



# (Remote) Mob Programming

Learn Together. Deliver Together!



Thomas Much

 @thmuch

26.05.2021

**Software developer**

**Technical agile coach**



Mob Programming  
since 2016

Remote Mob Programming  
since 2020

... on the shoulders of giants ...

 @thmuch



# Mob Programming

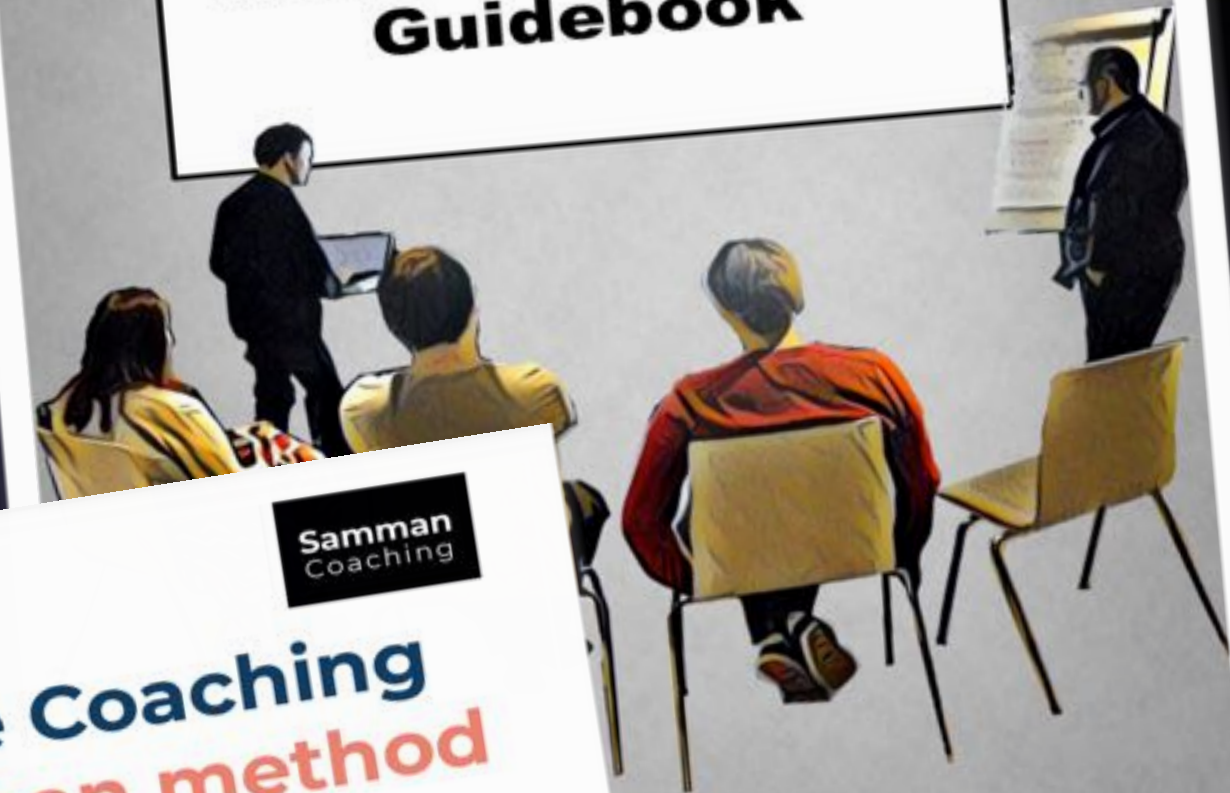
A Whole Team Approach



By Woody Zuill and Kevin Meadows



# The Mob Programming Guidebook



# MOB PROGRAMMING GUIDEBOOK

MAARET PYHÄJÄRVI

# Technical Agile Coaching with the Samman method

By Emily Bache  
Foreword by Kent Beck



i & Llewellyn Falco

# Remote Mob Programming

At home, but not alone

INNOQ

Foreword by Mark Pearl

The Pragmatic Programmers

Pragmatic express

# Code with the Wisdom of the Crowd

Get Better Together with Mob Programming

Mark Pearl  
edited by  
Tammy Coron





**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/>

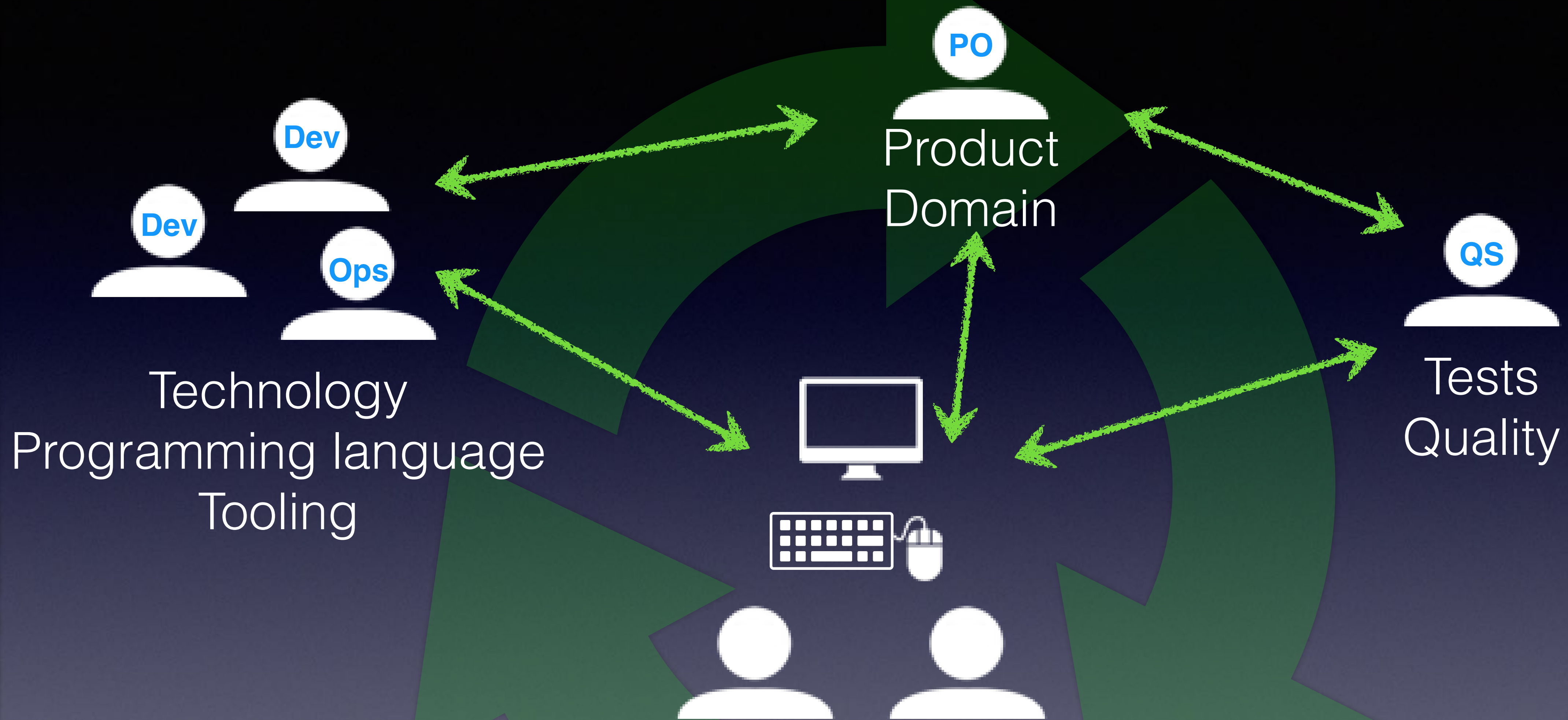
<https://twitter.com/woodyzuill>

# Mob Programming

„Mobbing“ 🤔🤨

Group Programming  
(Whole) Team Programming

Ensemble Programming\*



"**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



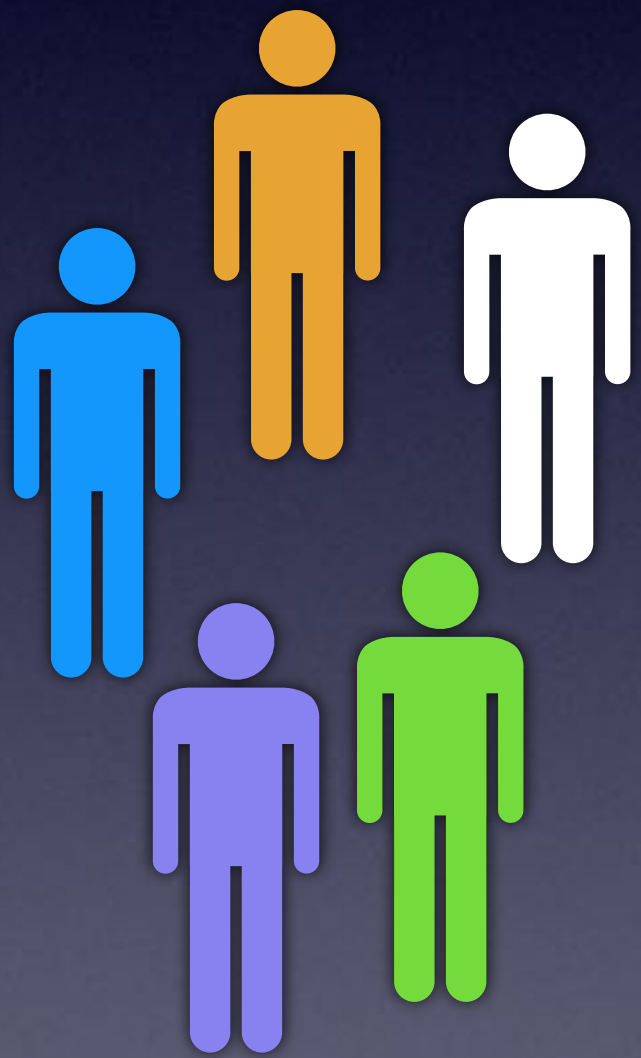
How's your team working? (& is this a problem?)

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

**Why does it work** (& help us work truly together)?

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???

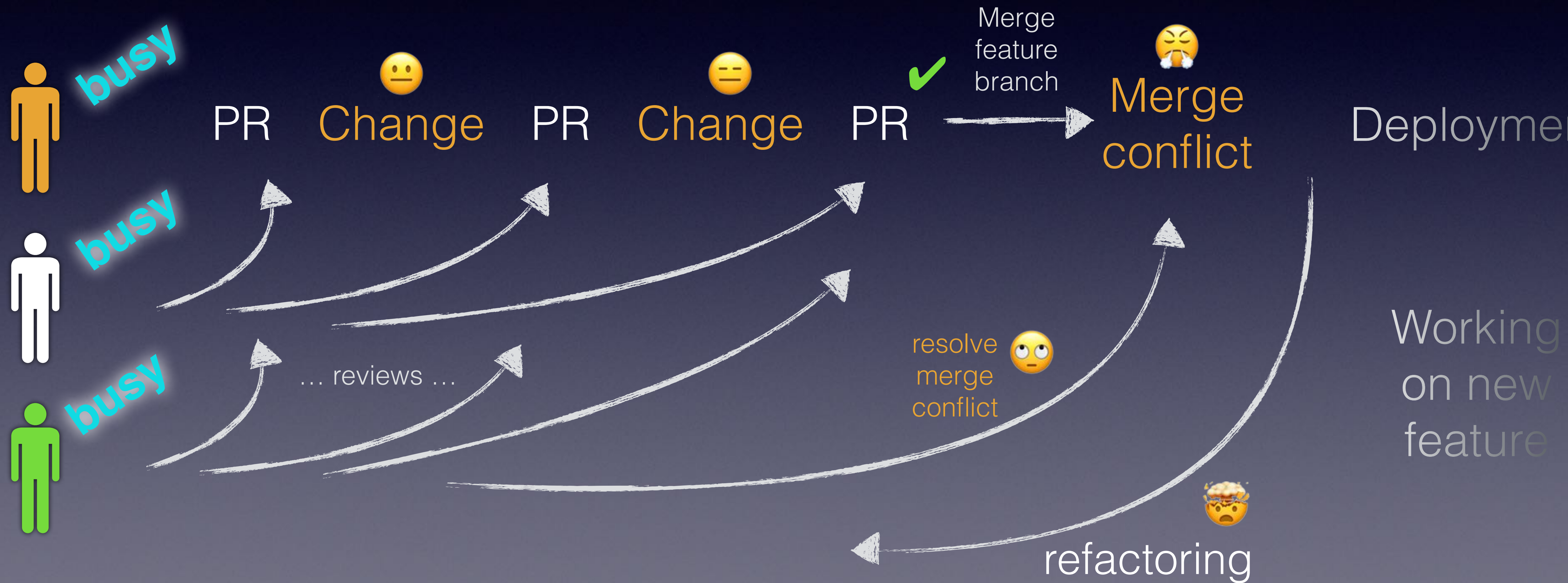
*Well... what do you optimise for?*

Deliver most important feature to our customers

*or*

Keep developers as busy & working to capacity as possible

# Busy waiting

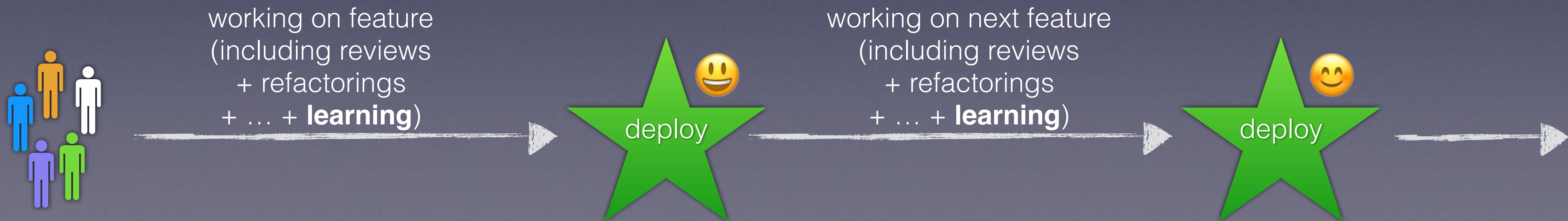


# Flow

... of value delivered to our customers:

Maximize number of things done

Minimize waste

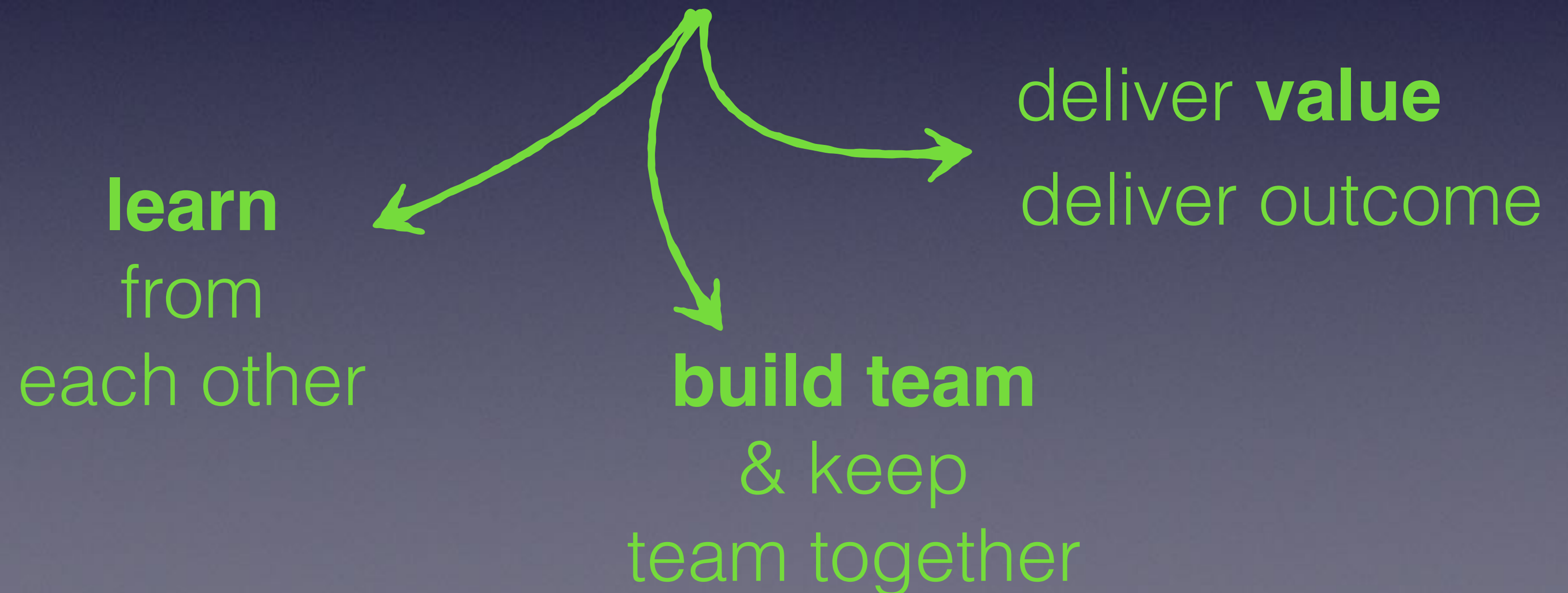




# But our speed!



„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)**

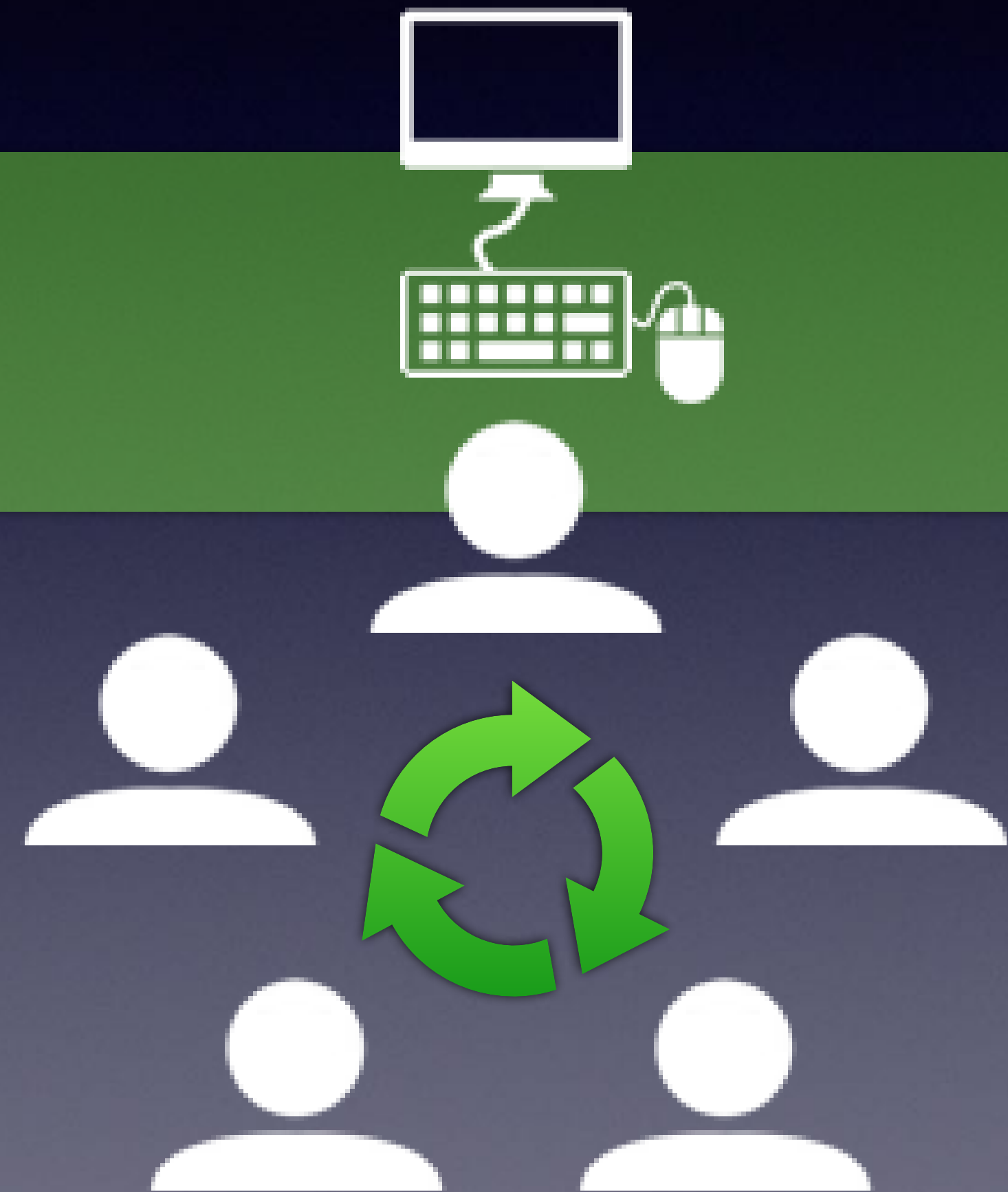
*Use timer app, e.g.*

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

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

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

or *smartphone timer app*

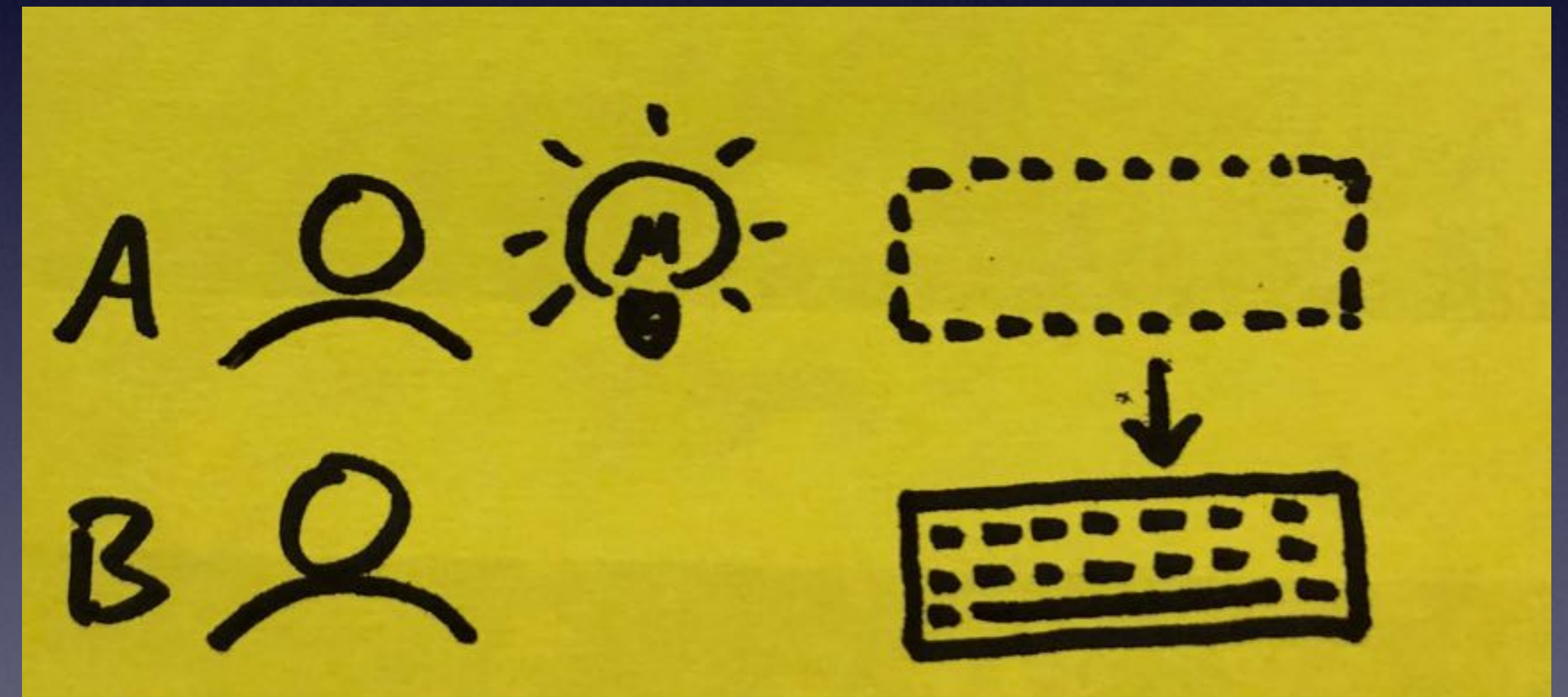
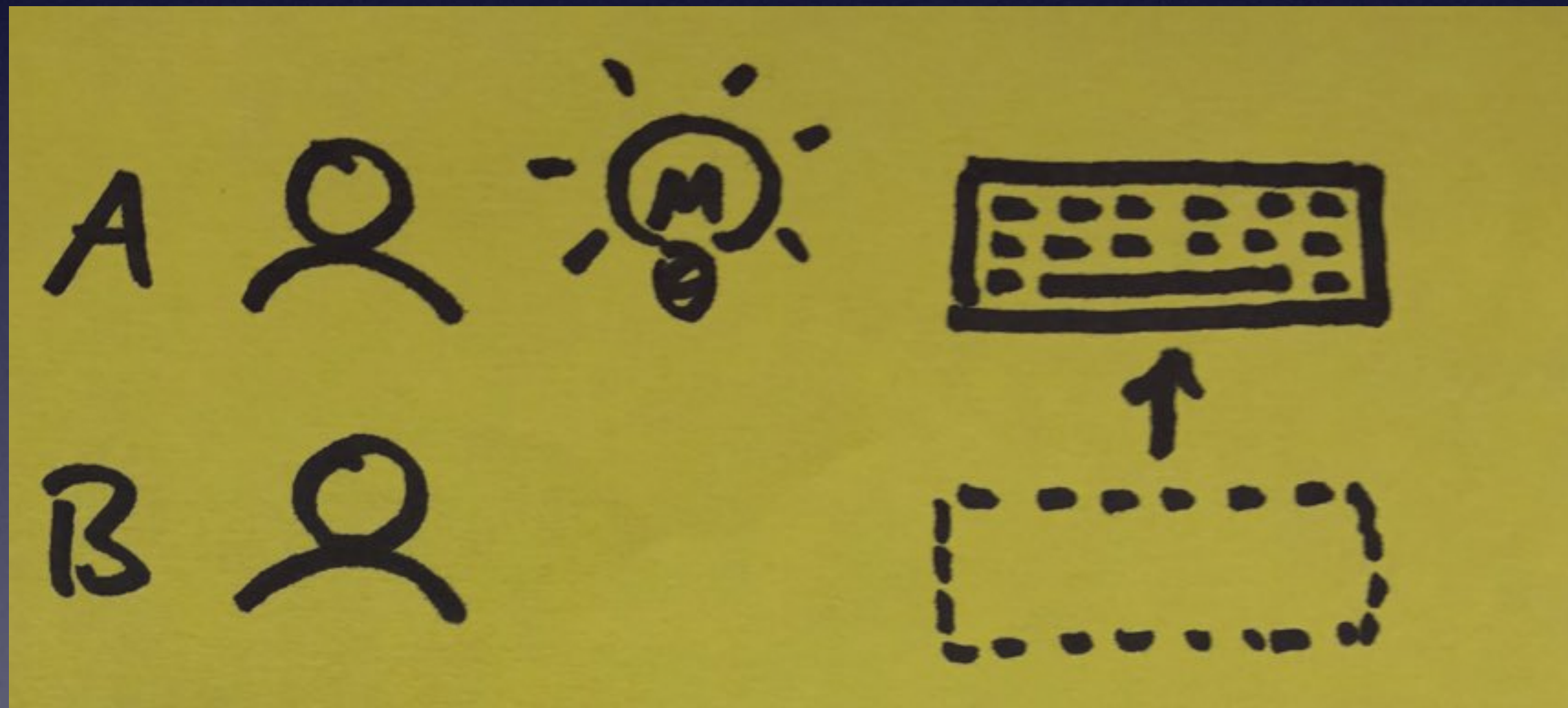


# Strong style navigation!

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)**

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

Learn to speak the **same** (domain) **language**.

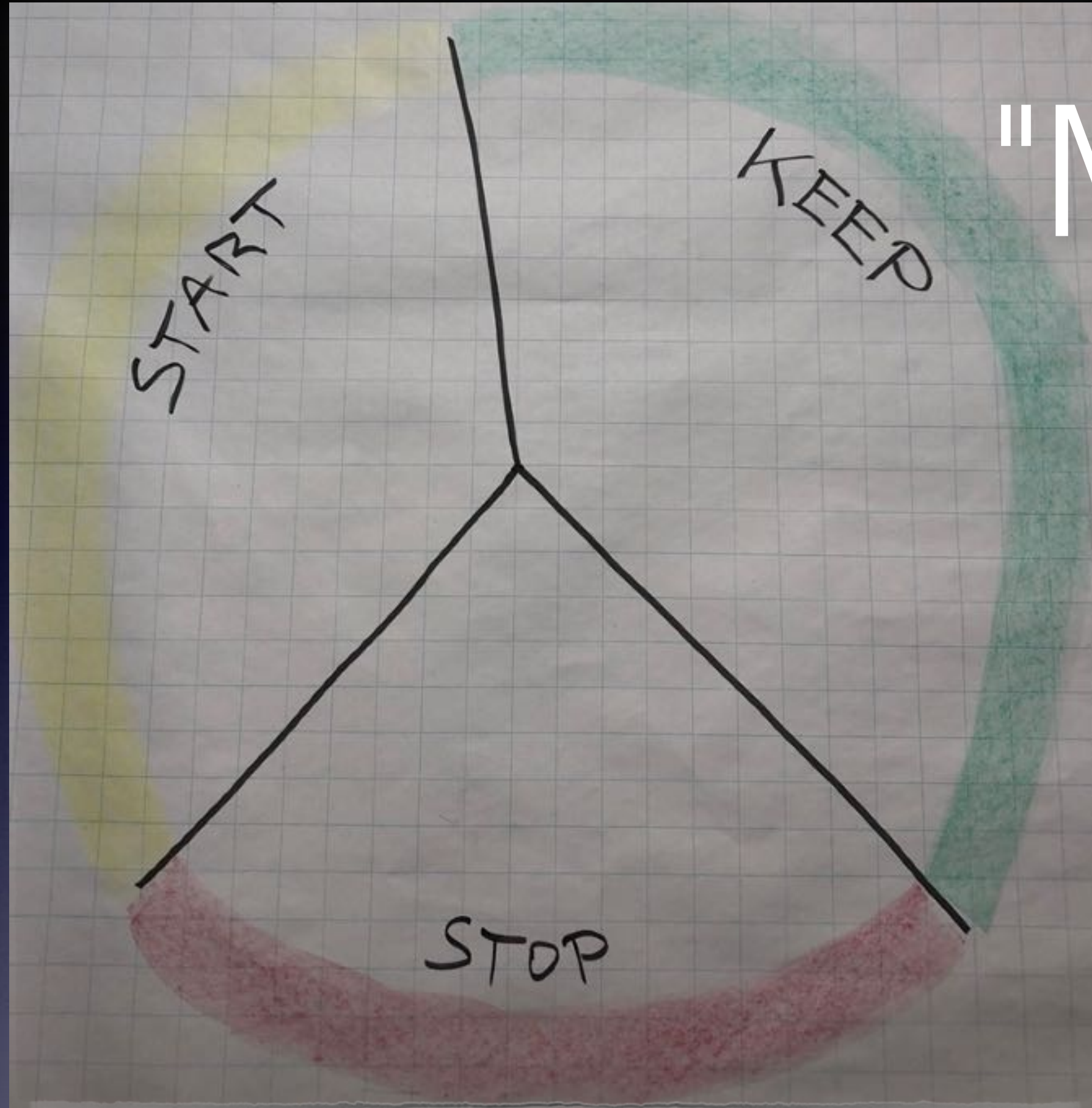


# Mob session agenda

- 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"



Title, Topic, Subject (Participants?) etc.

KEEP

START

STOP

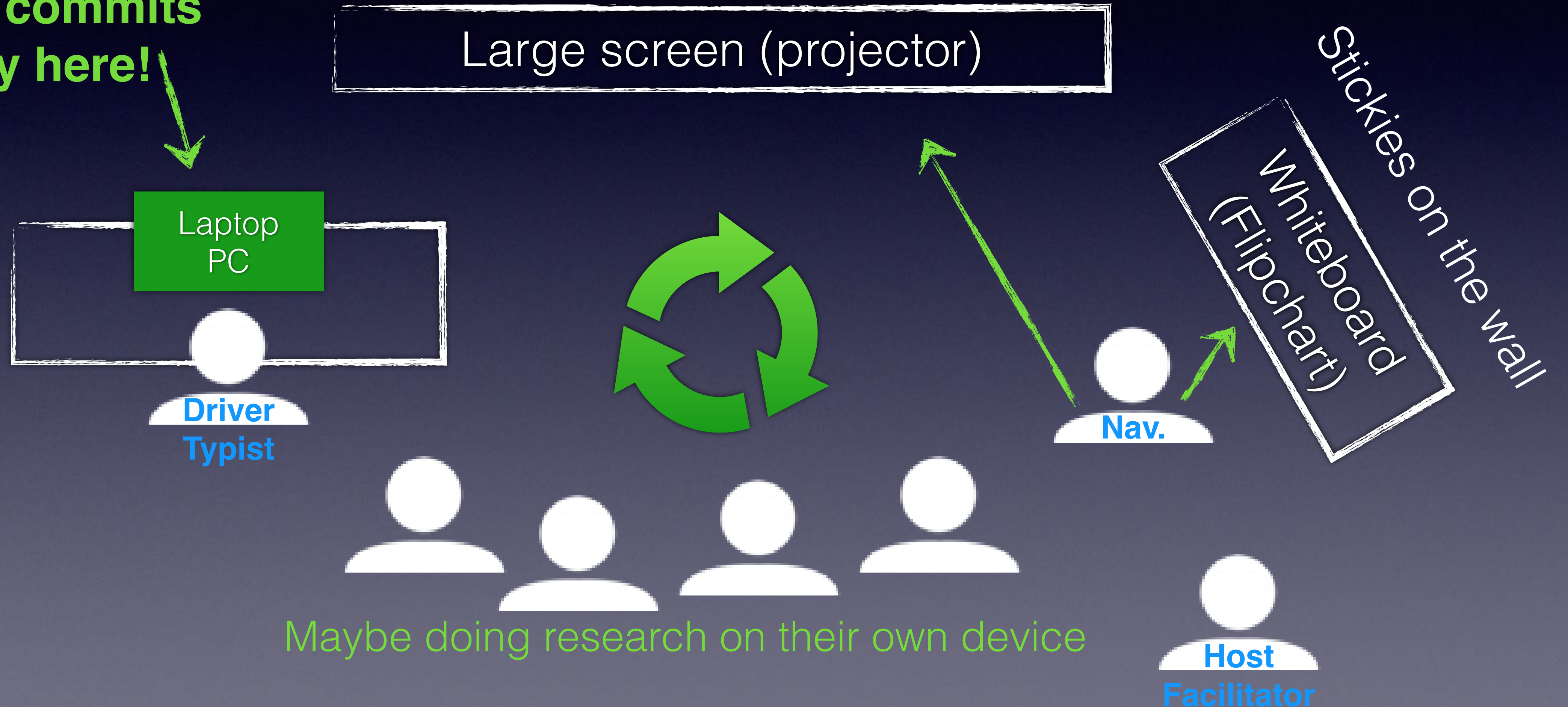
Next steps for tomorrow / for next session:

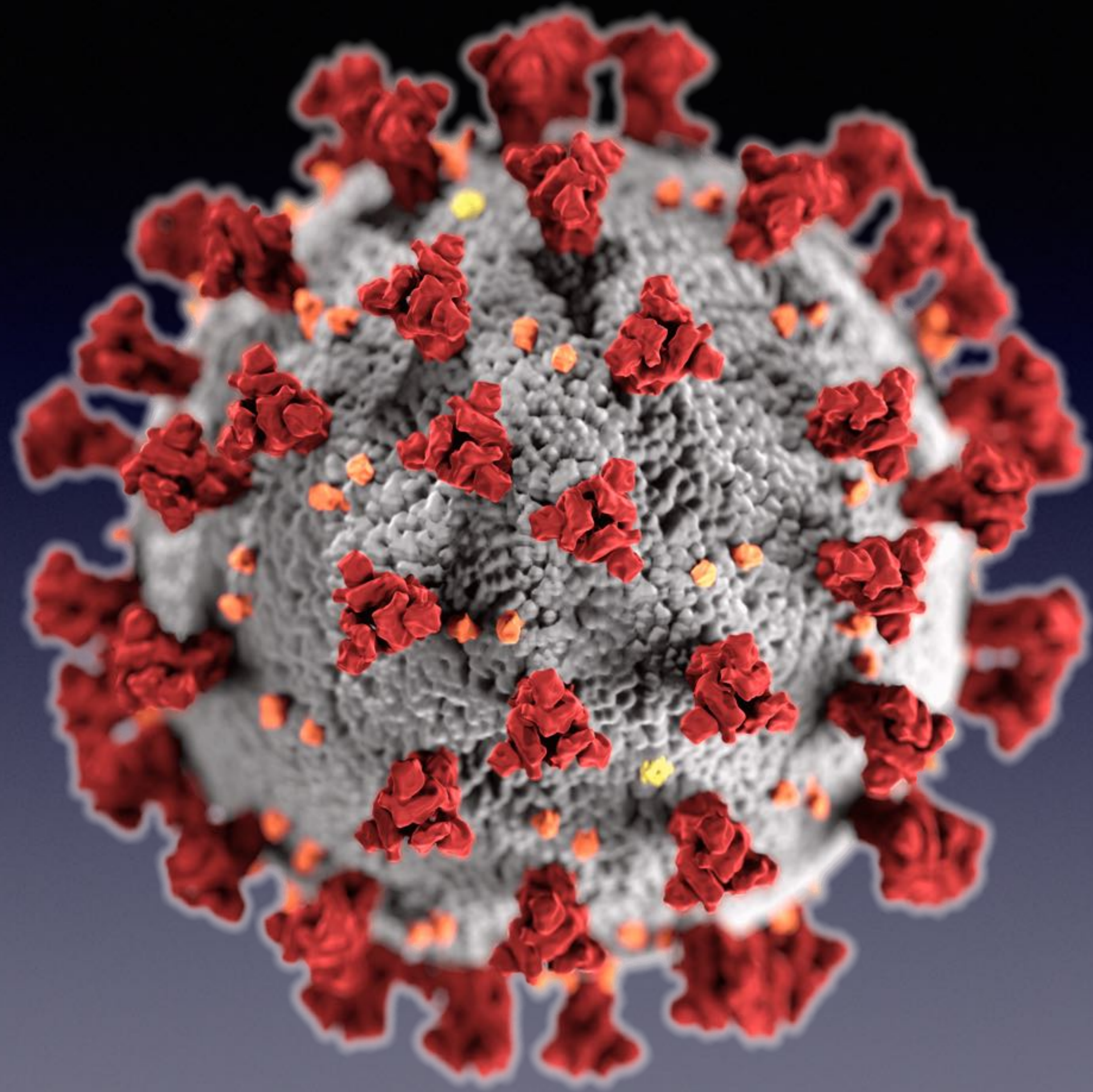
Focus on "keep" & "start" ⇒ **"Turn up the good"**

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

# 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!

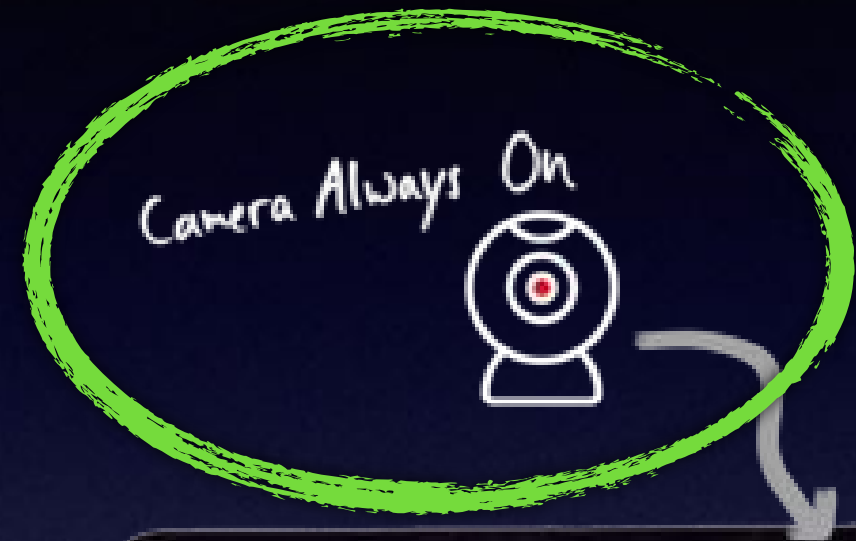
(GitLab) Remote Manifesto ↔ Remote Mob Programming

"Asynchronous communication  
*over*  
synchronous communication."

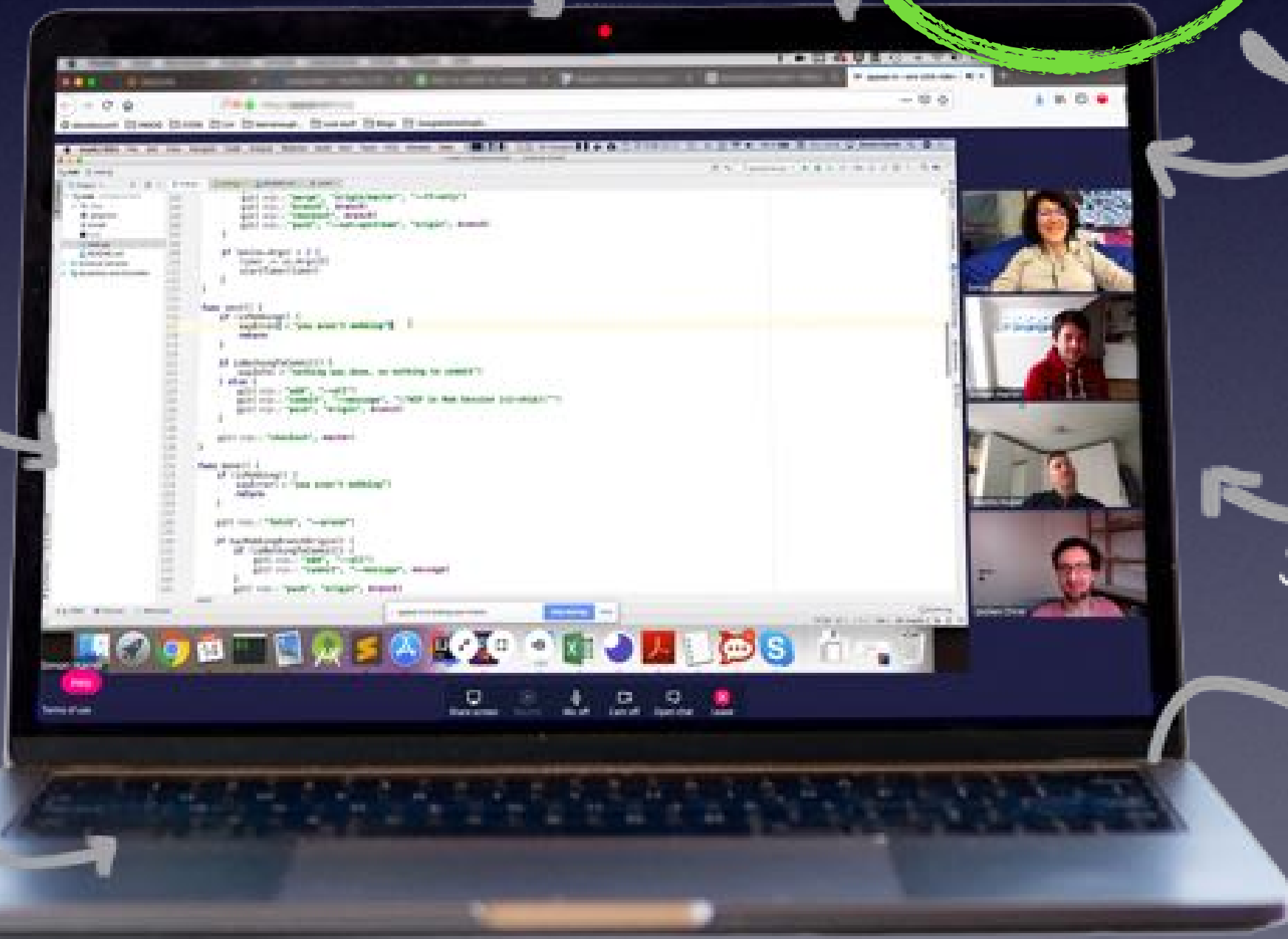


"same time"

# See each other



10 Minutes Intervals



Typist and the Rest of the Mob



Dine with your Family



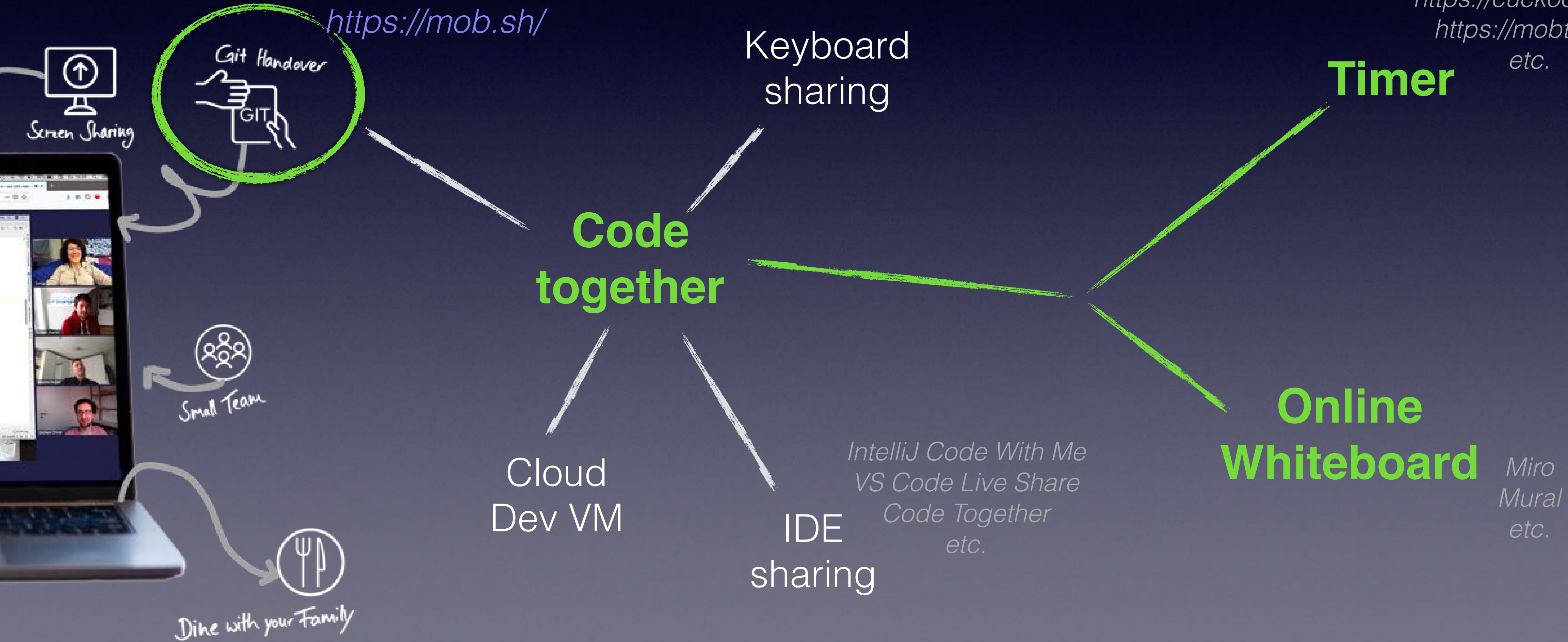
"remote everybody"

# Develop together



<https://mob.sh/>

<https://cuckoo.team/>  
<https://mobti.me/>  
etc.





# 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.
  - Another 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**

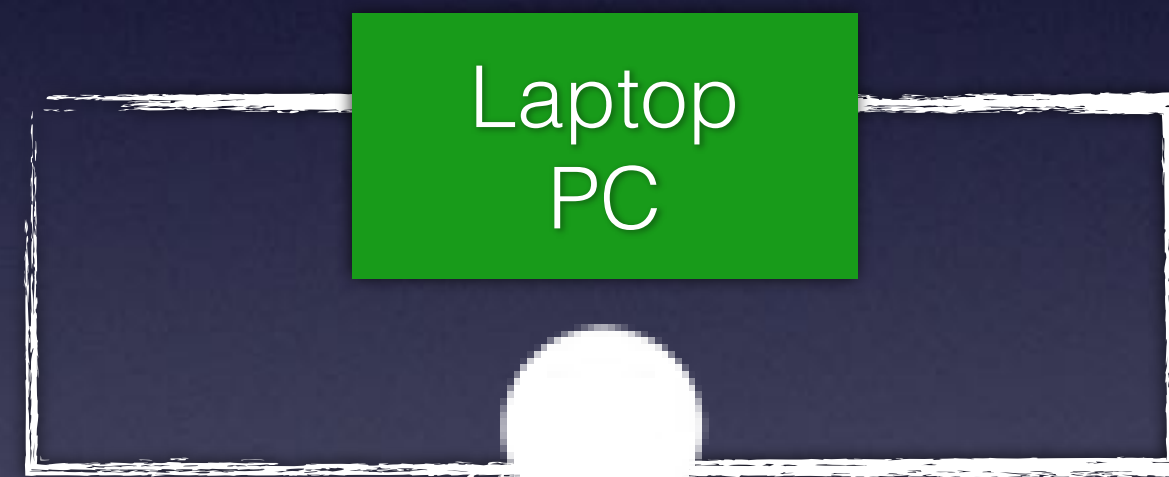
Wait, lean back & let the navigators do the thinking

Keep the minutes (in code)

# Mob Testing

Work through  
application  
under test

Large screen (projector)



Click-  
Typist

Test protocol  
etc.

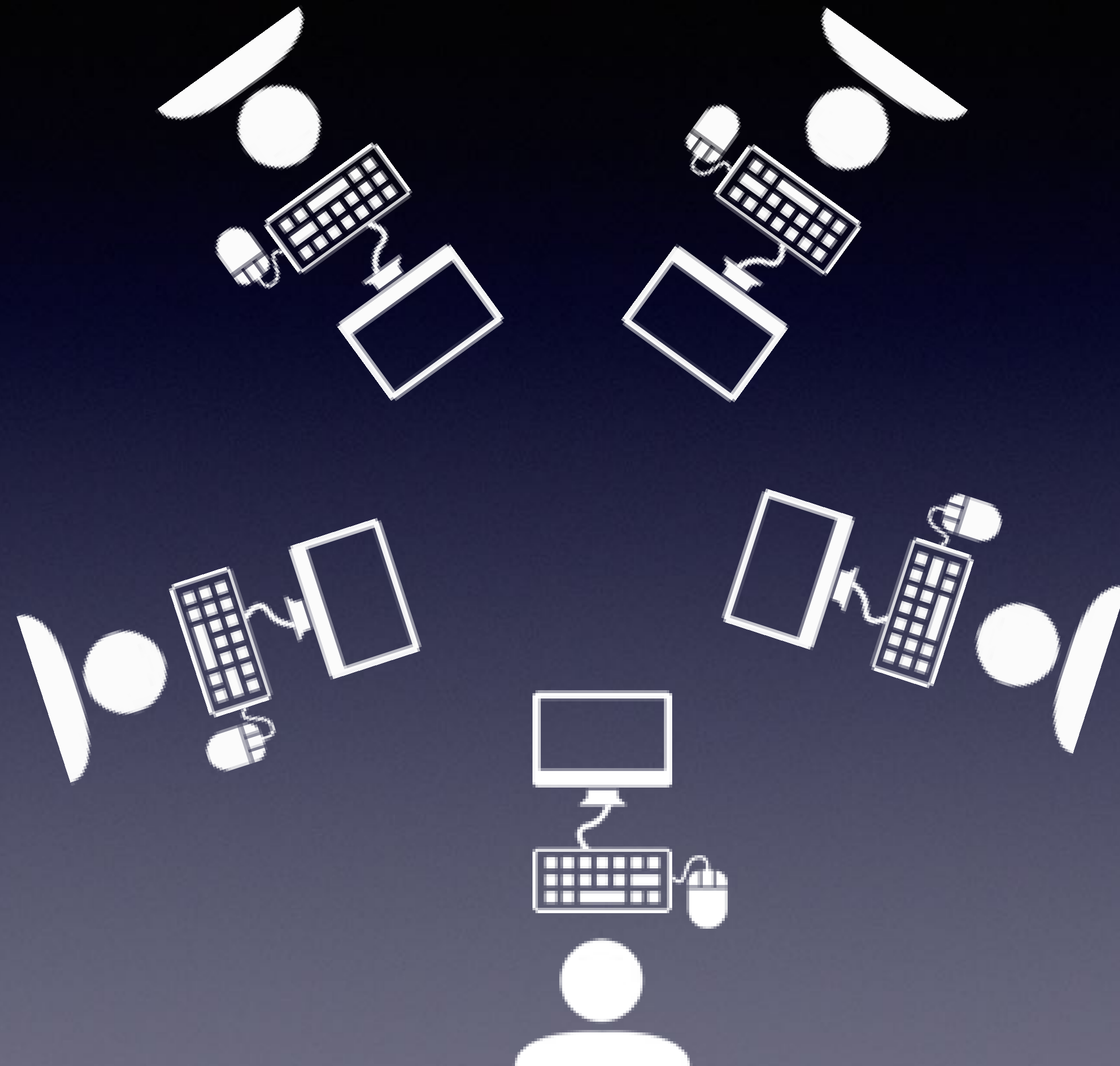
Explorative testing  
etc.



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



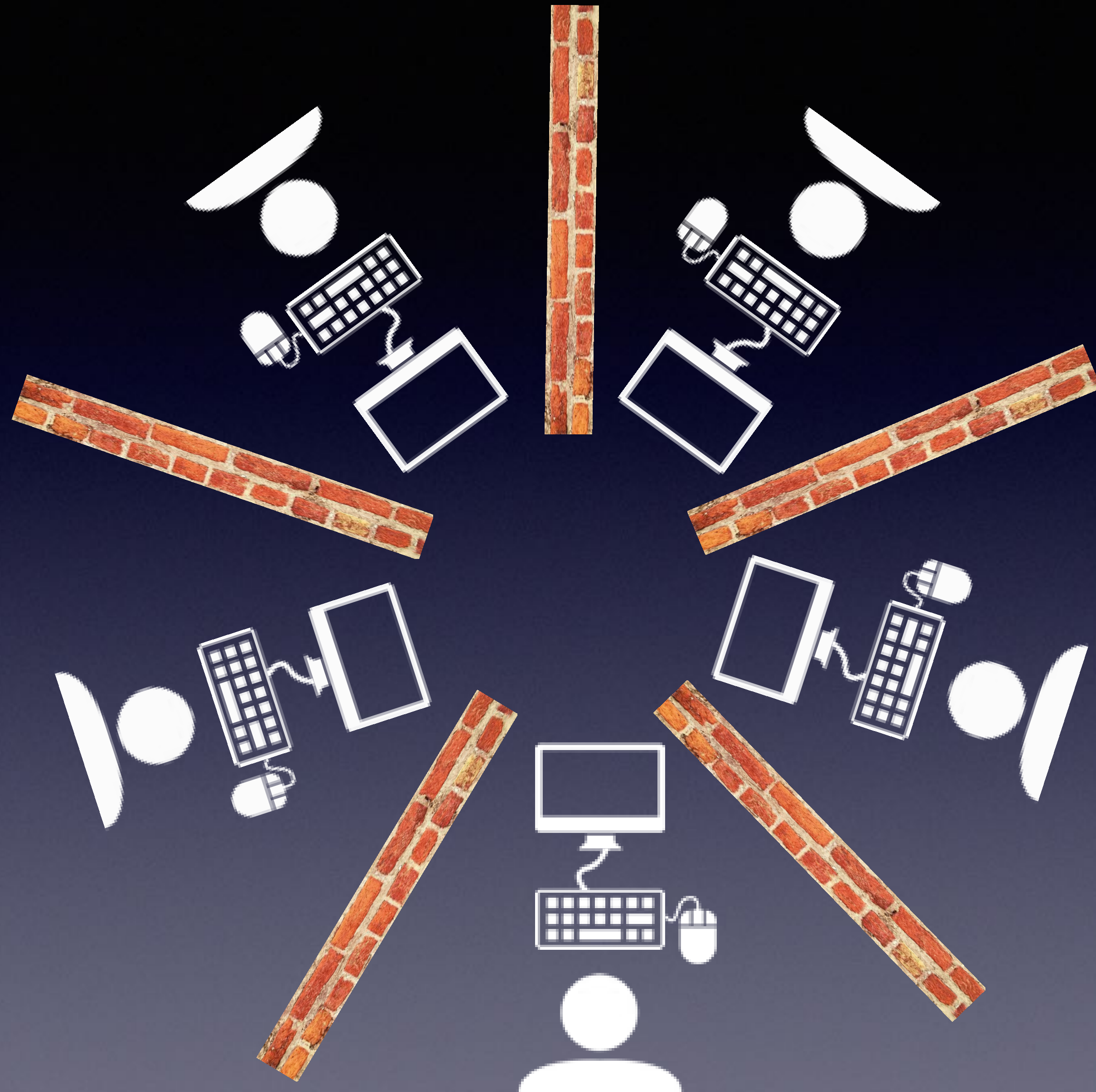
# In Your Office



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!

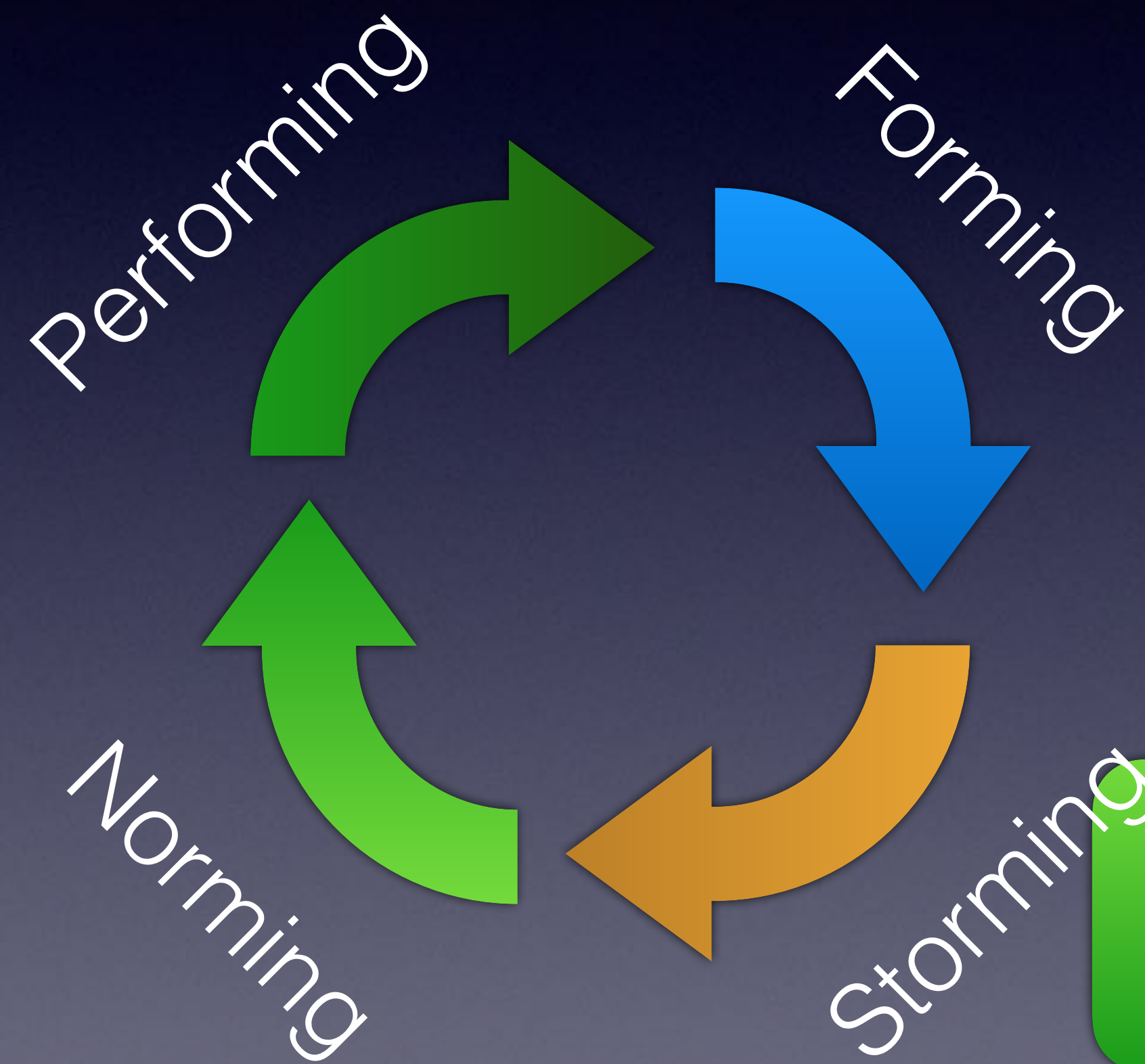
We need:

**Common values**

**Trust**

**Seeing each other regularly**

# Stages of Group Development

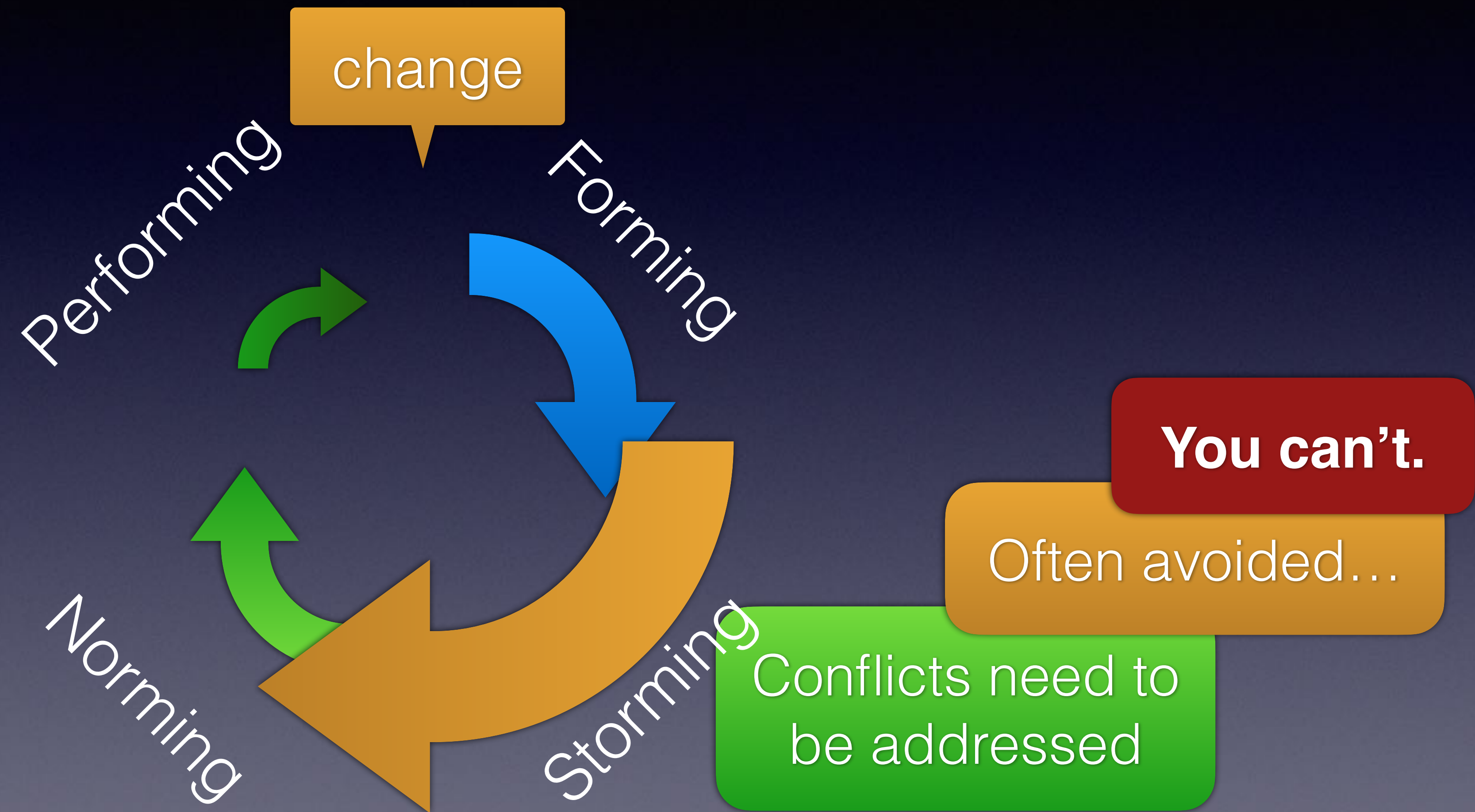


**You can't.**

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***

# 100% Mob Programming?

*Possible! But definitely not necessary.*

*(cf. Pair Programming)*

*It's a tool.*

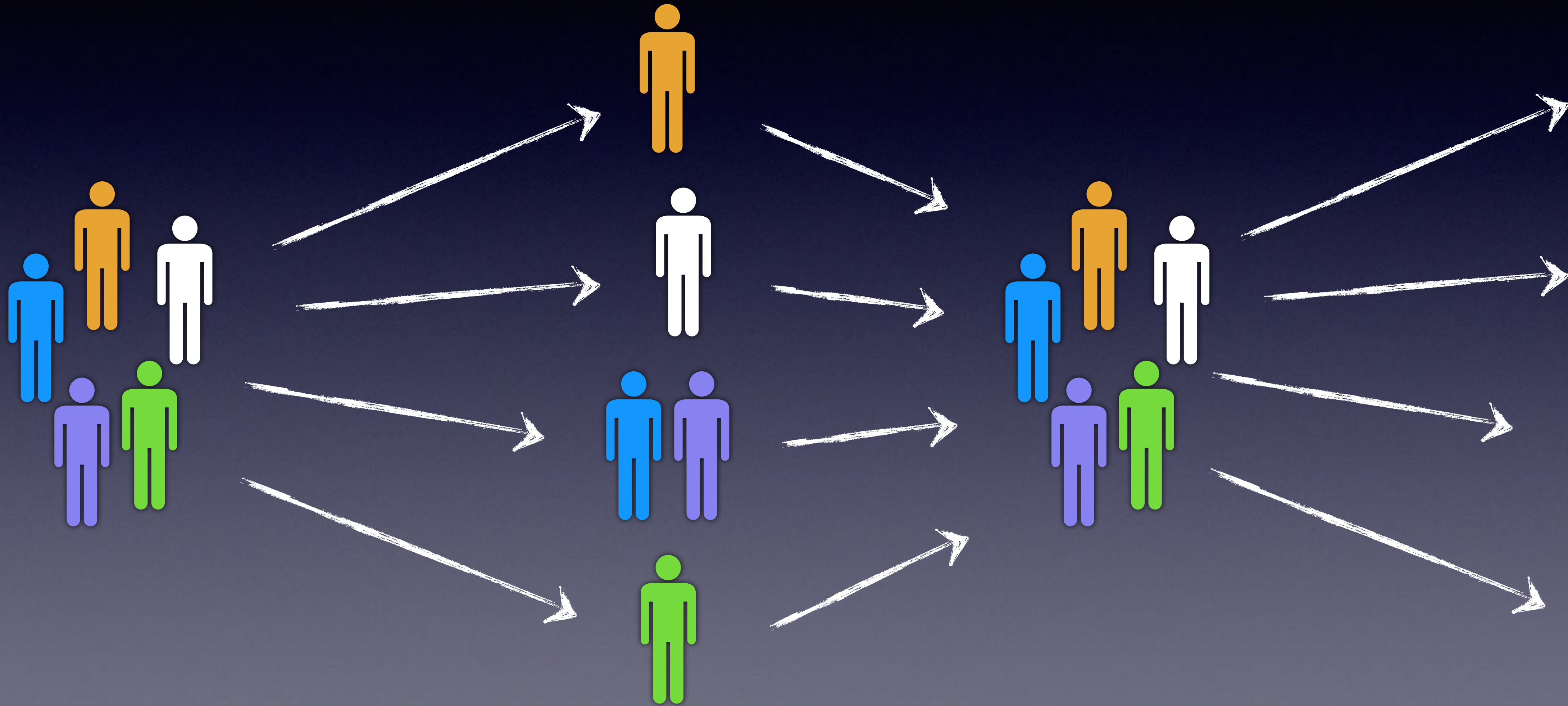
# 100% for the most important task

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

## Dynamic mob: come and go

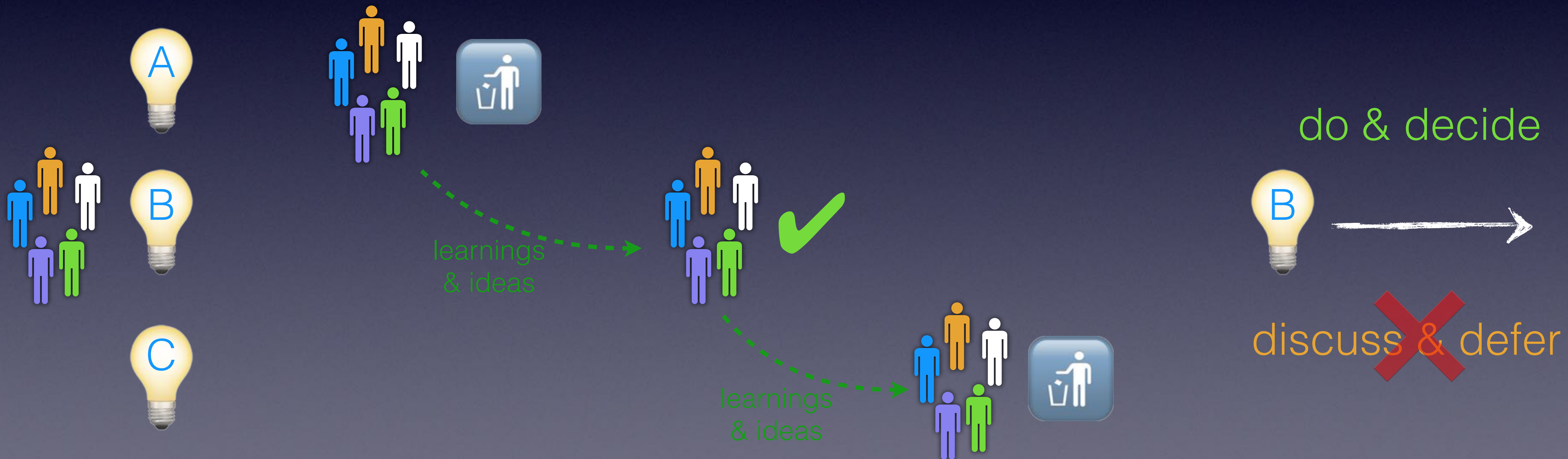


# Start together!



# Team decisions

More than one idea? *Try them all!*





# Different to meetings!

Mob Programming yields

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

Making us & our customers happy 😊

# MOB MENTALITY



## Mob Mentality Show

755 subscribers

SUBSCRIBE

HOME

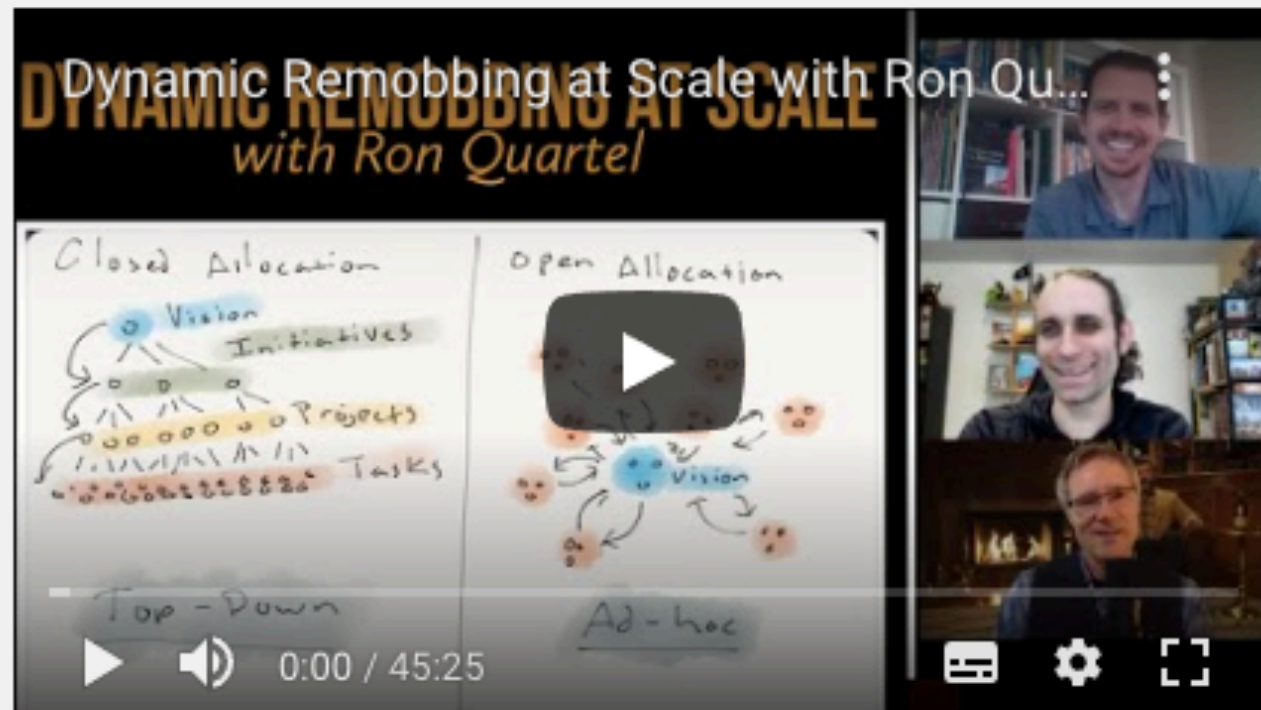
VIDEOS

PLAYLISTS

CHANNELS

DISCUSSION

ABOUT



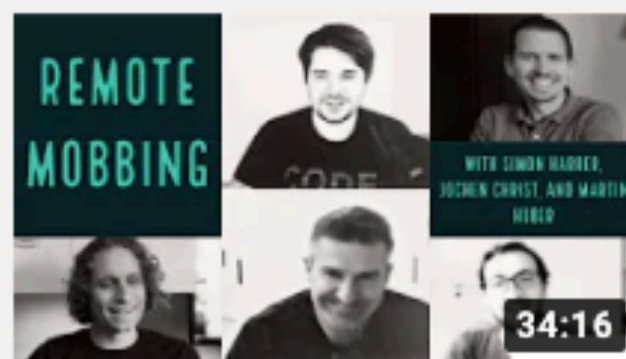
### Dynamic Remobbing at Scale with Ron Quartel

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

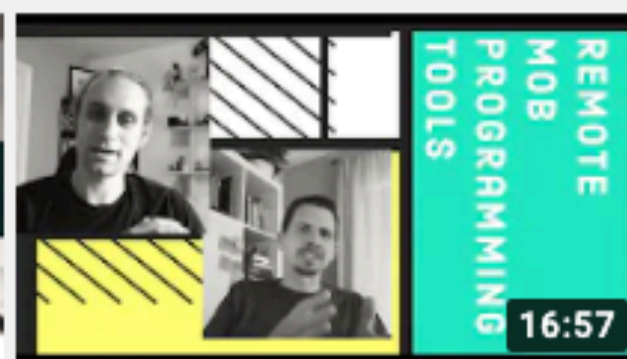
READ MORE

### 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

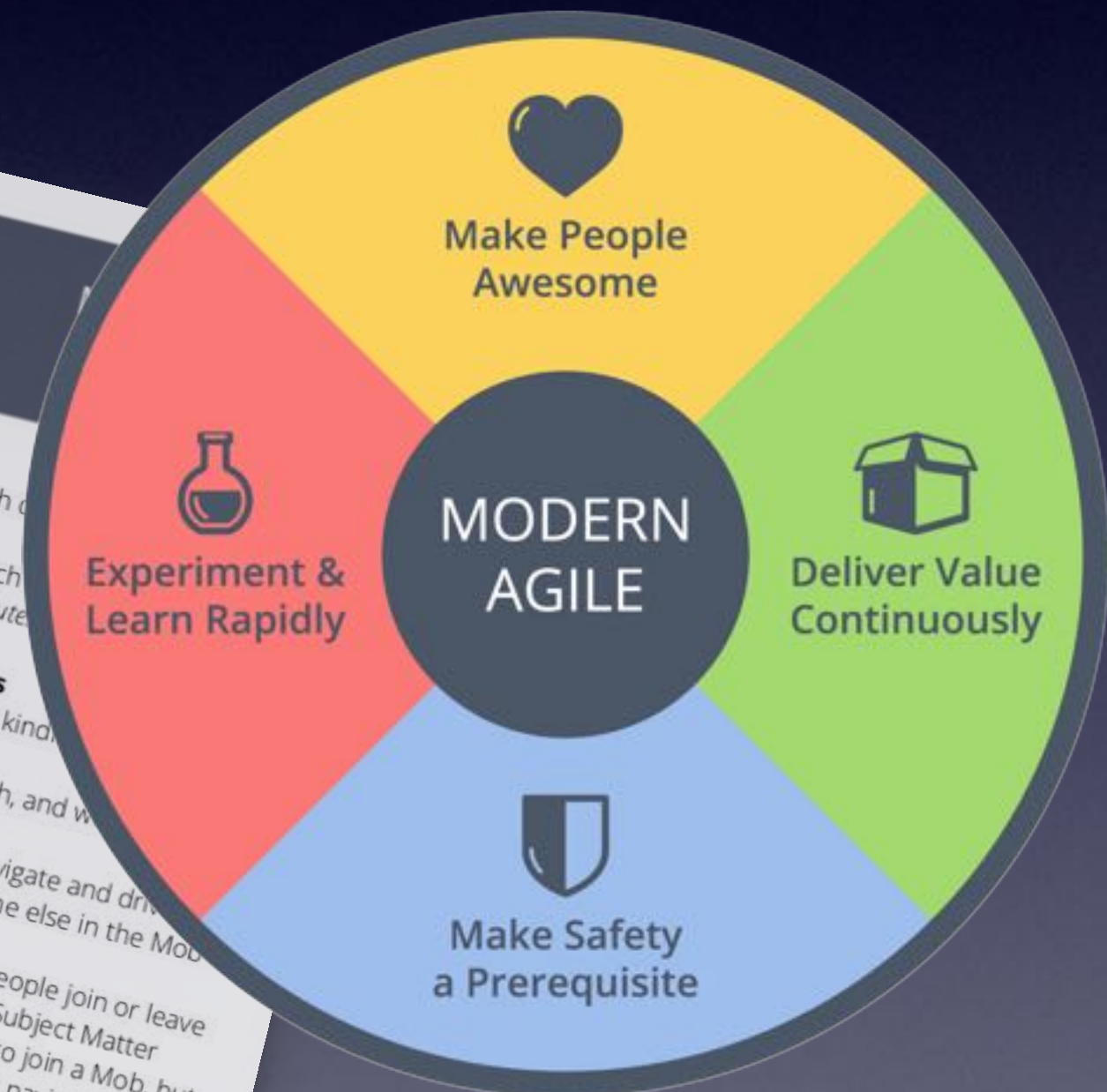
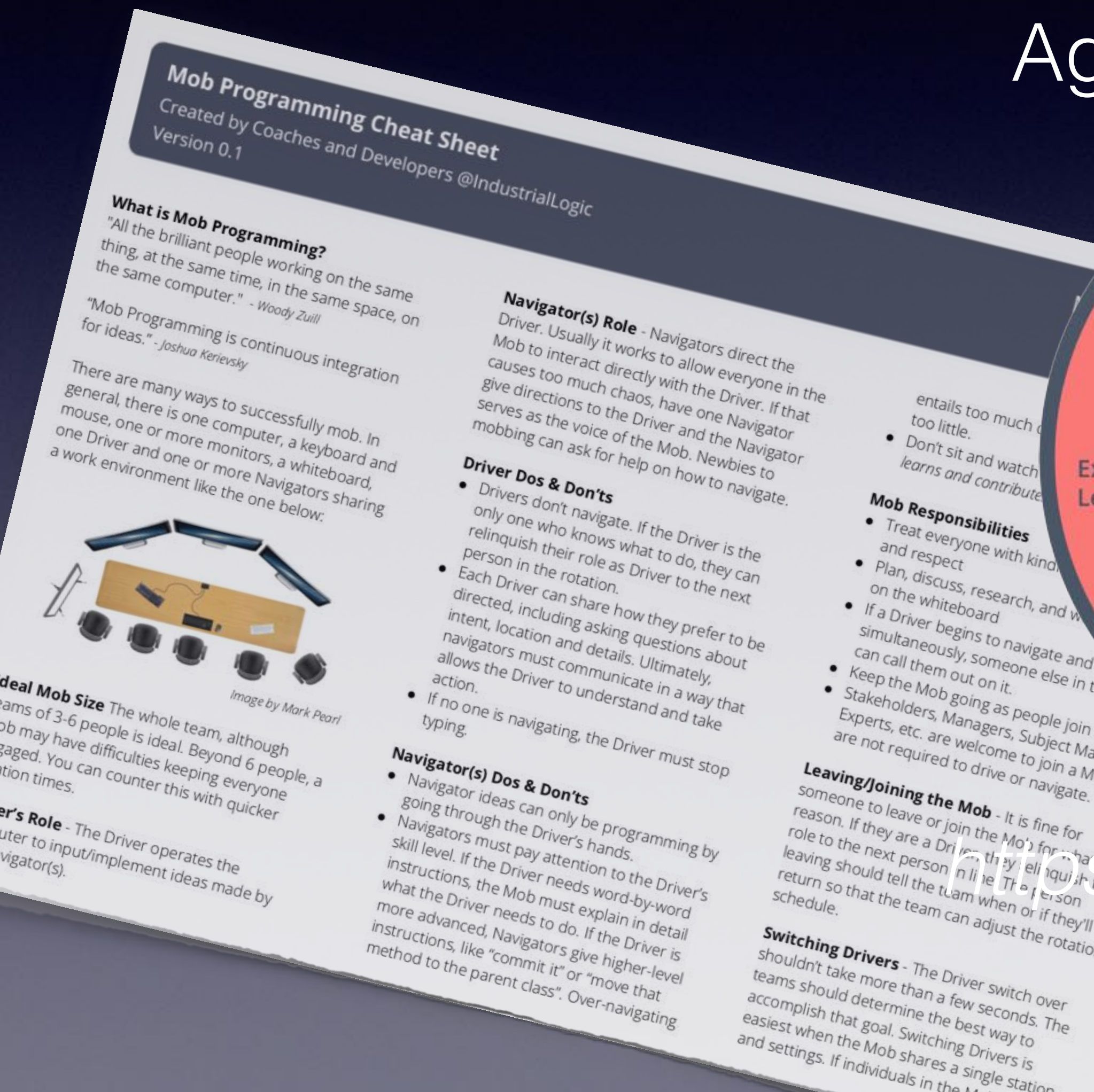


A Remote UI/UX Mobbing Story with Damien Klinnert

Mob Mentality Show

# Modern Agile

Agile. Well-Working.



#MobProgramming

#NoEstimates

#NoProjects

#ModernAgile

<https://modernagile.org/>

# Mob Programming

Pair Programming

Know-how transfer

Coaching

Taking breaks

Questions?

XP Remote

Readability

Modern Agile



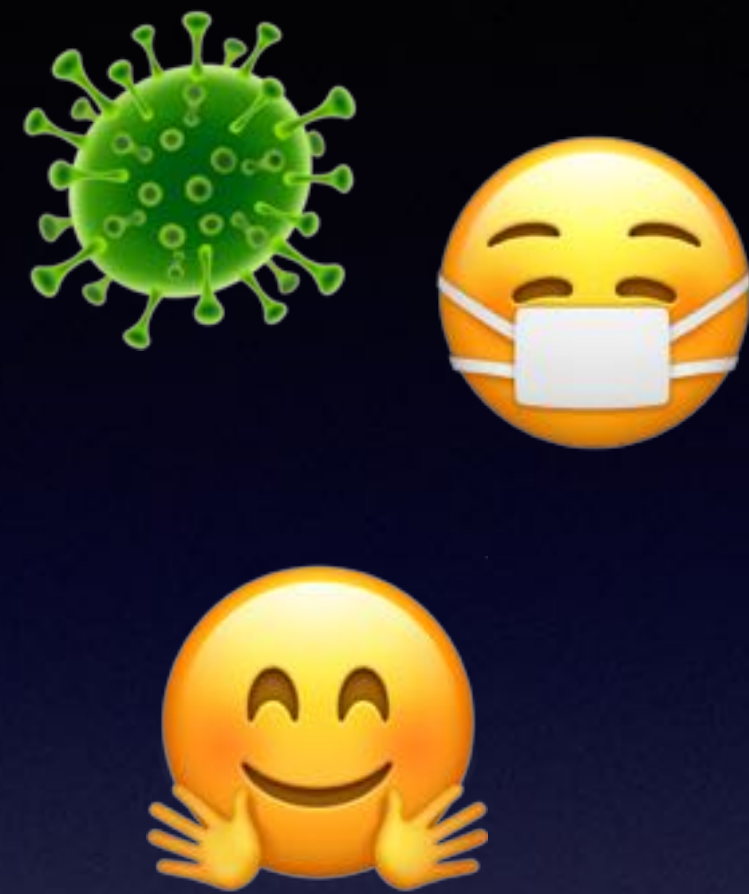
Simplicity

Strong Style navigation

Velocity Speed

TDD

Collective Product Ownership



# Thank you!

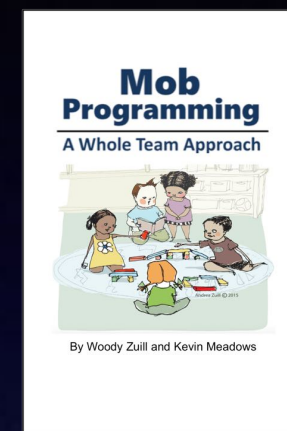
"We are uncovering better ways of developing software by doing it and helping others do it." \*

thomas@muchsoft.com

 @thmuch

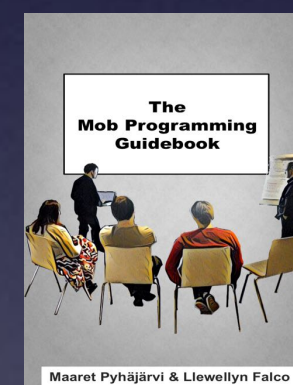
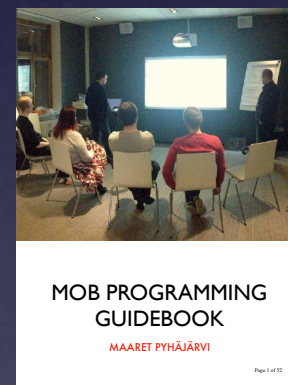
\*) <https://agilemanifesto.org/>

# Further Reading



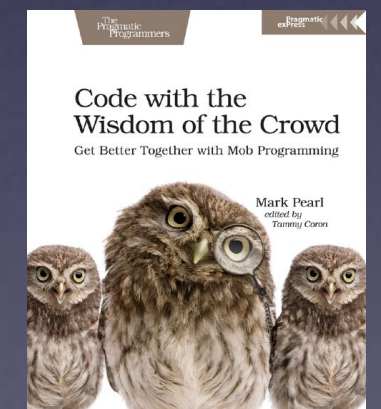
<https://mobprogramming.org/>  
<https://leanpub.com/mobprogramming>

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

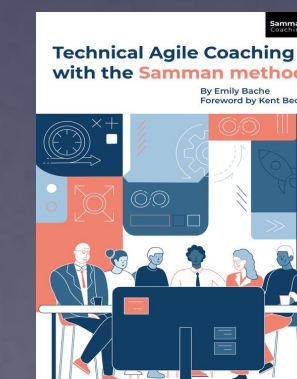


<https://mobprogrammingguidebook.xyz/>  
<http://www.mobprogrammingguidebook.com/>

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



<https://leanpub.com/techagilecoach>



<https://www.chrislucian.com/p/companies-that-are-mob-programming.html>  
<https://trello.com/b/1IfMkCOh/software-profession-resources>

# Code Sharing

## **Git Handover**

<https://mob.sh/>

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

## **IDE Sharing**

<https://www.jetbrains.com/de-de/code-with-me/>

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

<https://www.codetogether.com/>

<https://duckly.com/>

<https://git.live/>

<https://codeshare.io/>

<https://gitpod.io/>

<https://theia-ide.org/>

<https://aws.amazon.com/de/cloud9/>

## **Cloud Dev VM**

<https://claremacrae.co.uk/blog/2020/12/virtual-machines-for-online-mobbing-and-training>

# Online Whiteboards

Miro

*<https://miro.com/>*

Mural

*<https://www.mural.co/>*

Conceptboard

*<https://conceptboard.com/>*

Microsoft Teams Whiteboard

*[diagrams.net](https://diagrams.net/) / [draw.io](https://draw.io/)*

*[excalidraw.com](https://excalidraw.com/)*



# 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