



JAVA  
USER  
GROUP  
CH

# (Remote) Mob Programming



Building Teams and Keeping Teams Together

Thomas Much

 @thmuch

25.02.2021

Software developer

Agile developer coach



Mob Programming  
since 2016

Remote Mob Programming  
since 2020

... on the shoulders of giants ...

 @thmuch



# Mob Programming

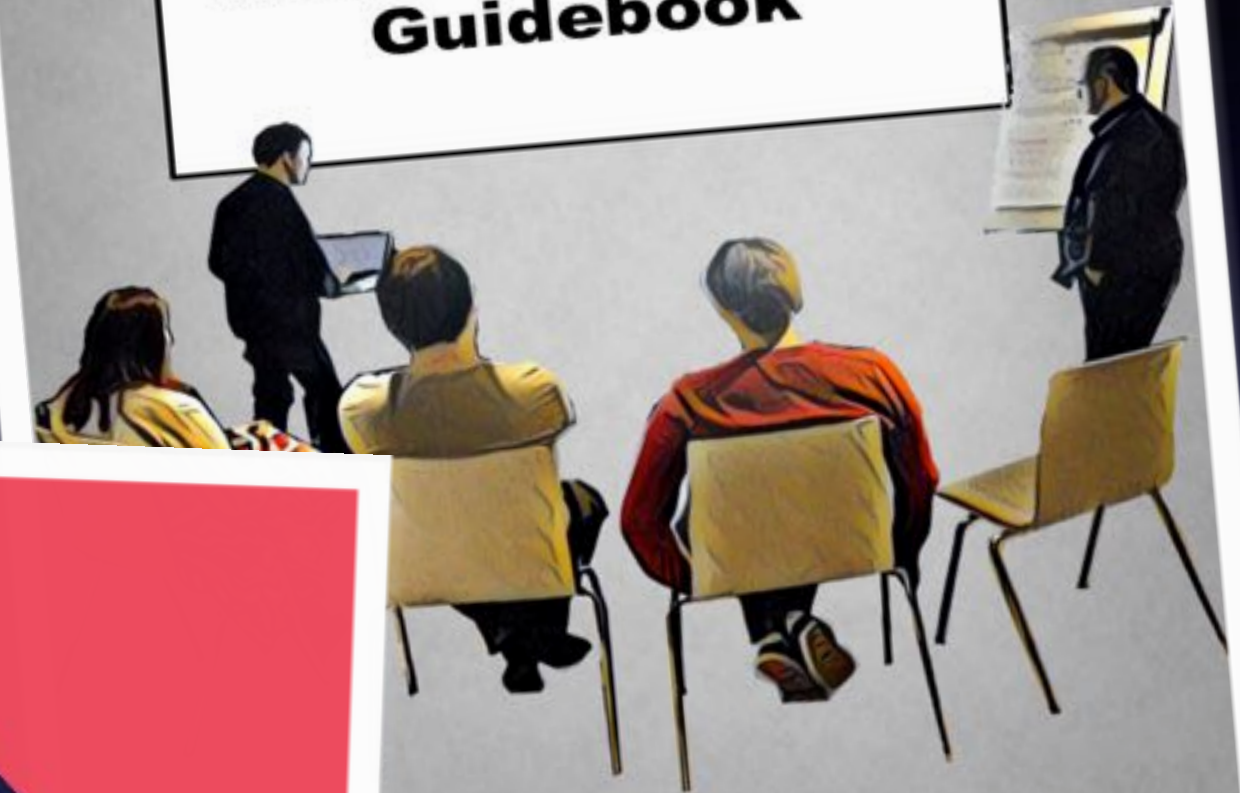
A Whole Team Approach



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 PragProg**

**Agile Scrum**

**Software Craft**

**IT-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/>

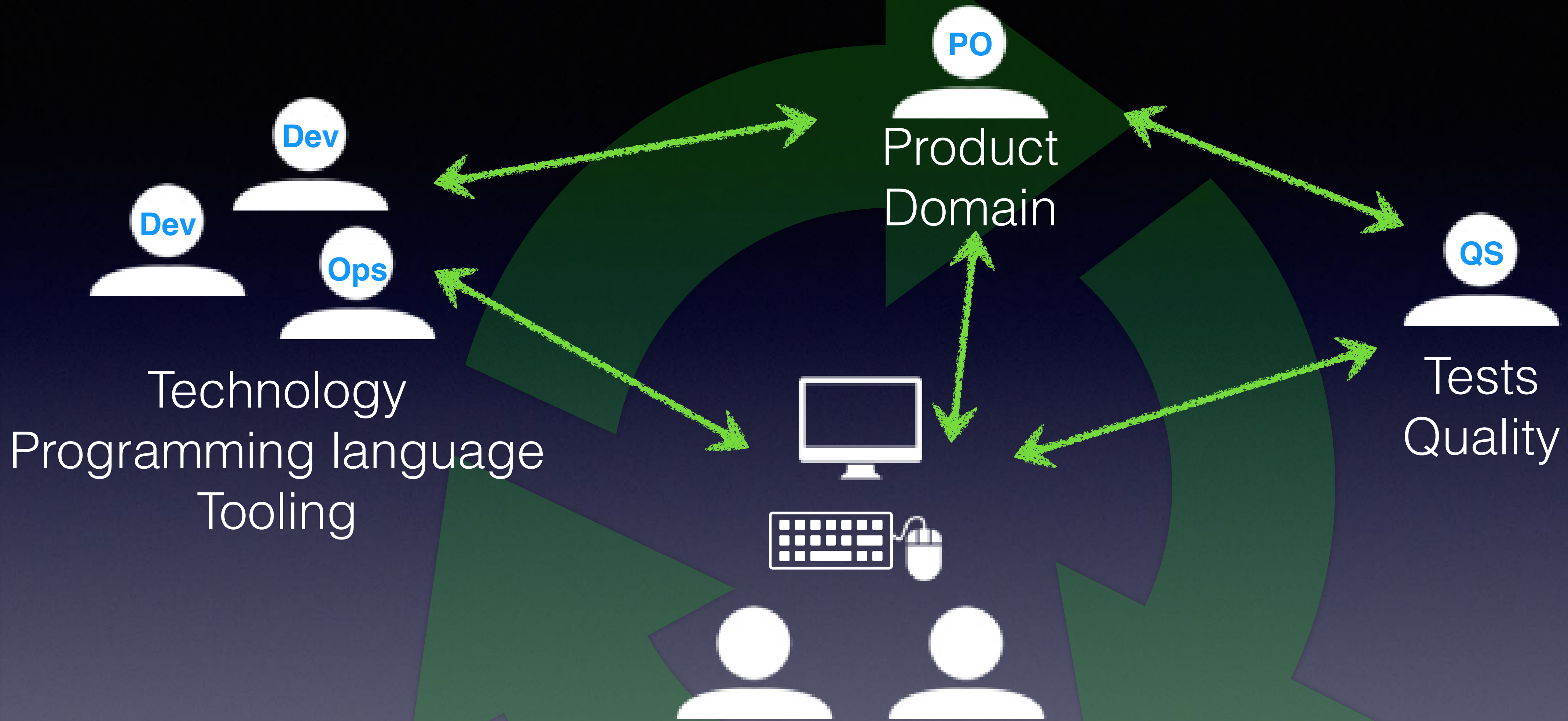
<https://twitter.com/woodyzuill>

# Mob Programming

„Mobbing“ 🤔🤨

Group Programming  
Team Programming

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



"**All the brilliant minds** working together on the same thing, at the same time, in the same space, ~~and at the same computer.~~"

virtual

– Woody Zuill



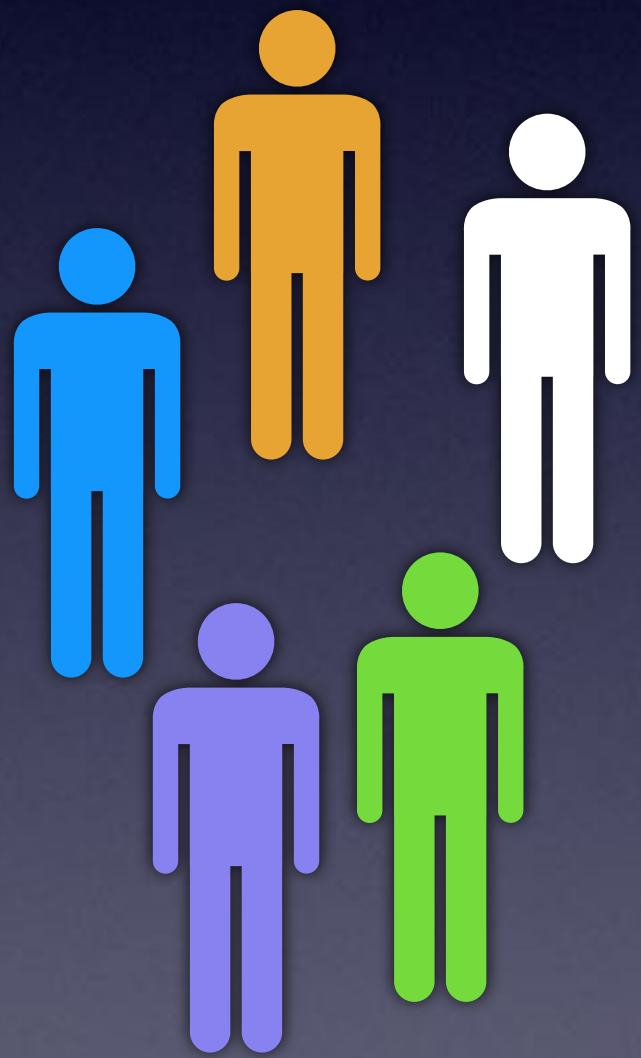
How's your team working? (& is this a problem?)

How does (Remote) Mob Programming (usually) work?

**Why does it work** (& solve several problems)?

How's your team working?

# Are we one team?



**One** team of 5

# Or rather several teams?



Five teams of 1

# Or rather several teams?



Five teams of 1

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

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

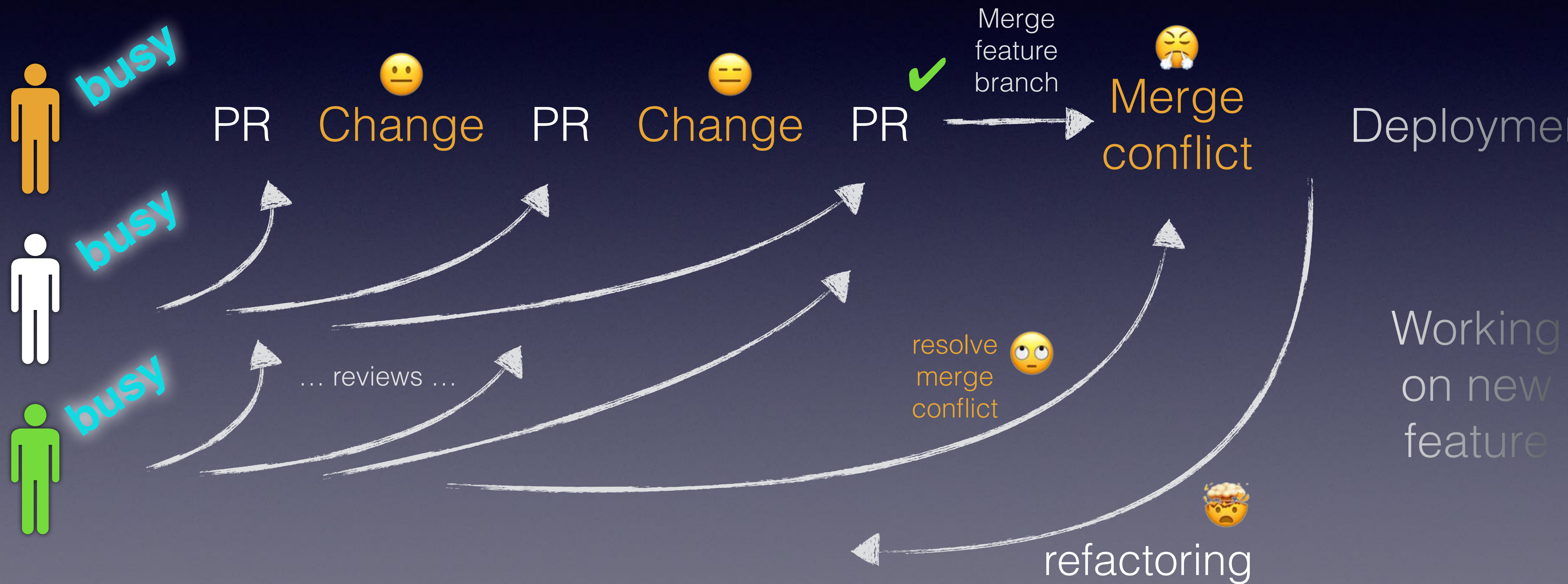
Deliver most important feature to our customers

*or*

Keep developers as busy & working to capacity as possible

(hint: WYO4IWYG)

# Busy waiting

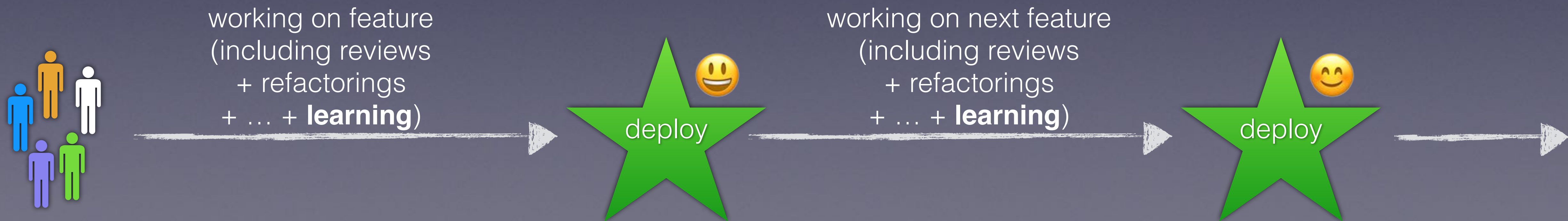


# Flow

... of value delivered to our customers:

Maximize number of things done

Minimize waste

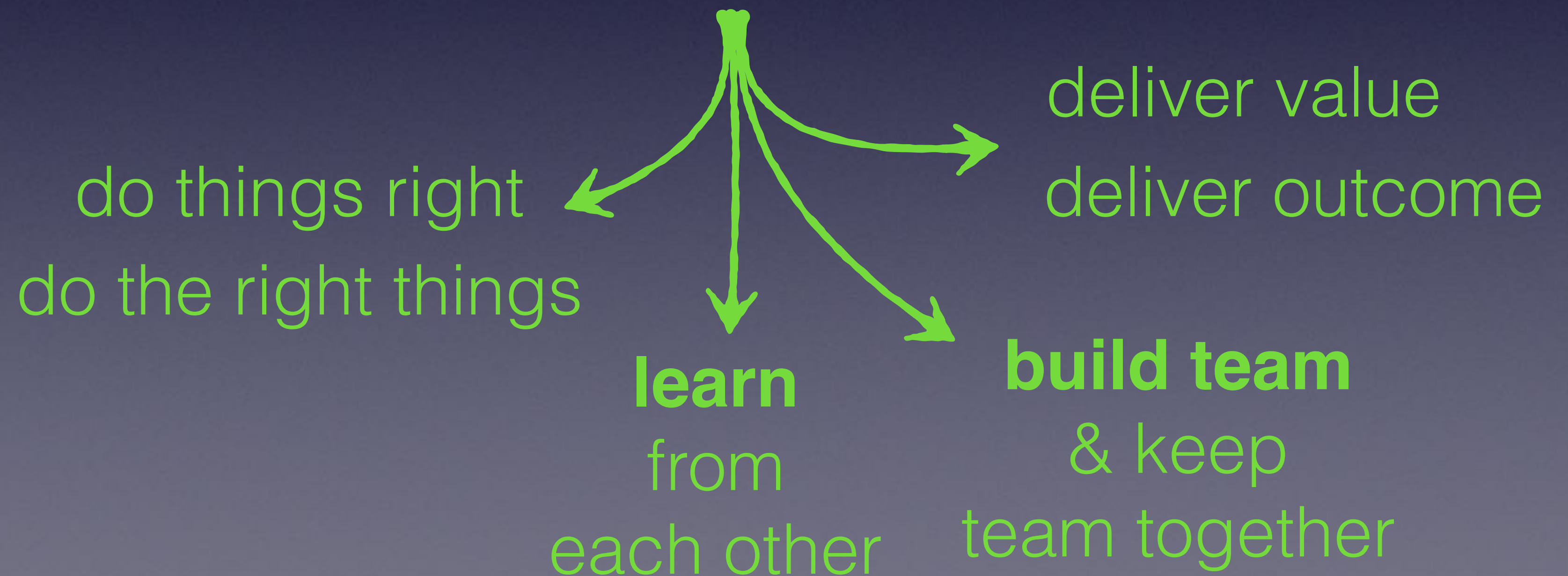




# But our speed!



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

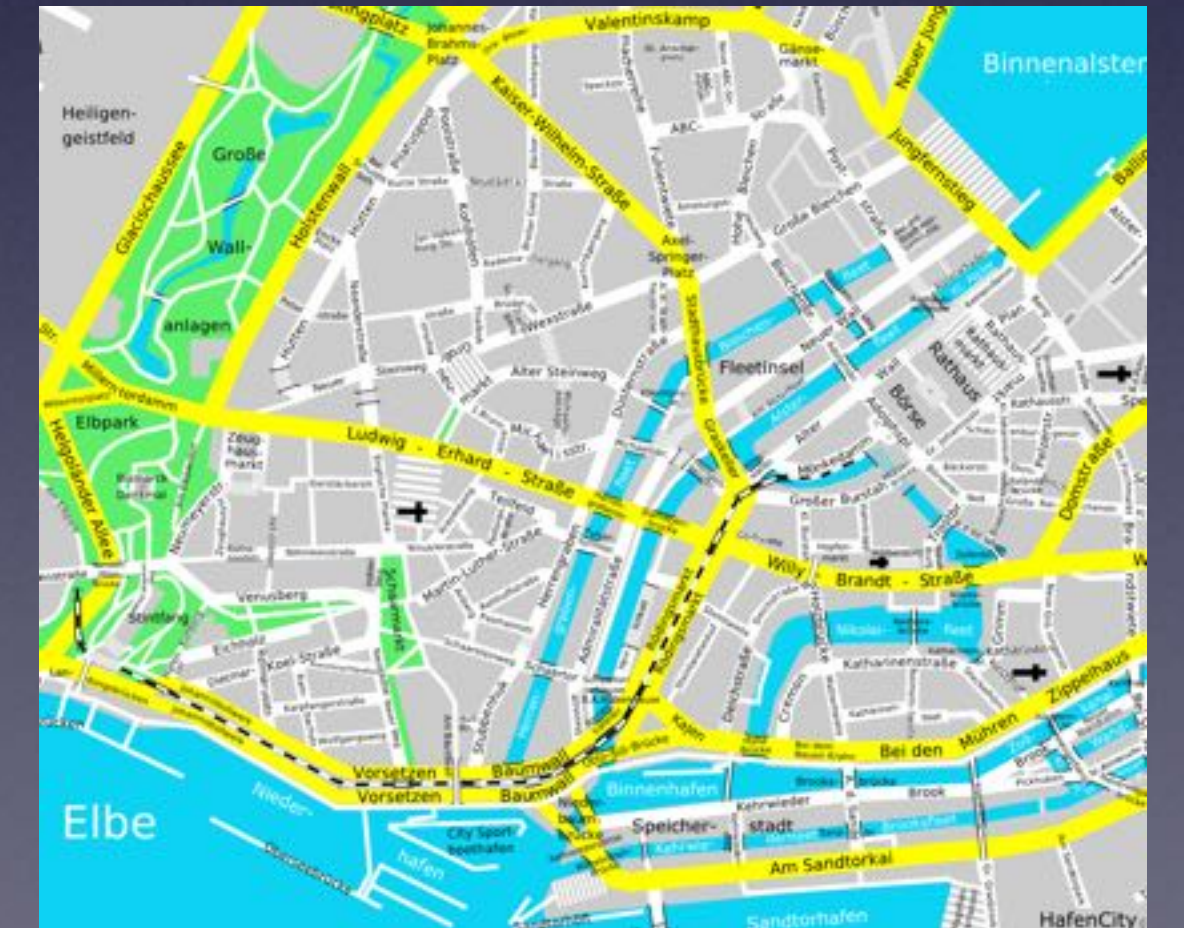


Don't **be** slow.  
But avoid rush & haste.

# How does (Remote) 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. / remote 10-15)**

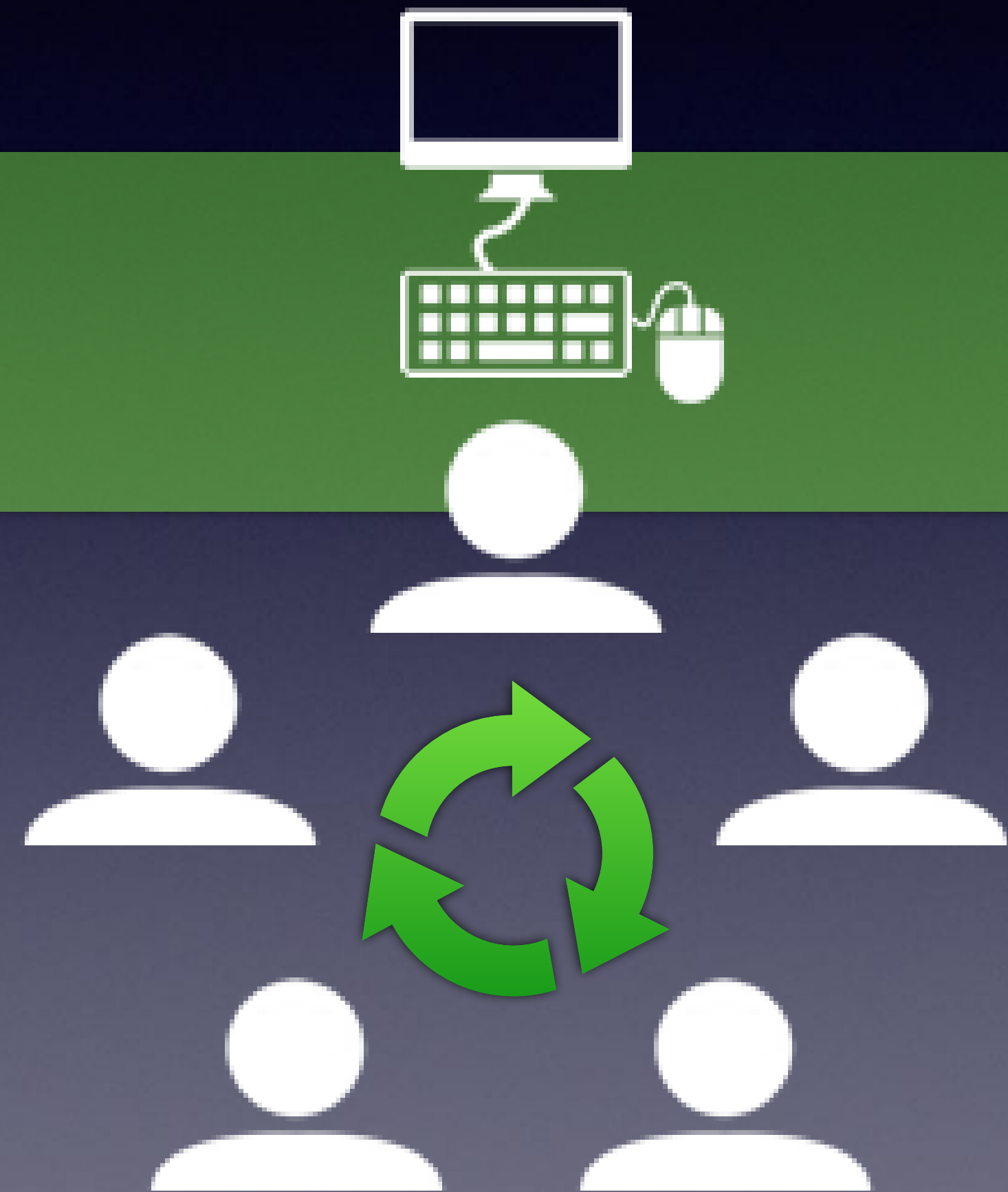
*Use timer app, e.g.*

\* <http://mobster.cc/>

\* <https://cuckoo.team/>

\* <https://mobti.me/>

or *smartphone timer app*

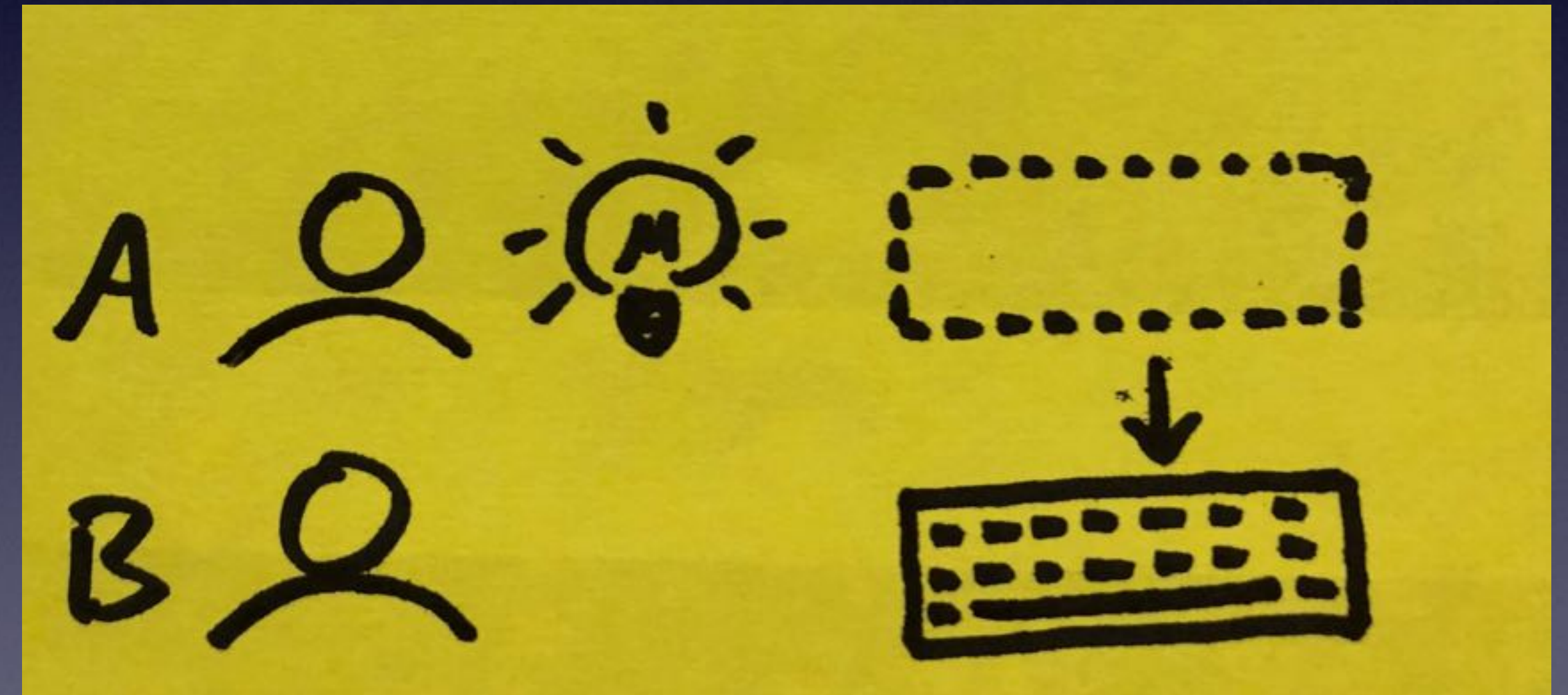
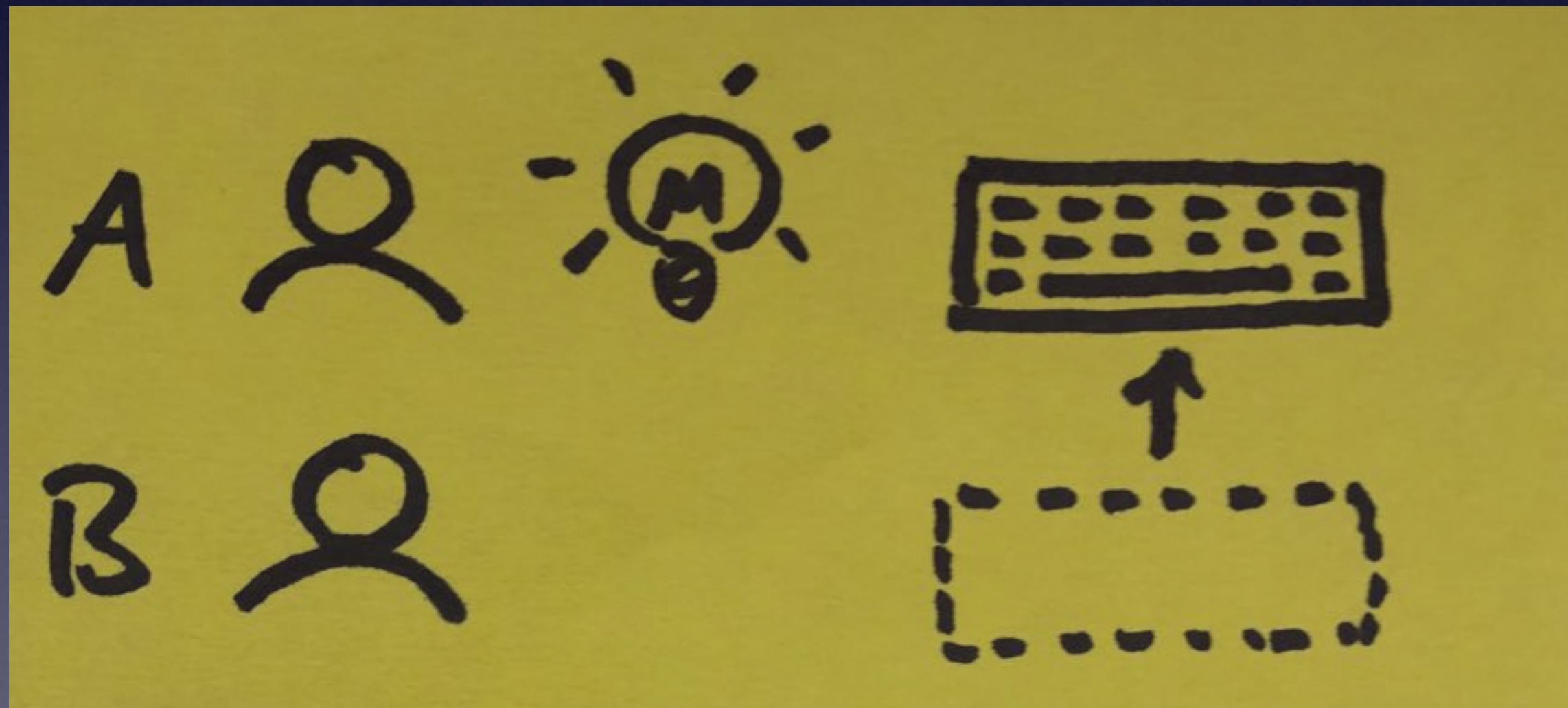


# Strong style navigation!

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. / remote 10-15)**

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

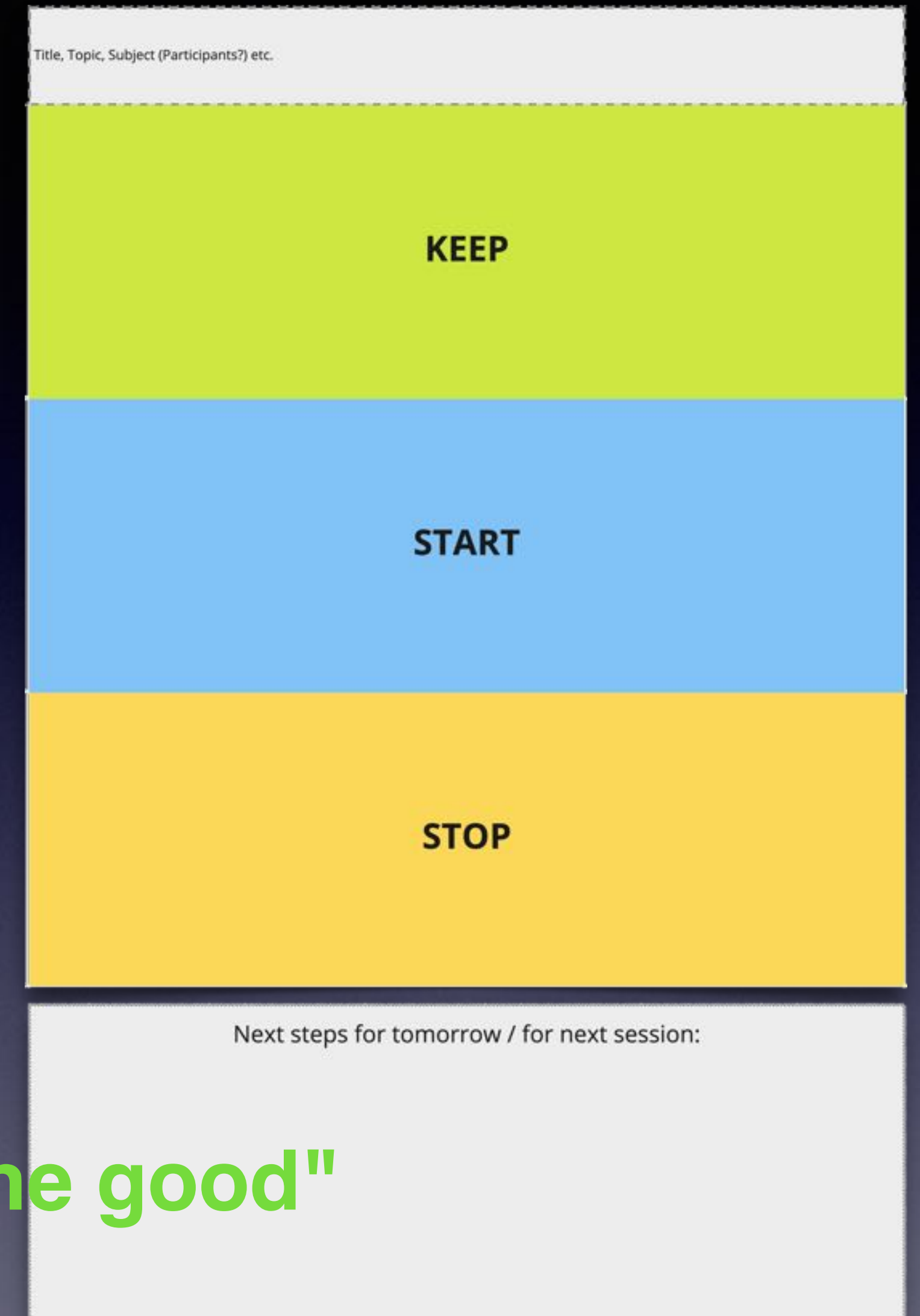
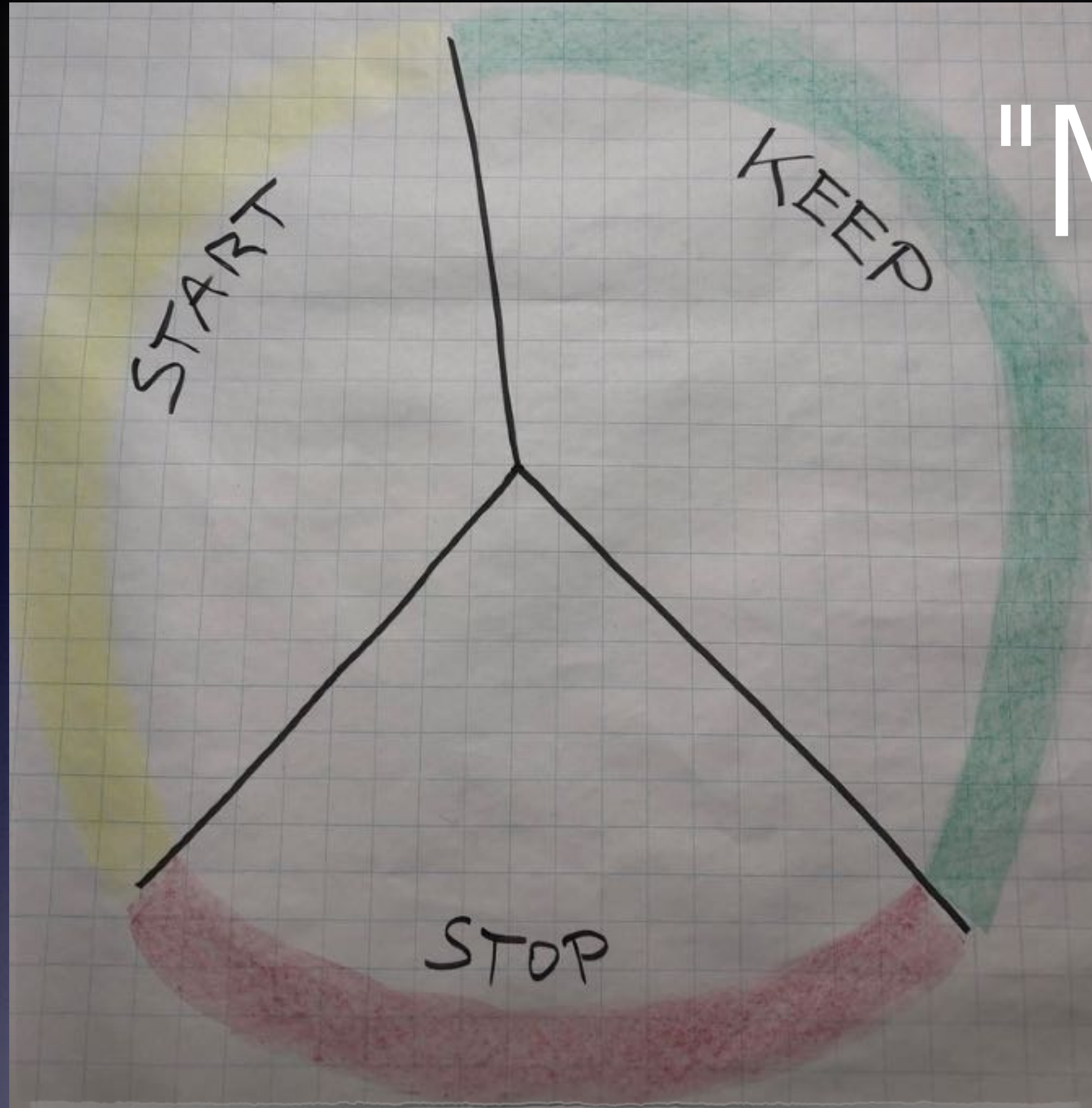


# Mob session agenda

- 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
- Short retrospective (start/stop/keep)



# "Mini Retros"

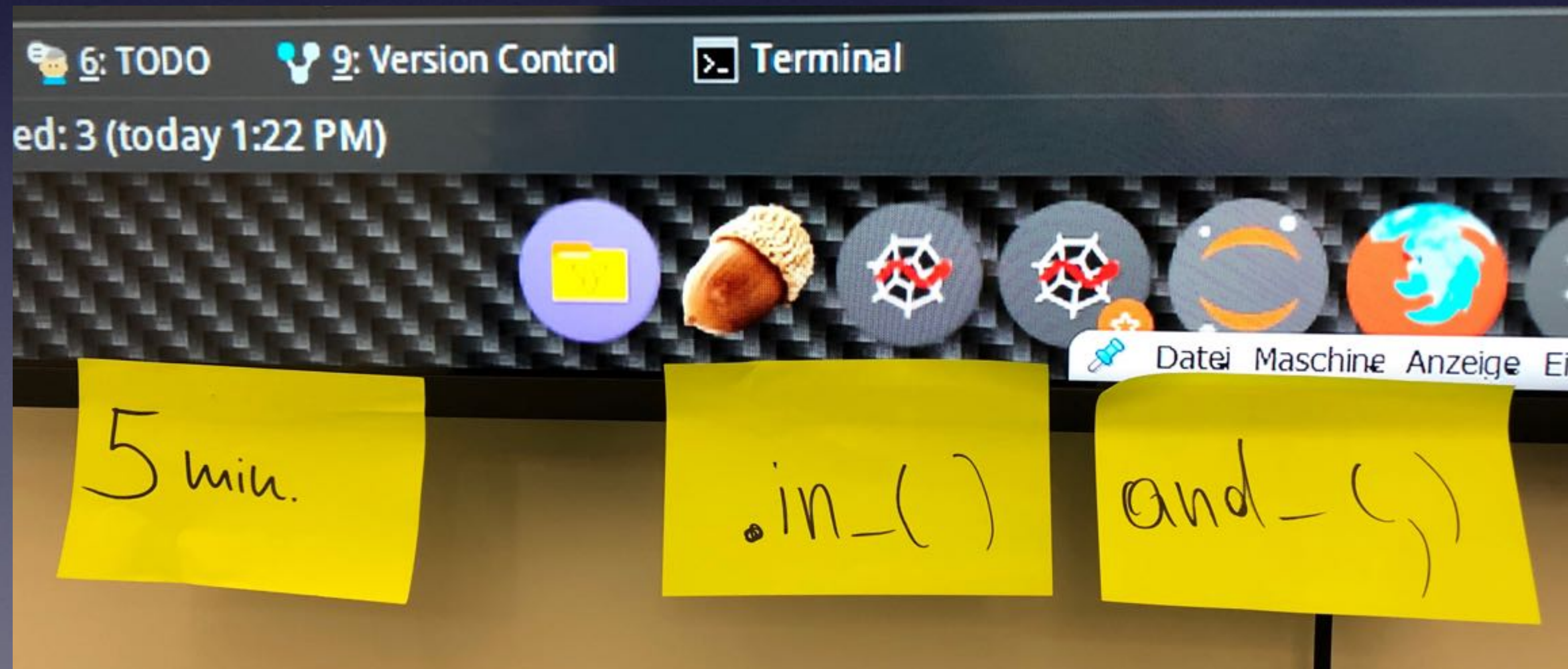


Focus on "keep" & "start" ⇒ **"Turn up the good"**

Write a concise "check-in" for next session (recap & next steps & ...)

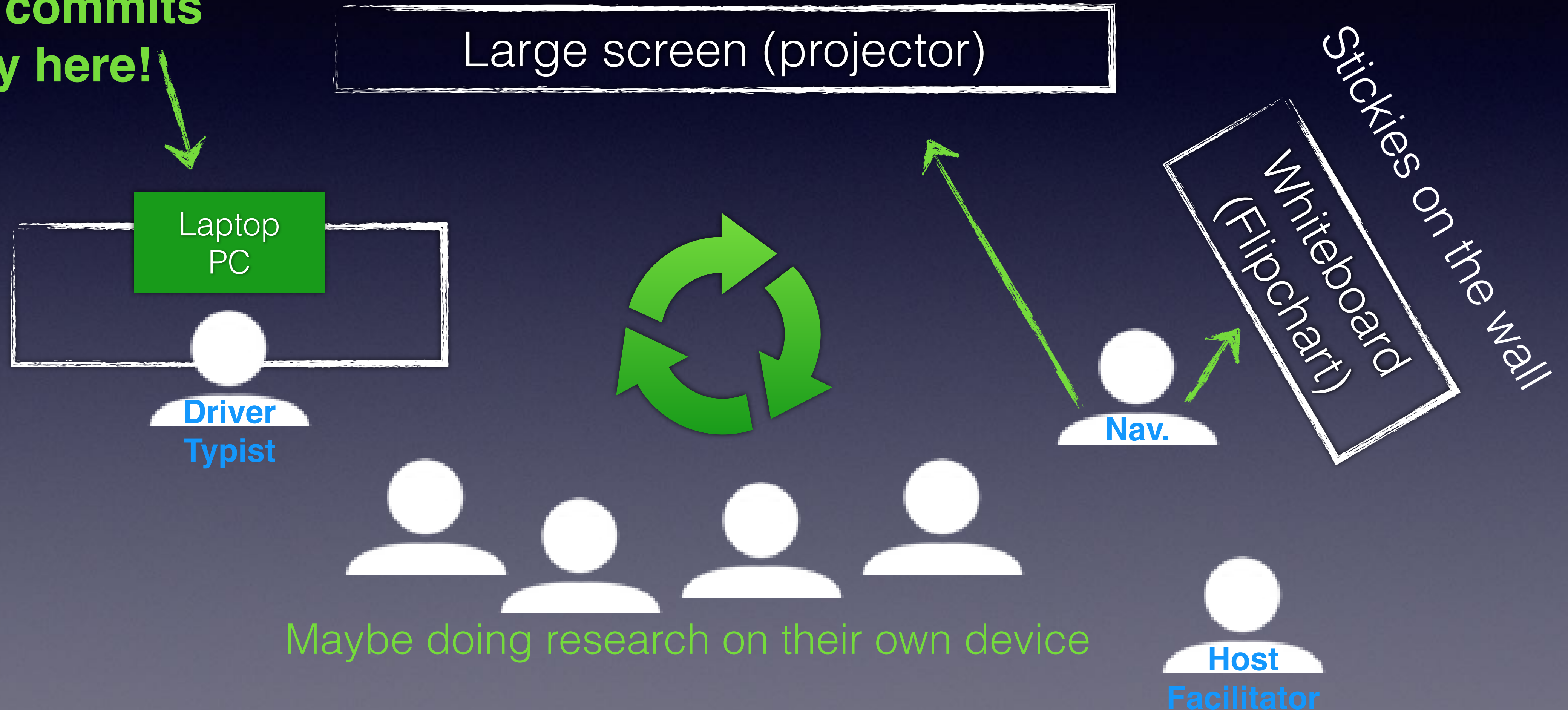
# Helpful

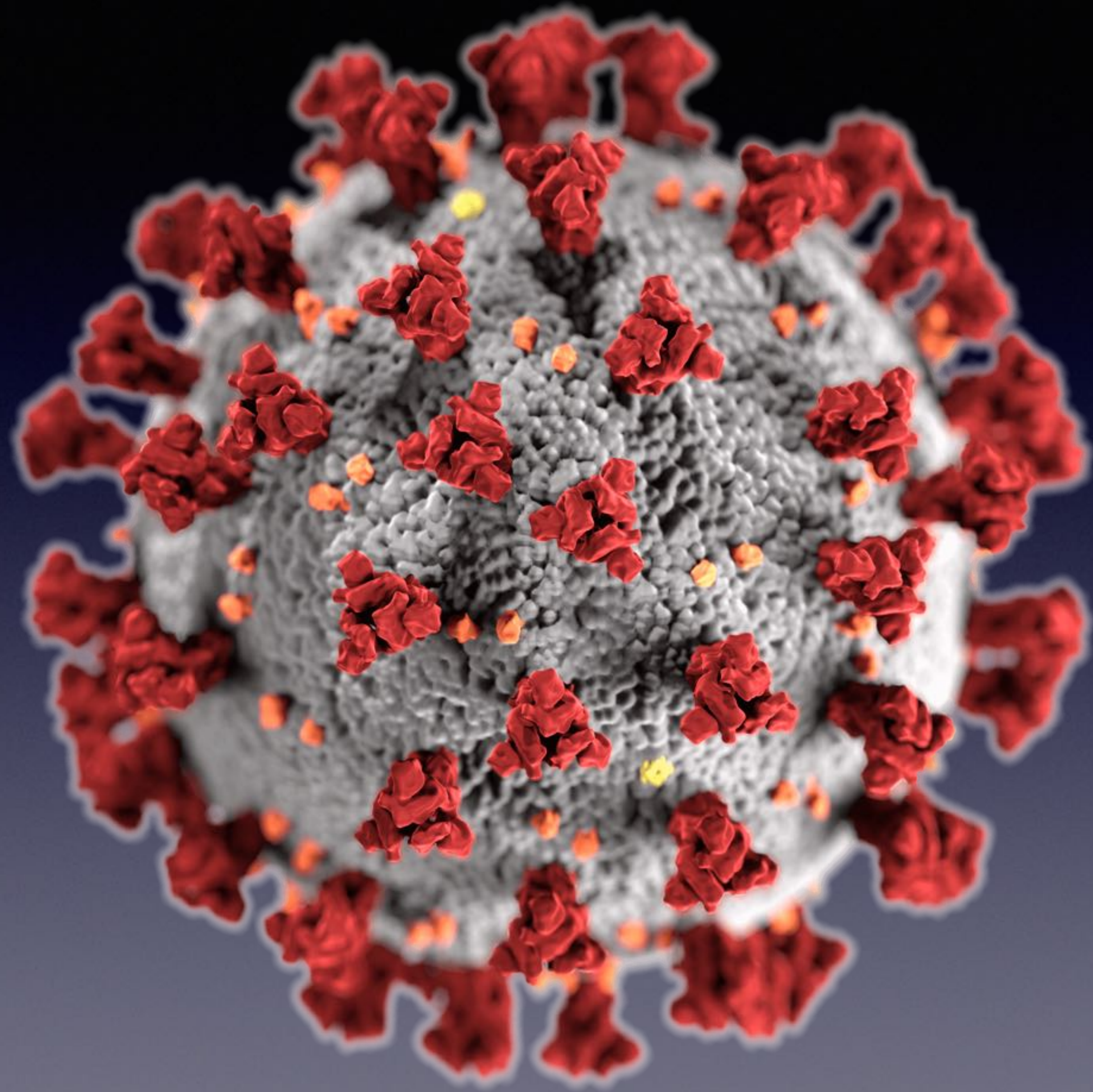
- Note down guidelines & insights clearly visible (timebox, ideas, shortcuts ...)
- Use *all* media! (flip chart, whiteboard, wallpaper, writable wall, sticky notes ...)



# Typist, navigator & rest of the mob

Code commits  
only here!





<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!

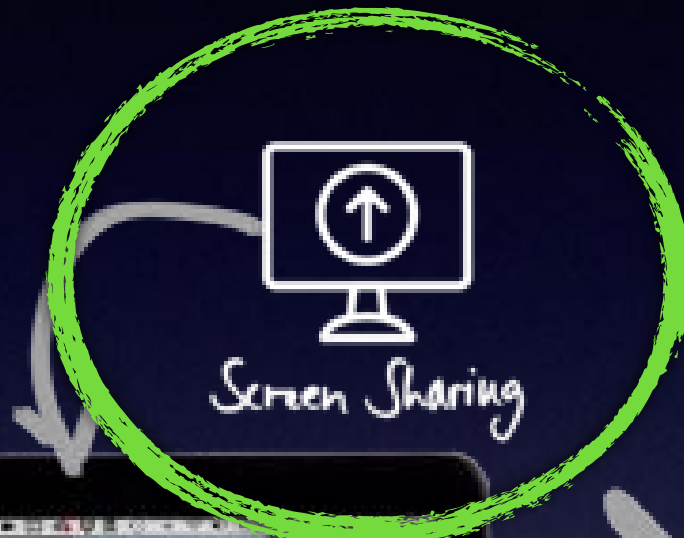
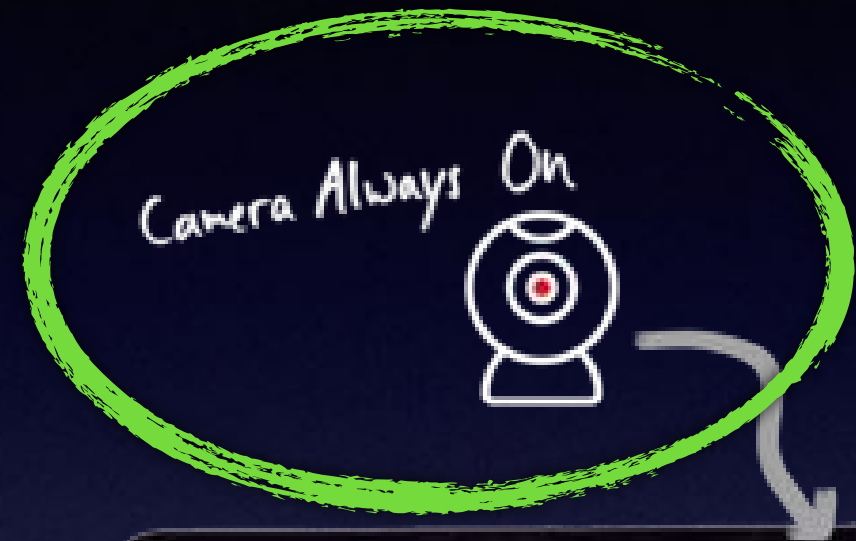
(GitLab) Remote Manifesto ↔ Remote Mob Programming

"Asynchronous communication  
*over*  
synchronous communication."

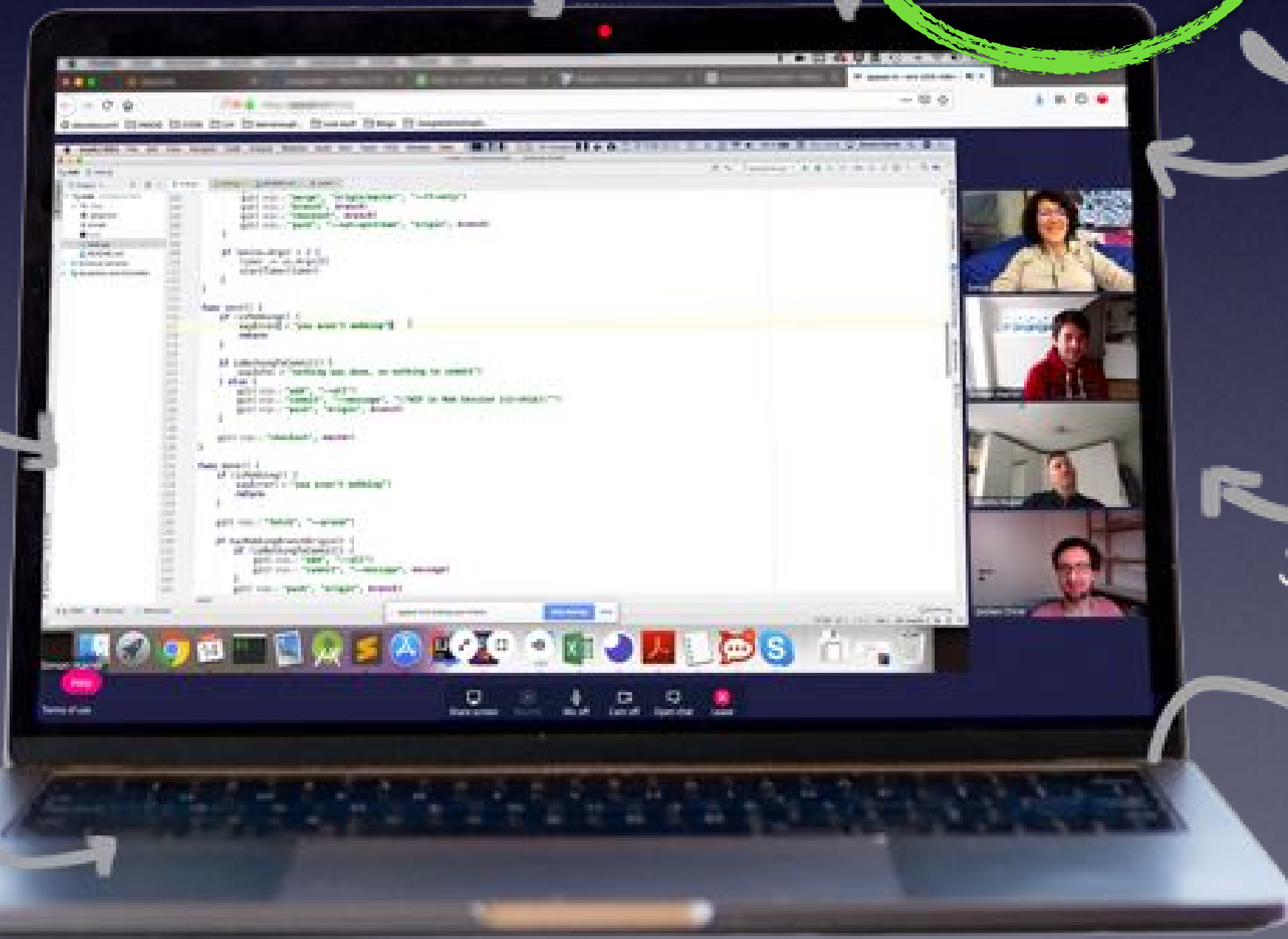


"same time"

# 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/>

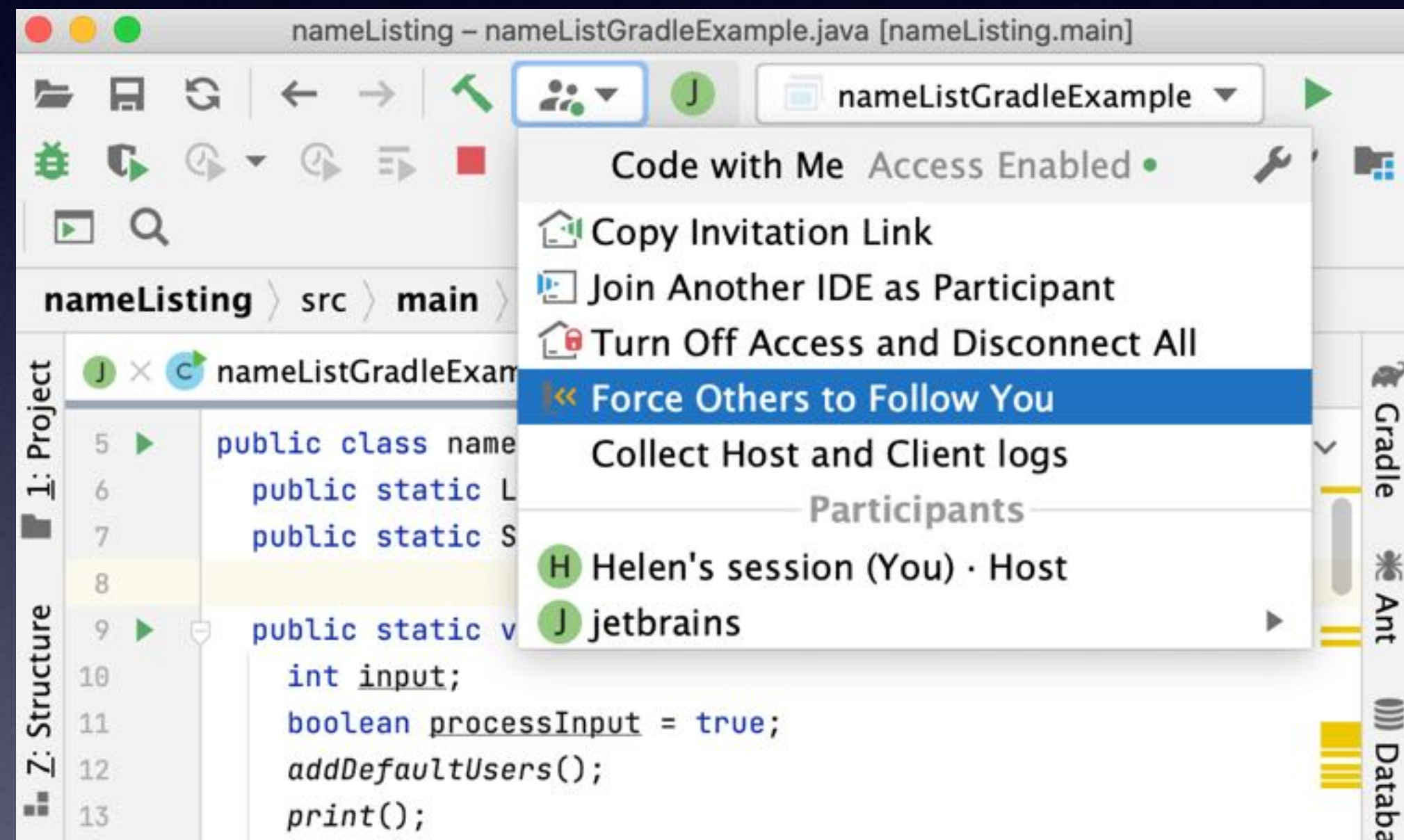
IntelliJ plug-in:   
<https://plugins.jetbrains.com/plugin/14266-mob>

# How to code together?

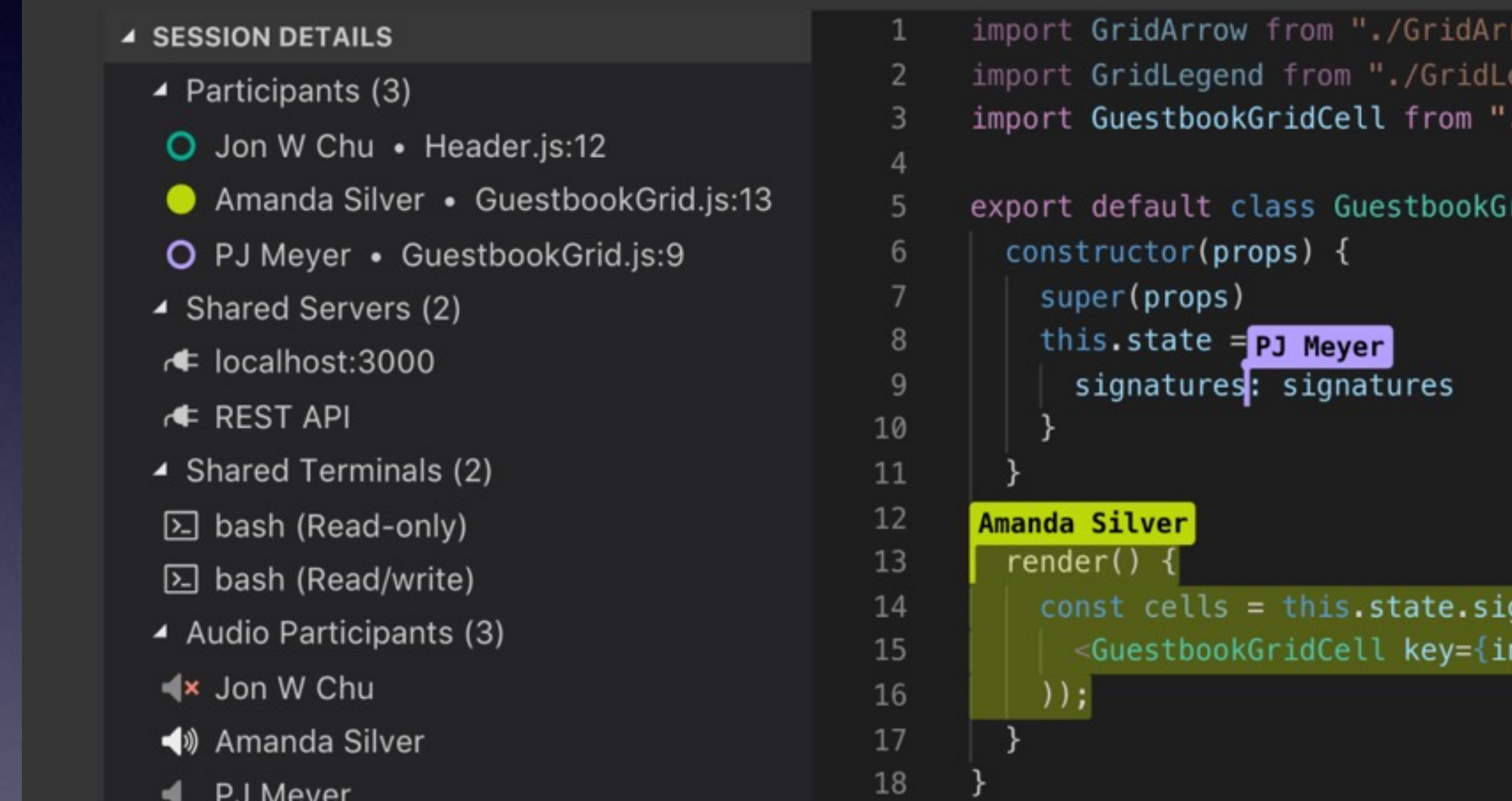
IntelliJ & Code With Me

Share your IDE!

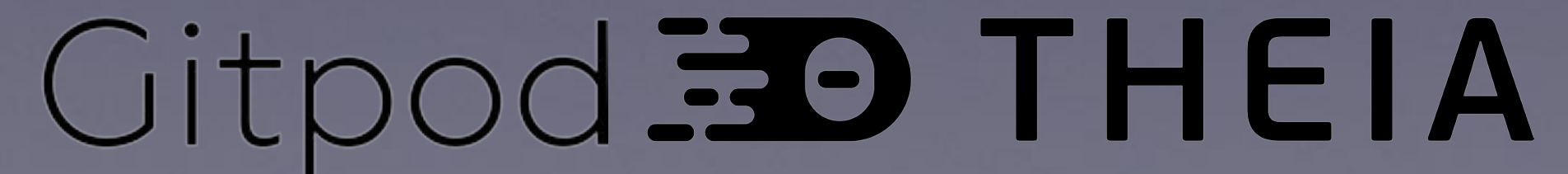
VS Code & Live Share



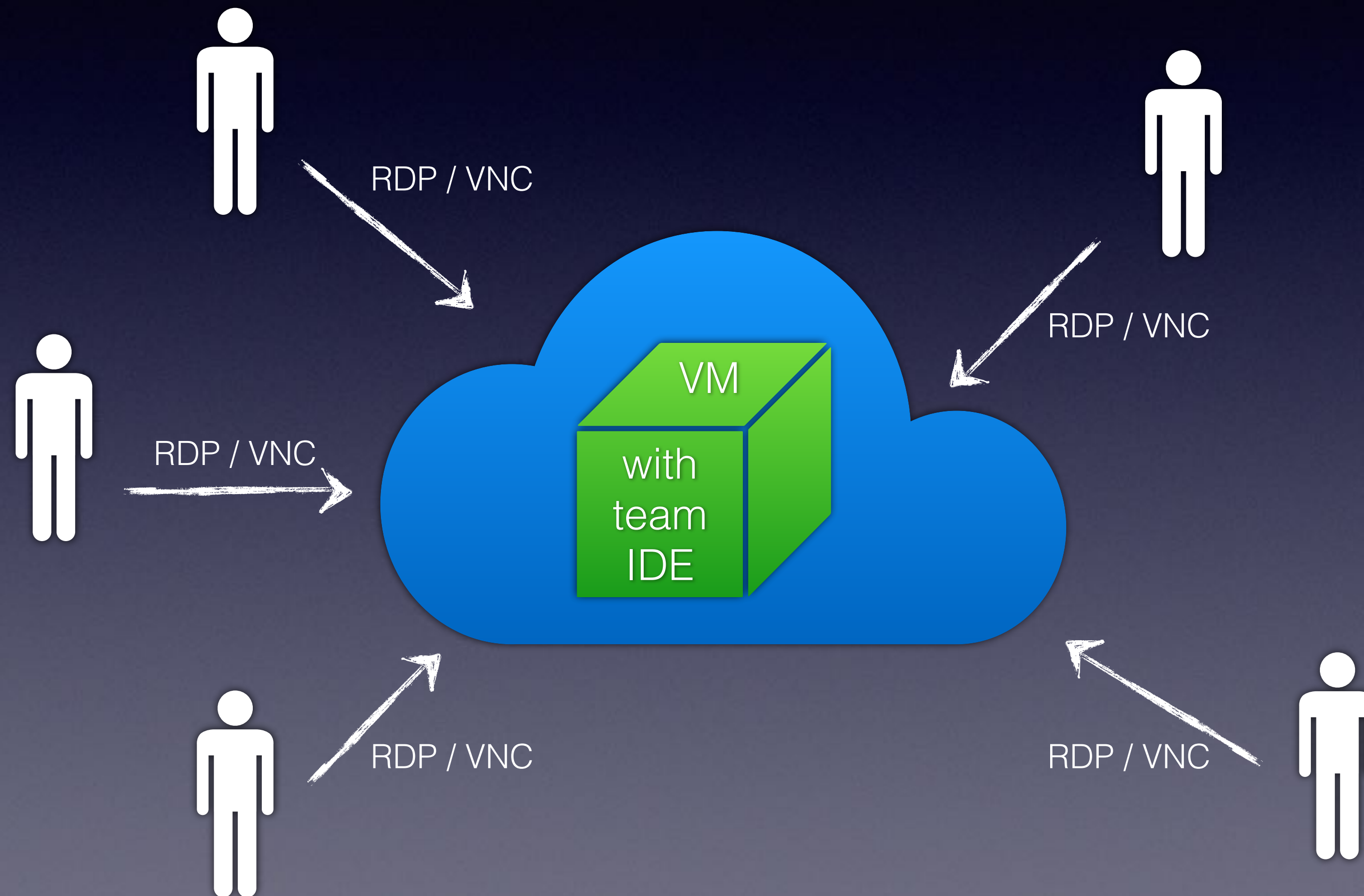
<https://www.jetbrains.com/help/idea/code-with-me.html>



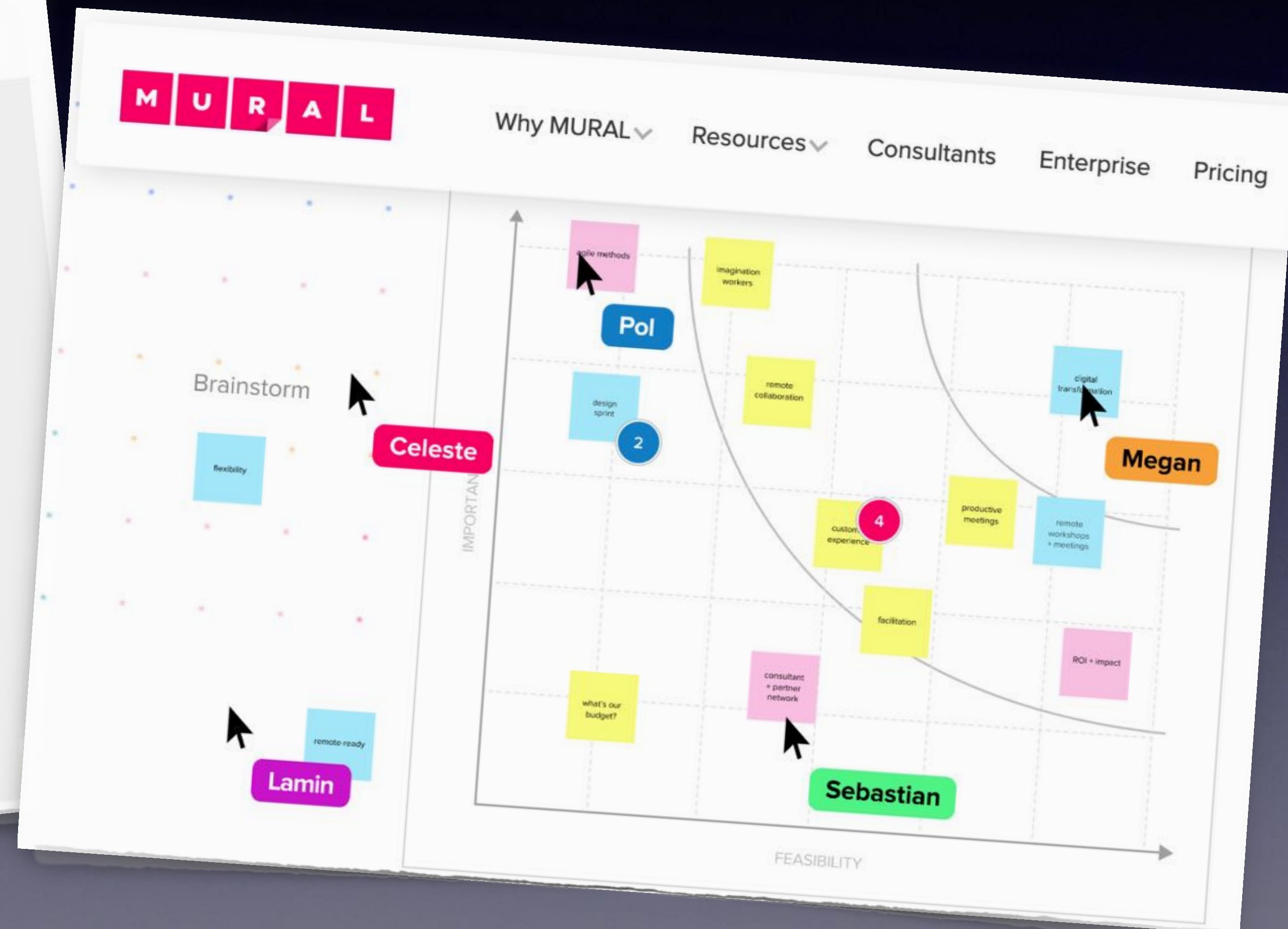
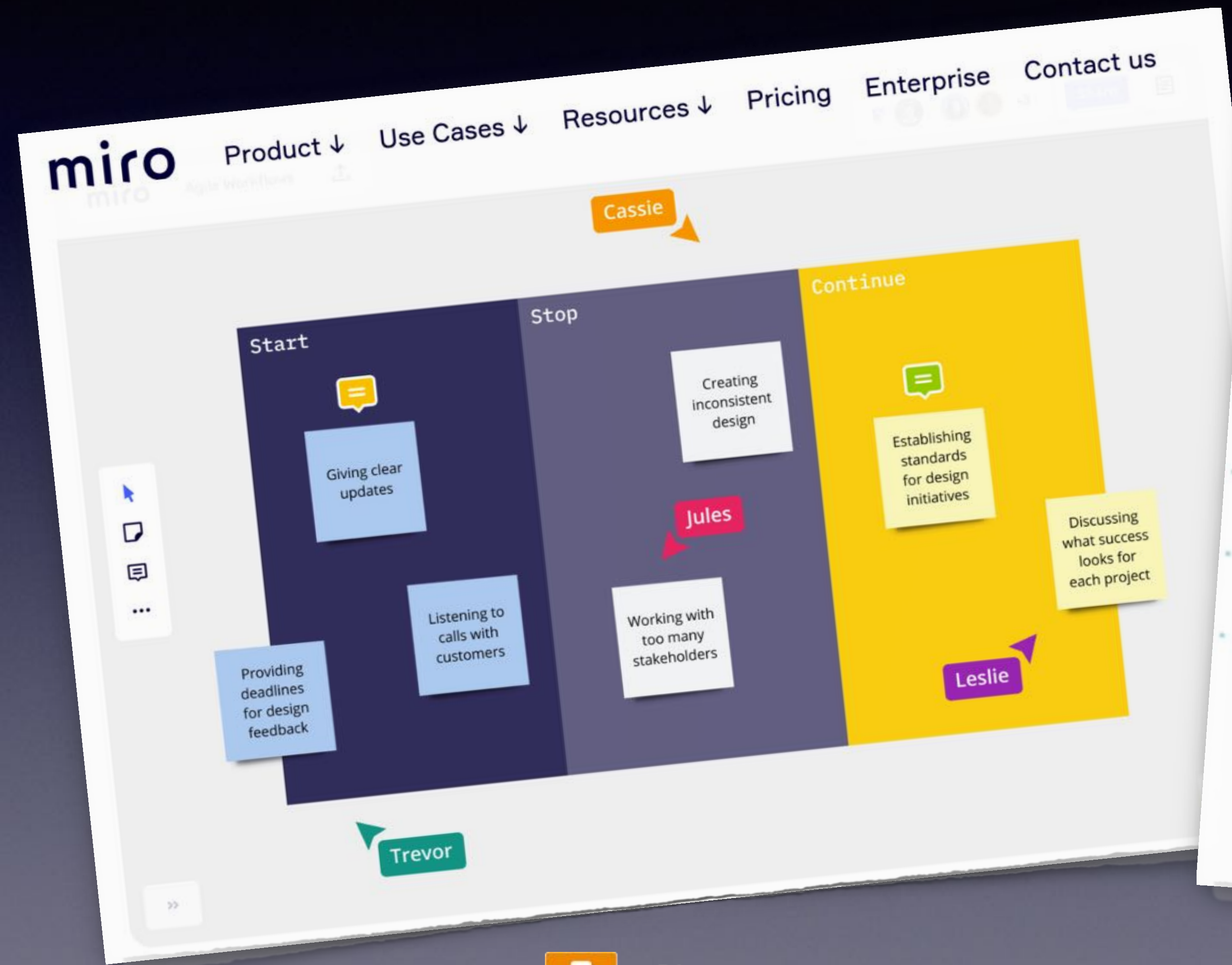
<https://visualstudio.microsoft.com/services/live-share/>



# How to code together?



# 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](https://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](https://cuckoo.team/my-mob-session-123)

Skip



Camera Always On

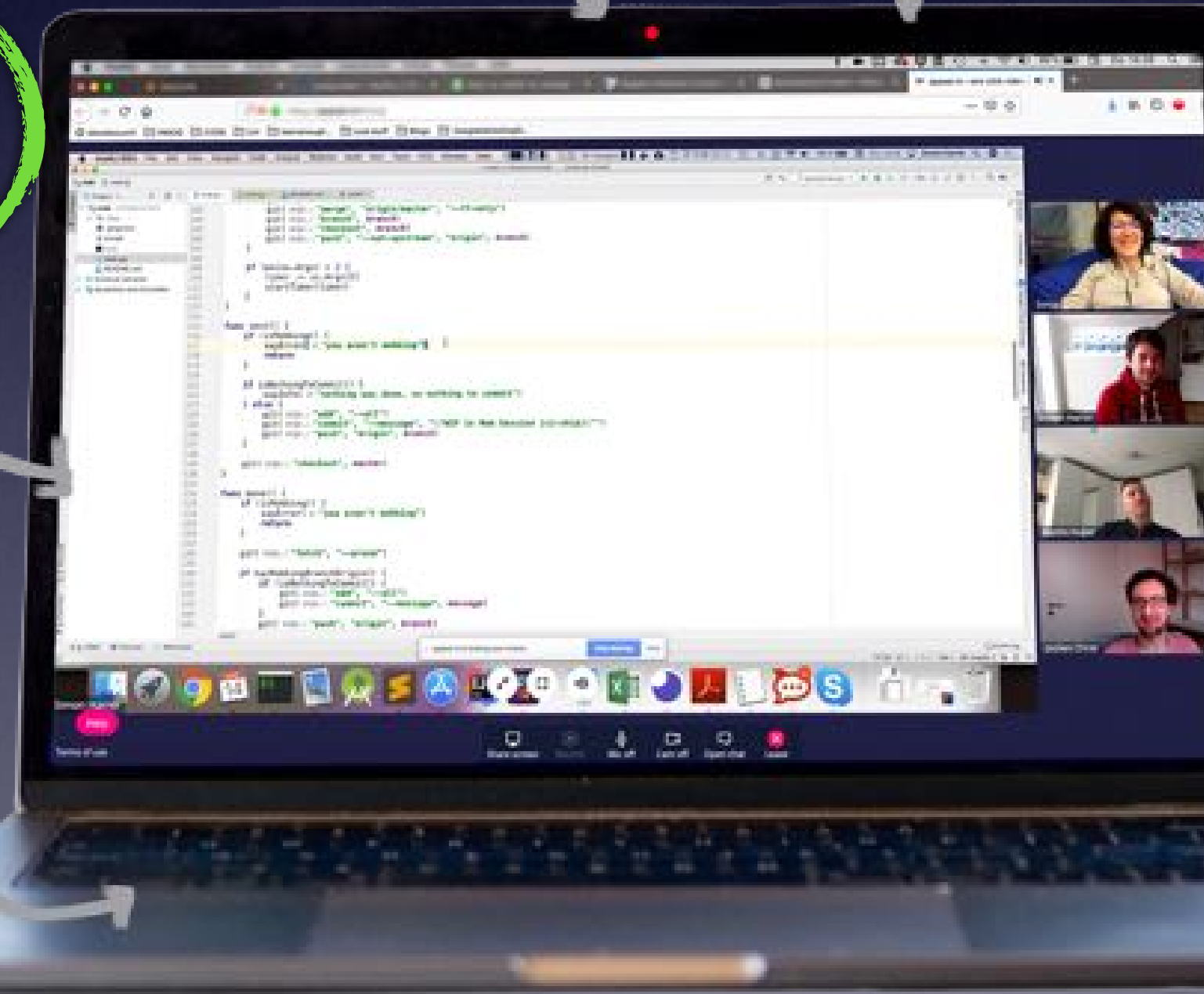


Screen Share

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" (with a dropdown arrow).
- Channel Header:** "PD T - Mob Sessions" with tabs for "Beiträge", "Dateien", "Wiki", and "1 weitere".
- Messages:**
  - A message titled "PDN-1100 Initiales Deployment gestartet" with 2 replies and a meeting duration of 37 Min. 59 Sek.
  - A message titled "PDN-1146 - Kafka SSL beendet: 28 Sek." with 42 replies and a meeting duration of 2 Min. 52 Sek.
  - A separator line labeled "Zuletzt gelesen".
  - A blue banner for "weitermachen mit durchstich" with a duration of 01:02:23 and a "Teilnehmen" button.
  - A message titled "durchstich arteria->cp->xpdp->pdn testen gestartet" with 8 replies.
  - A blue banner for "PRMRY-1987" with a duration of 13:13 and a "Teilnehmen" button.
  - A message titled "PRMRY-1987 gestartet" with replies.
- Bottom:** A "Neue Unterhaltung" button.
- Footer:** "Teams verwalten" and "Hilfe" icons.

# Whether remote or co-located...

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

**Your pair programming will get better**

by practicing mob programming!

"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



# 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**

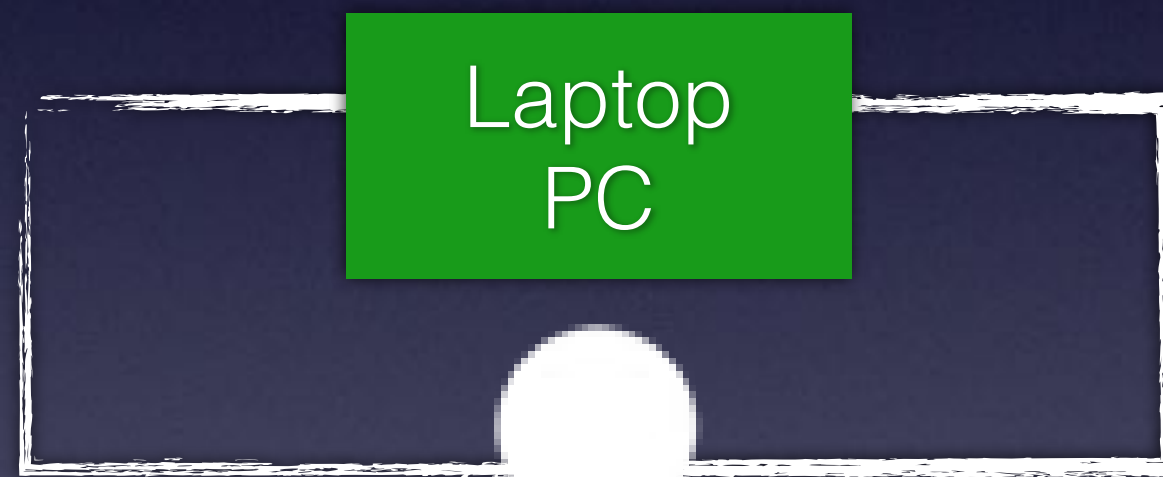
Wait, lean back & let the navigators do the thinking

Keep the minutes (in code)

# Mob Testing

Work through  
application  
under test

Large screen (projector)



Click-  
Typist

Test protocol  
etc.

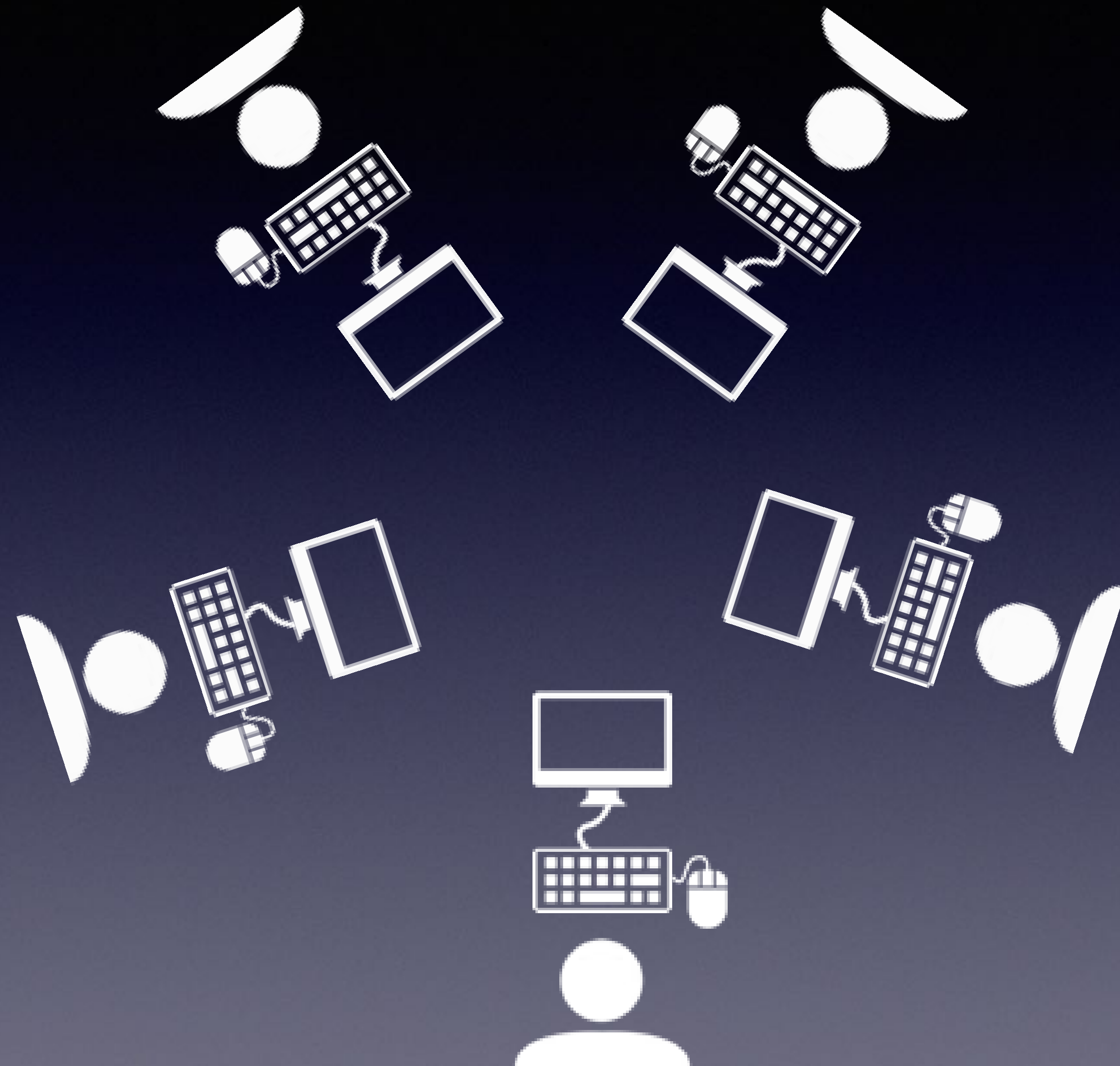
Explorative testing  
etc.



**Why** does  
(Remote) Mob Programming  
work?

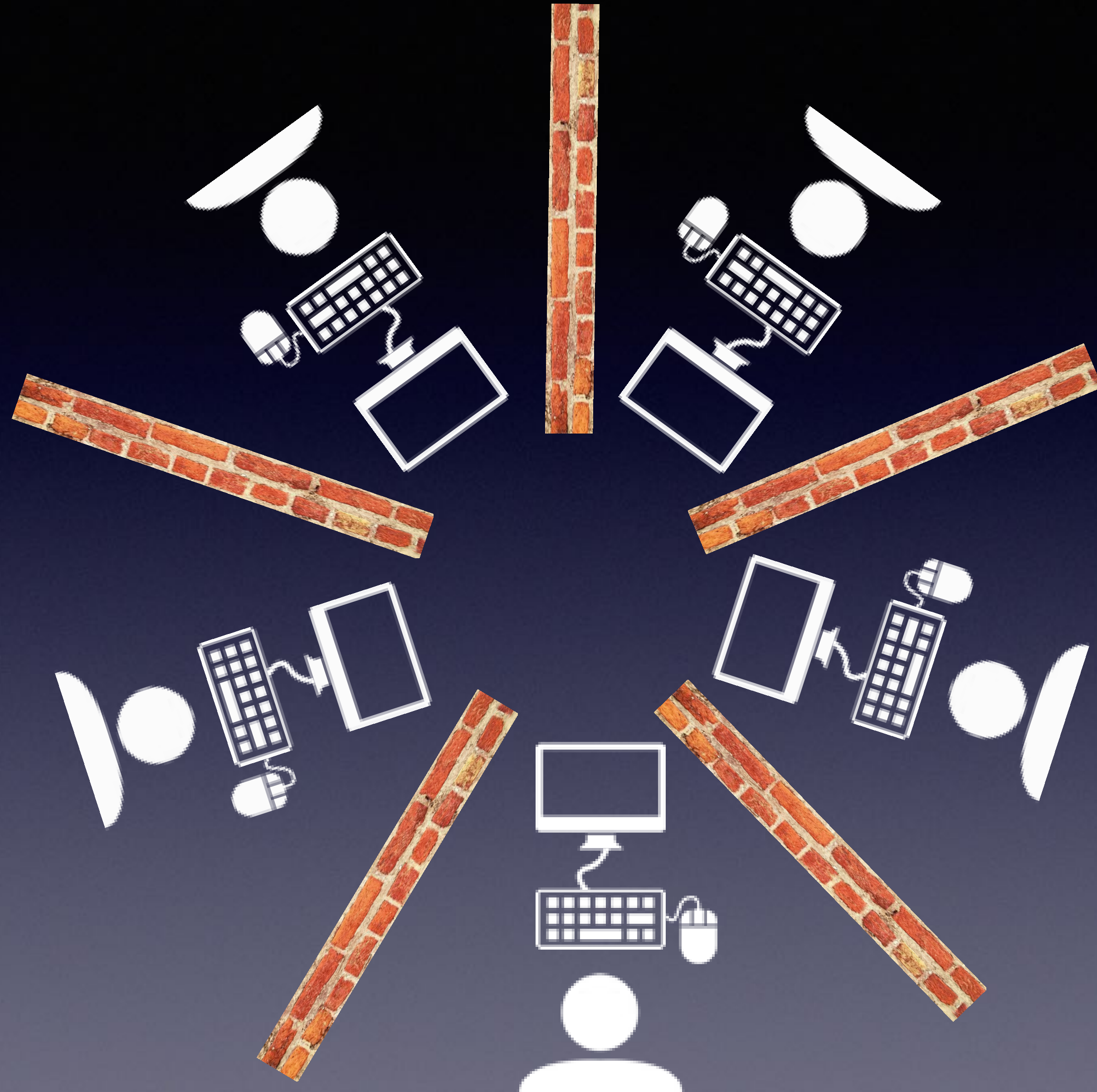


# In Your Office



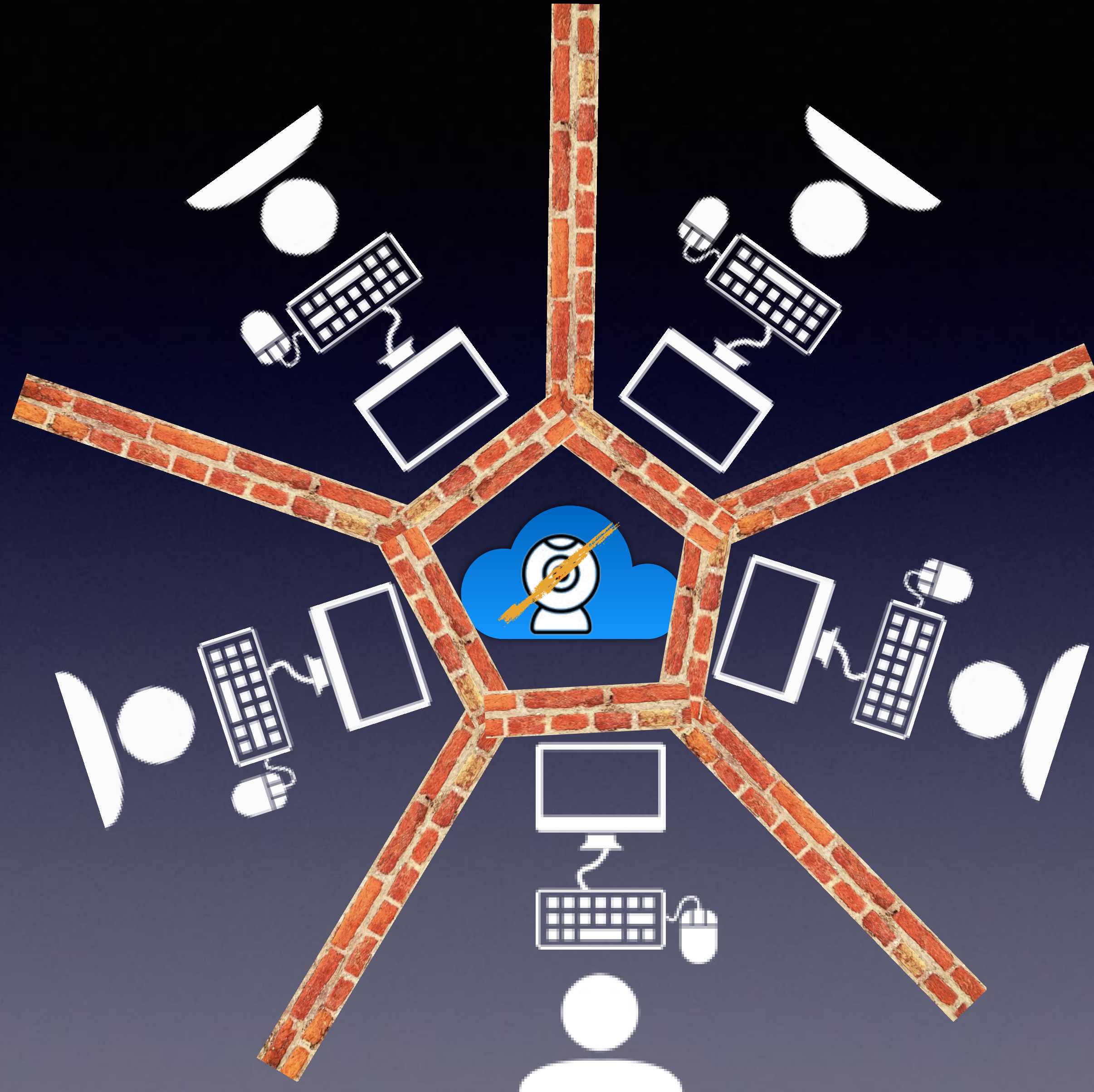
One team?

# In Your Office



"Teams" of 1?

Home  
Office  
– worse?



duck away...

# Remote? Not a Problem.

On-site presence *not* required for team spirit!

We need:

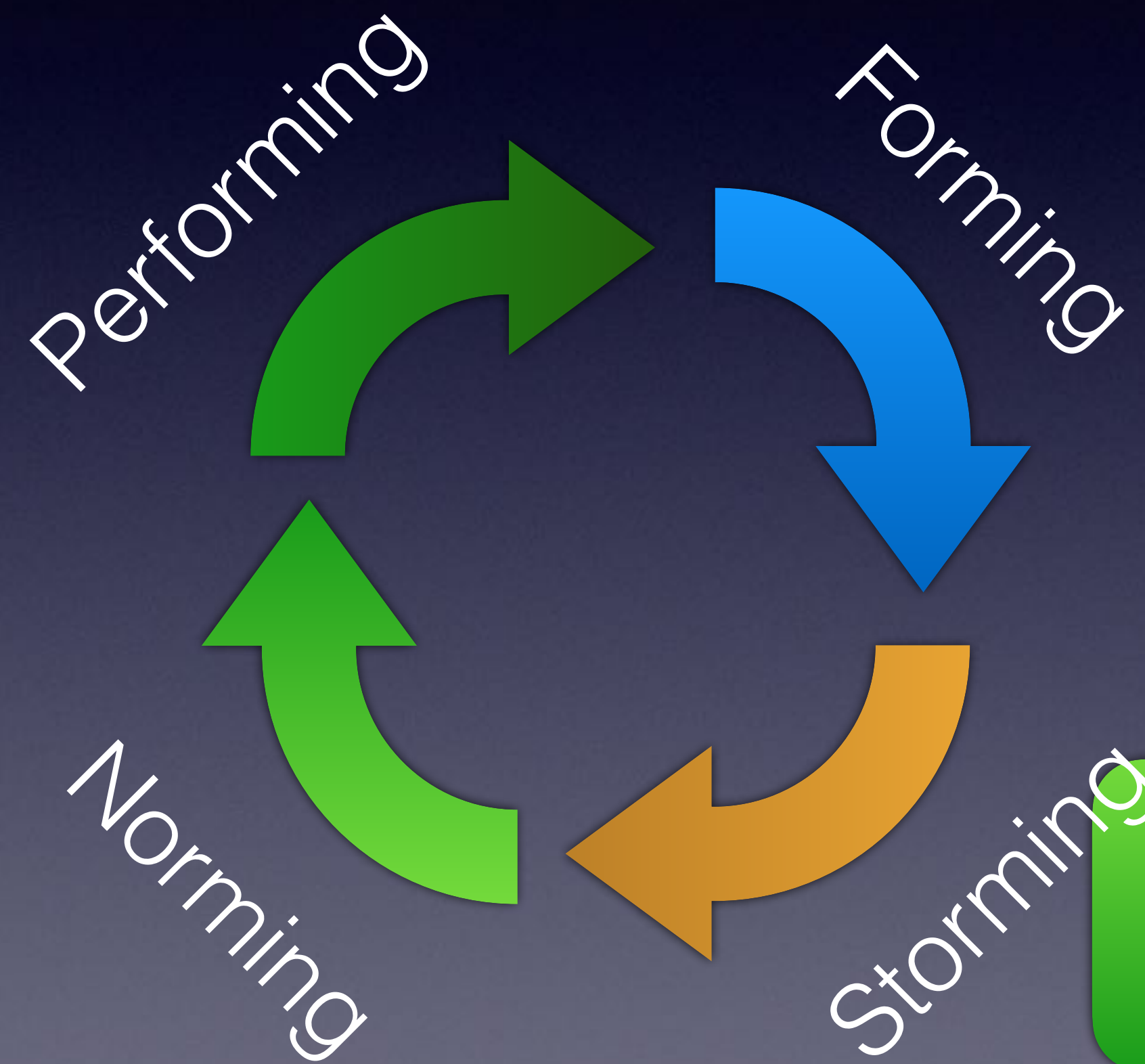
**Common values**

**Trust**

**Seeing each other regularly**



# Stages of Group Development

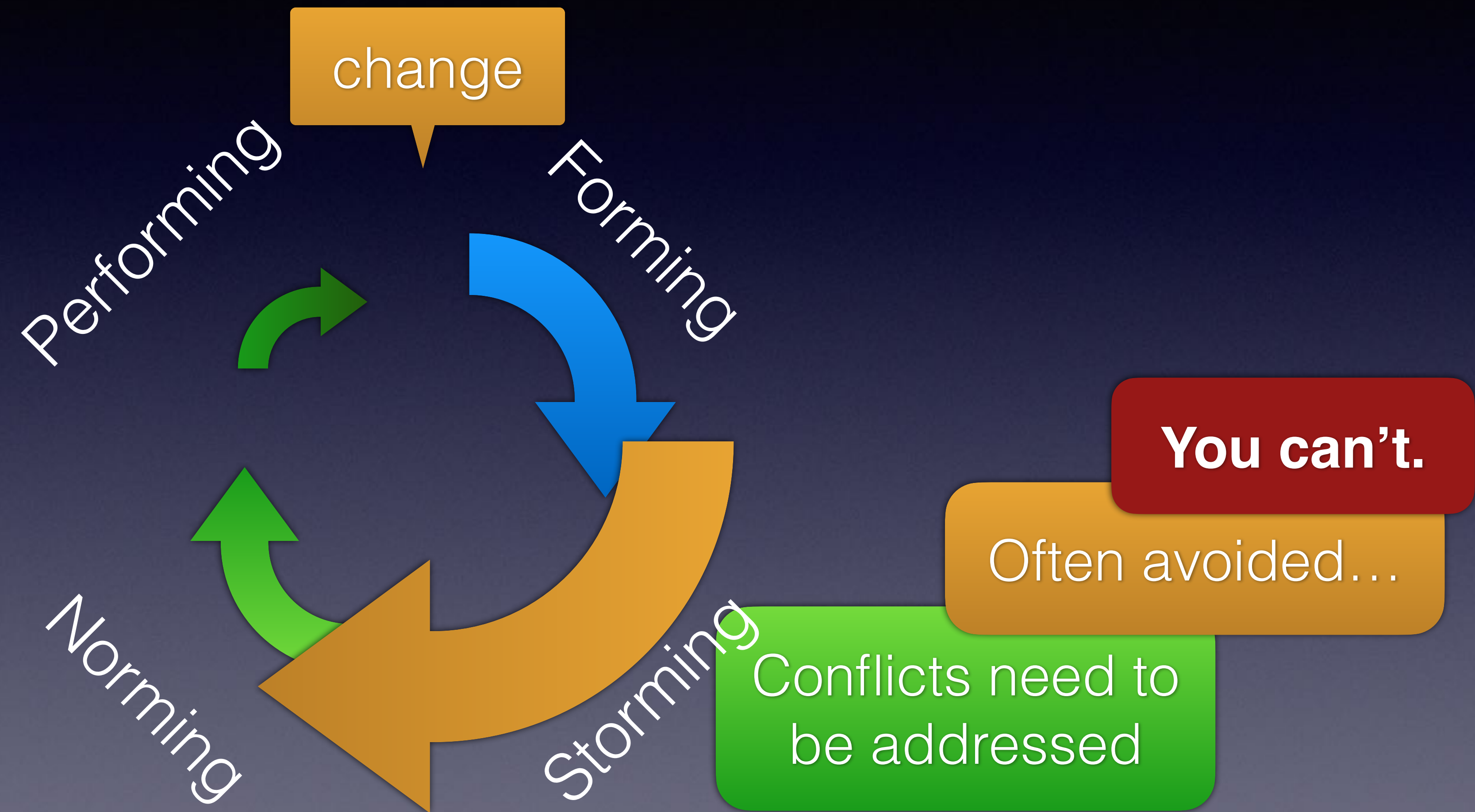


**You can't.**

Often avoided...

Conflicts need to be addressed

# Stages of Group Development



# Stable Teams?

Teams are **immutable**

**Change happens**

New team, new forming/storming/...

# Mob Programming

Shorter phases by experiencing them regularly



# Optimise for Easy Change

~~Resistance to change?~~

**Resilience** to change!

# Sharing Knowledge?

Documentation.

**Afterwards.**

"Show & tell"

Amazingly  
difficult!

Collaborate? Co-author, co-create!

Build  
knowledge and experience  
**together!**

Right from the start.

# Mob Programming:

Implicit (tacit)  
knowledge & skills  
**made visible**

Someone else is asking  
the question I would like  
to ask (but don't know  
how to express it)

*Watch others think.*

*See. Experience. Do it yourself.*



Knowledge **and skills**

*Know **how***

# Tackle complexity

*Our problems (tasks) are getting more & more complex*

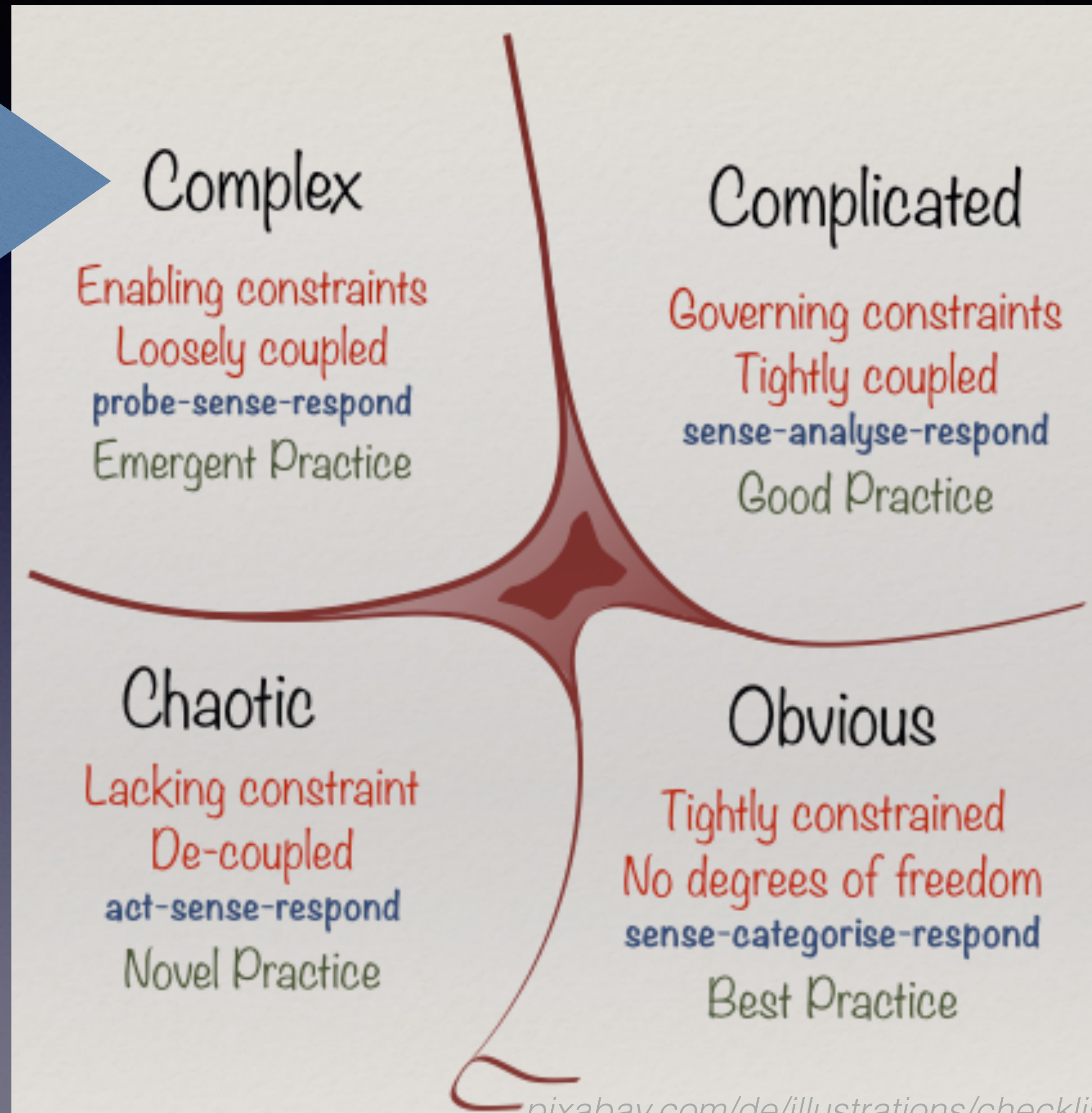
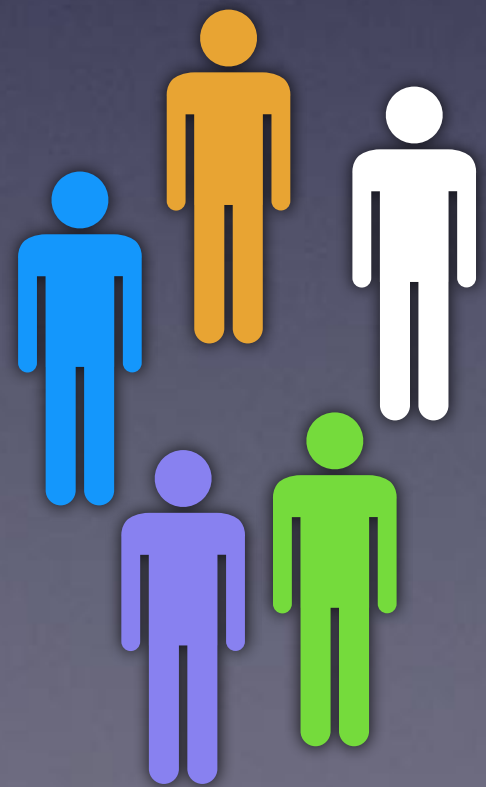
Team has to comprehend **path** to the solution  
(not only the result)

Why this architecture?

Why is some code *missing* here?

# Cynefin

We are often here  
Cause & effect  
can often  
be understood  
in retrospect  
only



The Cynefin Framework  
by Dave Snowden.  
CC BY-SA 3.0

# 3 stages of Mob Programming

Different team phases

Different problem categories

Learning together

Being productive together

Exploring together

Short-term:  
Pass on knowledge & skills

Medium-term:  
Maintainability & collective code (product) ownership

Long-term:  
Culture change

# 100% Mob Programming?

*Possible! But definitely not necessary.*

*(cf. Pair Programming)*

*It's a tool.*

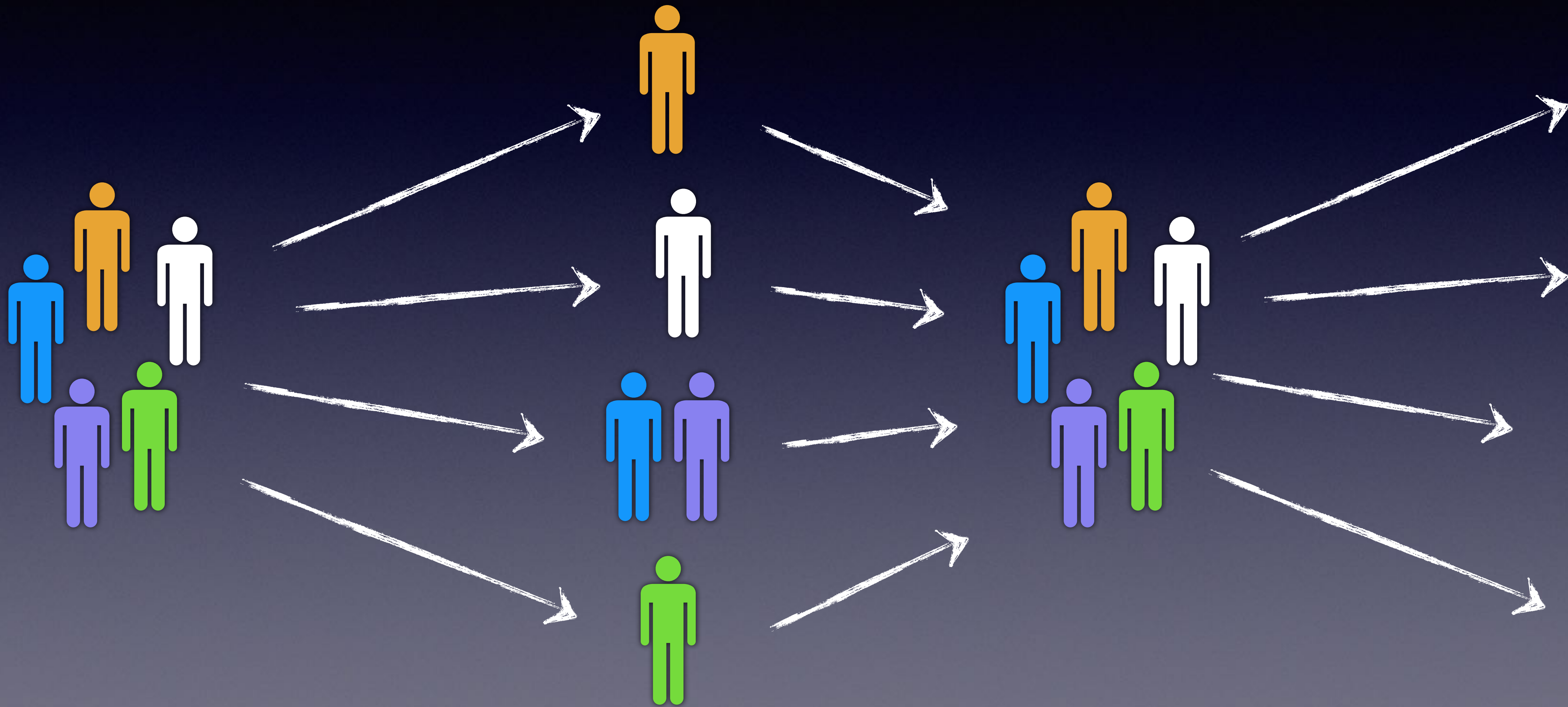
# 100% for the most important task

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

## Dynamic mob: come and go

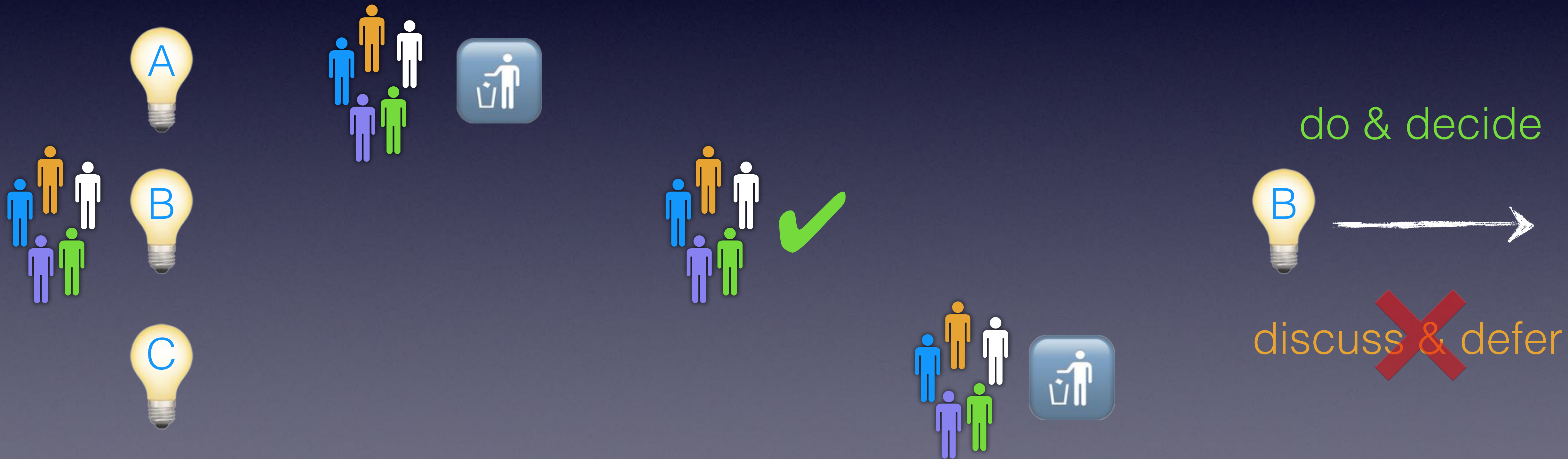


# Start together!



# Team decisions

More than one idea? *Try them all!*





# Different to meetings!

Mob Programming yields

**working**, tested, **shared code**.

Making us & our customers happy 😊

“If you want to go **fast**, go **alone**.

If you want to go **far**, go **together**.”

– Proverb

# MOB MENTALITY



## Mob Mentality Show

755 subscribers

SUBSCRIBE

HOME

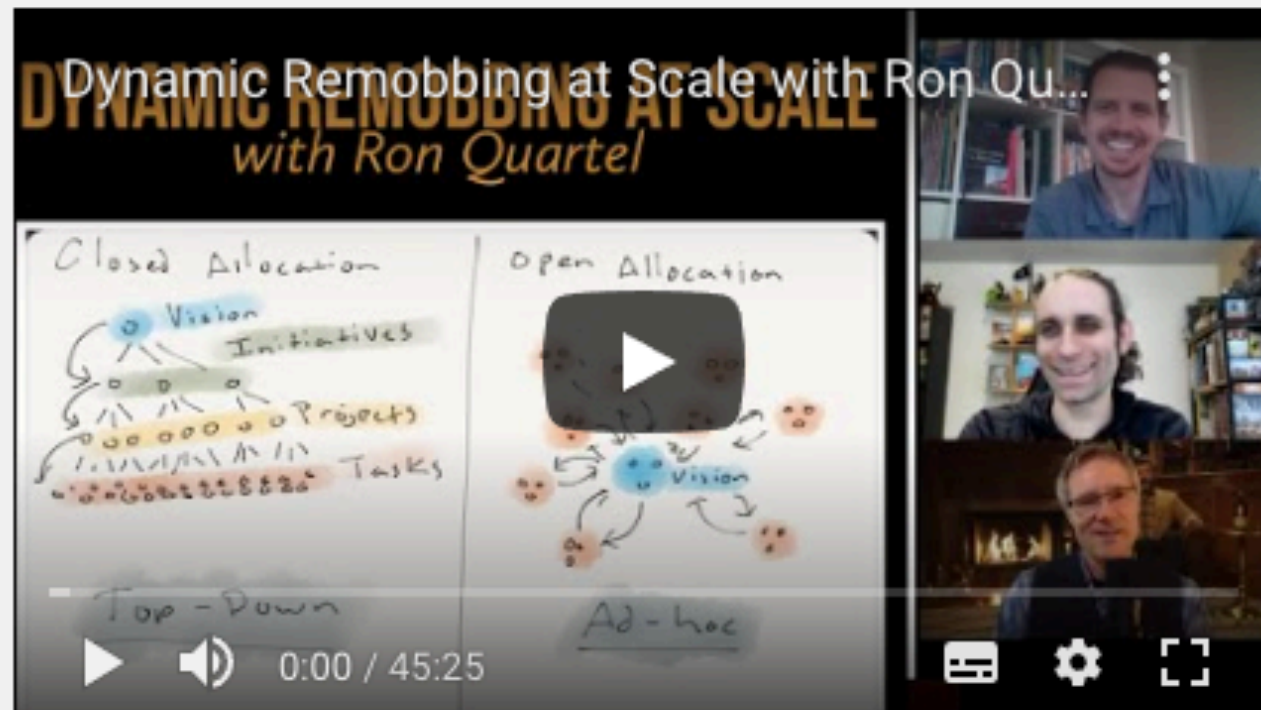
VIDEOS

PLAYLISTS

CHANNELS

DISCUSSION

ABOUT



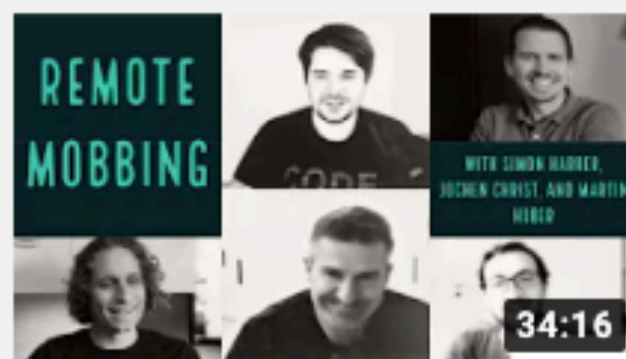
### Dynamic Remobbing at Scale with Ron Quartel

34 views • 18 hours ago

Chris Lucian and Austin Chadwick discuss all things #agile and product development from a #MobProgramming perspective. Imagine a team of 30-150 people that turned up the dial on self-organization to the max. Instead of favoring top-down closed allocation, they embraced open-allocation and autonomy. Now also imagine that many of these people happen to love #PairProgramming and #MobProgramming. What would their

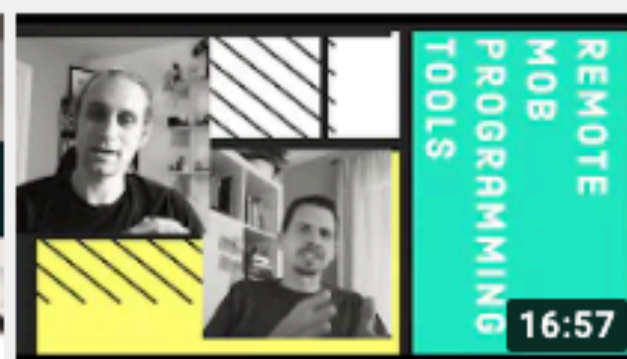
READ MORE

### Remote Mob Programming ▶ PLAY ALL



Remote Mobbing with Simon Harrer, Jochen Christ, and...

Mob Mentality Show



Remote Mob Programming Tools

Mob Mentality Show



Remote Mob Programming Etiquette

Mob Mentality Show



Remote Collaborative Coding with Lynn Langit

Mob Mentality Show



Unexpectedly Working Remote with Jason Weiman...

Mob Mentality Show

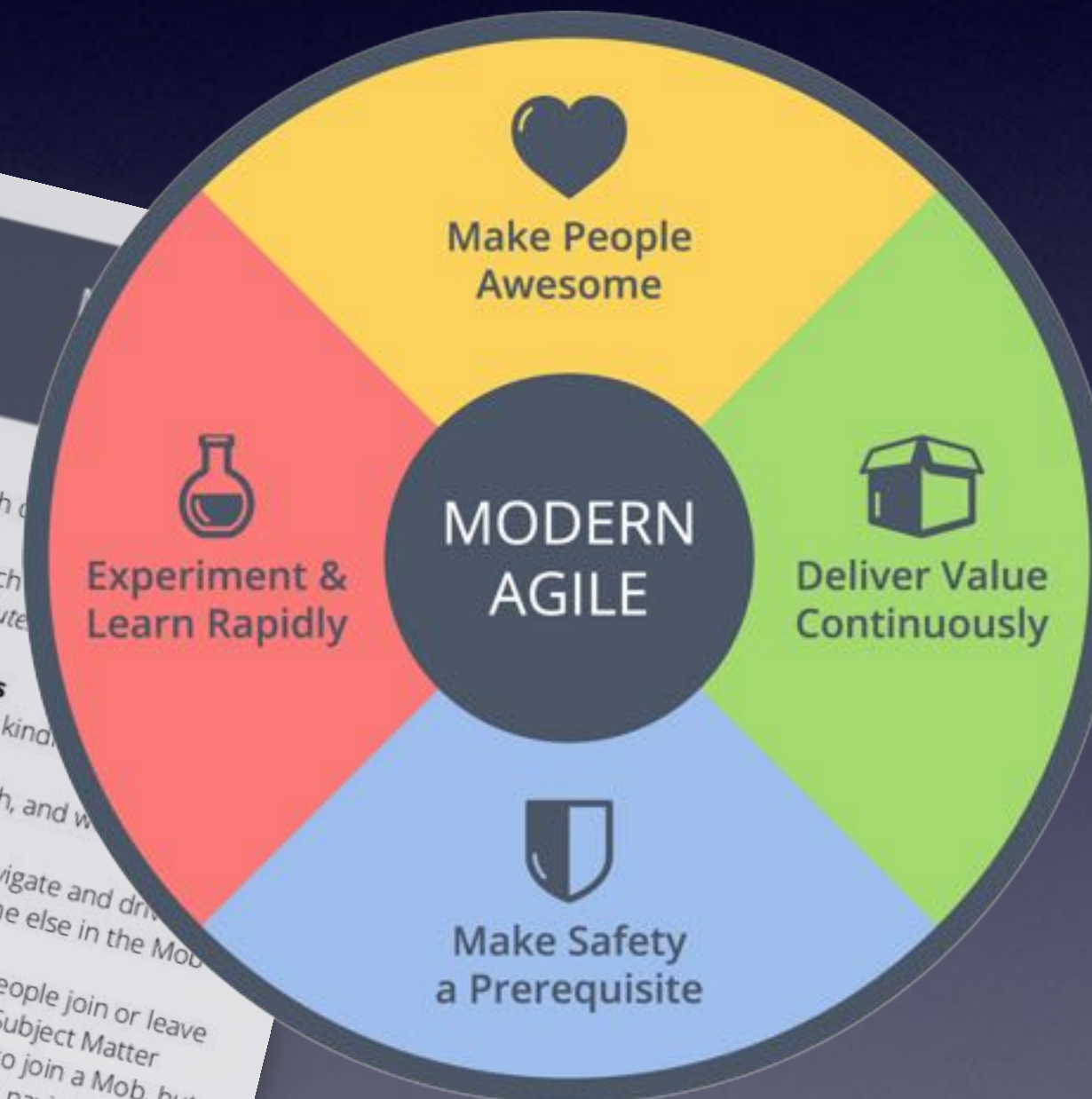


A Remote UI/UX Mobbing Story with Damien Klinnert

Mob Mentality Show

# Modern Agile

Agile. Well-Working.



#MobProgramming

#NoEstimates

#NoProjects

#ModernAgile

<https://modernagile.org/>

# Virtual JavaLand 2021

Login



HOME **PROGRAMM** ▾ TICKETS DETAILS ZUR TEILNAHME REFERENTEN HALL OF FAME TEAM



präsentiert ihr euren Entwurf, bekommt Feedback und könnt die Lösung anschließend verbessern! Bearbeitet jenseits von eingetretenen Pfaden des Projektalltags gemeinsam mit anderen eine Architekturaufgabe. Übt es, Architekturen und Architekturentscheidungen zu präsentieren und zu begründen!



**Voraussetzungen:** Für die Teilnahme ist ein Rechner mit Internetzugang, Kamera und Mikro (bzw. Headset) erforderlich. Vor dem Workshop gibt es noch eine E-Mail mit Details. Um Gedanken und Ideen bezüglich der Architektur zu teilen, ist ein Mal- oder Modellierungsprogramm hilfreich.

## MOB-PROGRAMMING-DOJO

Mob-Programming ist eine Methode der agilen Softwareentwicklung, bei der ein ganzes Team zur gleichen Zeit und am gleichen (virtuellen) Ort an der gleichen Aufgabe arbeitet. Lasst euch das Mob-Programming-Dojo nicht entgehen und probiert es anhand unserer vorbereiteten Aufgaben selbst einmal aus! Der Workshop richtet sich an Menschen in Software-Entwicklungsteams, die die Form der virtuellen Zusammenarbeit mit Mob-Programming ausprobieren wollen. Es sind dabei keine besonderen Vorkenntnisse nötig.

**Voraussetzungen:** Für die Teilnahme sind ein Rechner mit Internetzugang, Kamera und Mikro (bzw. Headset), Java 11, eine Java-IDE (IntelliJ, Eclipse, VS Code), git sowie das [mob-Shell-Tool](#) erforderlich. Vor dem Workshop gibt es noch eine E-Mail mit Details.

<https://www.javaland.eu/de/programm/community-aktivitaeten/>

# Mob Programming

Pair Programming

Know-how transfer

Coaching

Taking breaks

XP

Questions?

Readability

Modern Agile

Simplicity

Strong Style navigation

JAVA

USER

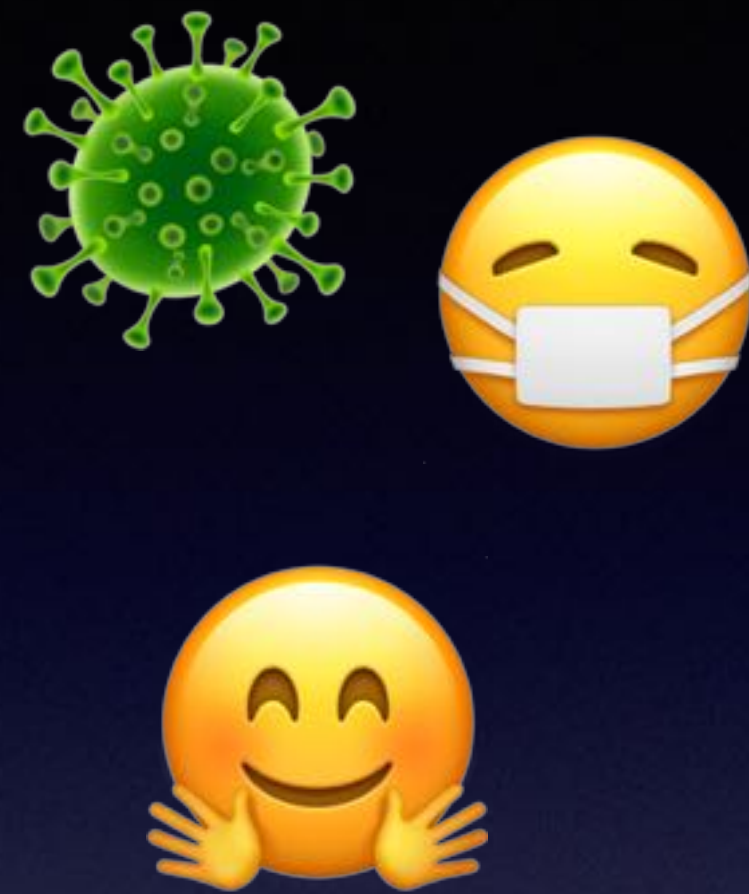
GROUP

CH

Velocity

Speed





JAVA  
USER  
GROUP  
CH



# 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://cuckoo.team/>

<https://mobti.me/>

<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/>

# 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, in the same space, and at the same computer."

– Woody Zuill

"Continuous Integration of Ideas"

– Joshua Kerievsky