

# Mob Programming

Learn together. Deliver together!

Thomas Much

 @thmuch

**#JCON2020**

27.10.2020

Software developer

Agile developer coach



Mob Programming  
since 2016

Remote Mob Programming  
since 2020

... on the shoulders of giants ...

 @thmuch

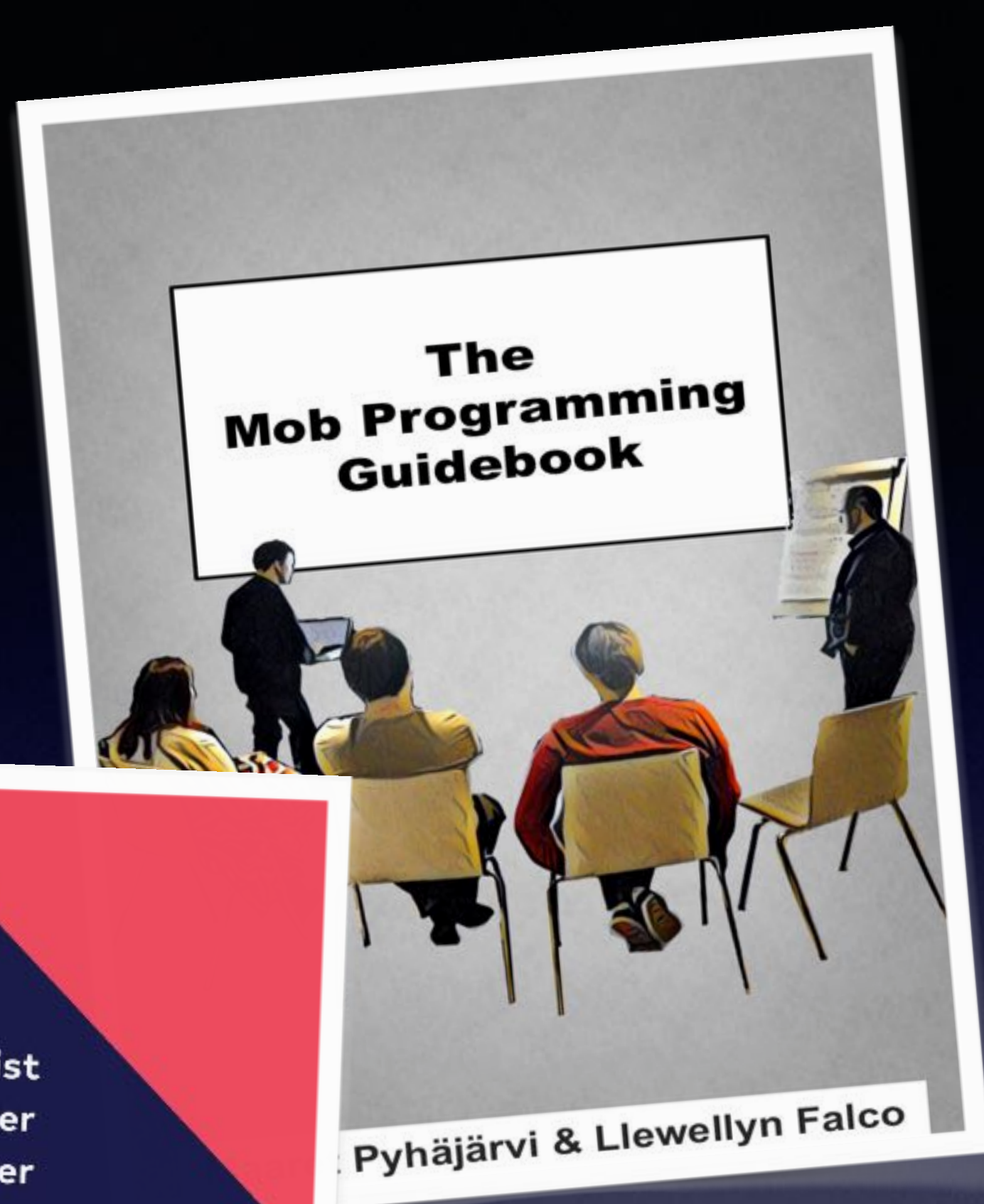


# Mob Programming

A Whole Team Approach



By Woody Zuill and Kevin Meadows



# The Mob Programming Guidebook

Pyhäjärvi & Llewellyn Falco

# MOB PROGRAMMING GUIDEBOOK

MAARET PYHÄJÄRVI

Page 1 of

# Code with the Wisdom of the Crowd

Get Better Together with Mob Programming

Mark Pearl  
edited by  
Tammy Coron



# Remote Mob Programming

At home, but not alone



INOQ

Foreword by Mark Pearl



**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](#)

**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

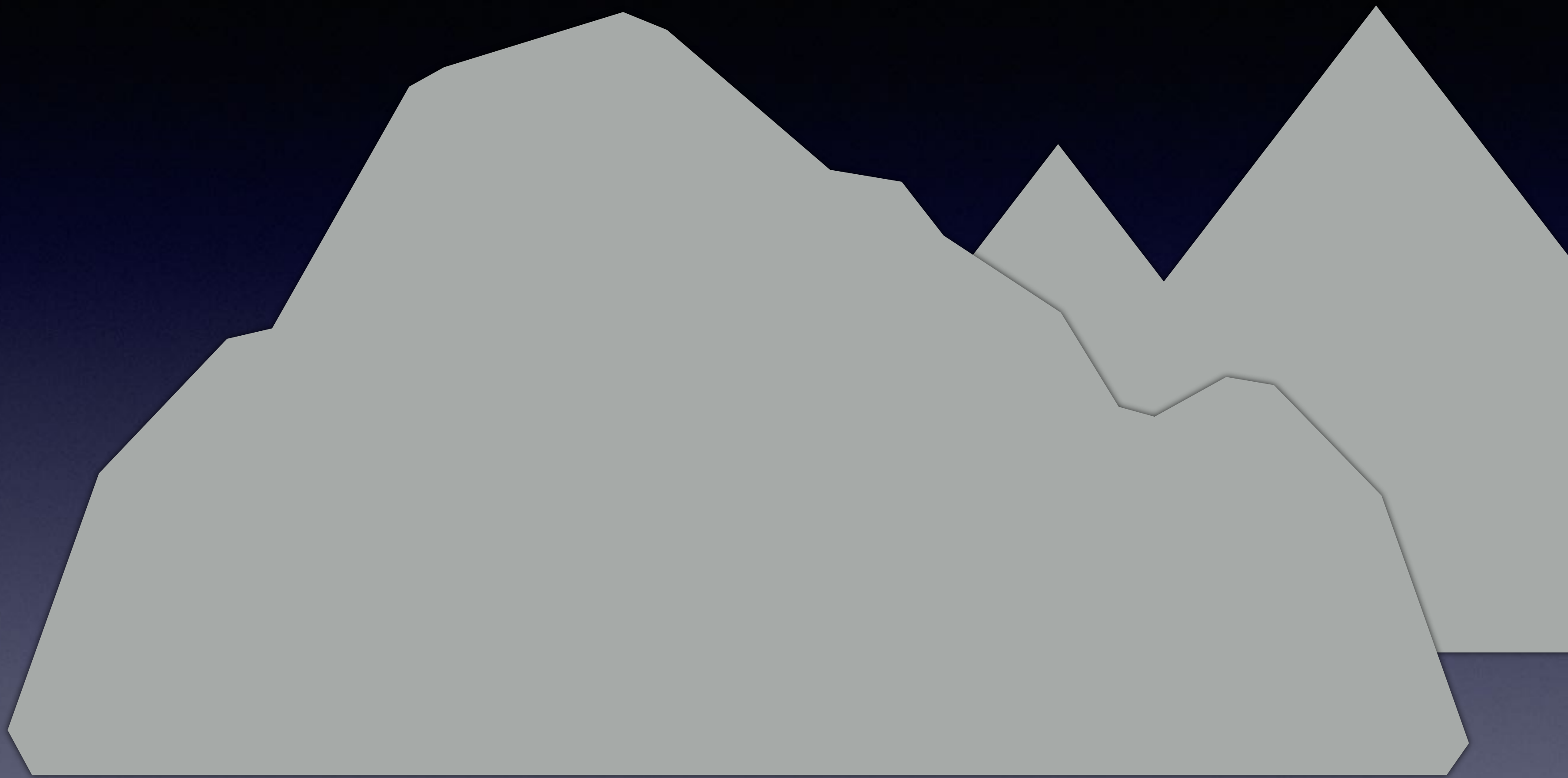
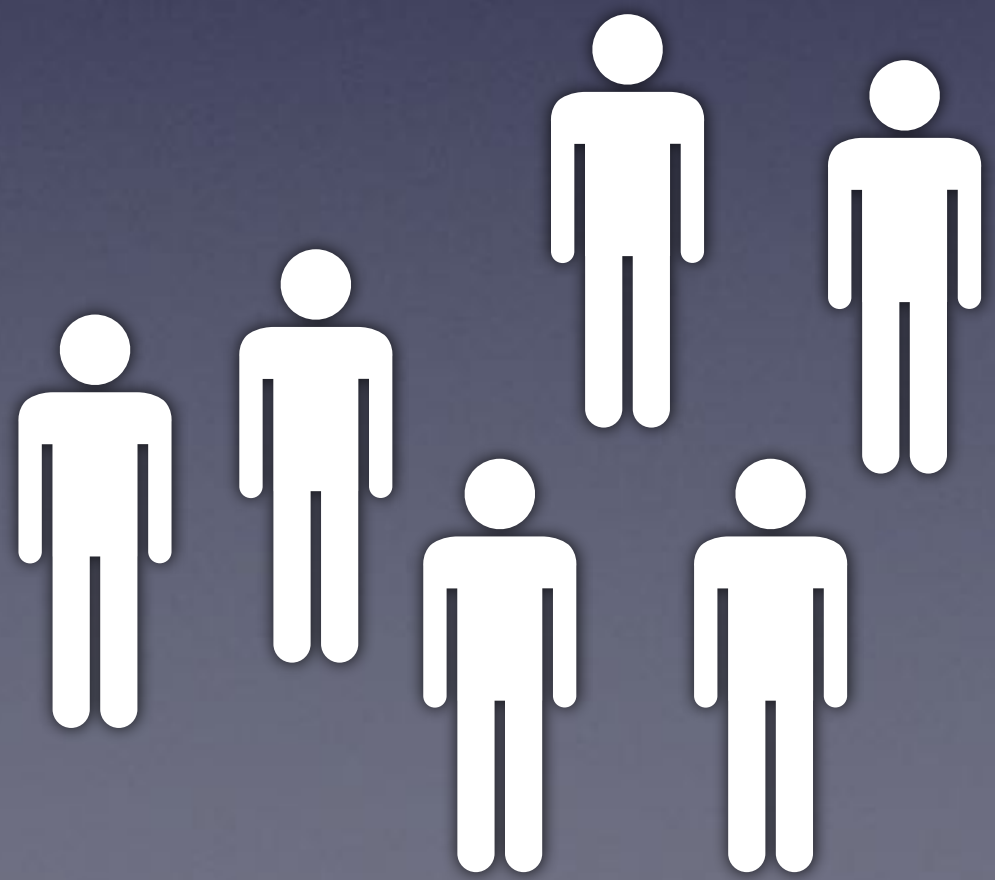
„Mobbing“ 🤔🤨

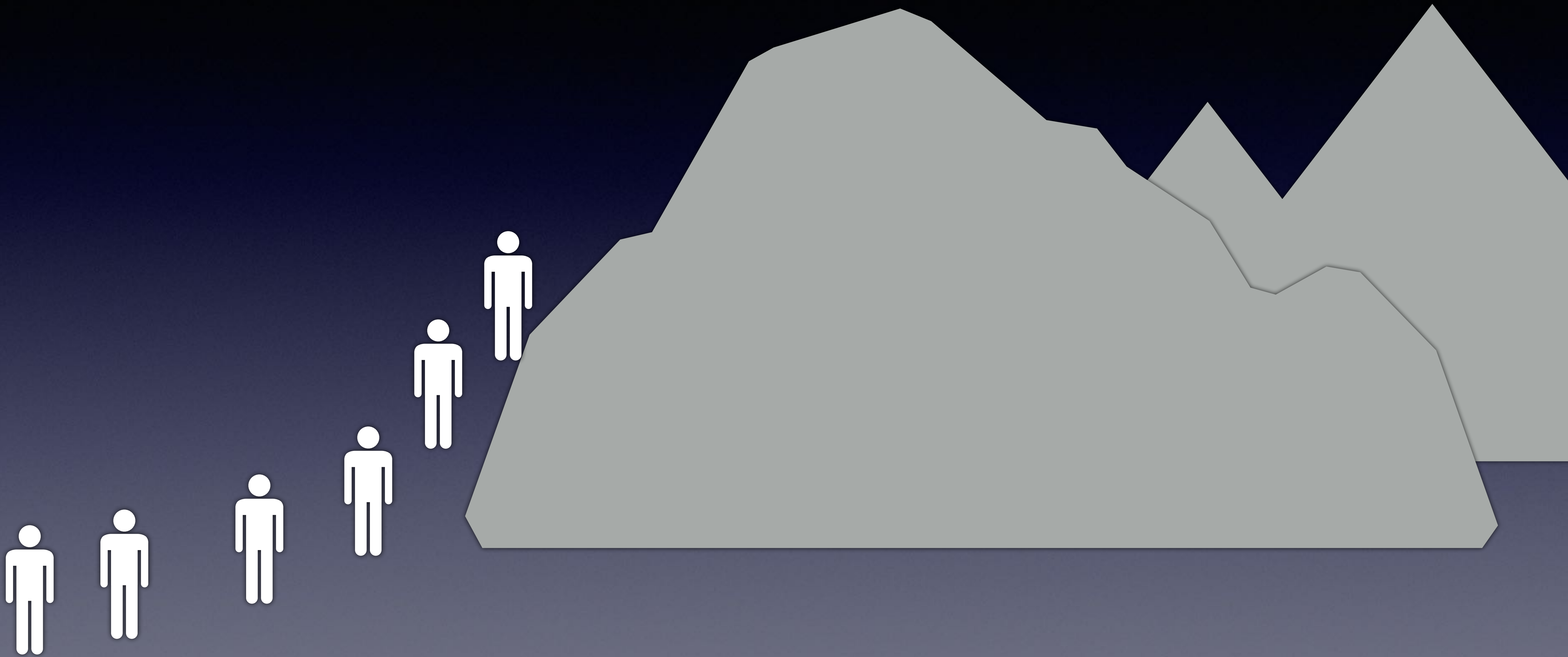
Group Programming  
Team Programming

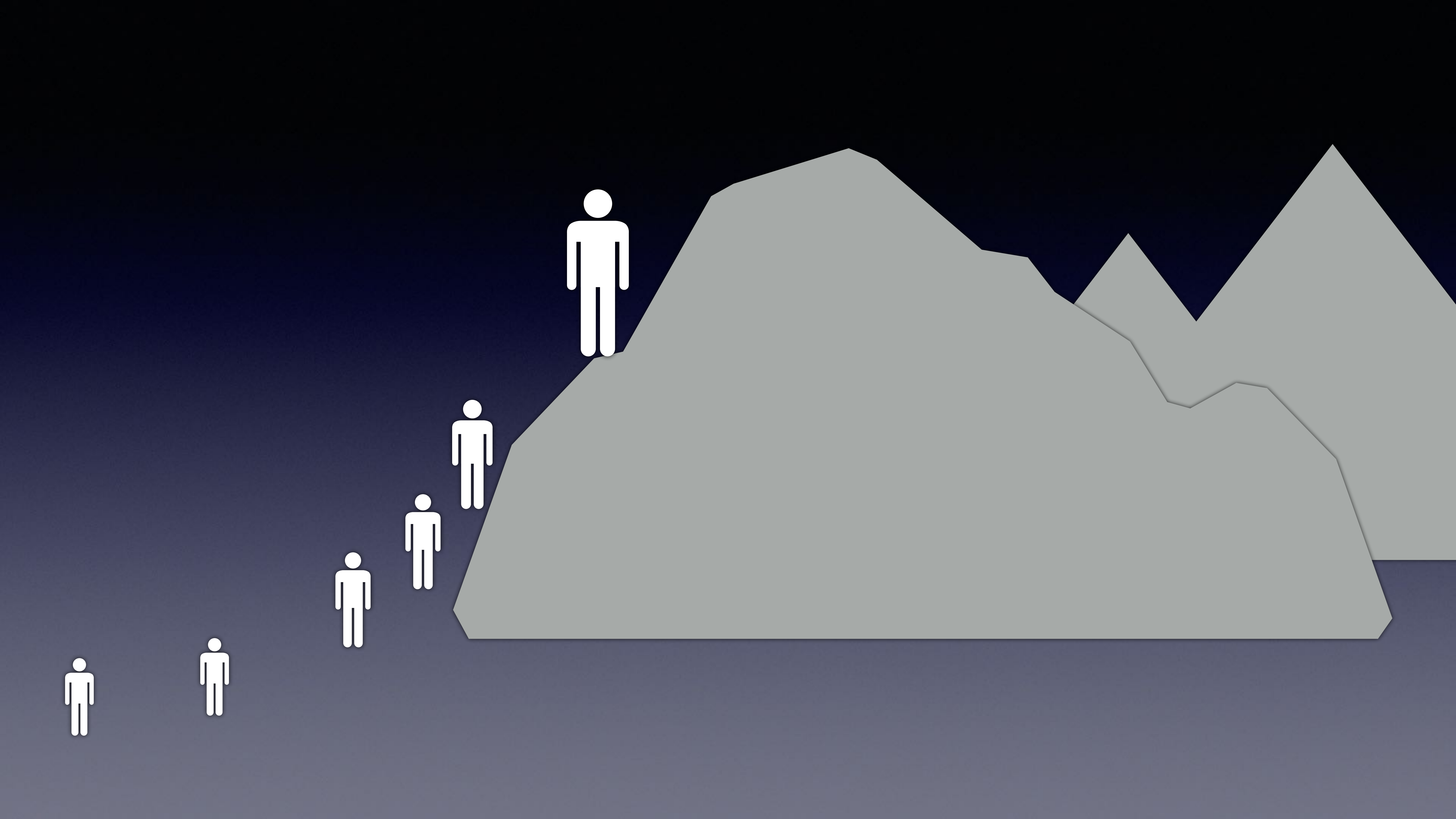
Ensemble Programming\*  
*(like, in a jazz combo)*

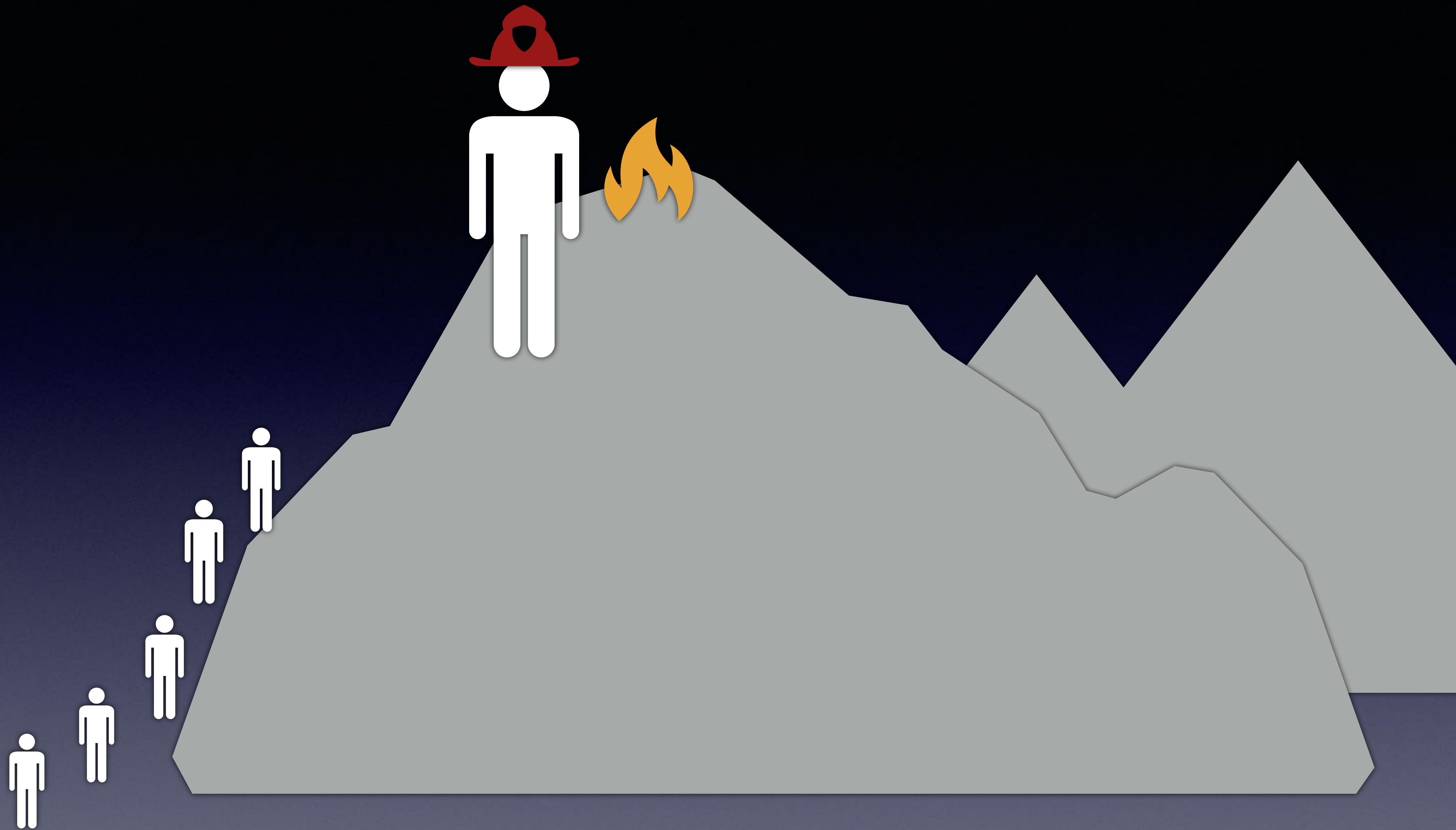
How's your team working?

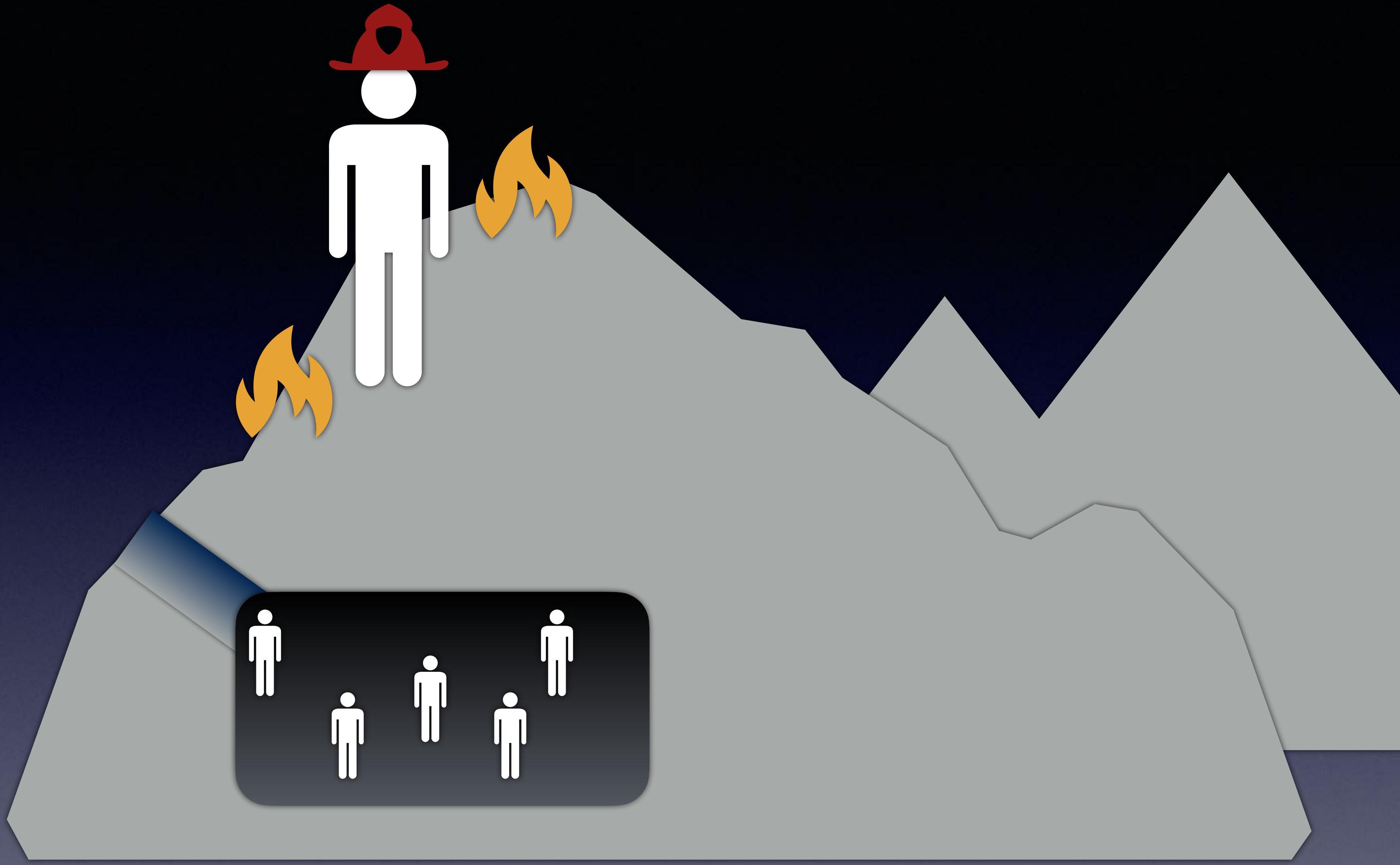


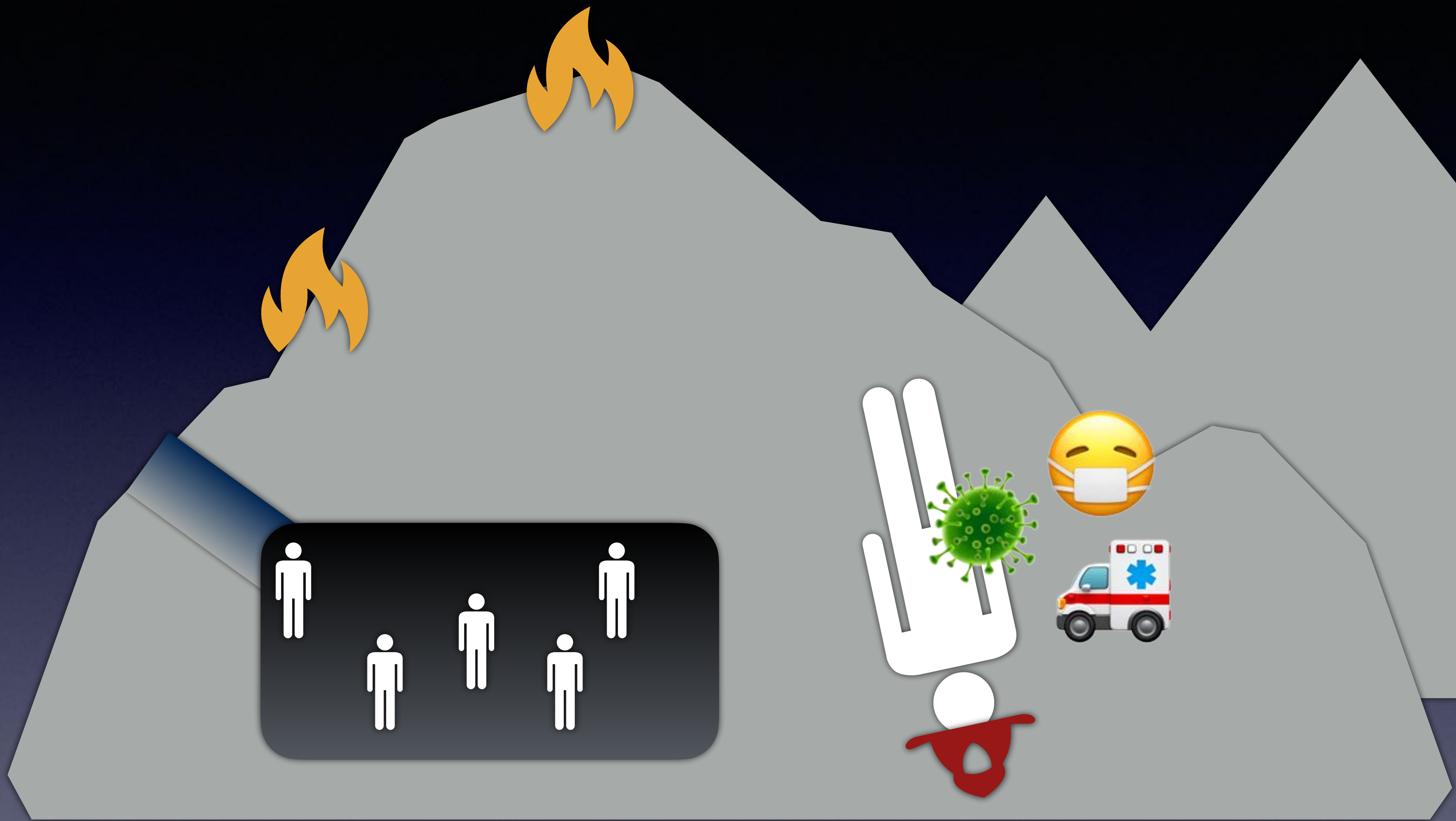


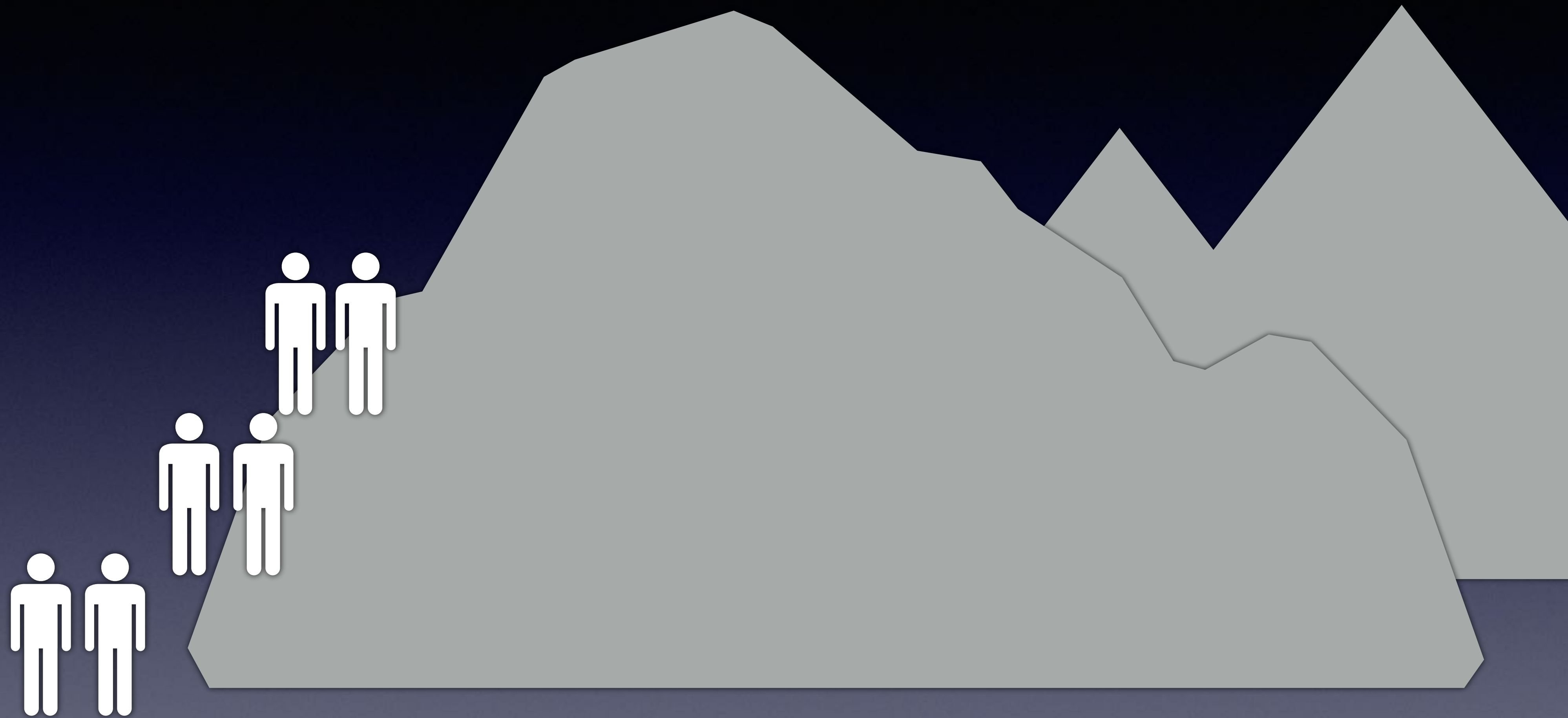




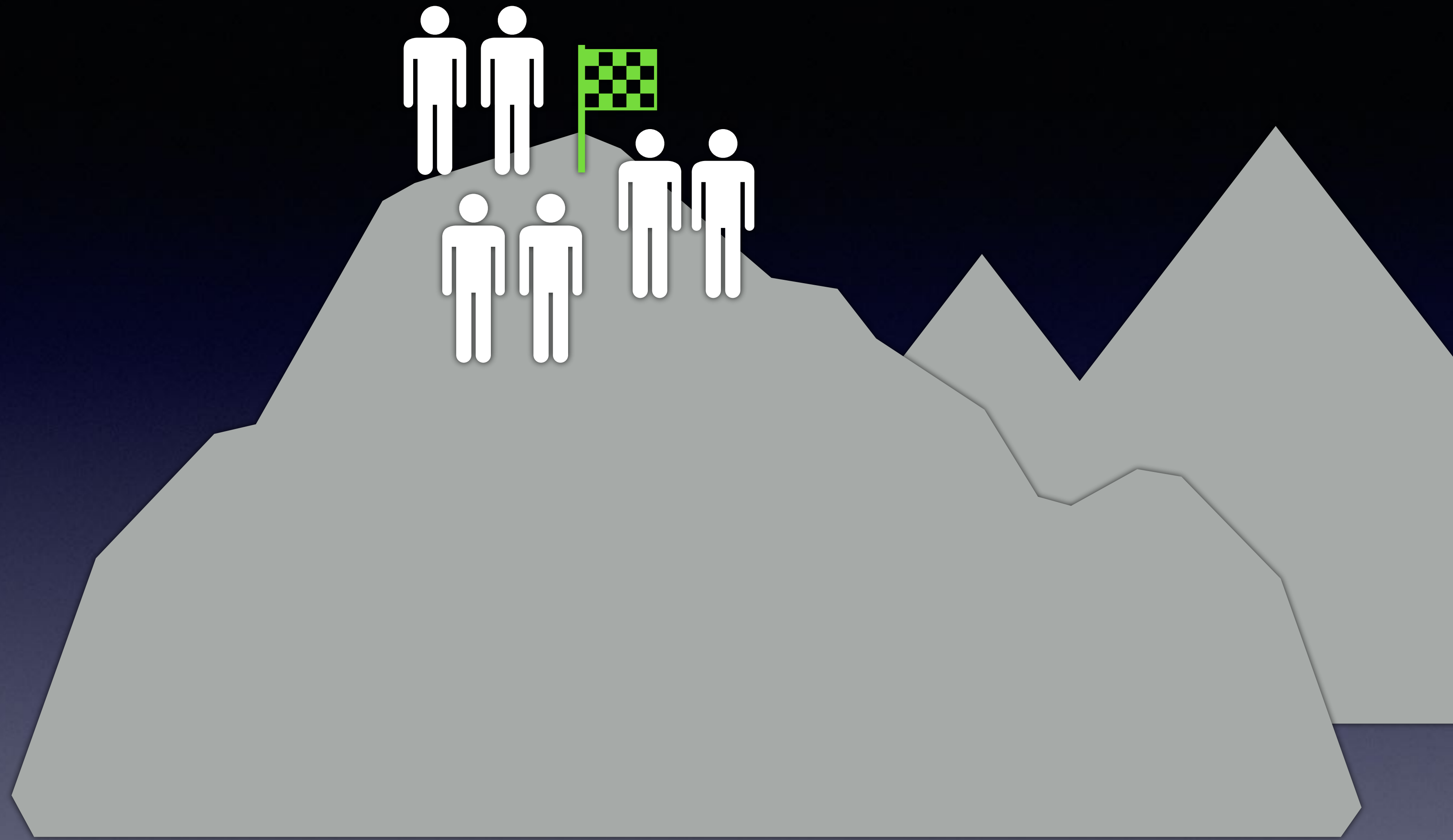






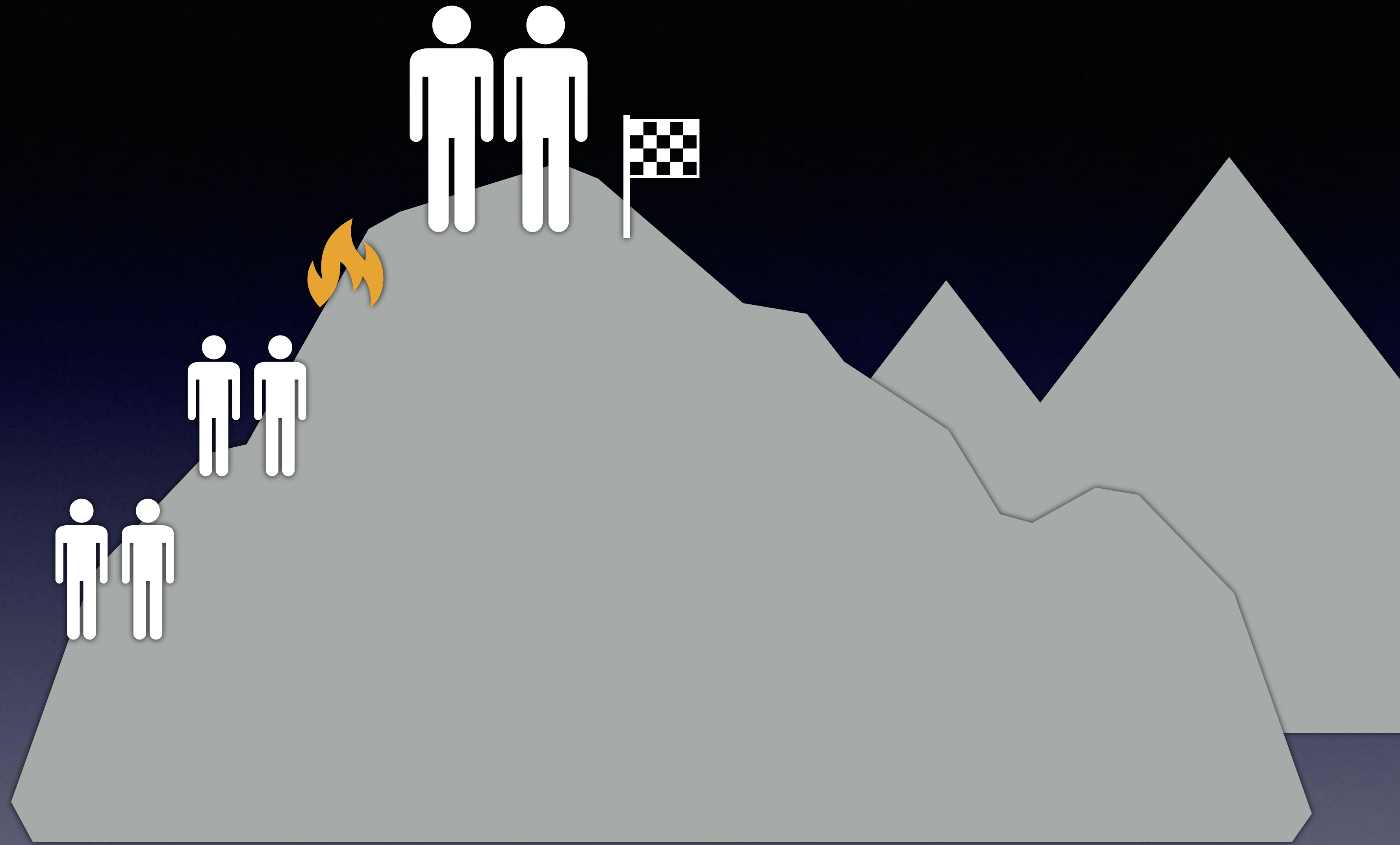


# Pair Programming

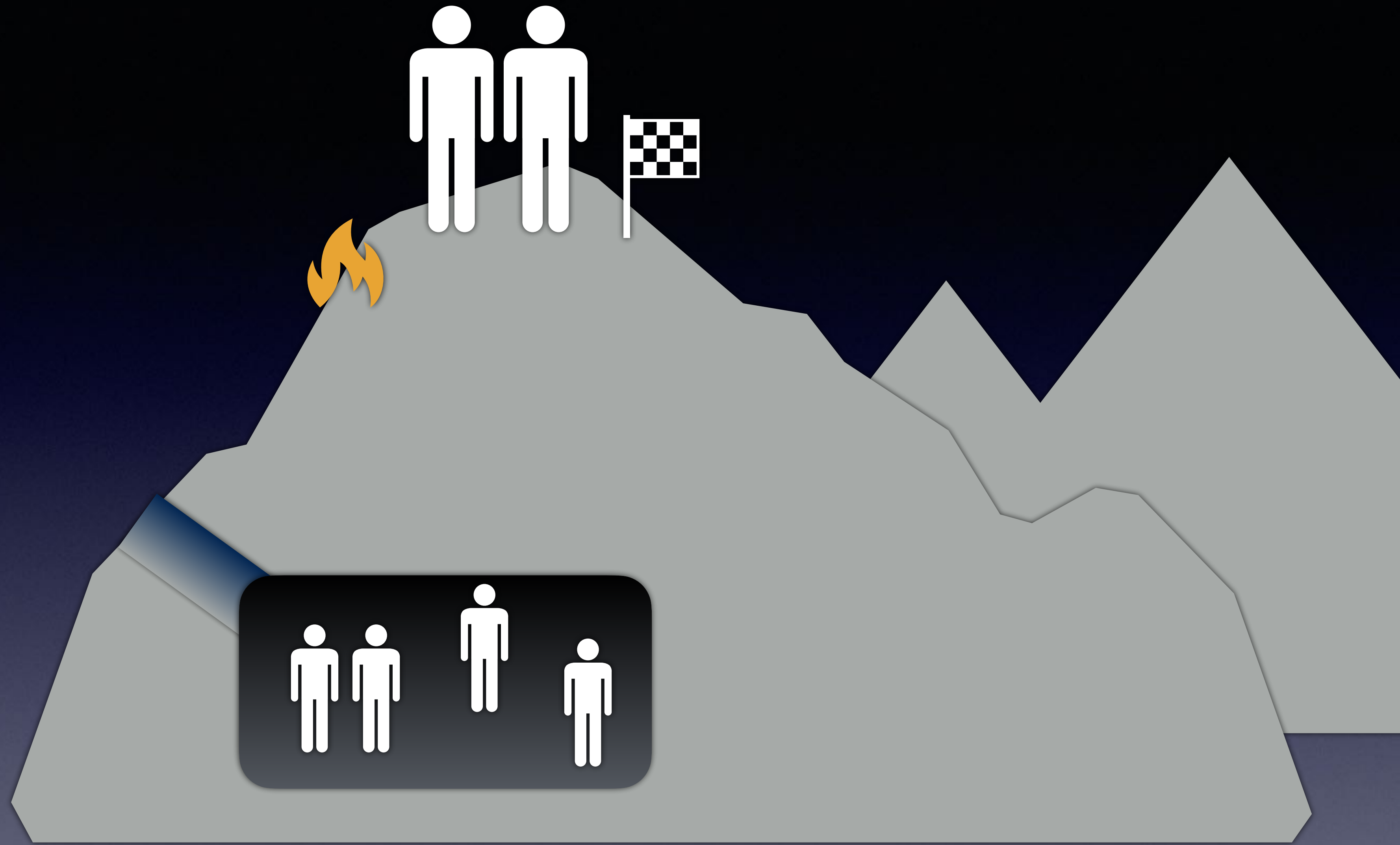


# Pair Programming





# 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***



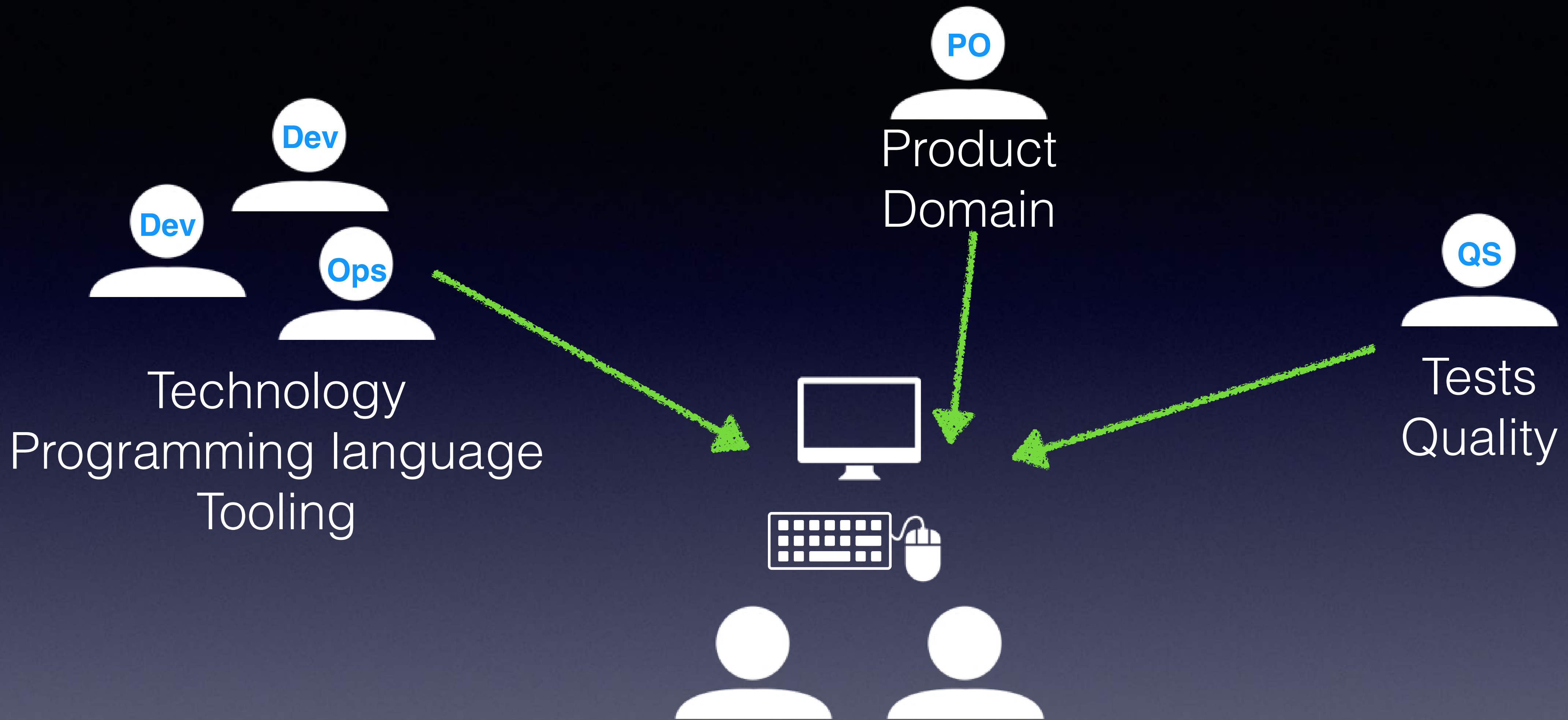
Product Domain

Tests Quality

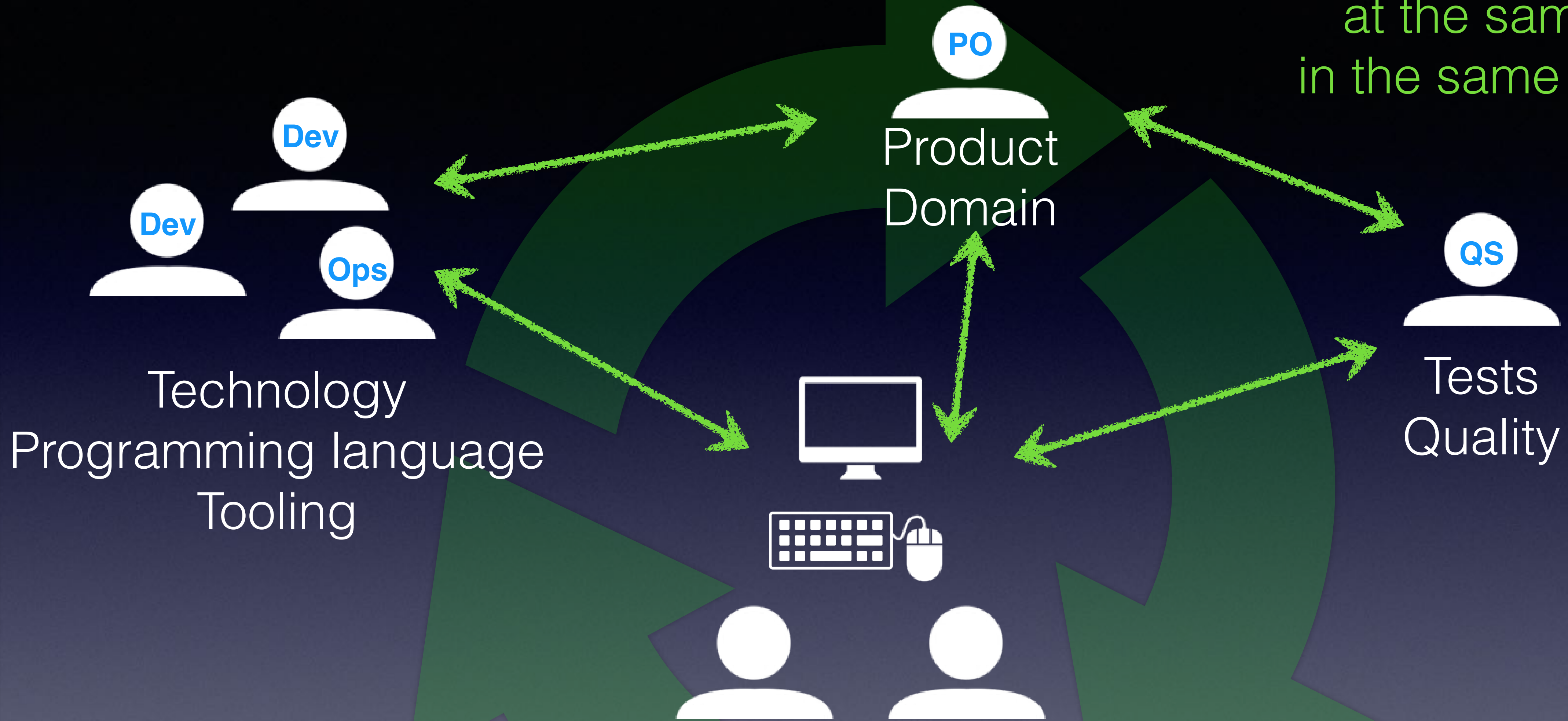
Technology  
Programming language  
Tooling



wait, research, (re-)plan



at the same time,  
in the same space!



# 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."



Allen Holub  
@allenholub

Antwort an @BillyGarnet und @mcflyDev

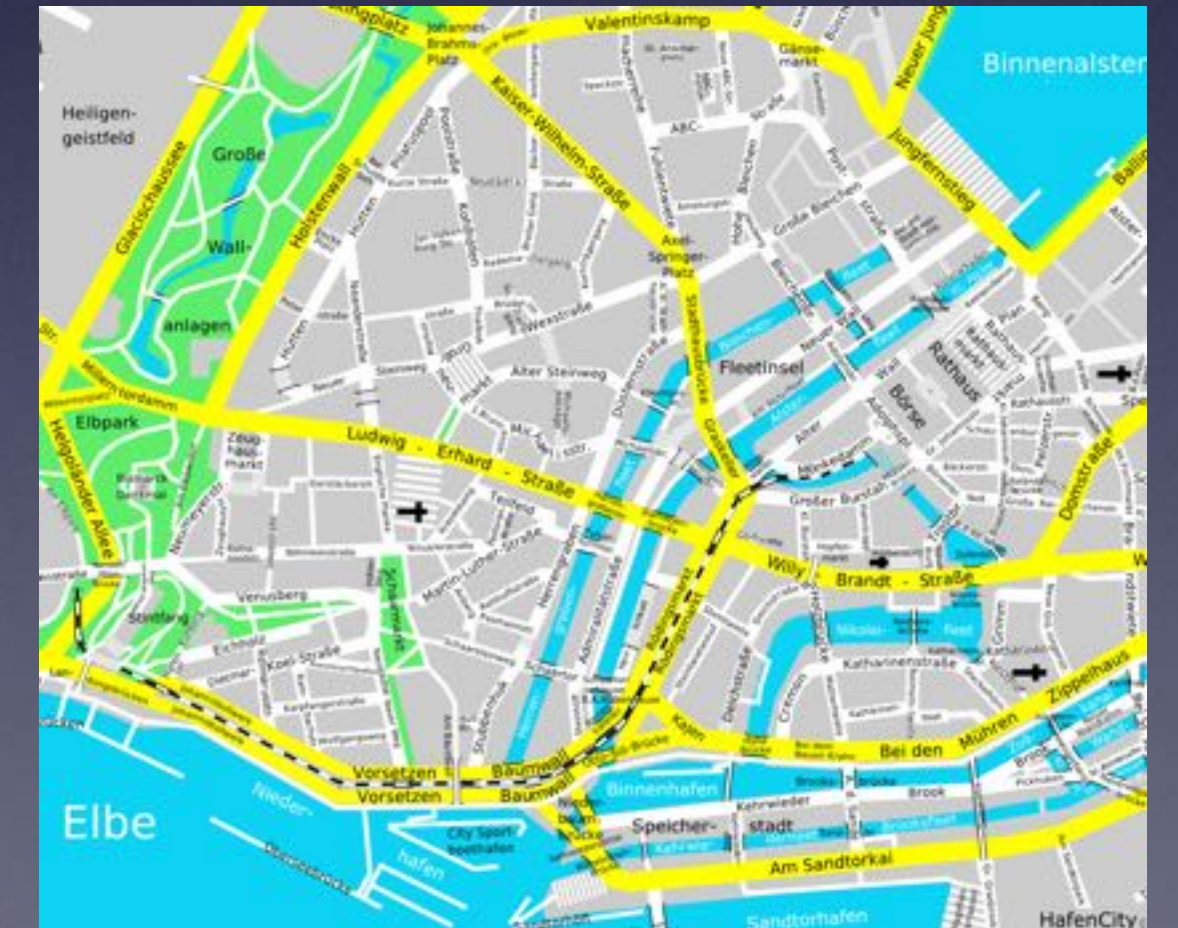
I see Mob Programming as an improvement over Pair Programming. They're both useful, of course, but I've seen Mob Programming be successful in places where Pairing didn't work. Pair Programming is like going on a date. Mobbing is like having dinner with friends. Different dynamic.

6:34 nachm. · 11. Mai 2020 · TweetDeck

# How does Mob Programming work?

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

# Driver & Navigator



# 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*

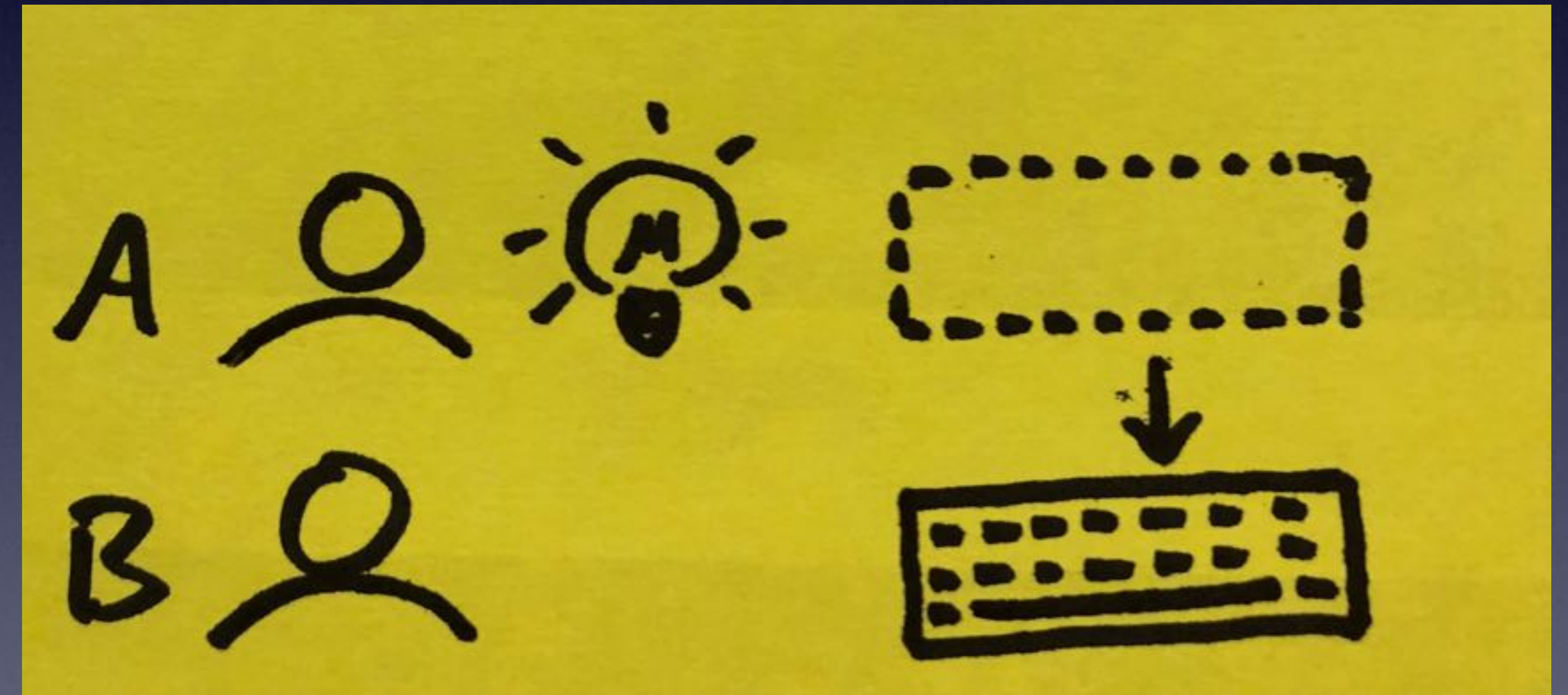
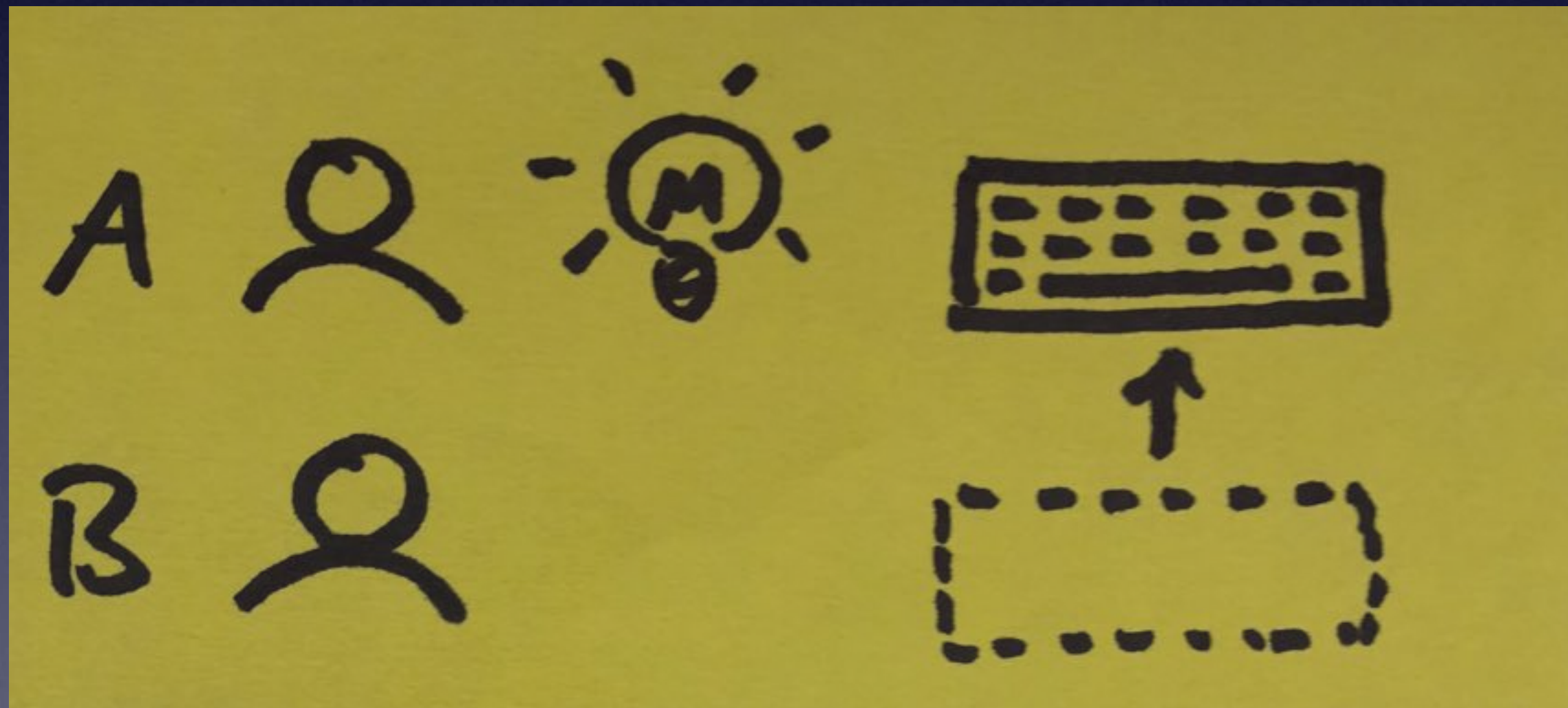


# Strong style navigation!

default  
for  
mob programming

“traditional”

“strong style”



@LlewellynFalco

# 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.



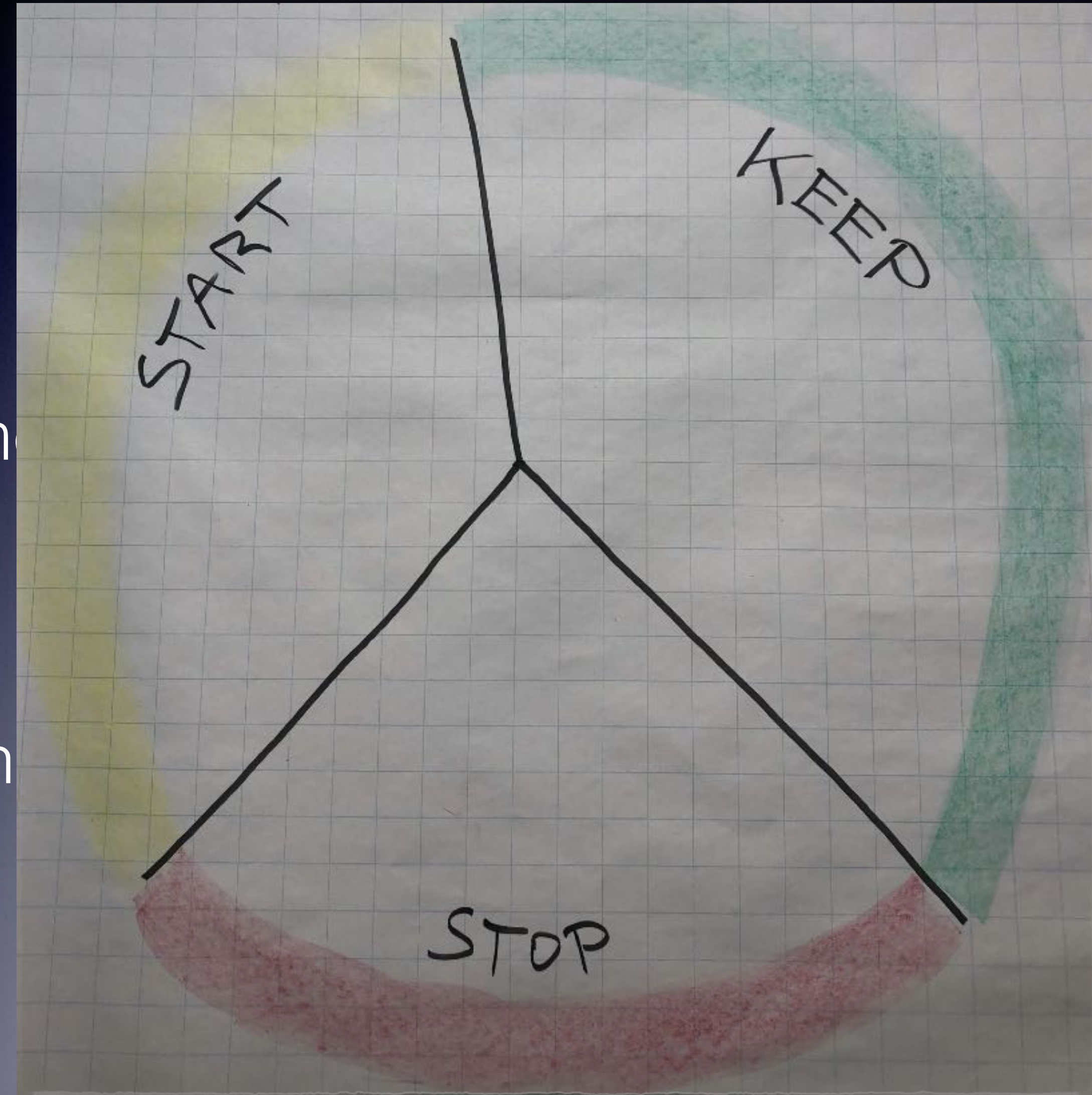


# Mob session agenda

- 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

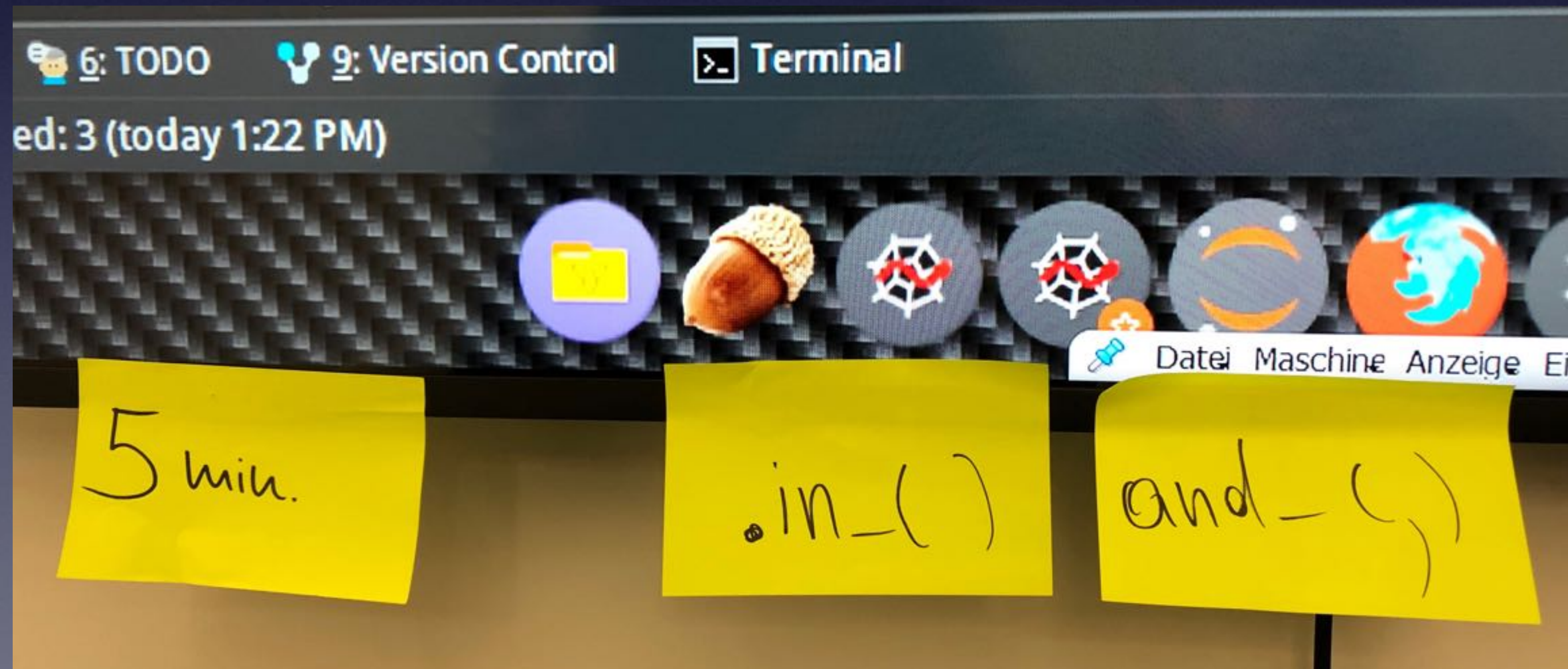
# Mob session agenda

- Agree guidelines for this mob session
- Short introduction to the task
- Discovery/~~estimation~~/planning/implementation
- 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.*

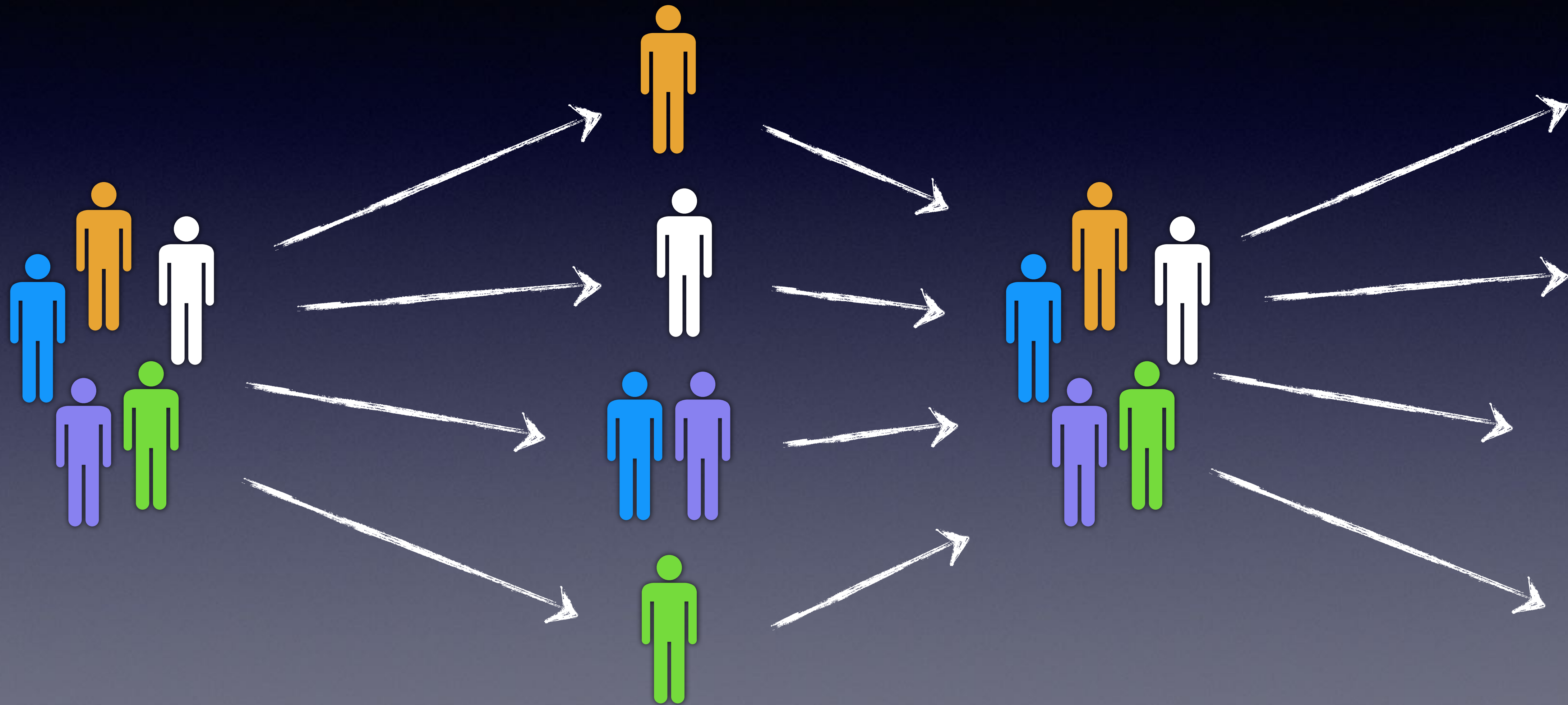
# 100% for the most important task

... 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!*



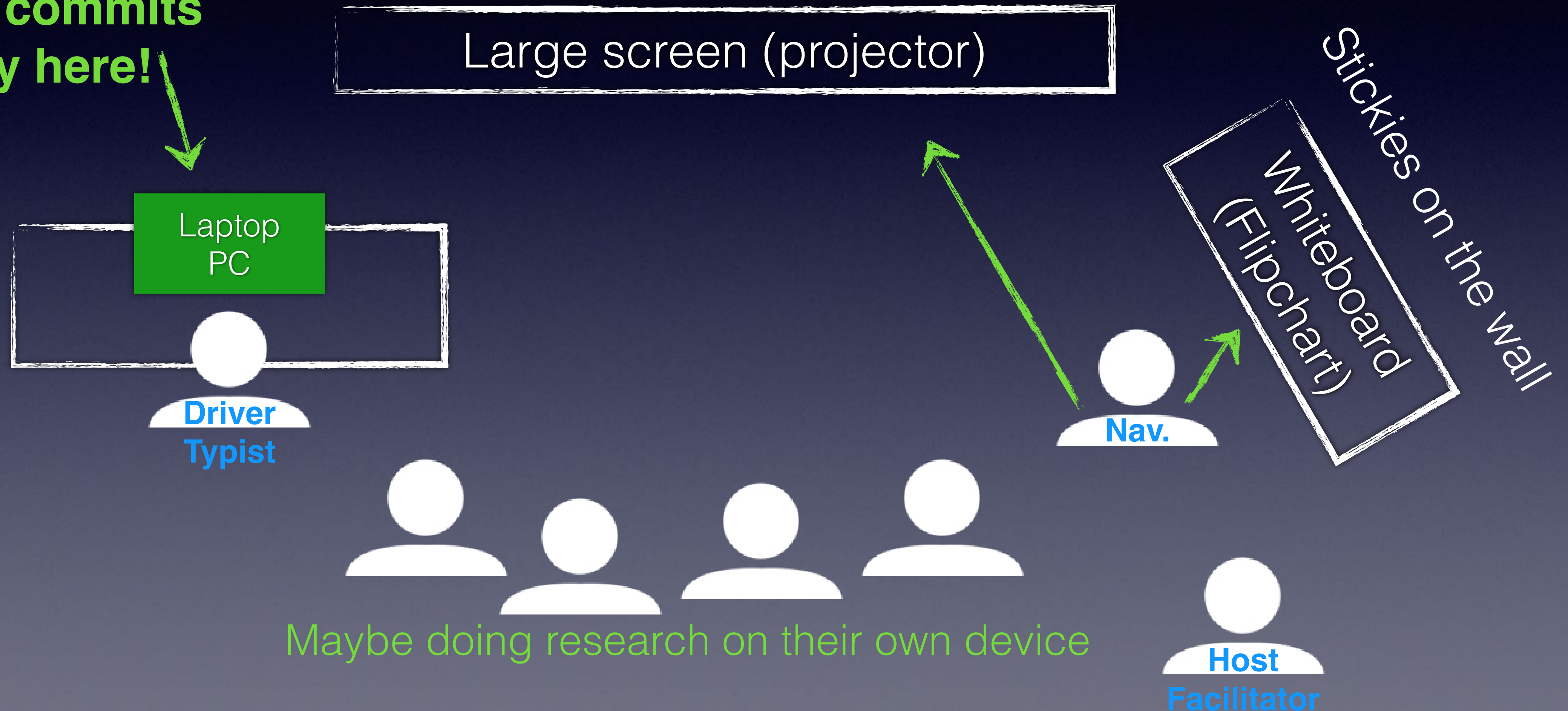
do & decide



no more  
discuss & defer

# Driver, navigator & rest of the mob

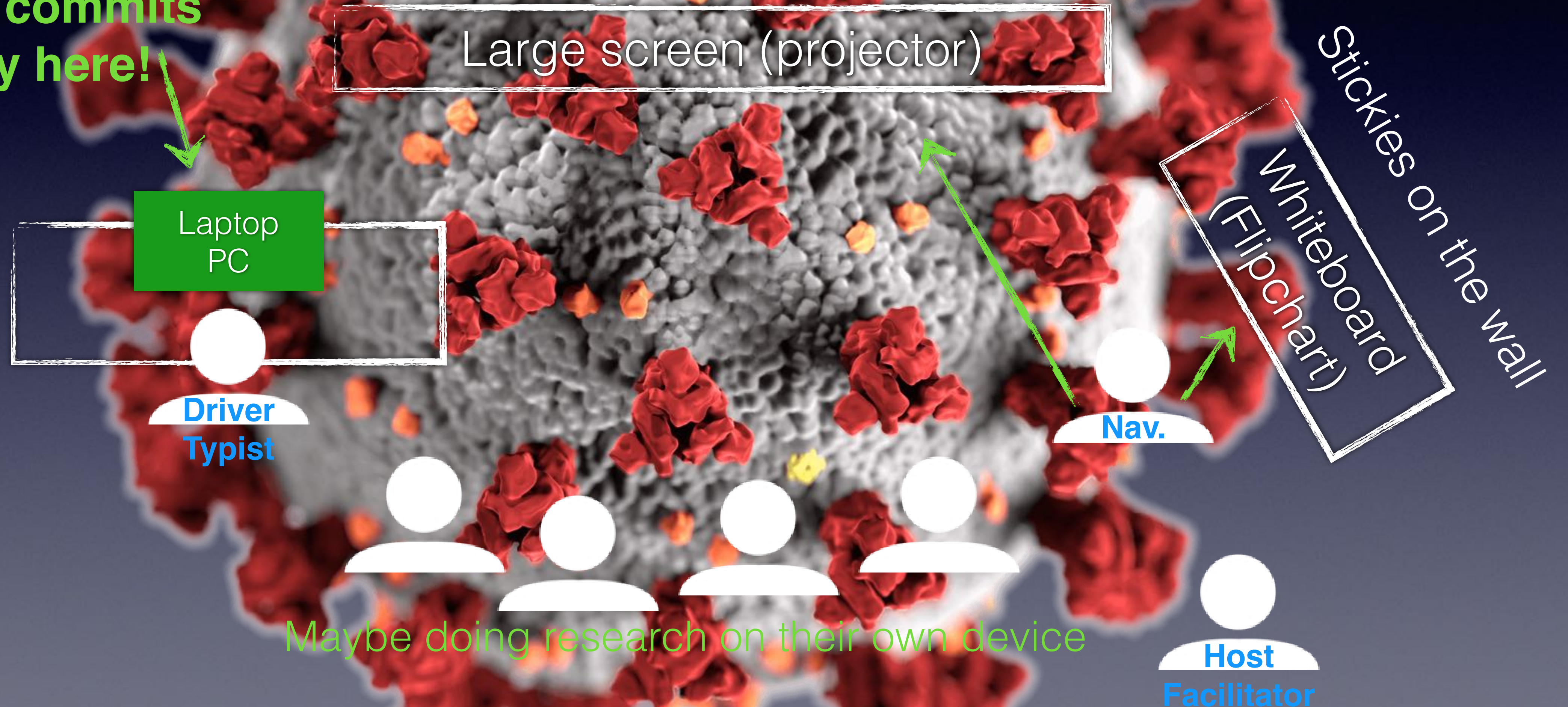
Code commits  
only here!





# Driver, navigator & rest of the mob

Code commits  
only here!



Maybe doing research on their own device

# 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!

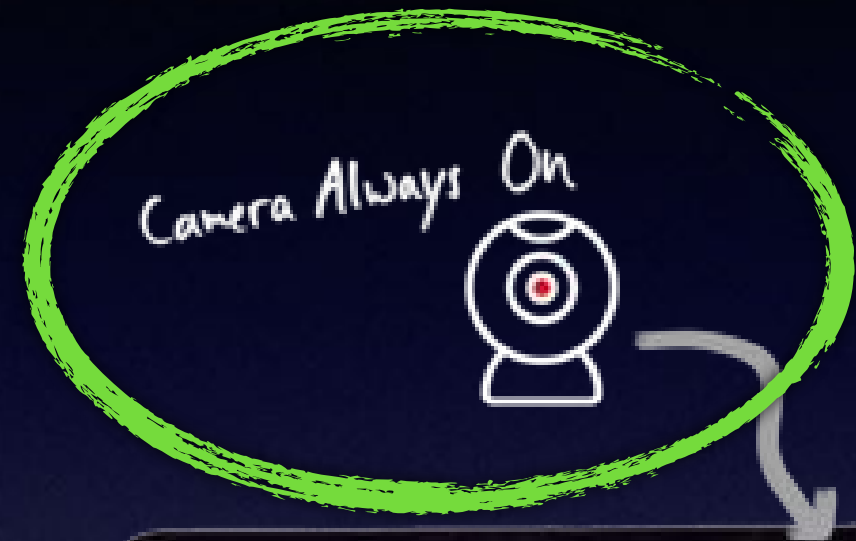
(GitLab) Remote Manifesto ↔ Remote Mob Programming

"Asynchronous communication  
*over*  
synchronous communication."

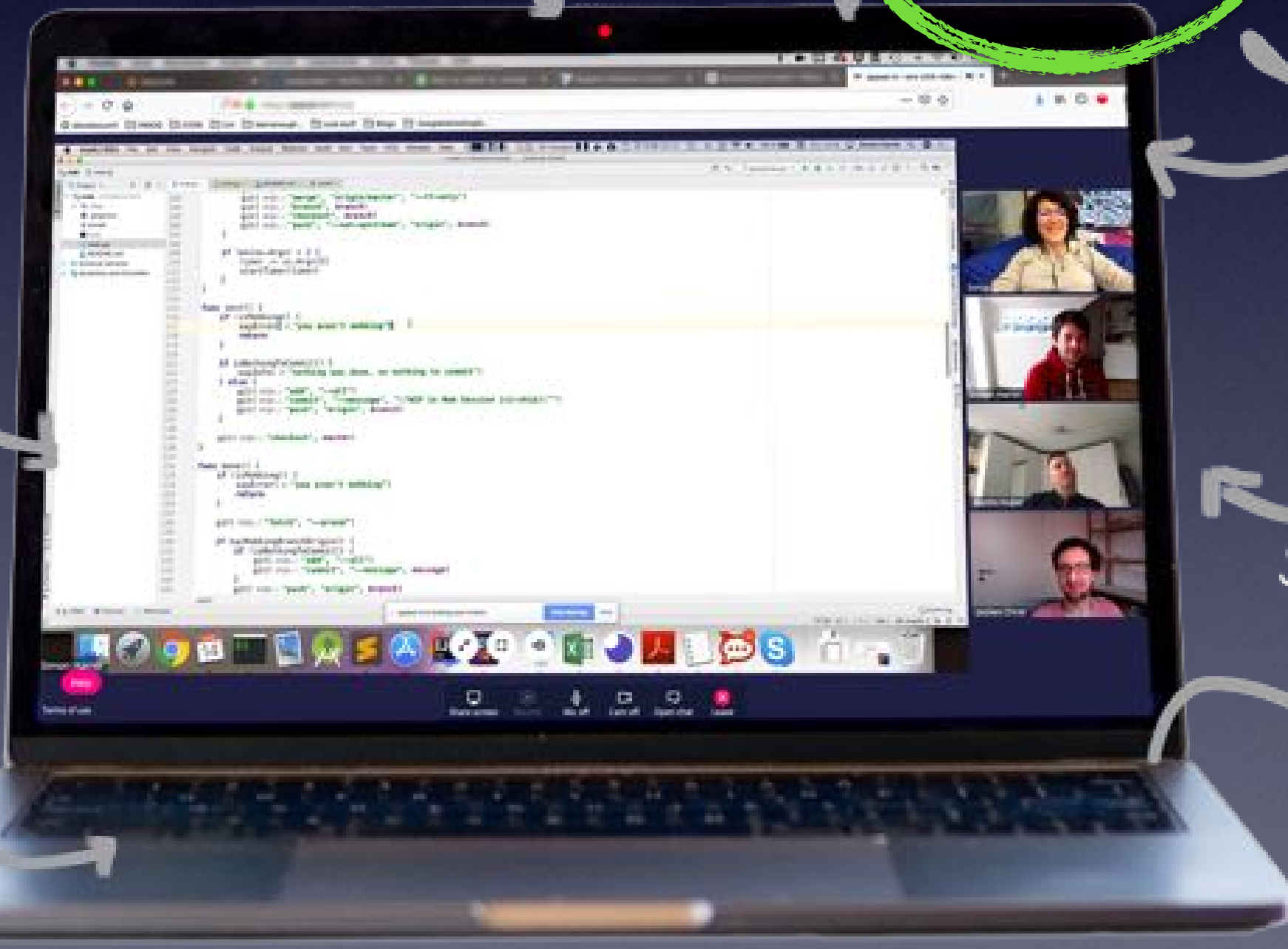


"same time"

# How to see each other?



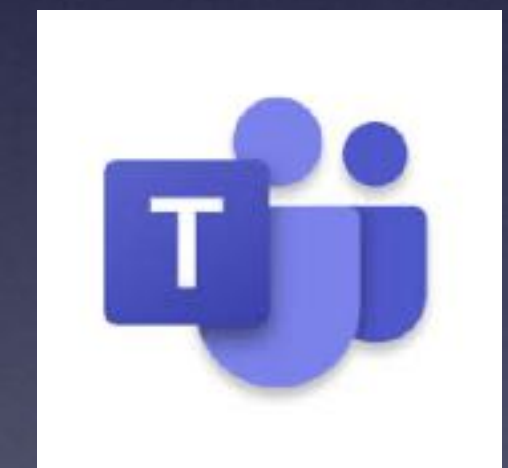
10 Minutes Intervals



Typist and the Rest of the Mob



Dine with your Family



"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"
```



<https://mob.sh/>

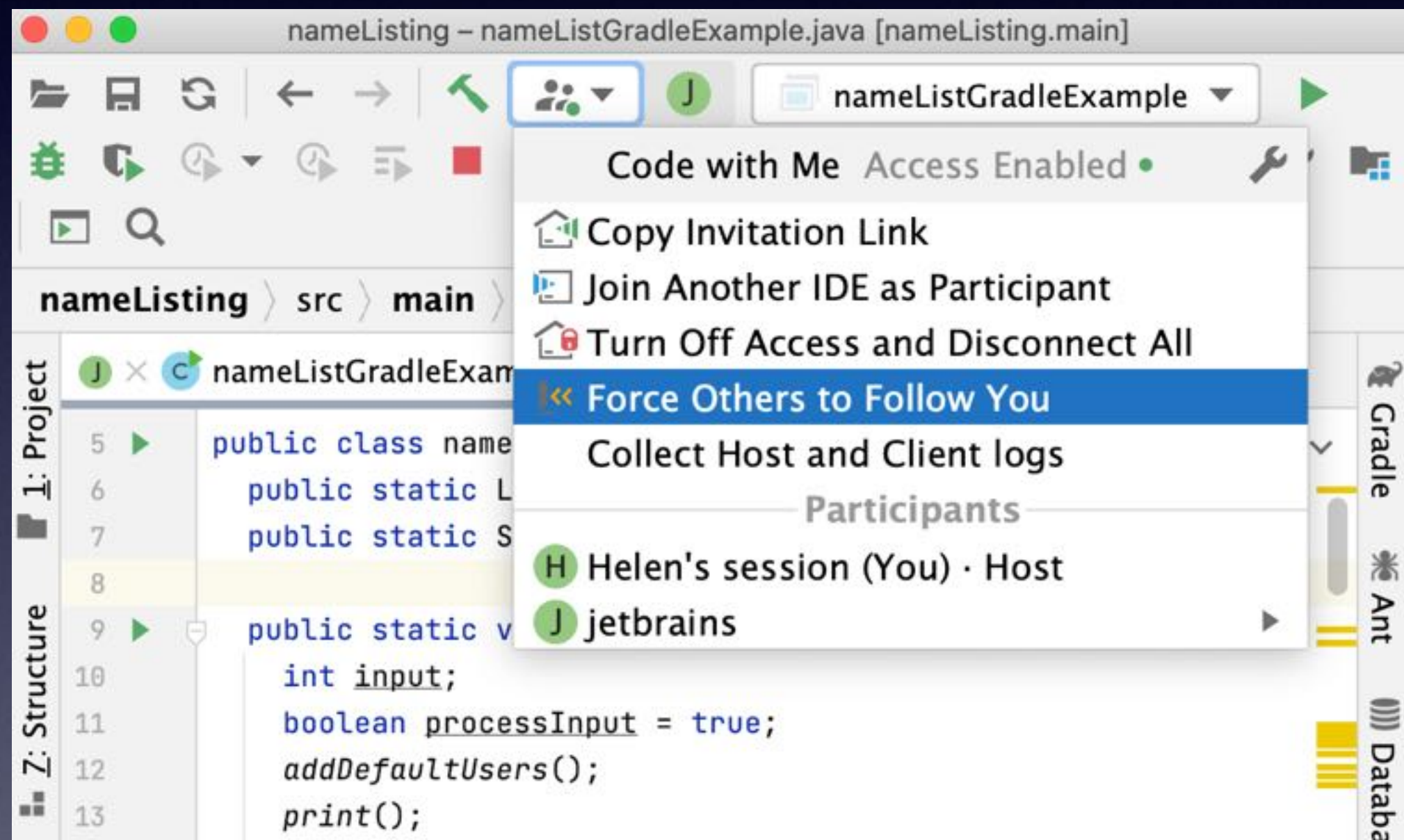
... many other tools like <https://github.com/otto-de/rstash>

# How to code together?

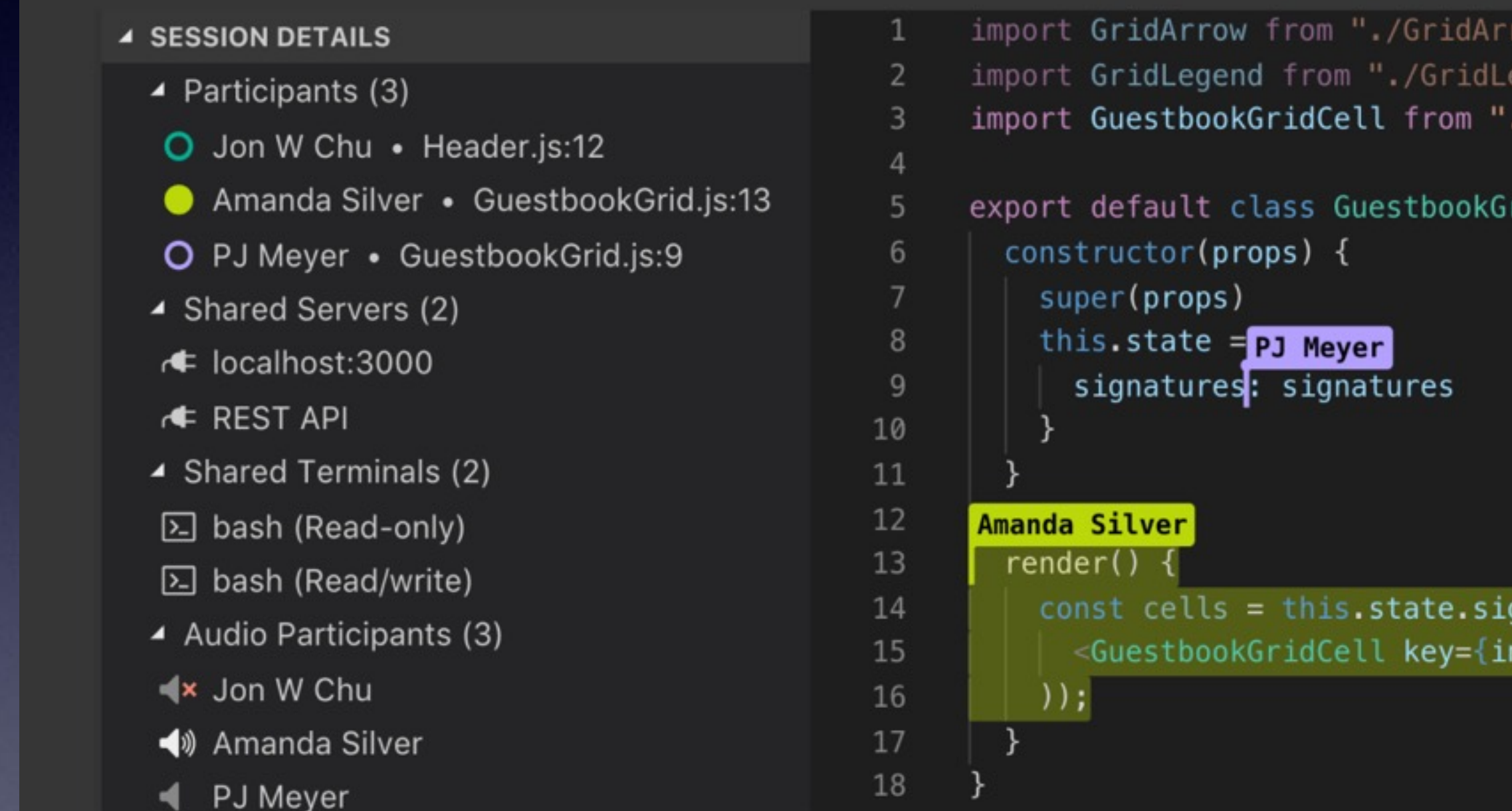
IntelliJ & Code With Me

Share your IDE!

VS Code & Live Share



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

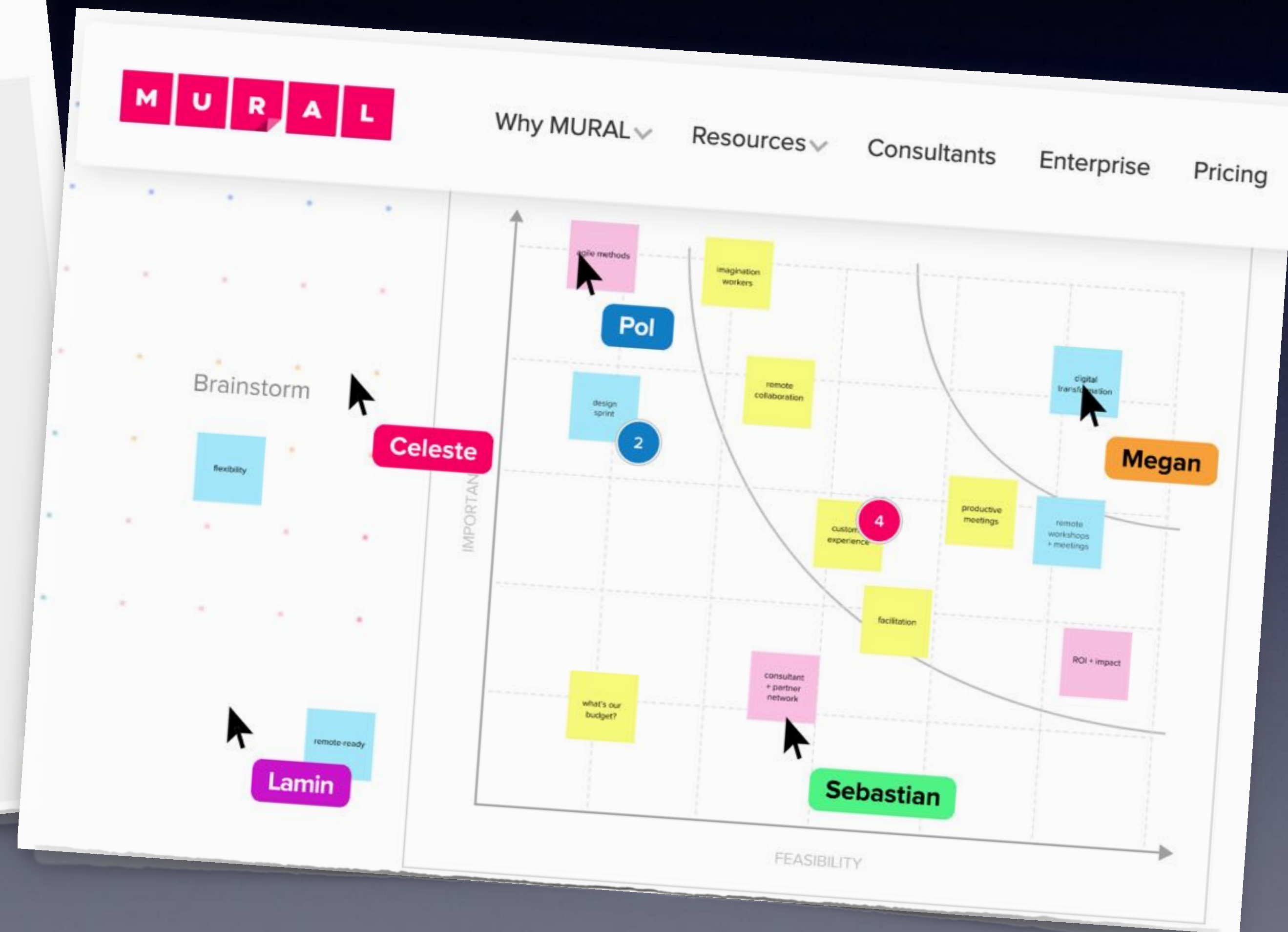


<https://visualstudio.microsoft.com/services/live-share/>



THEIA

# How to draw on a whiteboard?



# How to keep track of time?



A COLLABORATIVE TIMER  
FOR YOUR MOB TEAM

mobti.me/ my-mob-session-123

GET



Welcome to Cuckoo

A productivity timer for remote teams.

CREATE A SHAREABLE LINK

cuckoo.team/ my-mob-session-123

Skip



Camera Always On

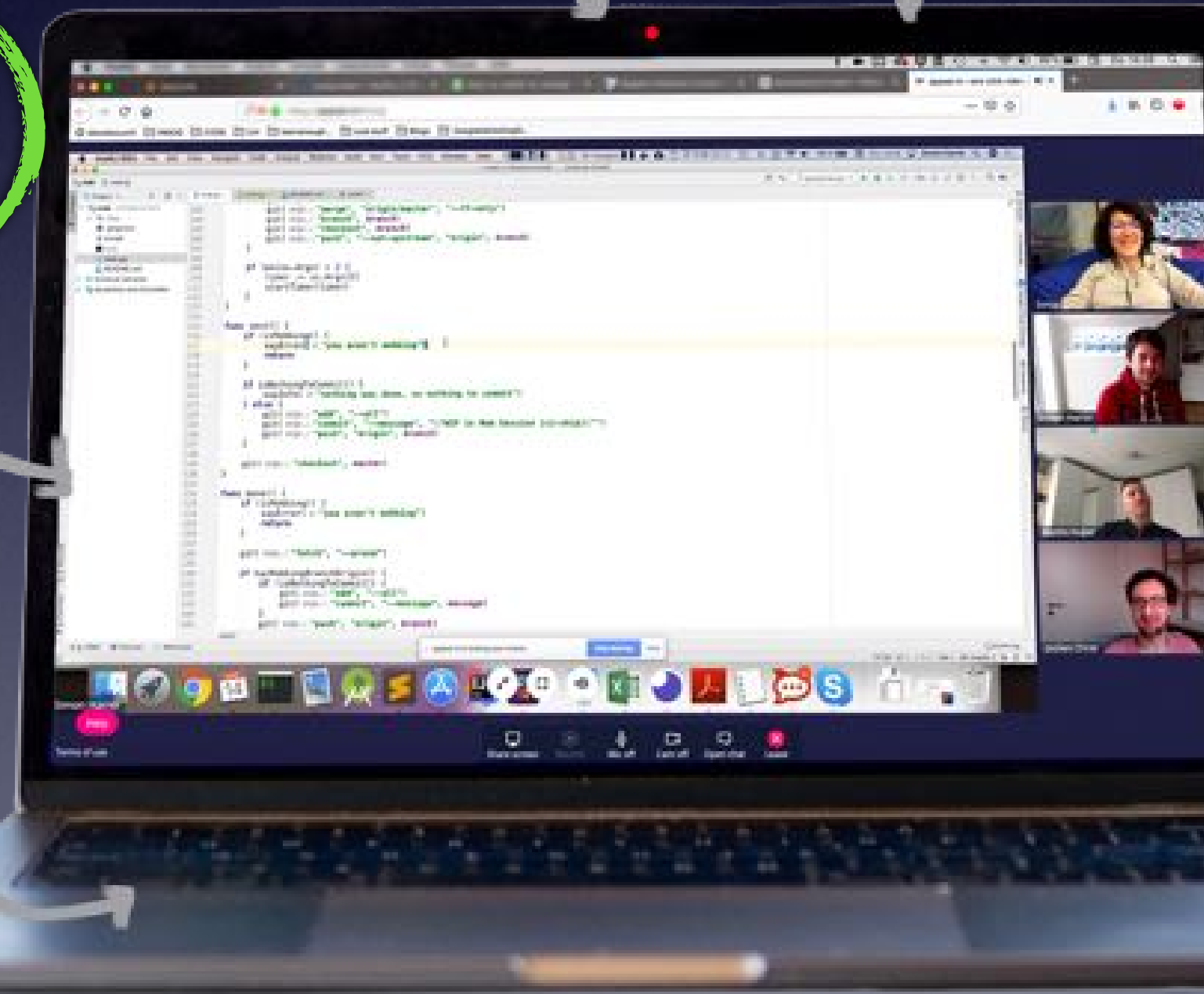


Screen Share

10 Minutes Intervals



Typist and  
the Rest of the Mob





# How to find my next mob session?

The screenshot displays the Microsoft Teams interface for a channel named "T - Mob Sessions". The left sidebar shows the navigation pane with "Aktivität", "Chat", "Teams", and "Dateien". The main content area is divided into several sections:

- Navigation:** "Organisation", "1 Gast", "Besprechung", and "2 MeetUps".
- Messages:**
  - PDN-1100 Initiales Deployment gestartet:** 2 Antworten von [User] und [User]. Includes a meeting card: "Besprechung beendet: 37 Min. 59 Sek.".
  - PDN-1146 - Kafka SSL beendet: 28 Sek.:** 42 Antworten von [User] und [User]. Includes a meeting card: "Besprechung beendet: 2 Min. 52 Sek.".
- Meeting Cards:**
  - weitermachen mit durchstich:** 01:02:23. Includes a "Teilnehmen" button.
  - durchstich arteria->cp->xpdp->pdn testen gestartet:** 8 Antworten von [User] und [User].
  - PRMRY-1987:** 13:13. Includes a "Teilnehmen" button.
- Footer:** "Neue Unterhaltung" button and "Teams verwalten" link.

# Whether remote or co-located...

*There will be "mobs" of 2 ...*

**Your pair programming will get better**

by practicing mob programming!

# Being "driver" vs. being "typist"

**Pair programming – being driver can be stressful**

1:1

Too large gap in knowledge and skills?

**Mob programming – relax while being typist**

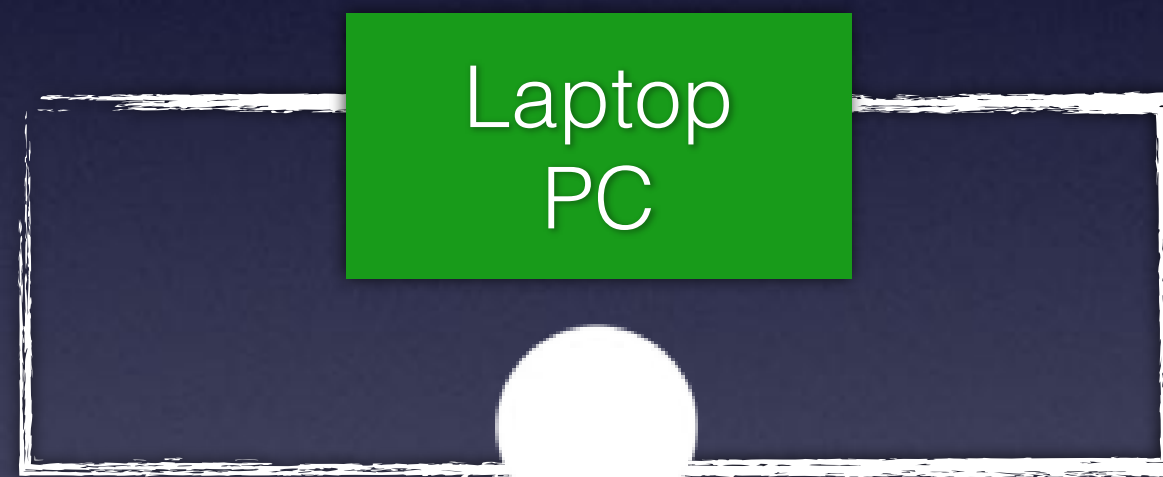
Wait, lean back & let the navigators do the thinking

Keep the minutes (in code)

# Mob Testing

Work through  
application  
under test

Large screen (projector)



Click-  
Typist

Test protocol  
etc.

Explorative testing  
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



JCON  
2020



# 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/>

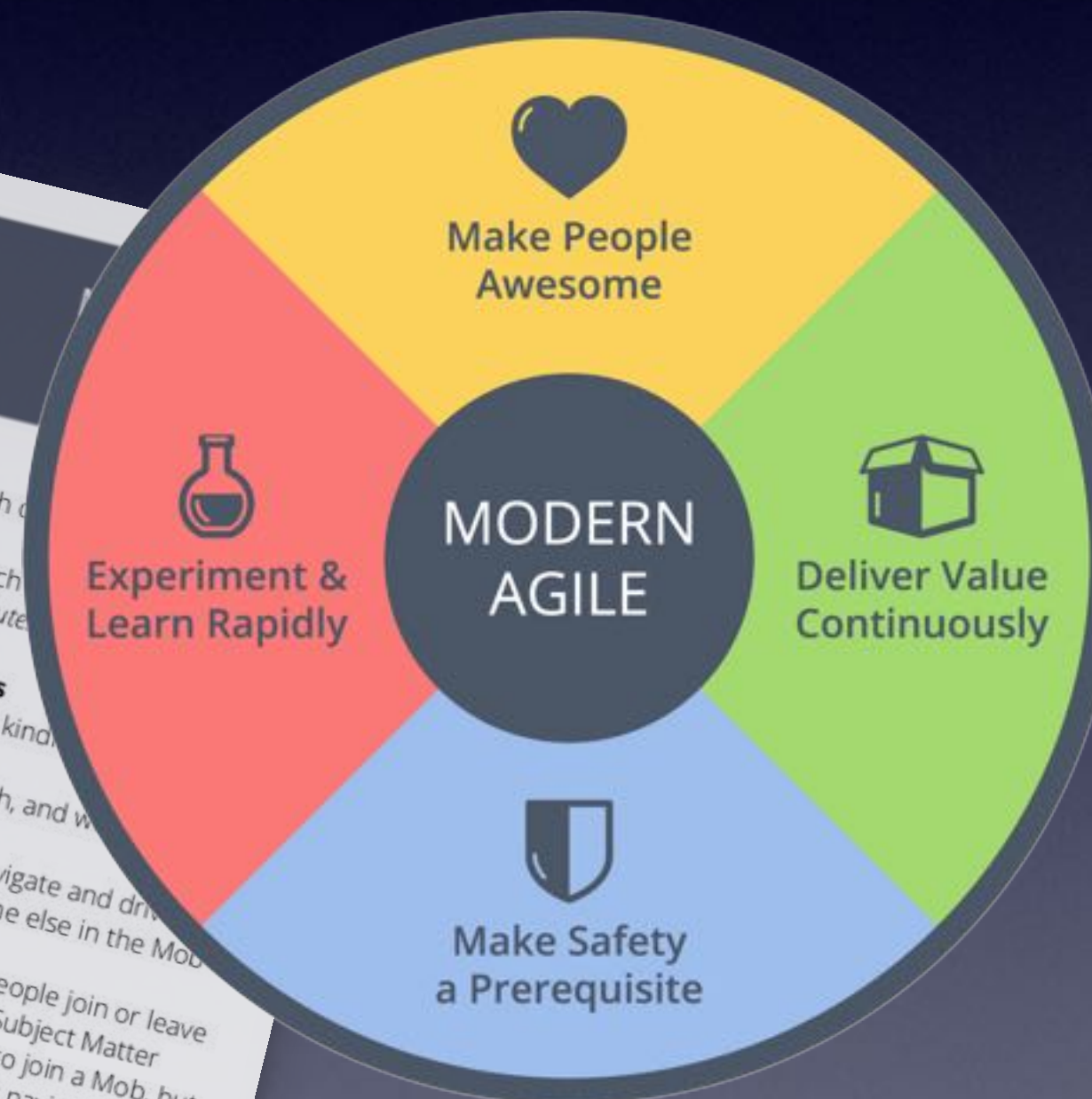
<https://github.com/MobProgramming/MobTimer.Python>

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

<http://mobster.cc/>

# Modern Agile

Agile, the working way.



#MobProgramming

#NoEstimates

#NoProjects

#ModernAgile

<https://modernagile.org/>

Any managers here?

# But our speed!

deliver ~~output~~

„If you need to be fast, **slow down**“

do things right  
do the right things

deliver value  
deliver outcome

# 5 devs for 1 (ONE) task???

*Well... what do you optimise for?*

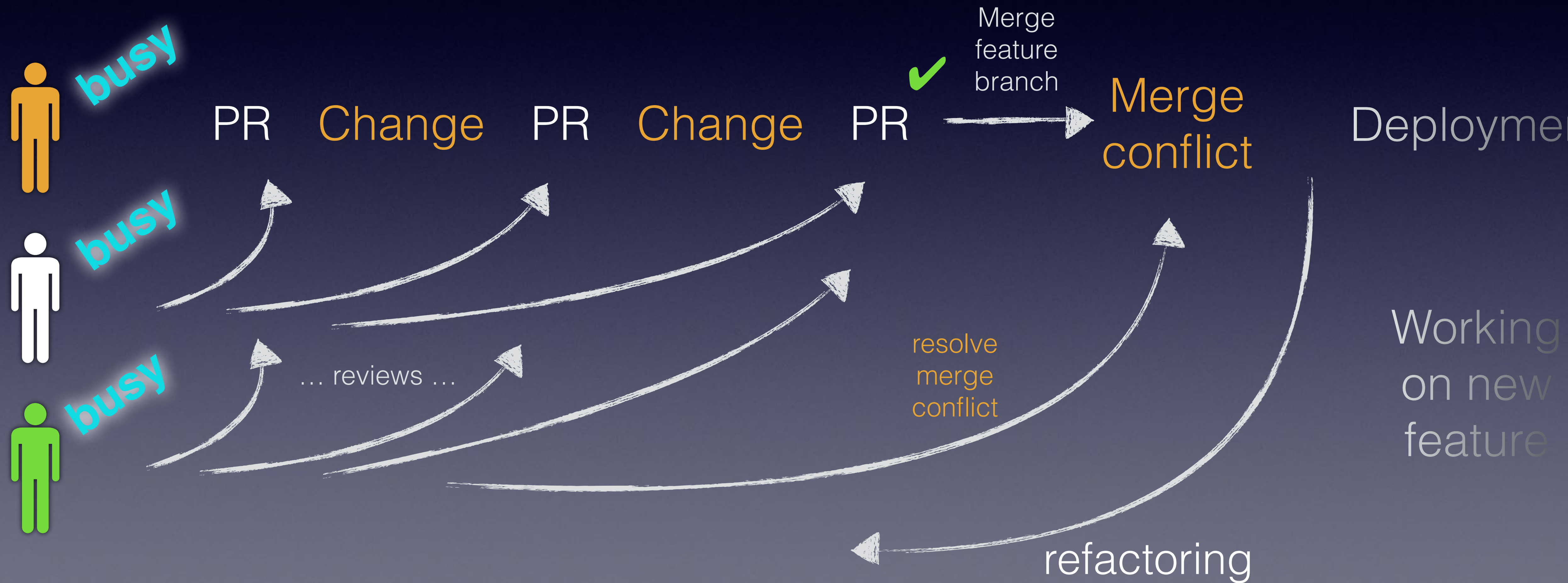
Deliver most important feature to our customers

*or*

Keep developers as busy & working to capacity as possible

(hint: WYO4IWYG)

# Busy waiting

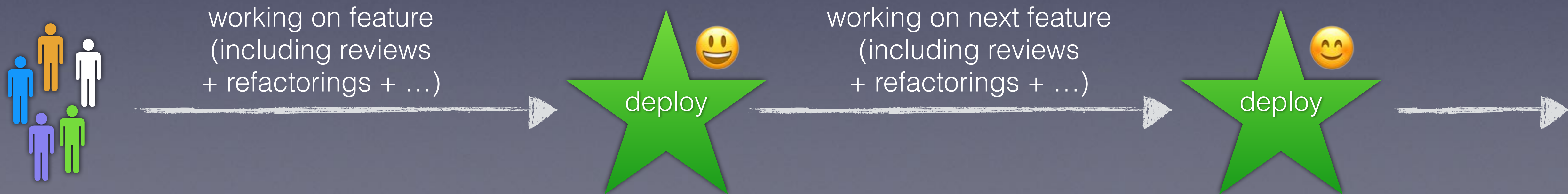


# Flow

... 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