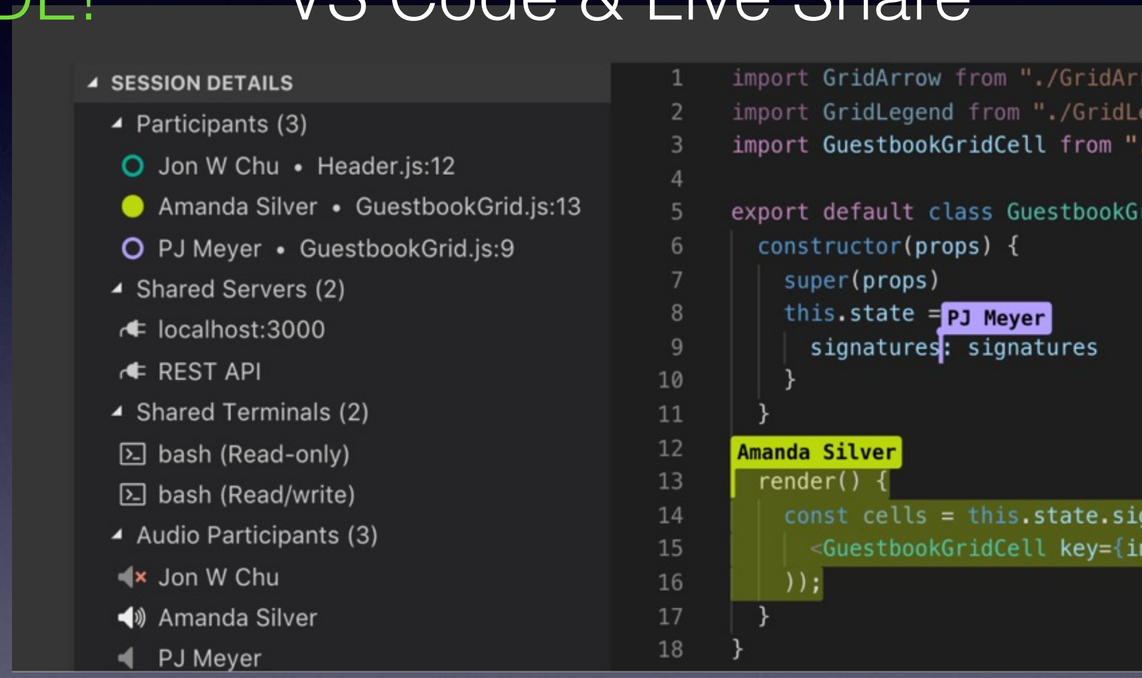
IntelliJ & Code With Me

Share your IDE!

VS Code & Live Share



https://www.jetbrains.com/help/idea/code-with-me.html



https://visualstudio.microsoft.com/services/live-share/

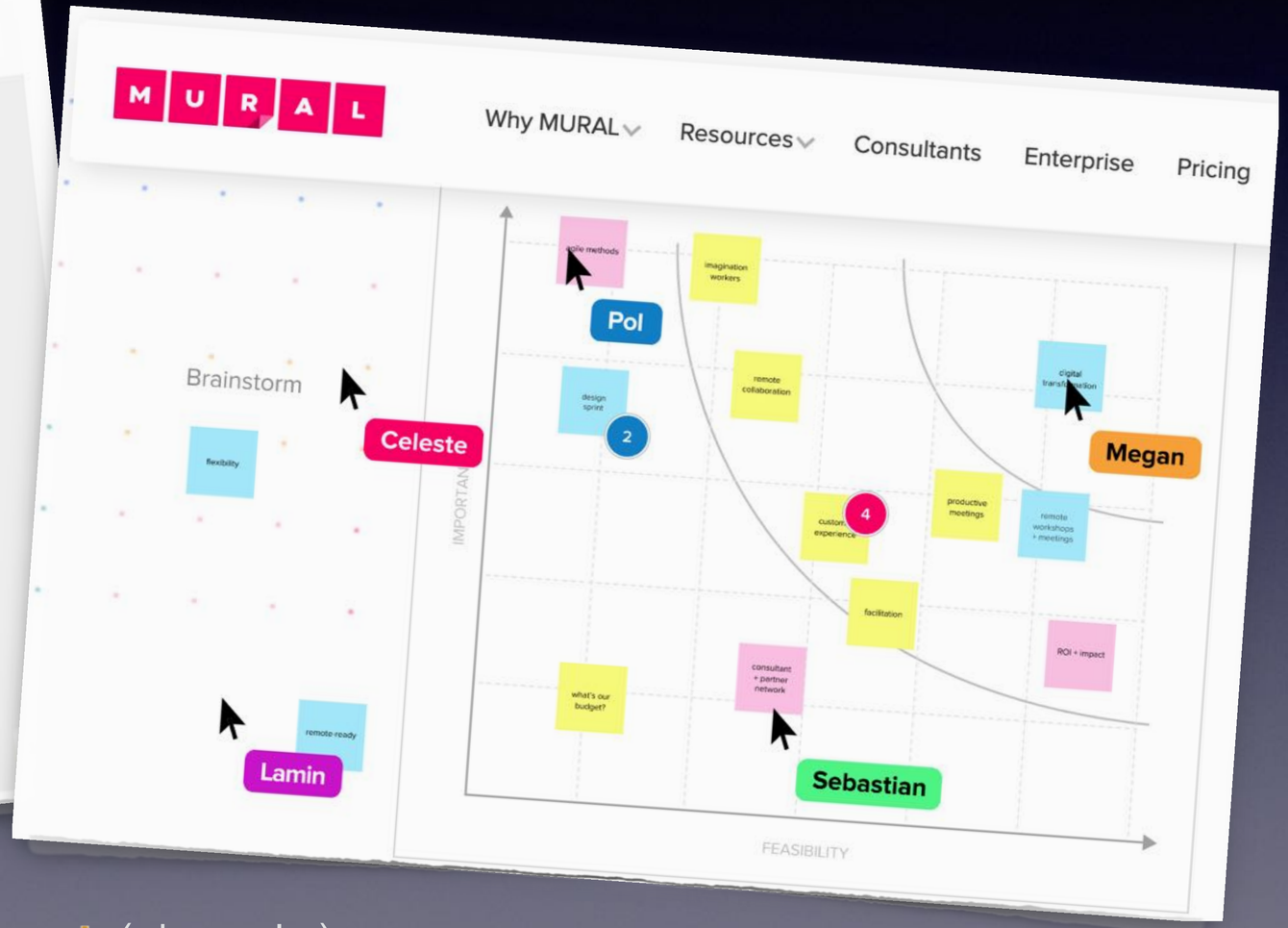
CodeTogether

Cloud9

Gitpod

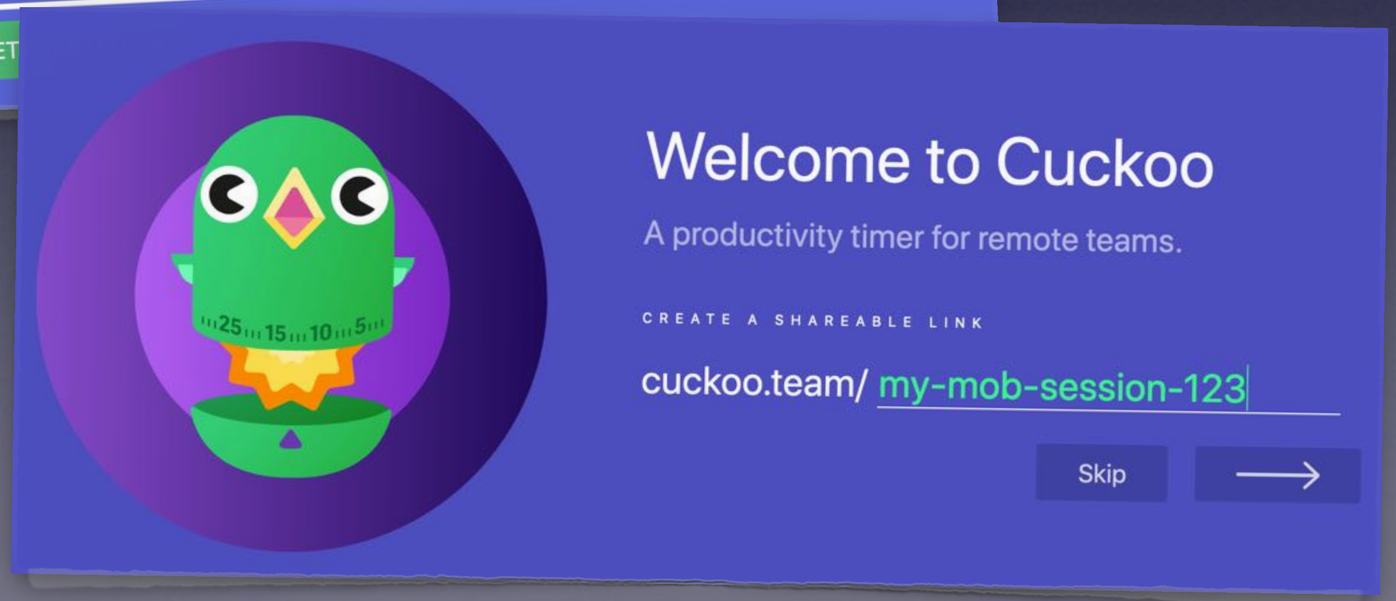
THEIA

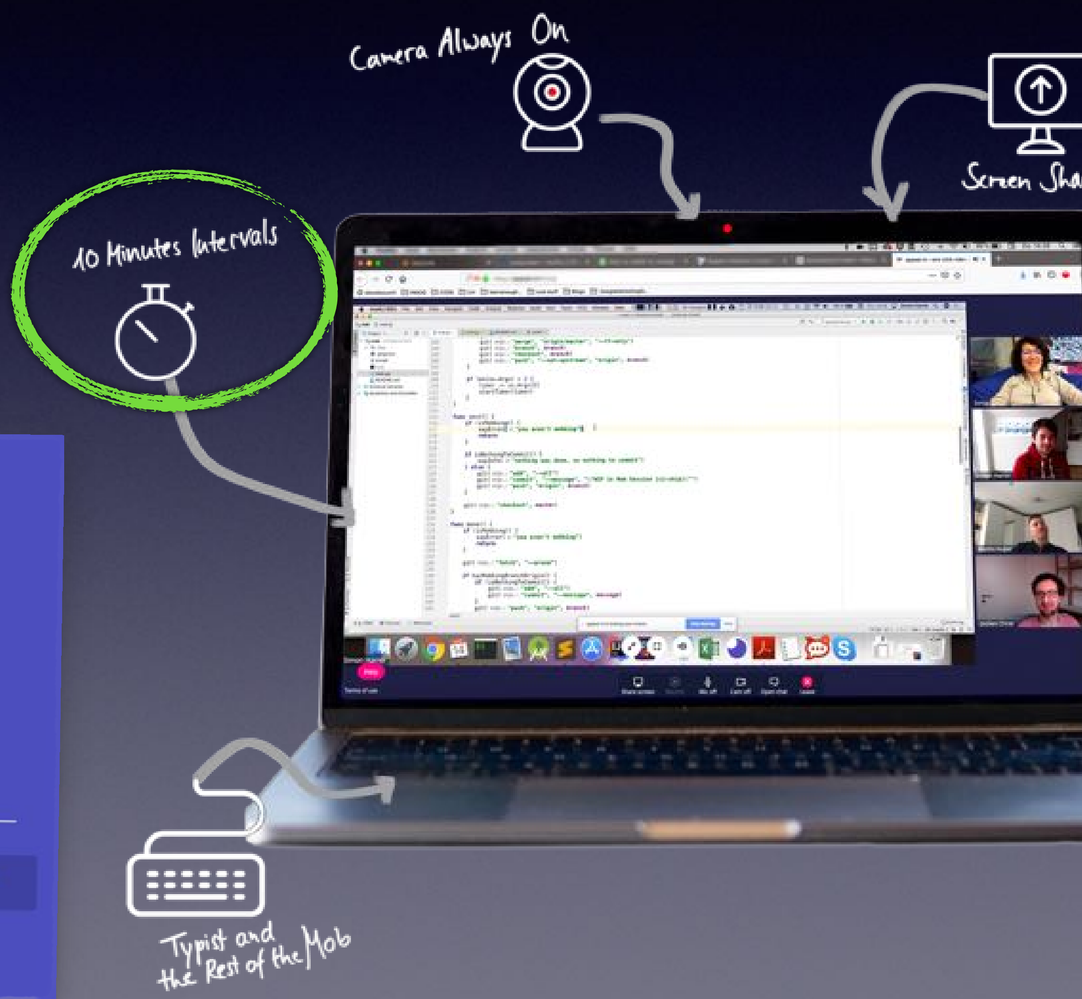
How to draw on a whiteboard?



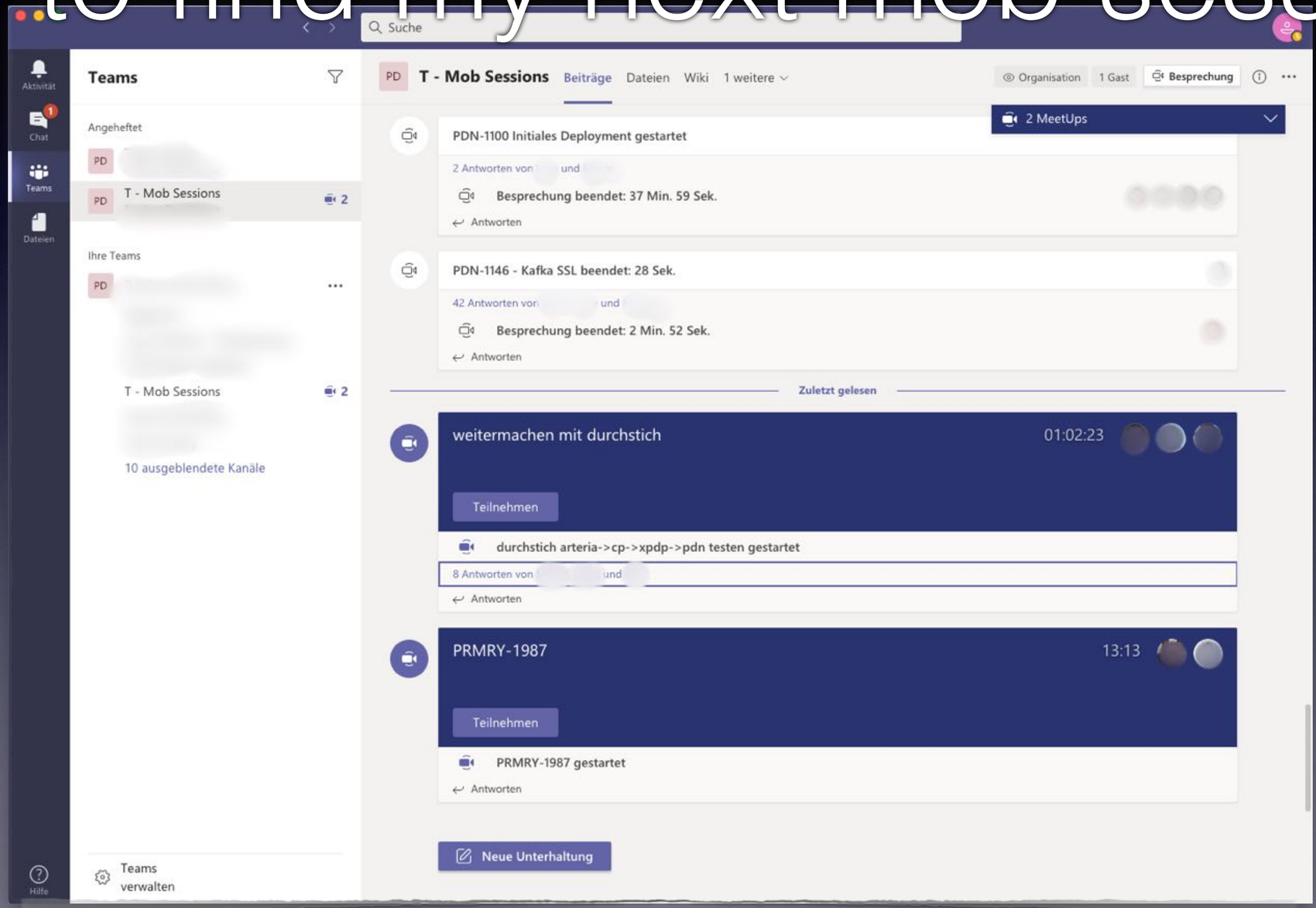
diagrams.net (draw.io)

How to keep track of time?





How to find my next mob session?



Whether remote or co-located…

There will be "mobs" of 2 …

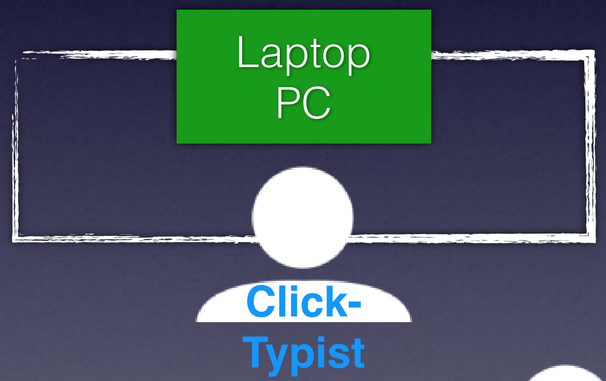
Your pair programming will get better

by practicing mob programming!

Mob Testing

Work through application under test

Large screen (projector)



Explorative testing
etc.

Test protocol
etc.

Why is it working?

Mob Programming is

making implicit (tacit) knowledge & skills visible.

Watch others think.

See. Experience. Do it yourself.

Different to meetings!

Mob Programming yields

working, tested, **shared code**.

Making us & our customers happy 😀

Mob Programming:
Learn together. Deliver together.

Mob Programming

Pair Programming

Know-how transfer

Coaching

Taking breaks

XP

Questions?

Readability

Modern Agile

Simplicity

Strong Style navigation

Velocity

Speed

Thank you!

"We are uncovering better ways of developing software by doing it and helping others do it.“ *

thomas@muchsoft.com
@thmuch

*) *https://agilemanifesto.org/*

Further Reading

https://mobprogramming.org/
https://leanpub.com/mobprogramming

https://www.remotemobprogramming.org/
https://leanpub.com/remotemobprogramming

https://mobprogrammingguidebook.xyz/
http://www.mobprogrammingguidebook.com/

https://pragprog.com/book/mpmob/code-with-the-wisdom-of-the-crowd

https://www.chrislucian.com/p/companies-that-are-mob-programming.html

Mob Timer

https://mobti.me/

https://cuckoo.team/

https://agility.jahed.dev/

http://mobtimer.zoeetrope.com/

https://mobtimer.com/

https://saschamz.github.io/mobtimer/

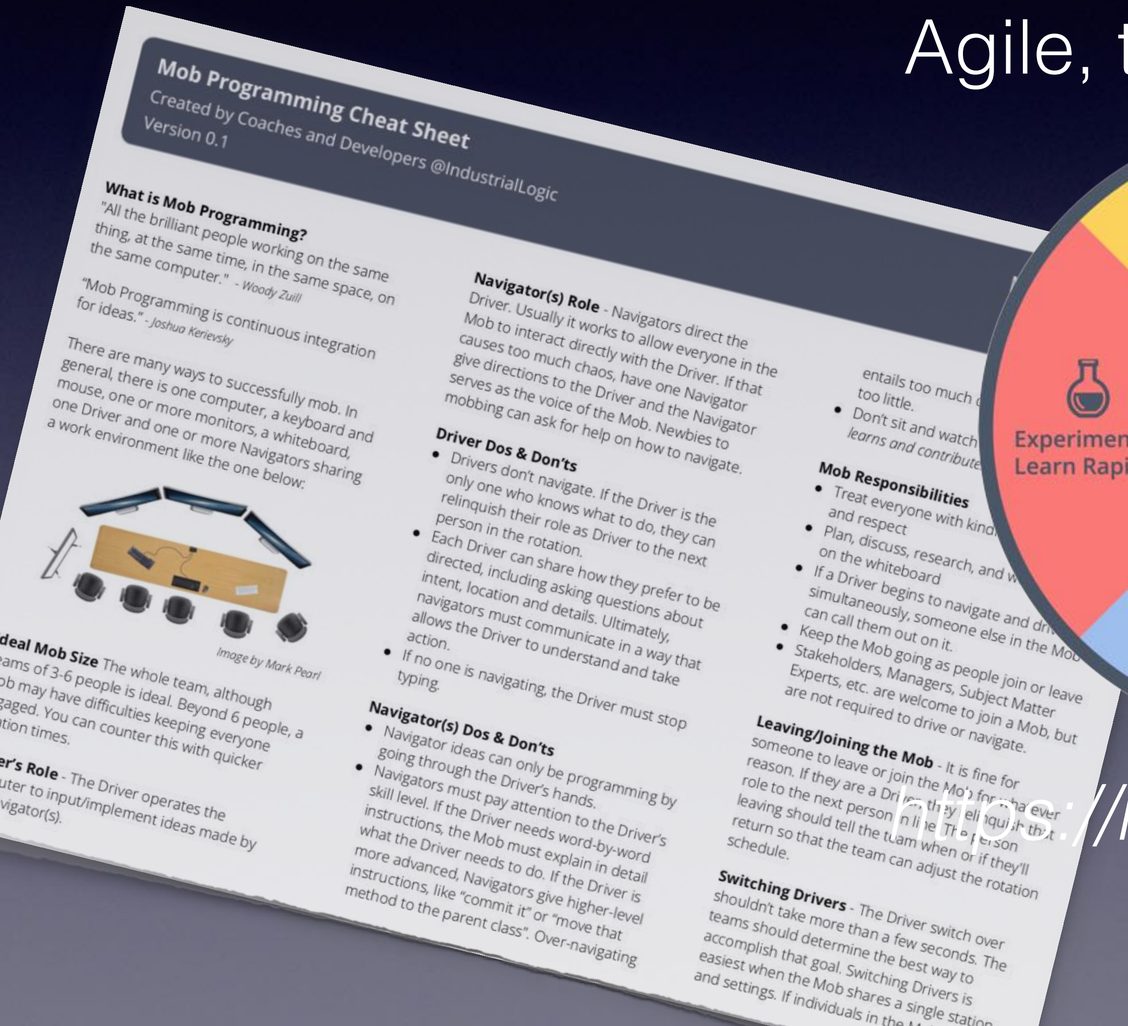
https://github.com/MobProgramming/MobTimer.Python

https://github.com/pluralsight/mob-timer

http://mobster.cc/

Modern Agile

Agile, the working way.



Mob Programming Cheat Sheet
Created by Coaches and Developers @IndustrialLogic
Version 0.1

What is Mob Programming?
"All the brilliant people working on the same thing, at the same time, in the same space, on the same computer." - *Woody Zuill*

"Mob Programming is continuous integration for ideas." - *Joshua Kerievsky*

There are many ways to successfully mob. In general, there is one computer, a keyboard and mouse, one or more monitors, a whiteboard, one Driver and one or more Navigators sharing a work environment like the one below:

Image by Mark Pearl

Ideal Mob Size The whole team, although teams of 3-6 people is ideal. Beyond 6 people, a mob may have difficulties keeping everyone engaged. You can counter this with quicker rotation times.

Driver's Role - The Driver operates the computer to input/implement ideas made by navigator(s).

Navigator(s) Role - Navigators direct the Driver. Usually it works to allow everyone in the Mob to interact directly with the Driver. If that causes too much chaos, have one Navigator give directions to the Driver and the Navigator serves as the voice of the Mob. Newbies to mobbing can ask for help on how to navigate.

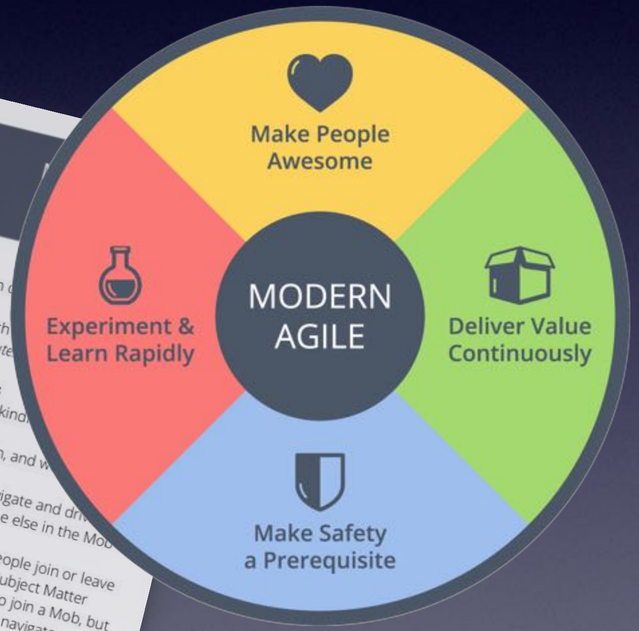
Driver Dos & Don'ts
- Drivers don't navigate. If the Driver is the only one who knows what to do, they can relinquish their role as Driver to the next person in the rotation.
- Each Driver can share how they prefer to be directed, including asking questions about intent, location and details. Ultimately, navigators must communicate in a way that allows the Driver to understand and take action.
- If no one is navigating, the Driver must stop typing.

Navigator(s) Dos & Don'ts
- Navigator ideas can only be programming by going through the Driver's hands.
- Navigators must pay attention to the Driver's skill level. If the Driver needs word-by-word instructions, the Mob must explain in detail what the Driver needs to do. If the Driver is more advanced, Navigators give higher-level instructions, like "commit it" or "move that method to the parent class". Over-navigating entails too much d
too little.
- Don't sit and watch
learns and contribute

Mob Responsibilities
- Treat everyone with kind
and respect
- Plan, discuss, research, and w
on the whiteboard
- If a Driver begins to navigate and dri
simultaneously, someone else in the Mob
can call them out on it.
- Keep the Mob going as people join or leave
- Stakeholders, Managers, Subject Matter Experts, etc. are welcome to join a Mob, but are not required to drive or navigate.

Leaving/Joining the Mob - It is fine for someone to leave or join the Mob for a ever reason. If they are a Dri[illegible] they relinquish that role to the next person in line. The person leaving should tell the team when or if they'll return so that the team can adjust the rotation schedule.

Switching Drivers - The Driver switch over shouldn't take more than a few seconds. The teams should determine the best way to accomplish that goal. Switching Drivers is easiest when the Mob shares a single station and settings. If individuals in the M



https://modernagile.org/

#MobProgramming

#NoEstimates

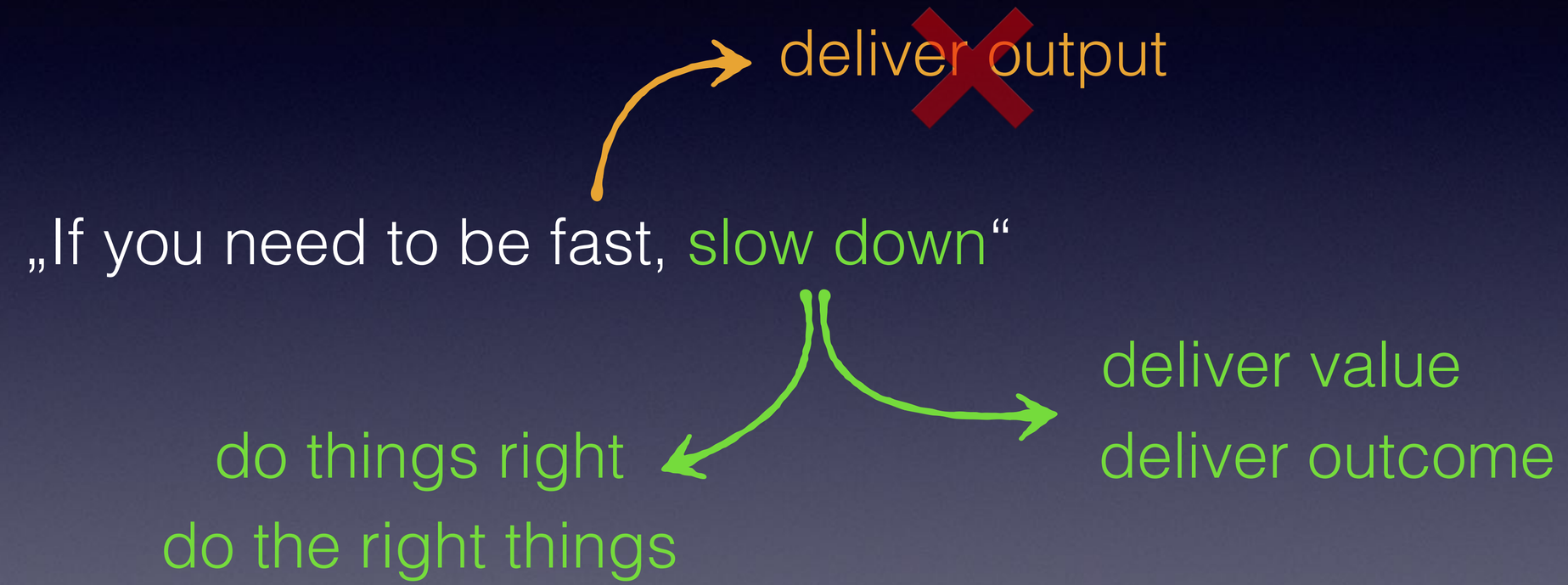
#NoProjects

#ModernAgile

Any managers here?

But our speed!

Velocity



5 devs for 1 (ONE) task???

Well… what do you optimise for?

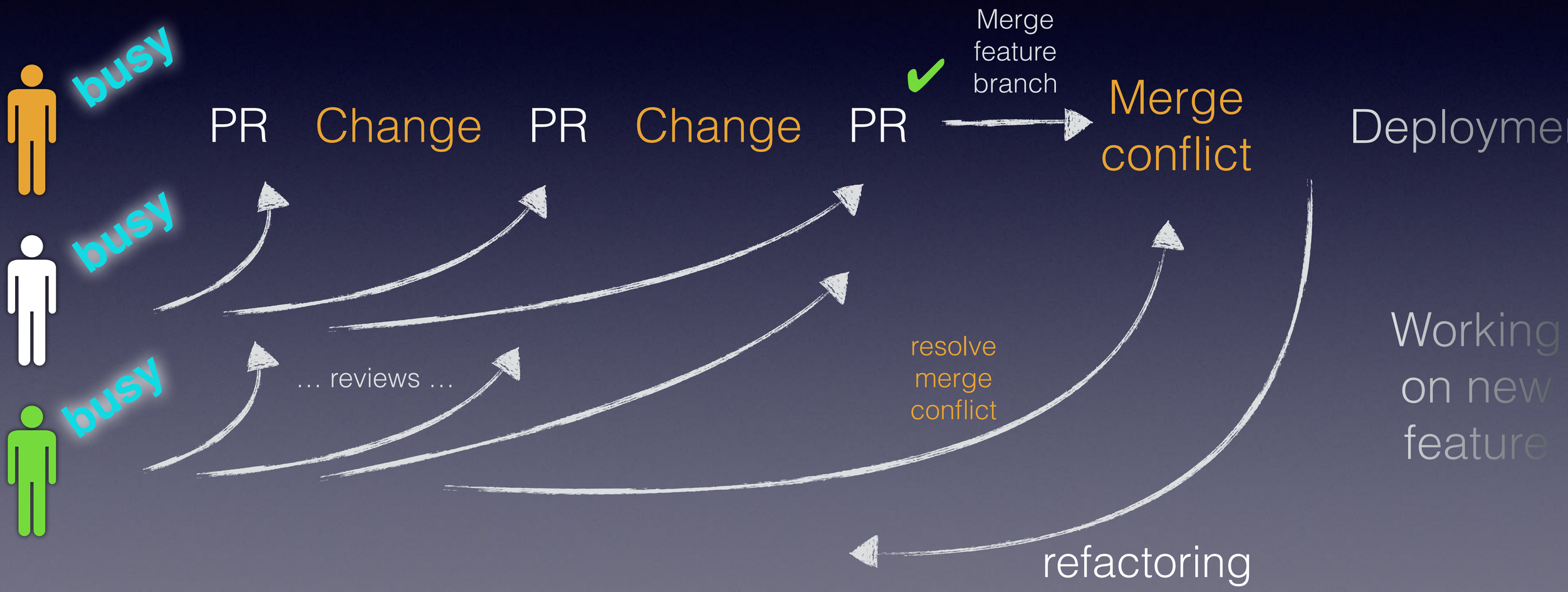
Deliver most important feature to our customers

or

Keep developers as busy & working to capacity as possible

(hint: WYO4IWYG)

Busy waiting

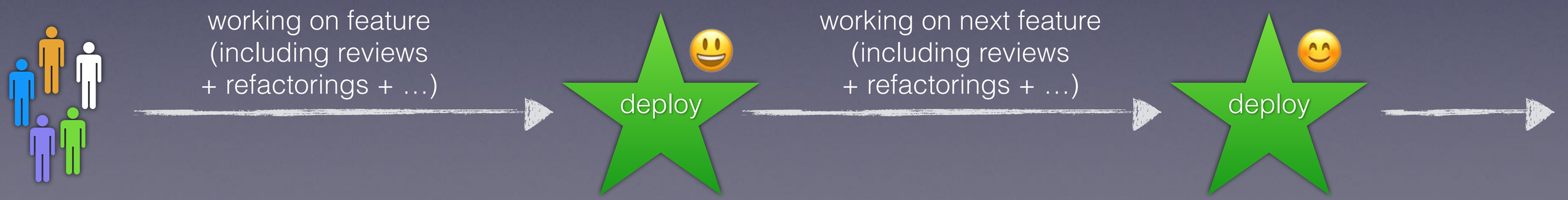


Flow

… of value delivered to our customers:

Maximize number of things done

Minimize waste



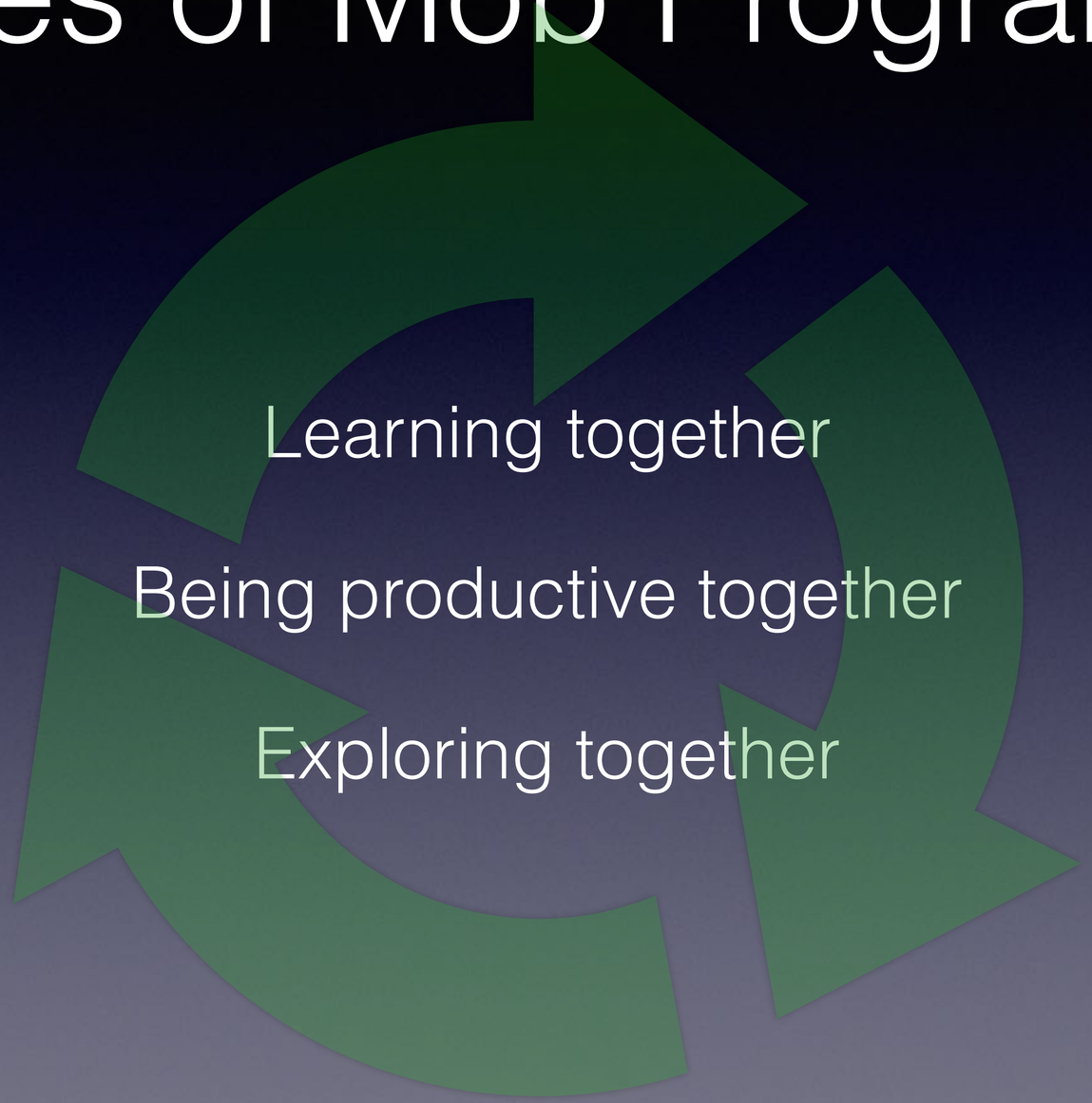
Tackle complexity

Our problems (tasks) are getting more & more complex

Team has to comprehend **path** to the solution
(not only the result)

Why this architecture?
Why is some code *missing* here?

3 stages of Mob Programming



Learning together

Being productive together

Exploring together