



GPL freelancer
OFE e.V.

Hochschule Fulda
University of Applied Sciences



Research project enRZet



- Co-Author OpenNMS Netzwerkmanagement mit freier Software
- Working for The OpenNMS Group, Inc. as GPL freelancer
- Co-Founder OpenNMS Foundation Europe e.V.
- Loves to contribute stuff under free licenses
- GSoC Mentor for the OpenNMS project in 2010/2011/2012
- Freifunk Fulda | <http://www.freifunk-fulda.de>
- Chaostreff Fulda irc://irc.hackint.org: #mag.lab | <http://mag.lab>

The must known
tools and techniques
to survive in a
Hipster-Startup!



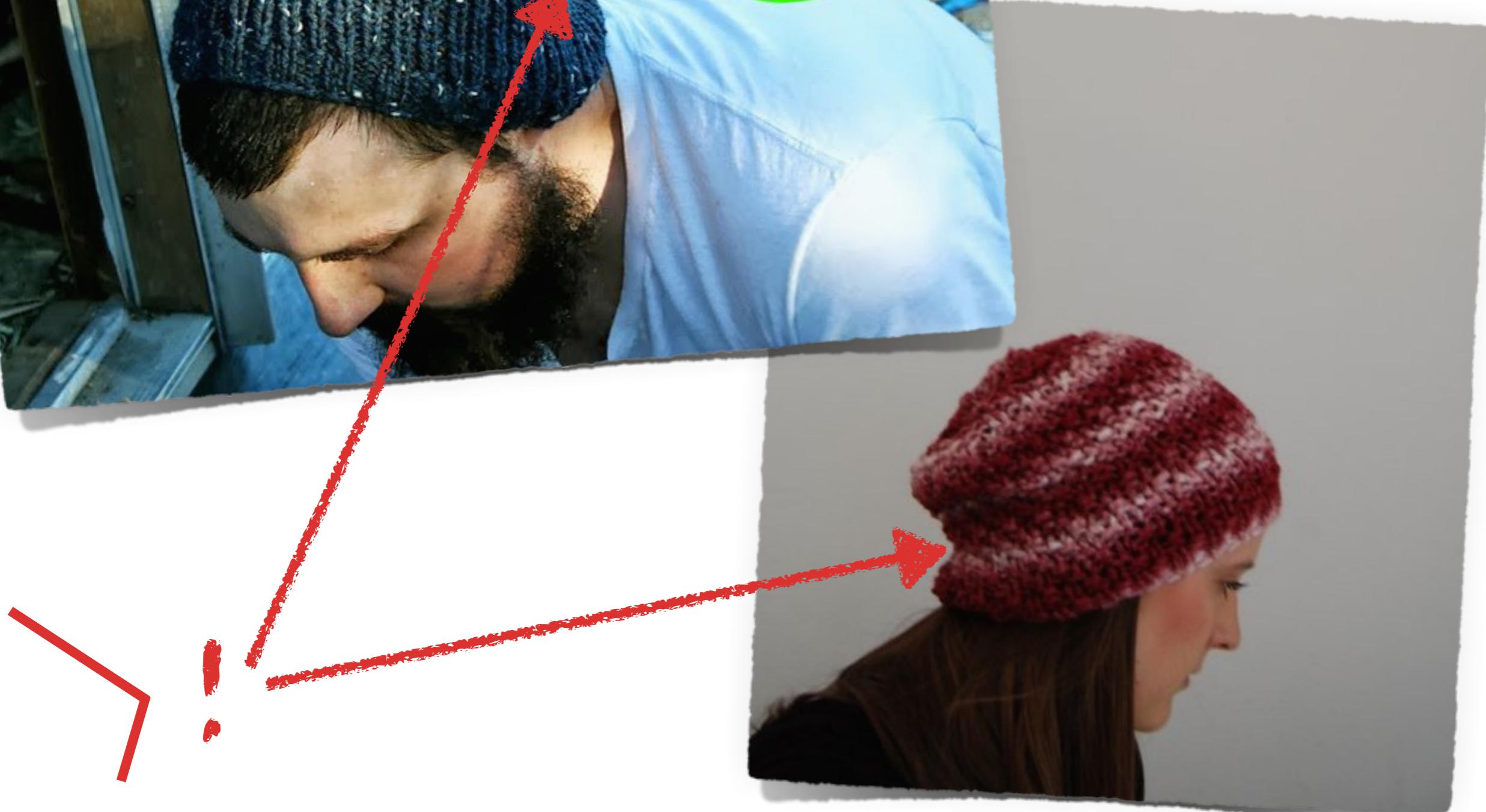


HIPSTER SMURF
HAT





HIPSTER SMURF
HAT



Startups?!

ihr seid wenige

Welt verändern

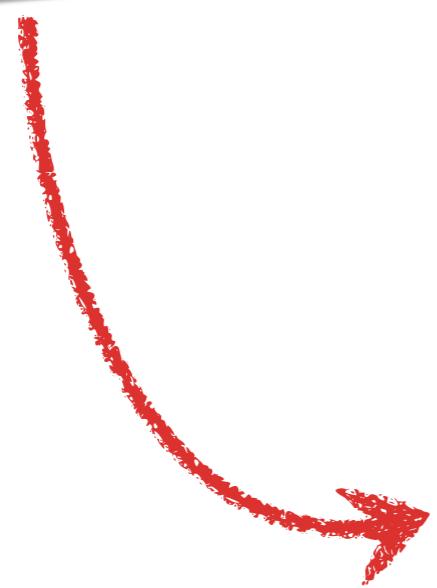
den Laden verticken

Startups?!

ihr seid wenige

Welt verändern

den Laden verlieren



Exit Strategie





TechHipster CV



VAGRANT



{JSON}



Redis Cassandra
mongoDB

membbase





VAGRANT



membase



Redis



Cassandra

mongoDB

riak



git

{JSON}



{JSON}

HTML

CSS



JAVASCRIPT



The git logo consists of the word 'git' in a dark brown sans-serif font, with a red arrow pointing from the 'g' towards the 'i'.



The MongoDB logo features the word 'mong' in a large, dark brown serif font, with a small brick wall icon above the 'o'.



The riak logo features the word 'riak' in a dark grey sans-serif font, with a small network icon above the 'r'.

The AngularJS logo features the word 'ANGULARJS' in a large, bold black sans-serif font, with a red flame icon above the 'J'. Below it, the text 'by Google' is written in a smaller, italicized black font.

WorldChangeApp

WorldChangeApp

Idee wäre gut :)

ihr seid wenige

schnelle Entscheidungen

flache Hierarchie

tools die ihr mögt

WorldChangeApp

Findet USER!

... redet mit denen!

... und zuhören!

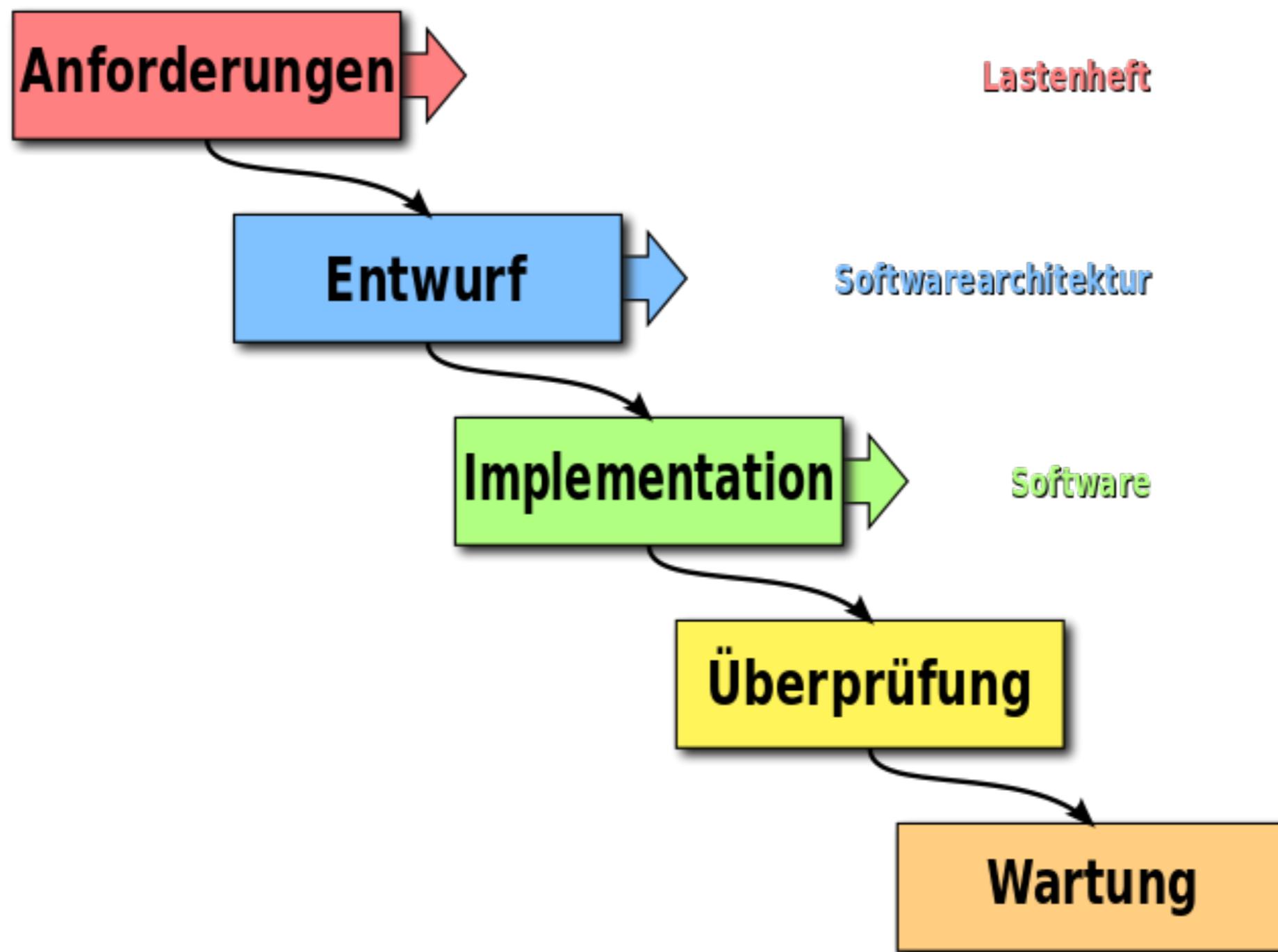
WorldChangeApp

FIGHT FOR THE USER



Software Development

Development



Development

Annahmen:

Alle Anforderungen sind bekannt

Alle Anforderungen wurden bis in Detail verstanden

Technologien zur Umsetzung funktionieren wie vorgesehen und verursachen keine Probleme

Development

Realität ist häufig anders

NICHT alle Anforderungen sind
bekannt

NICHT alle Anforderungen wurden bis
in Detail verstanden

NICHT ALLE Technologien zur
Umsetzung funktionieren wie
vorgesehen und verursachen keine
Probleme

Development

Alternativen?

Development

Empirische Softwareentwicklungsprozesse:

Beobachtung nicht Vorhersage

Mehr unbekannte Faktoren

ständige Beobachtung der aktuellen Situation

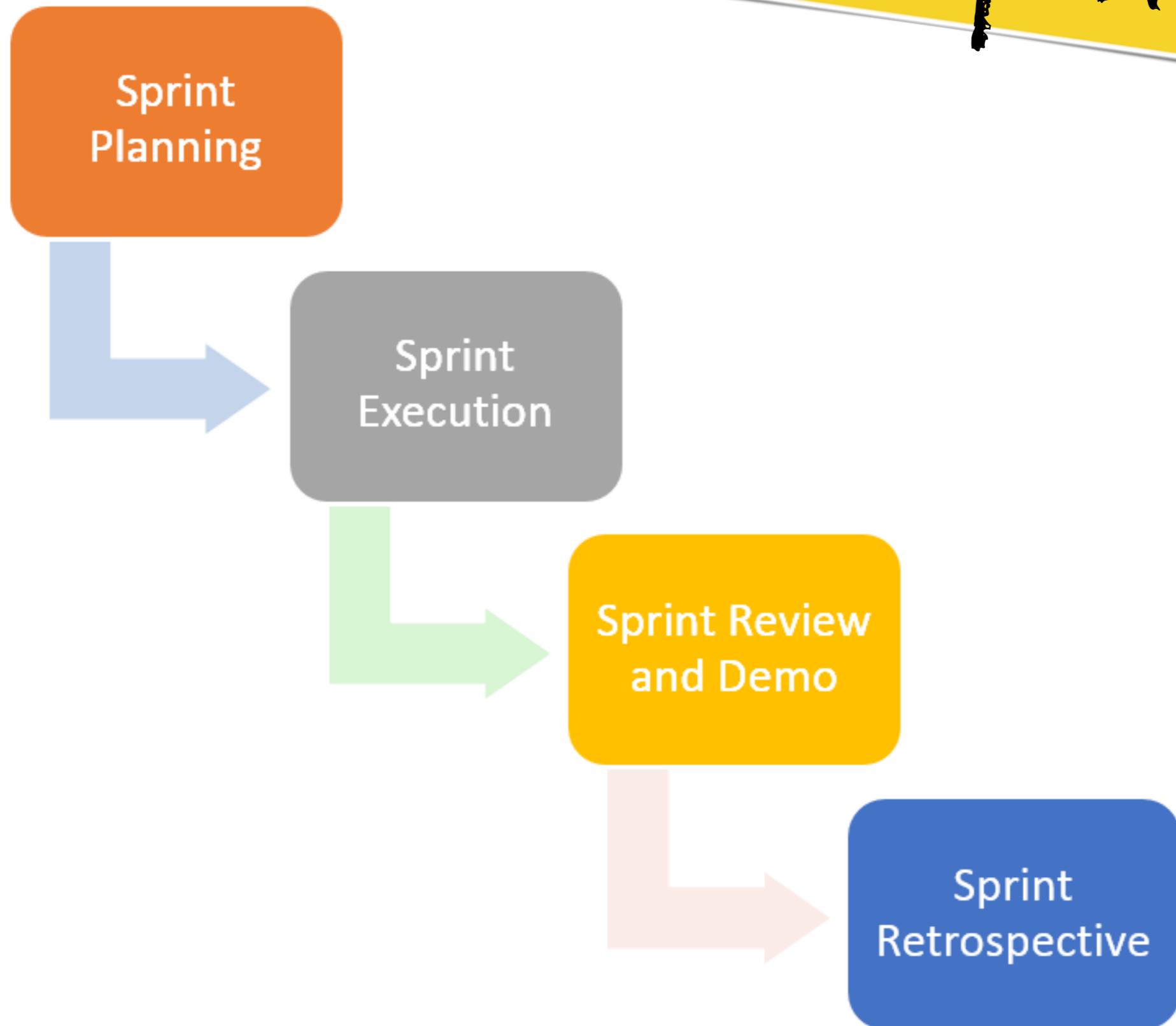
je mehr unbekannte, je höher die Frequenz
zwischen Beobachtung und Anpassung

Development

ITERATION

Scrum

Development



Scrum

Development

Sprint
Planning

Sprint
Execution

2 – 4 weeks

Sprint Review
and Demo

Sprint
Retrospective



Scrum

Development

Sprint Planning

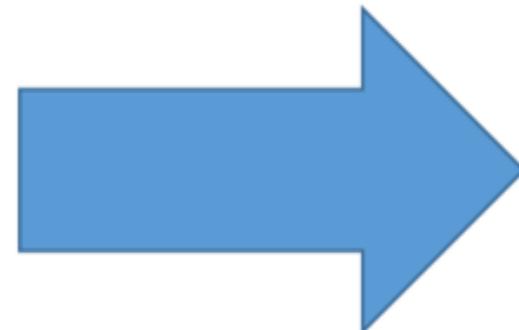
Product Backlog

Product Backlog Item #1

Product Backlog Item #2

Product Backlog Item #3

..



Sprint Backlog

Product Backlog Item #1

Task #1

Task #2

..

Task #1

Product Backlog Item #3

Task #2

..

Scrum

Development

Sprint
Planning

As a [type of user], I want to [user need] so that I can [achieve user goal].

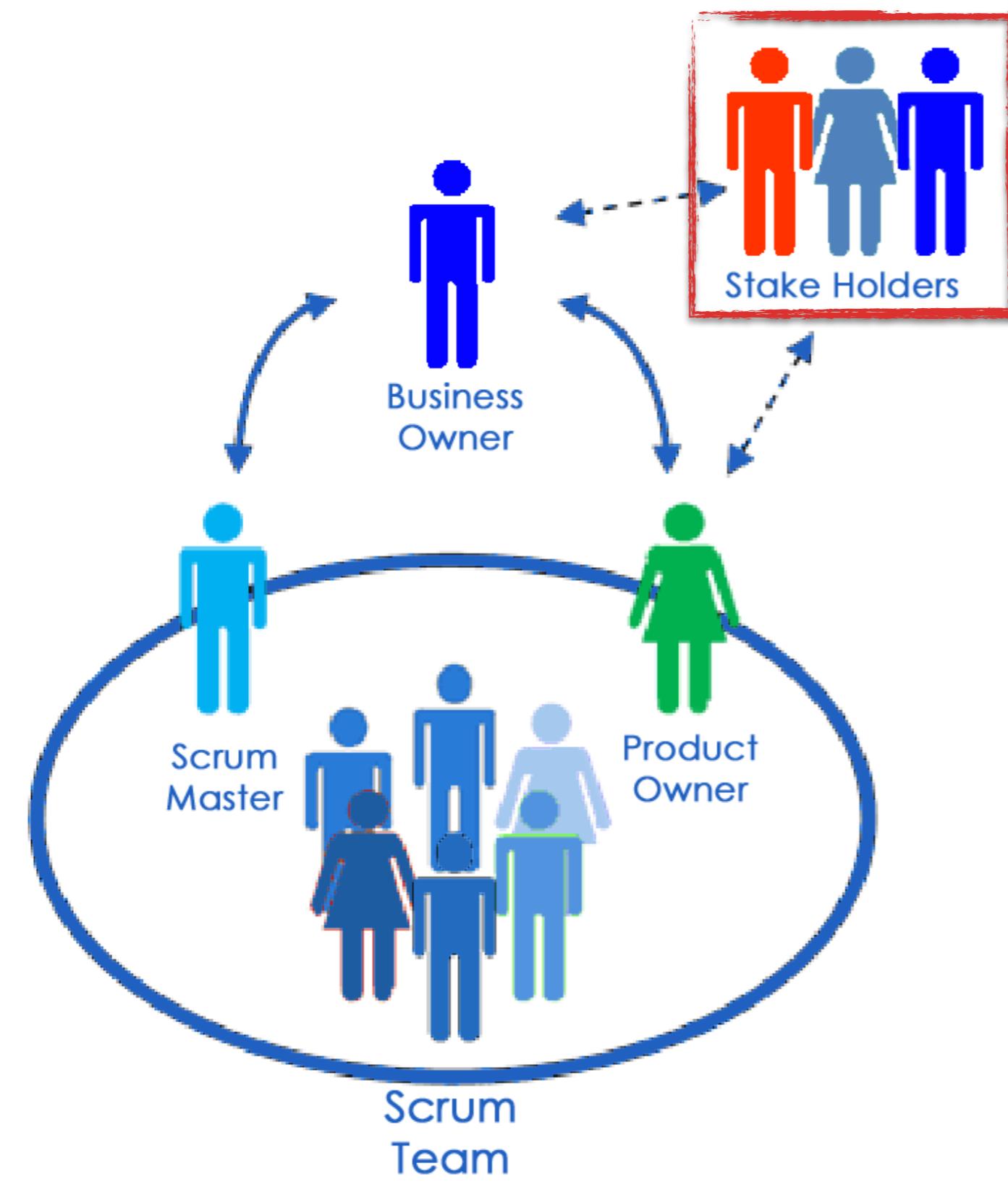
As a user, I can backup my entire hard drive.

As a power user, I can specify files or folders to backup based on file size, date created and date modified.

As a user, I can indicate folders not to backup so that my backup drive isn't filled up with things I don't need saved.

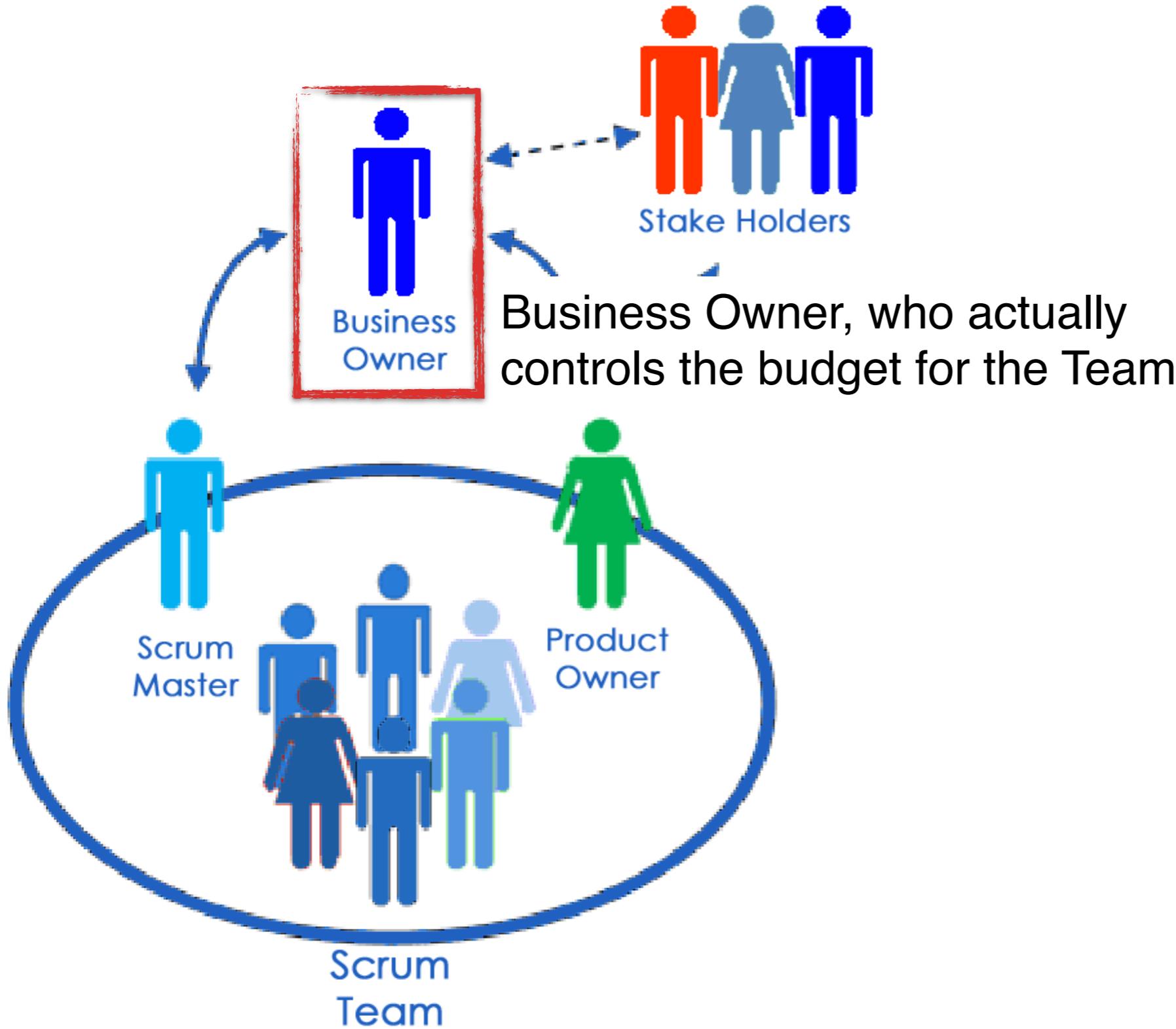
Wer macht was?

Development

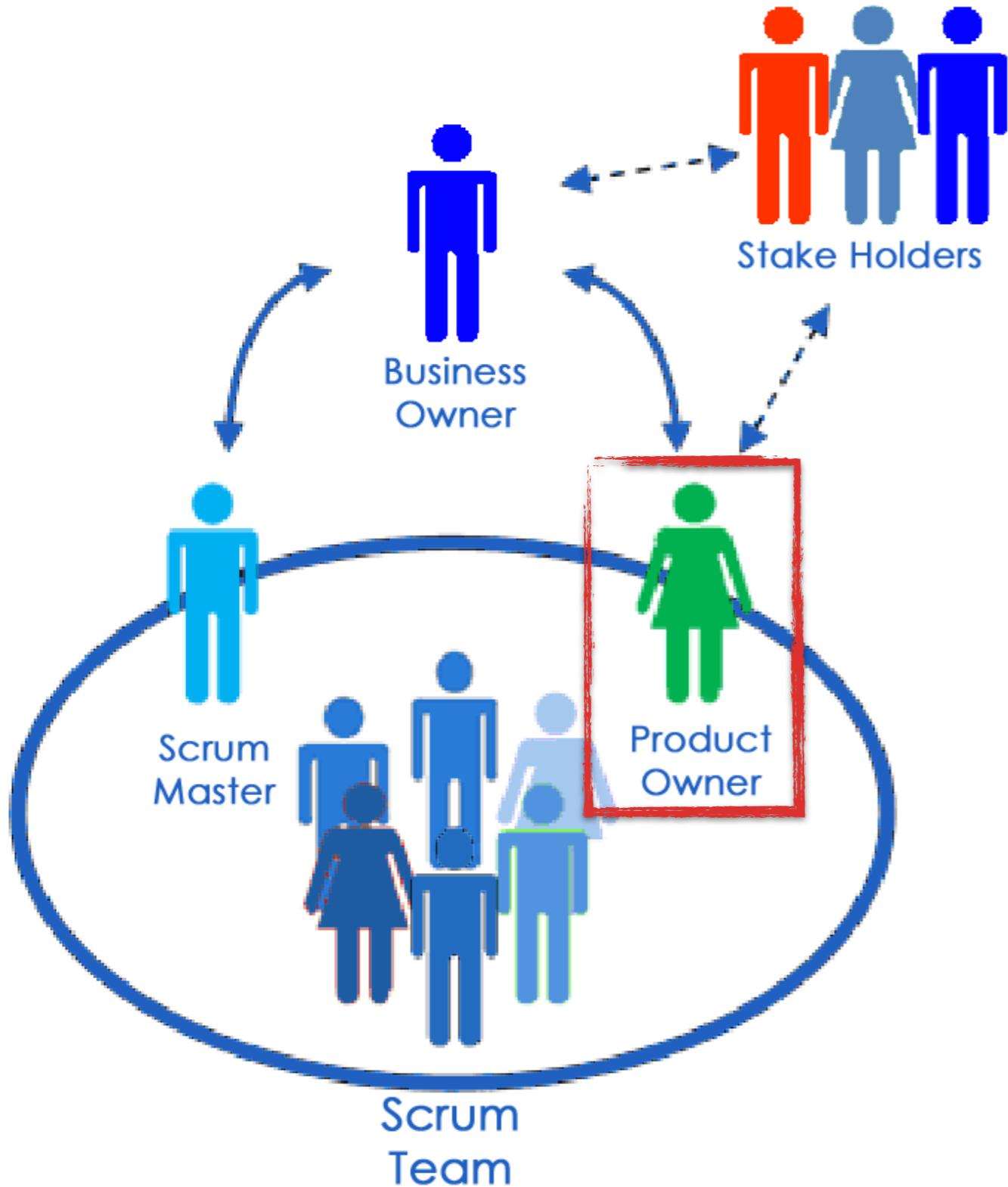


Stakeholders are the ones who have desires, wants, and needs, and are the reason the Team is developing the software in the first place

Development

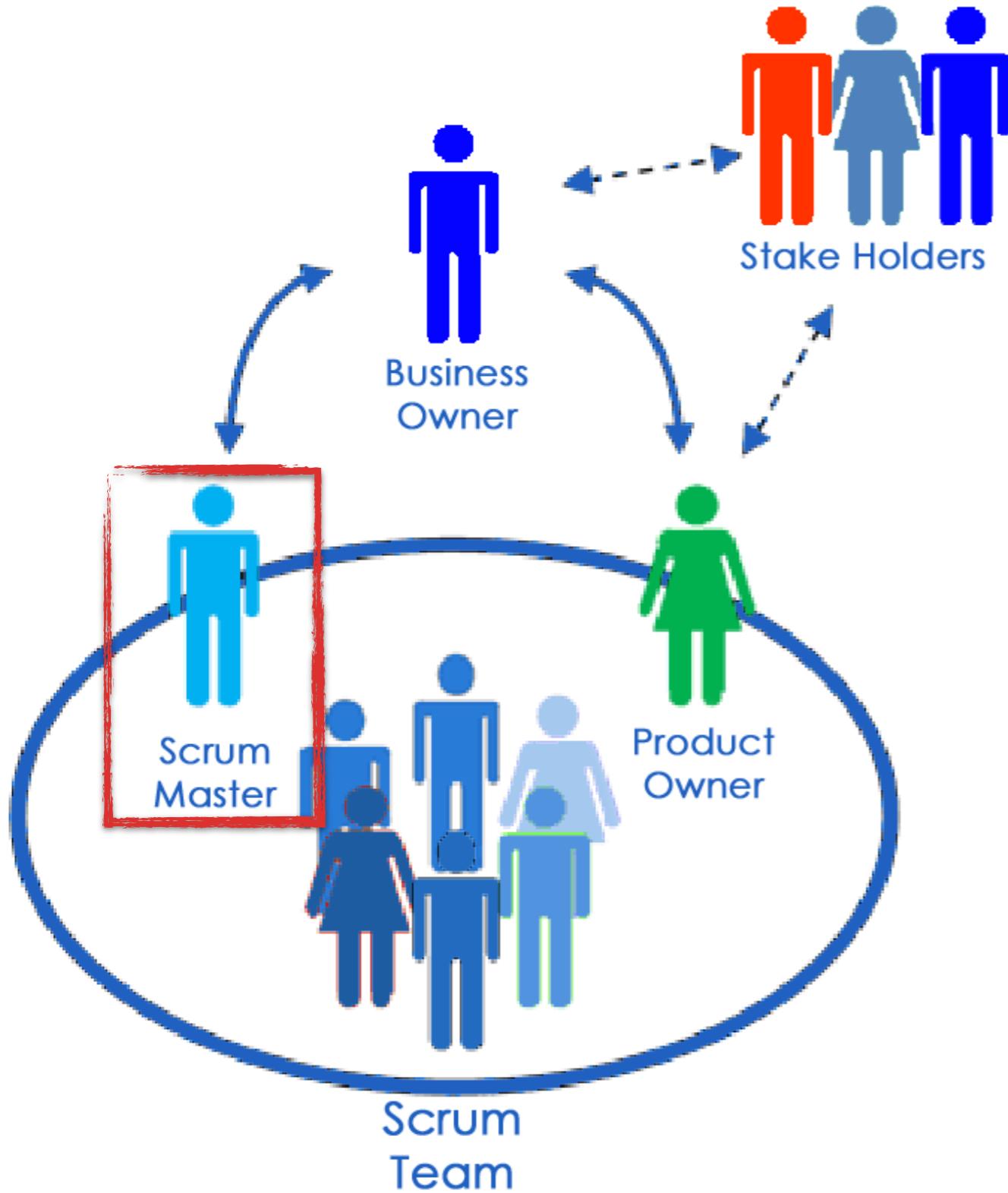


Development



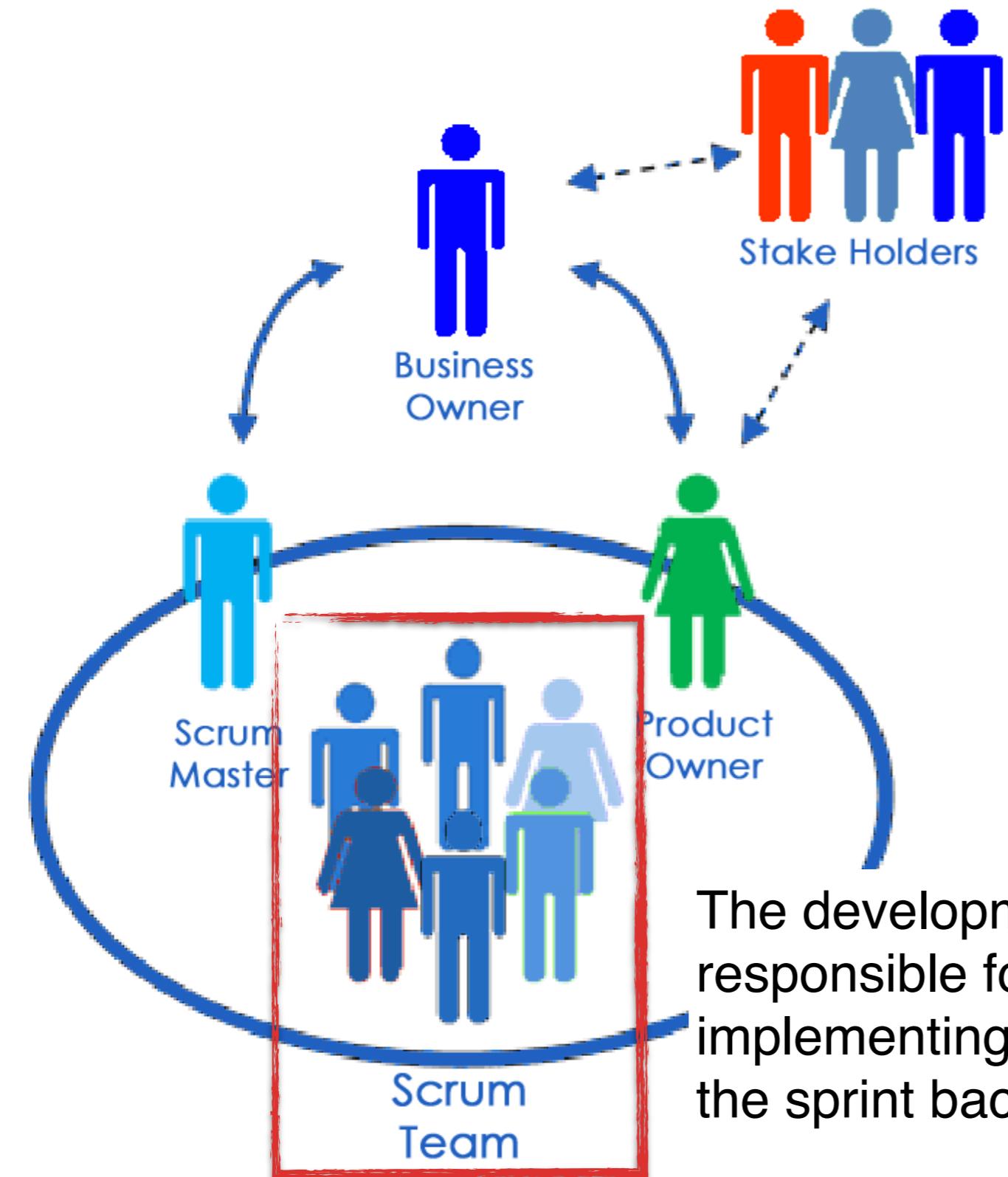
- PO works with the Stakeholders, represents their interests
- Is the first person held accountable for the Team's success.
- PO must find a result that will satisfy the Stakeholders' needs and desires.
- PO provides direction and goals for the Team, and prioritizes what will be done.

Development



- SM's facilitator, moderator, and coach, with particular emphasis on helping the Team mature its self-organization and management.
- The ScrumMaster manages the relationship between the PO and the rest of the Team, and facilitates removal of impediments for the Team
- Impediments can come from within the Team and outside the Team. Creating a smart center of focus is the art of being a SM.

Development



The development team is responsible for designing and implementing the tasks identified in the sprint backlog.

Development

Not like this....



1



2



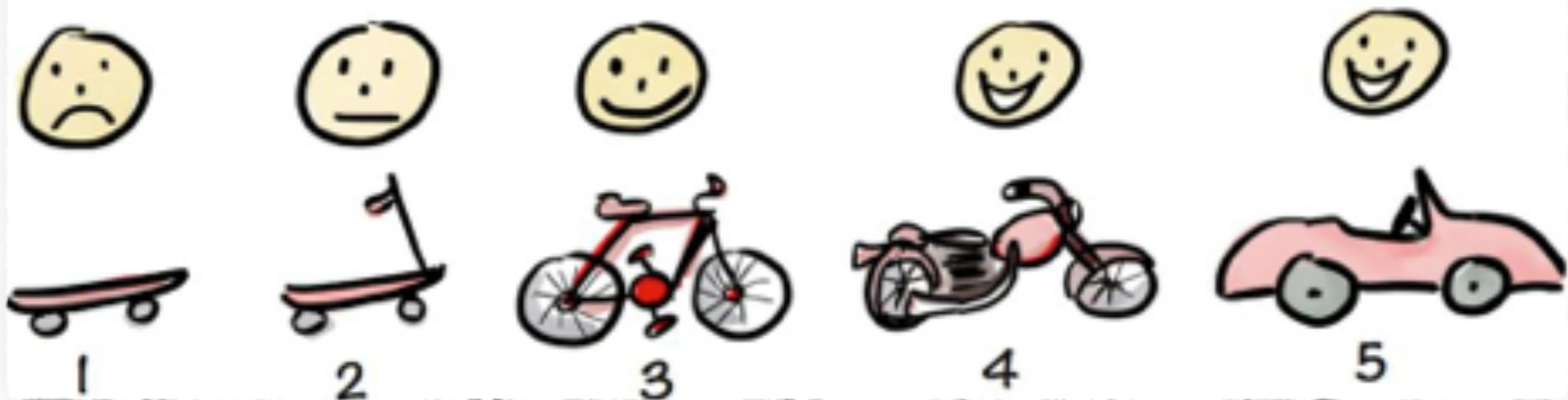
3



4

Development

Like this!



Development

VALIDATED LEARNING LOOP

BUILD

Better
IDEAS

LEARN

MEASURE

with customers
& users

Minimal Viable Product
EXPERIMENT

Subjective &
Objective DATA

Coden alleine
ist einfach!

Code Control

Protokollieren

Archivieren

Wiederherstellen

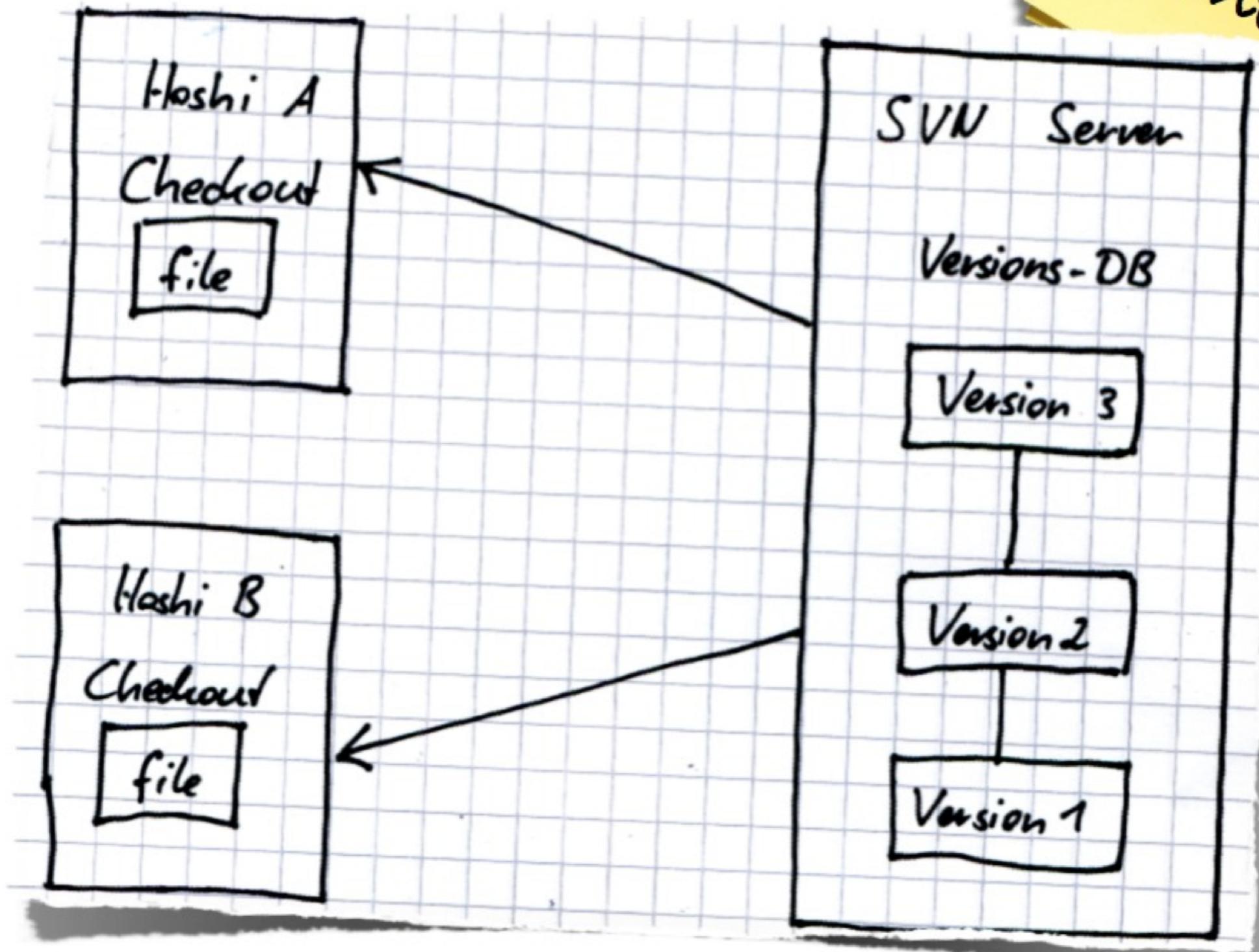
Code Control

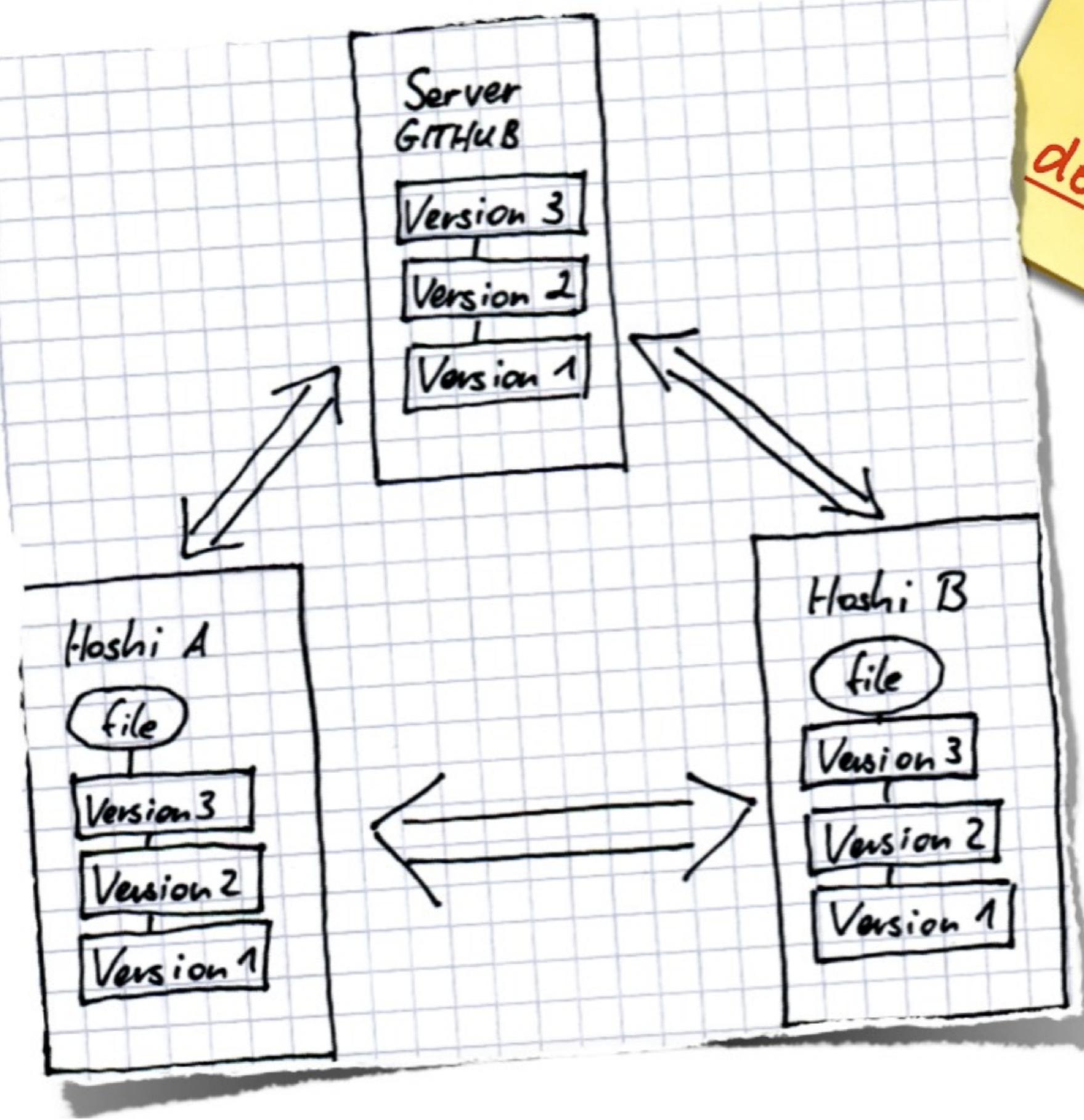
Was gibts so?

Distributed Concurrent
Version System (DCVS)

Concurrent Version
System (CVS)

Subversion
zentral





Code Control

Was gibts so?

Distributed Concurrent
Version System (DCVS)

git

Mercurial

SVK

Concurrent Version
System (CVS)

CVS

SVN

VSS

Code Control

Was gibts so?

Distributed Concurrent
Version System (DCVS)



Mercurial

SVK

Concurrent Version
System (CVS)

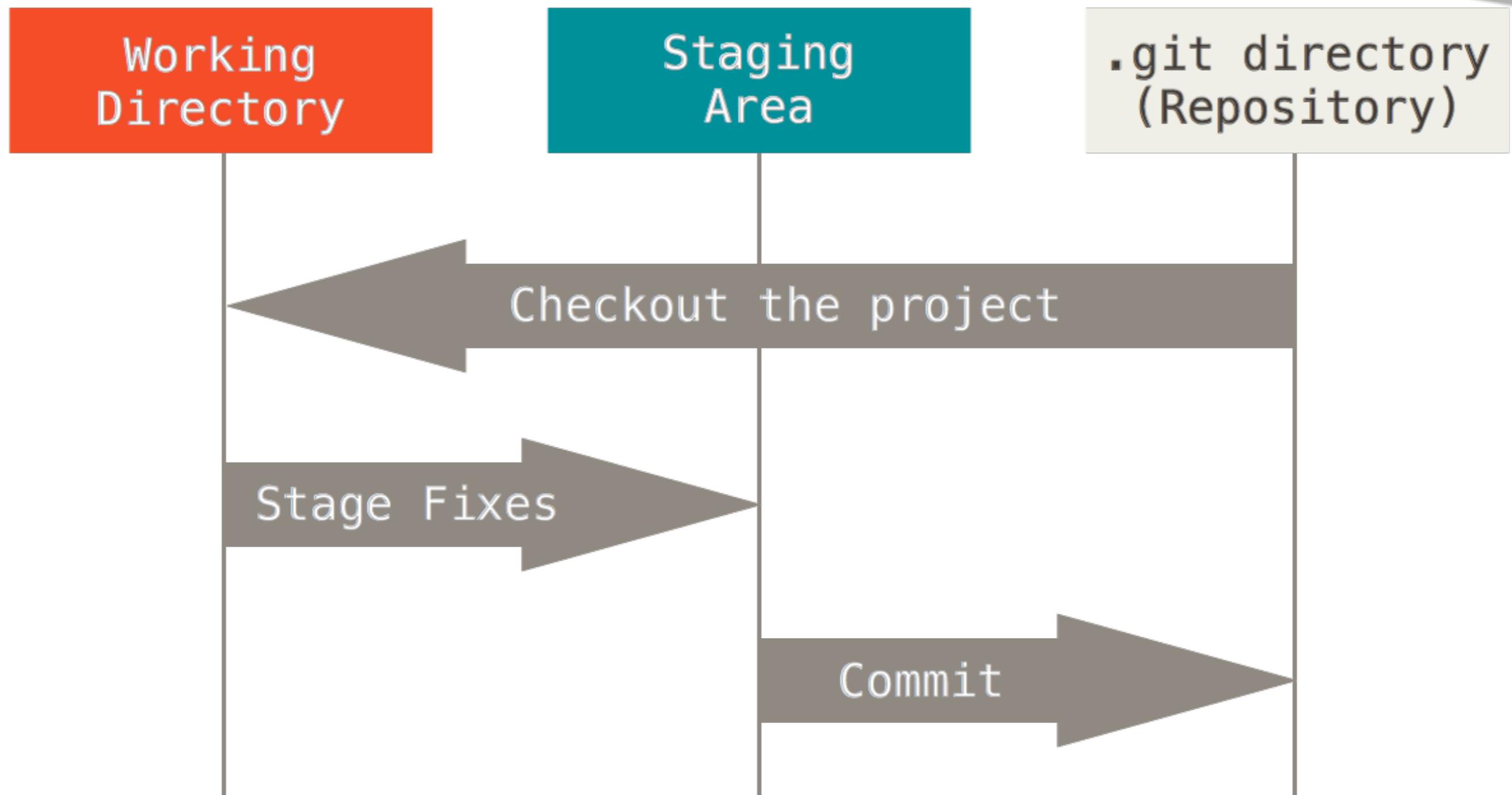
CVS

SVN

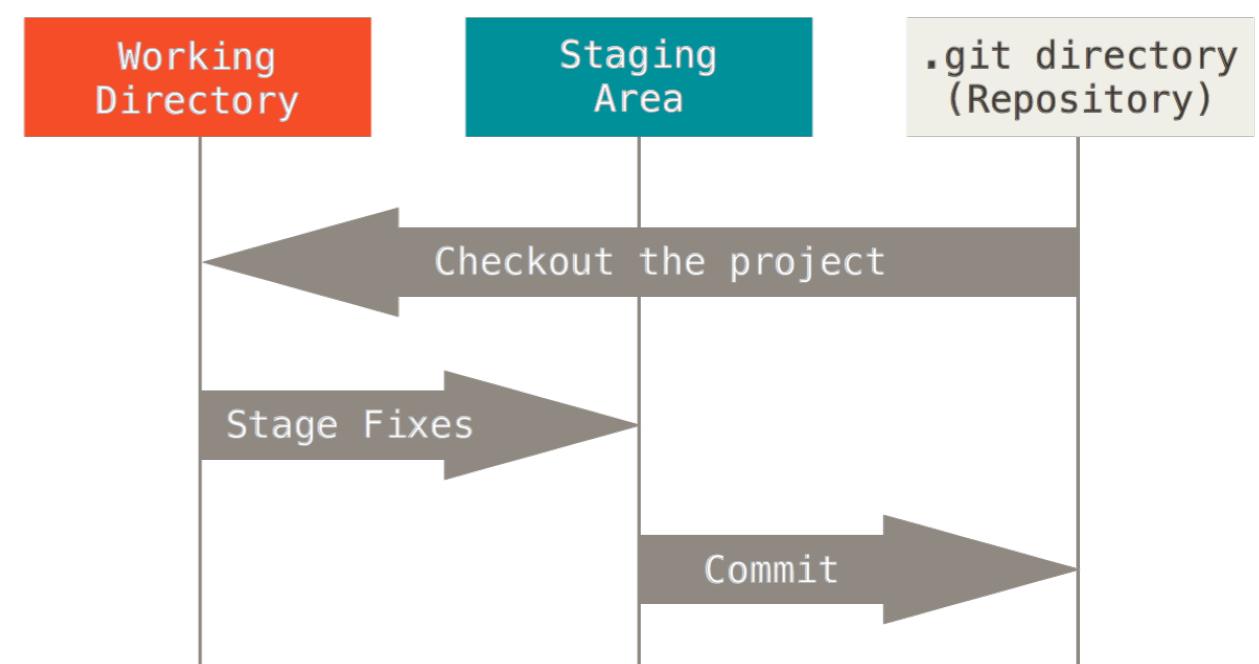
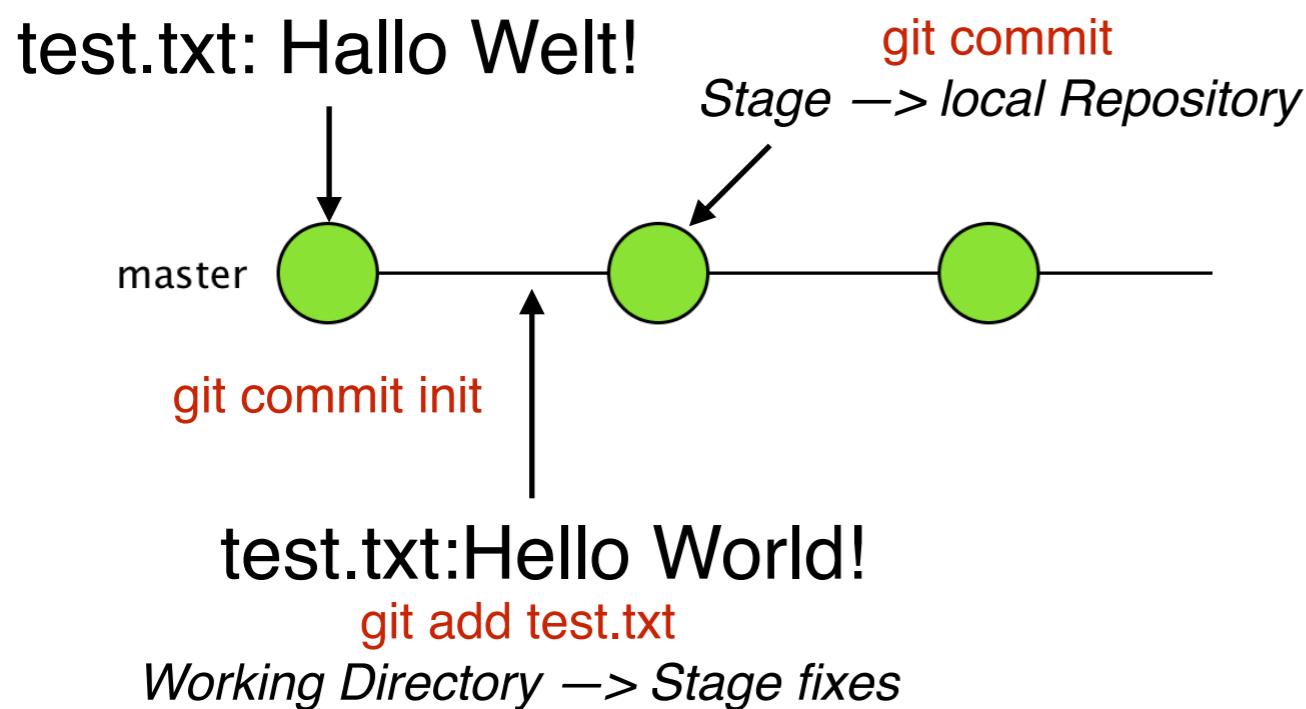
VSS

Git Local

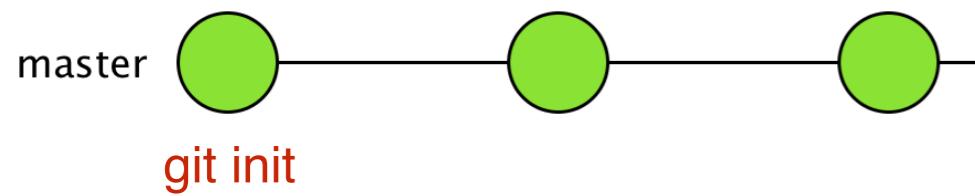
Git Local



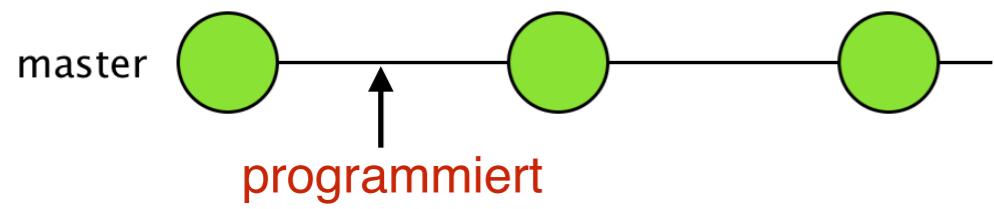
Git Local



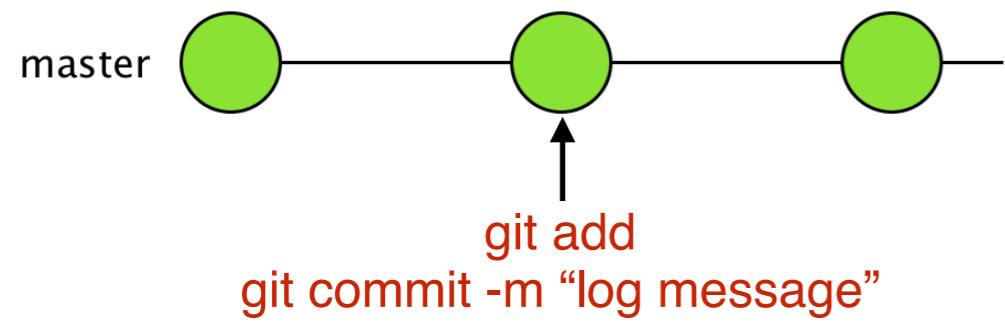
Git Local



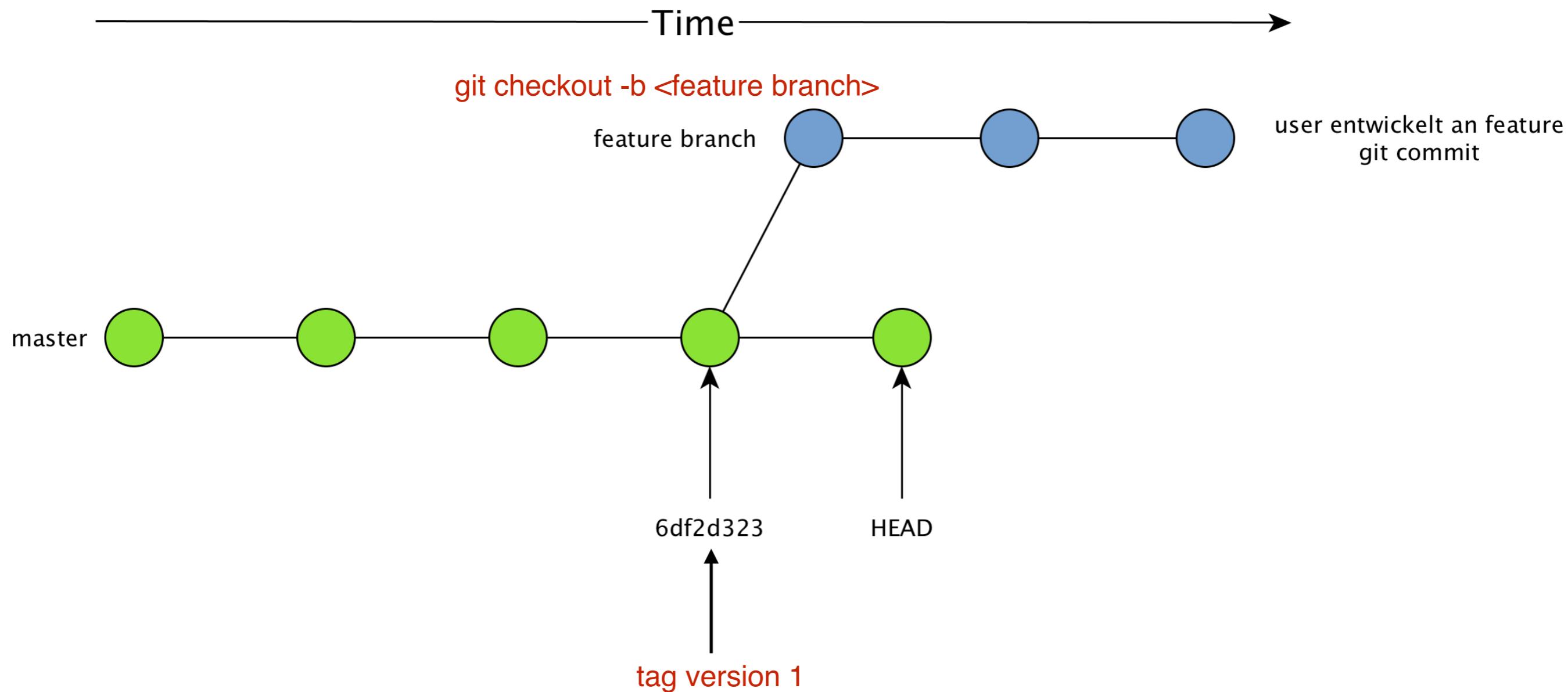
Git Local



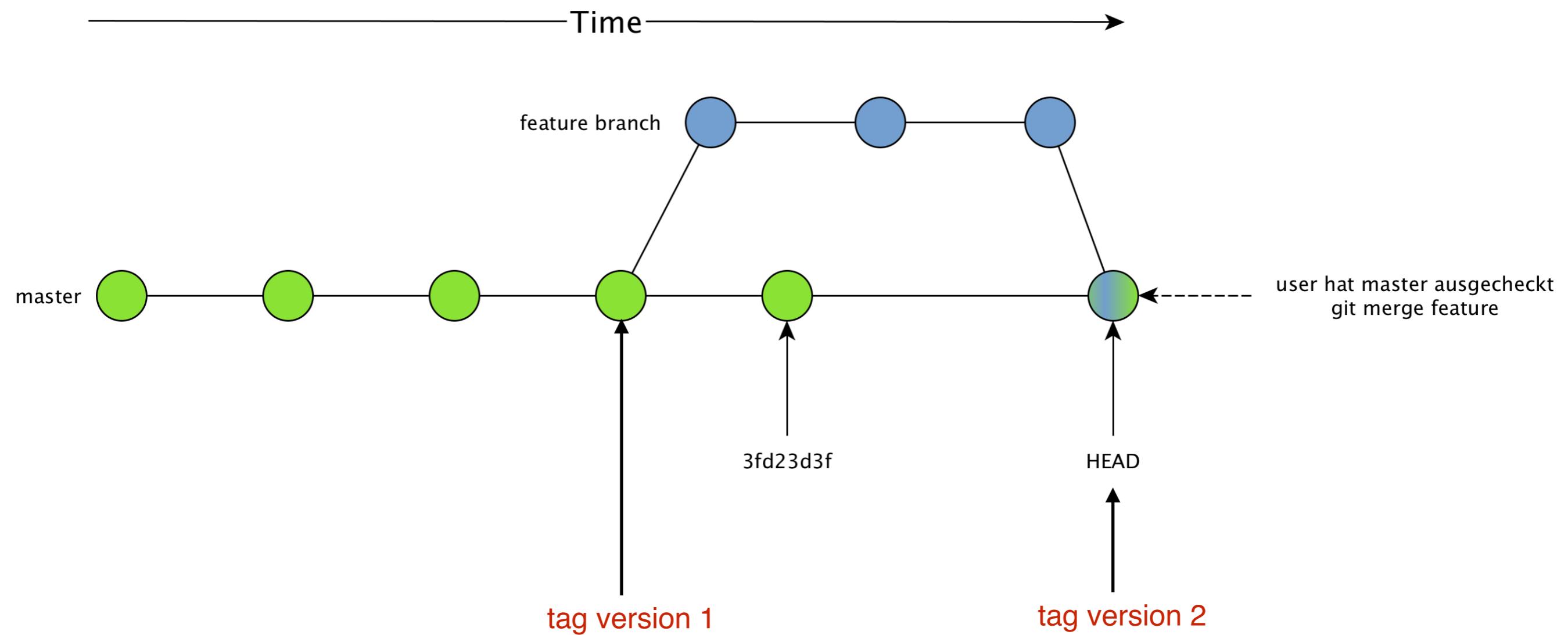
Git Local



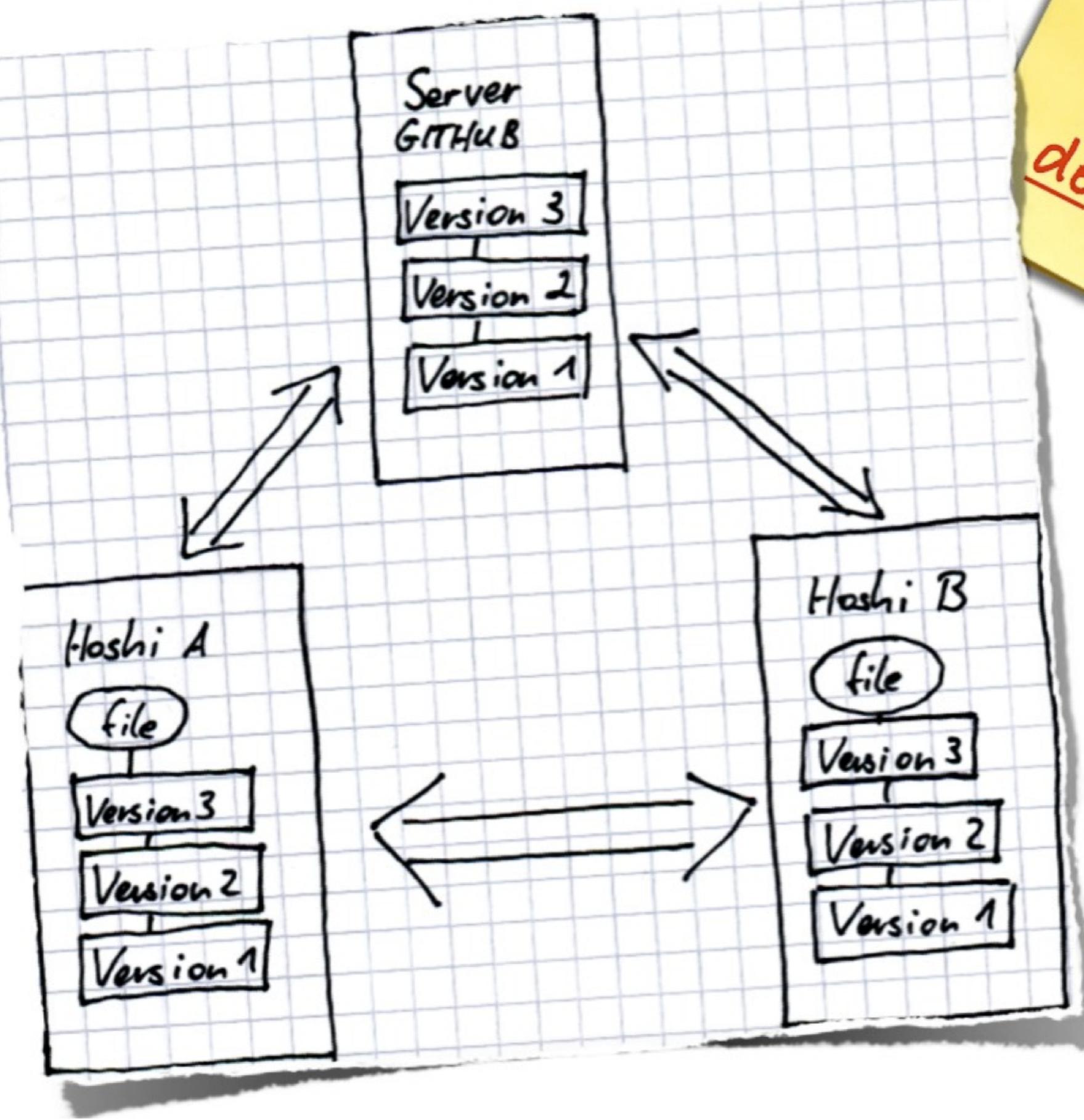
Git Local



Git Local



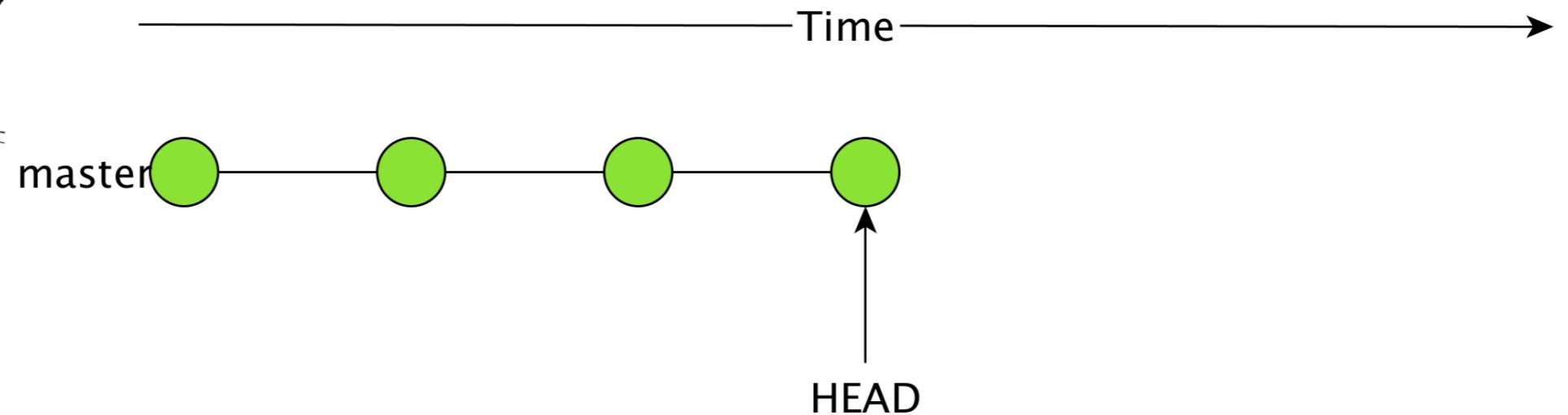
Git remote mit
Github



Git
deZentral

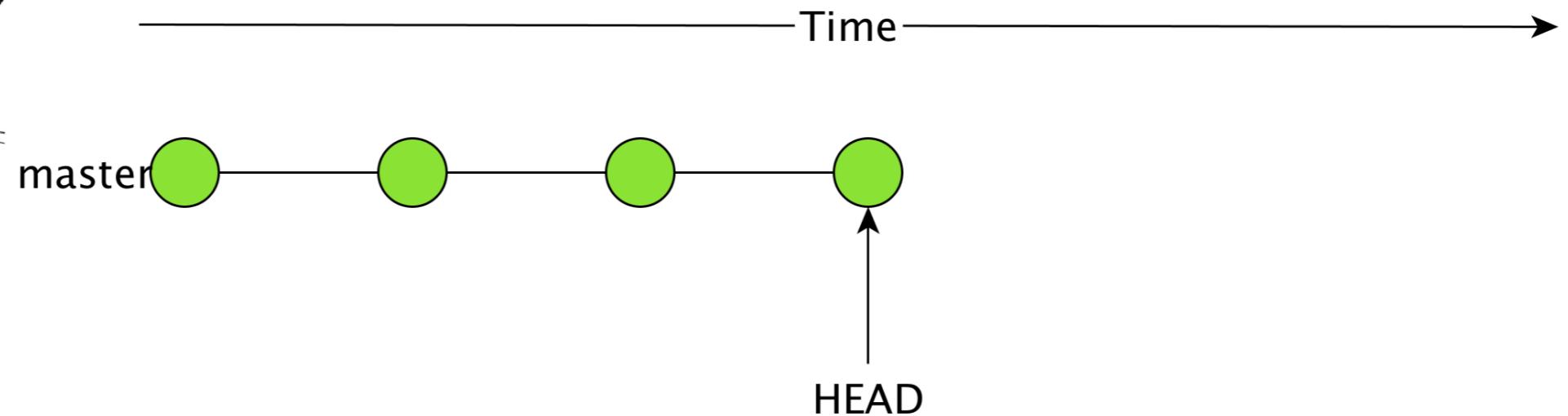
Git remote

GitHub

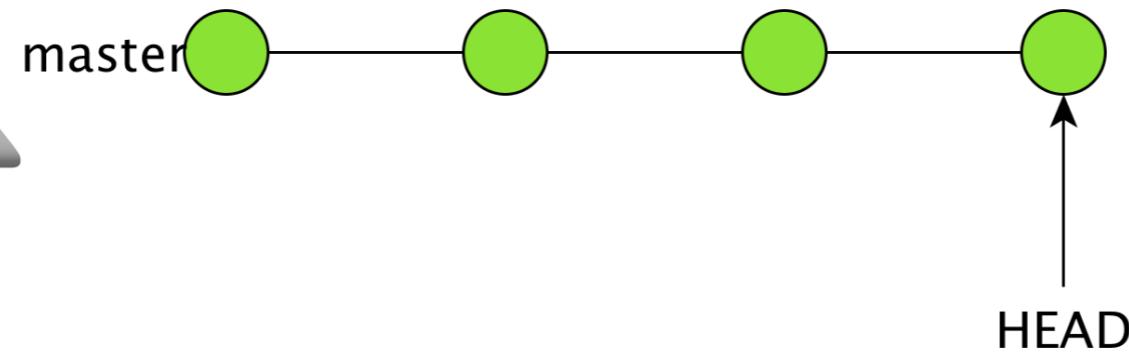


Git remote

GitHub



```
git clone https://github.com/awesome
```

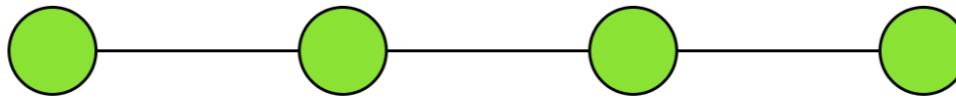


Git remote

GitHub



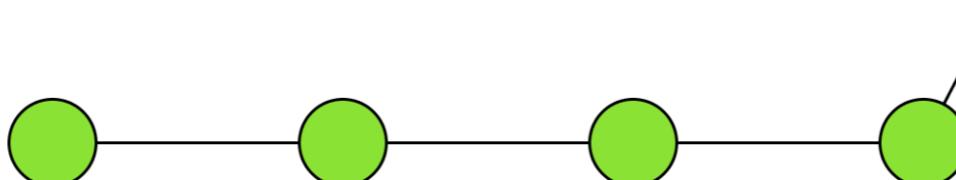
master



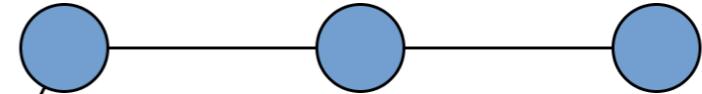
```
git clone https://github.com/awesome
```



master



```
git checkout -b myCoolFeature
```

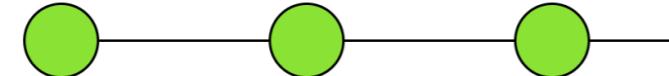


Git remote

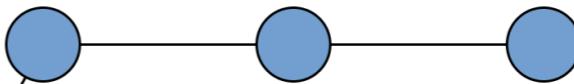
GitHub



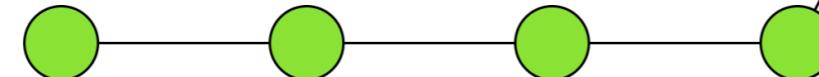
master



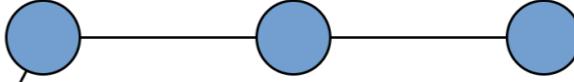
myCoolFeature



master



myCoolFeature

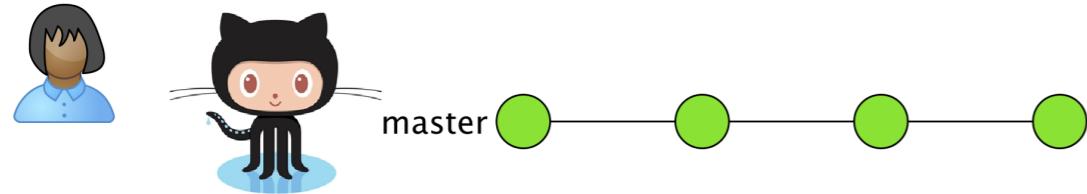


git push -u origin myCoolFeature

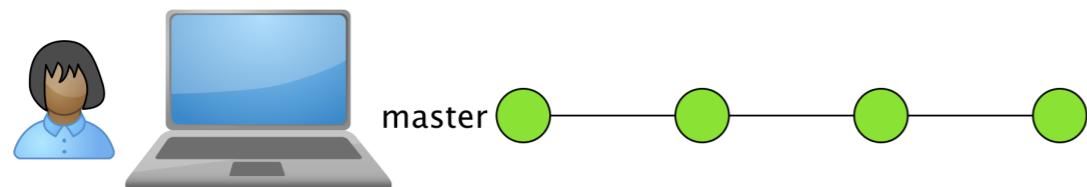
Fork me on
Github



GitHub

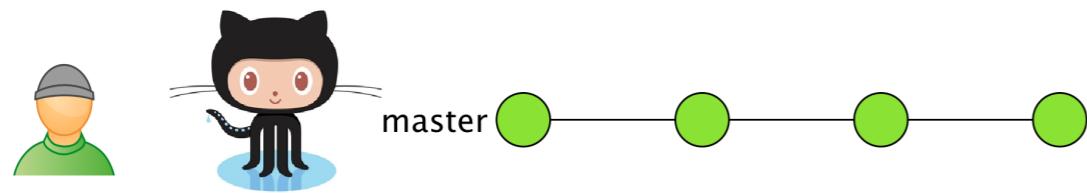


```
git clone https://github.com/user1/awesome
```

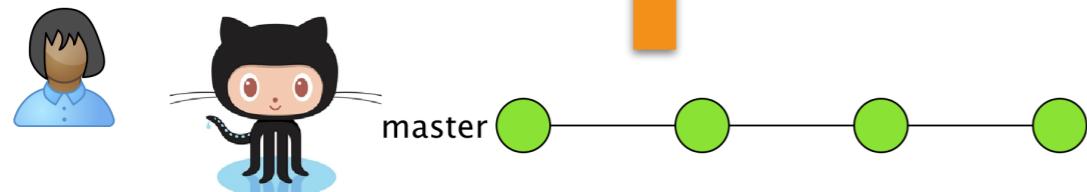




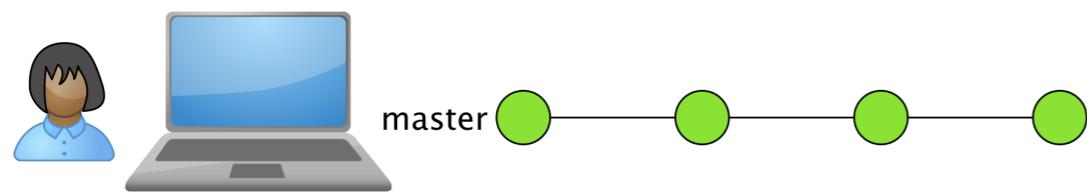
GitHub



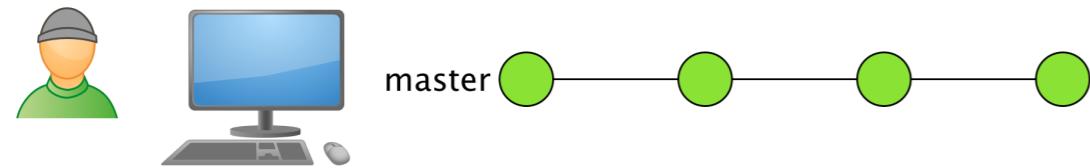
GitHub



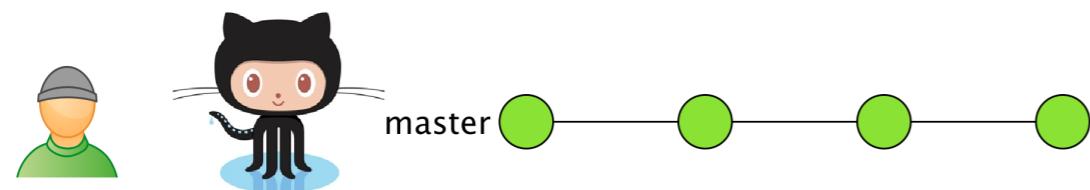
```
git clone https://github.com/user1/awesome
```



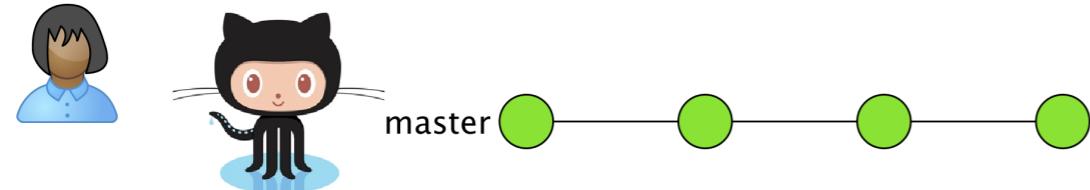
```
git clone https://github.com/user2/awesome
```



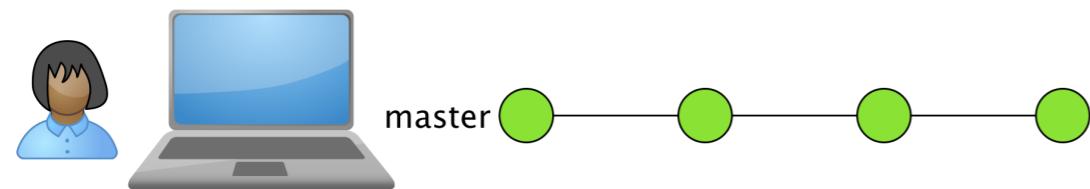
GitHub



GitHub



```
git clone https://github.com/user1/awesome
```



```
git clone https://github.com/user2/awesome
```



master



GitHub



master



GitHub



master



```
git clone https://github.com/user1/awesome
```

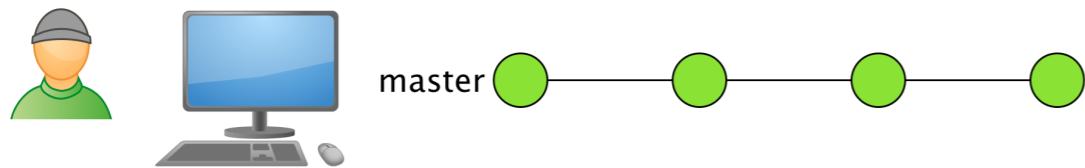


master

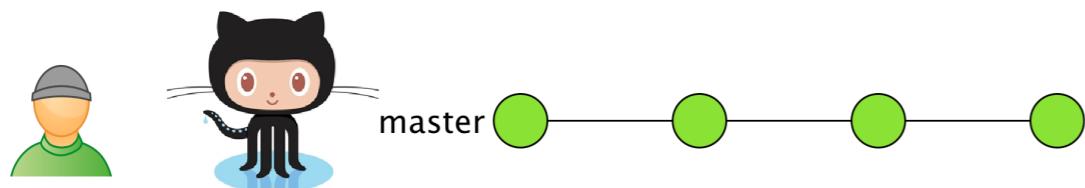


Fork me

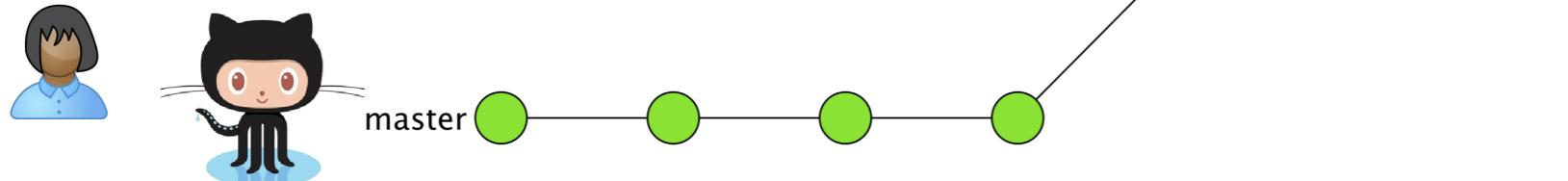
```
git clone https://github.com/user2/awesome
```



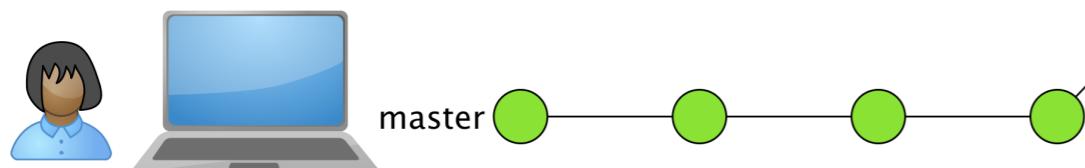
GitHub



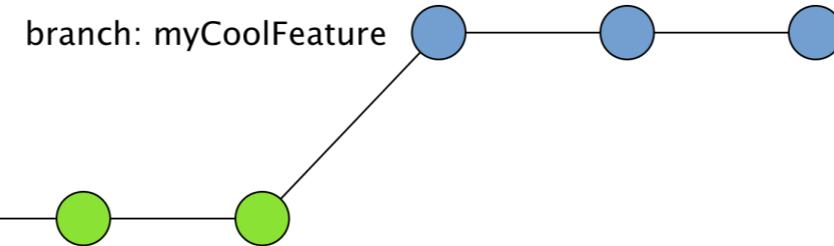
GitHub



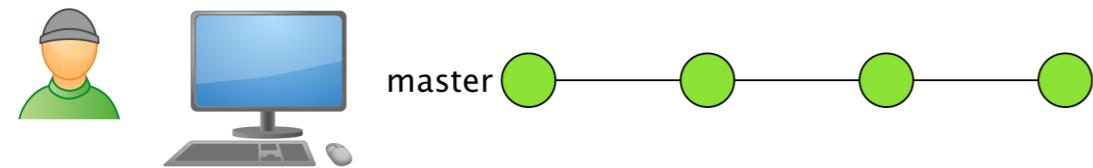
```
git clone https://github.com/user1/awesome
```



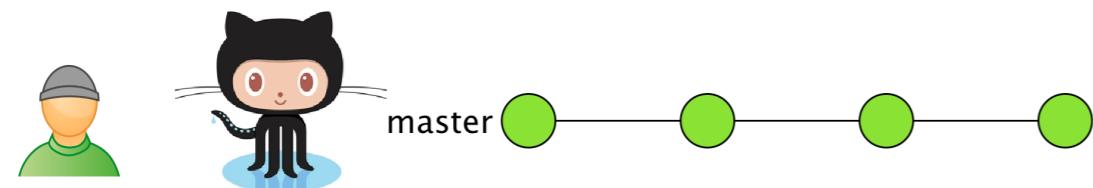
```
branch: myCoolFeature
```



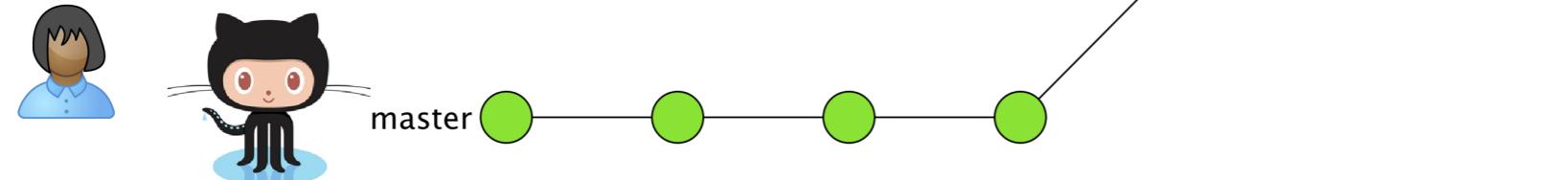
```
git clone https://github.com/user2/awesome
```



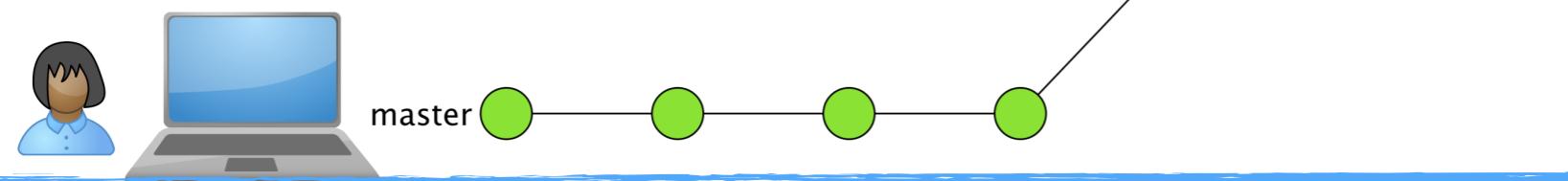
GitHub



GitHub



```
git clone https://github.com/user1/awesome
```



```
git clone https://github.com/user2/awesome
```



master



GitHub



master

GitHub



master

branch: myCoolFeature

```
git clone https://github.com/user1/awesome
```



master

branch: myCoolFeature

```
git clone https://github.com/user2/awesome
```



master



GitHub



master

Review Changes
Merge Pull Request

Pull Request
user1:myCoolFeature -> user2:master

GitHub



master

branch: myCoolFeature

```
git clone https://github.com/user1/awesome
```



master

branch: myCoolFeature

```
git clone https://github.com/user2/awesome
```



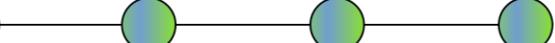
master



GitHub



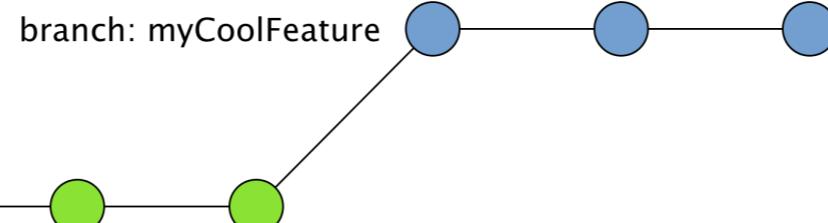
master



GitHub



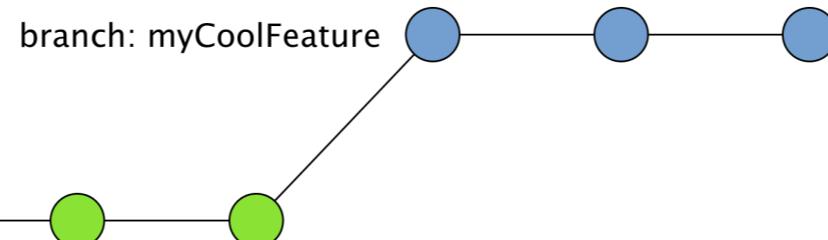
master

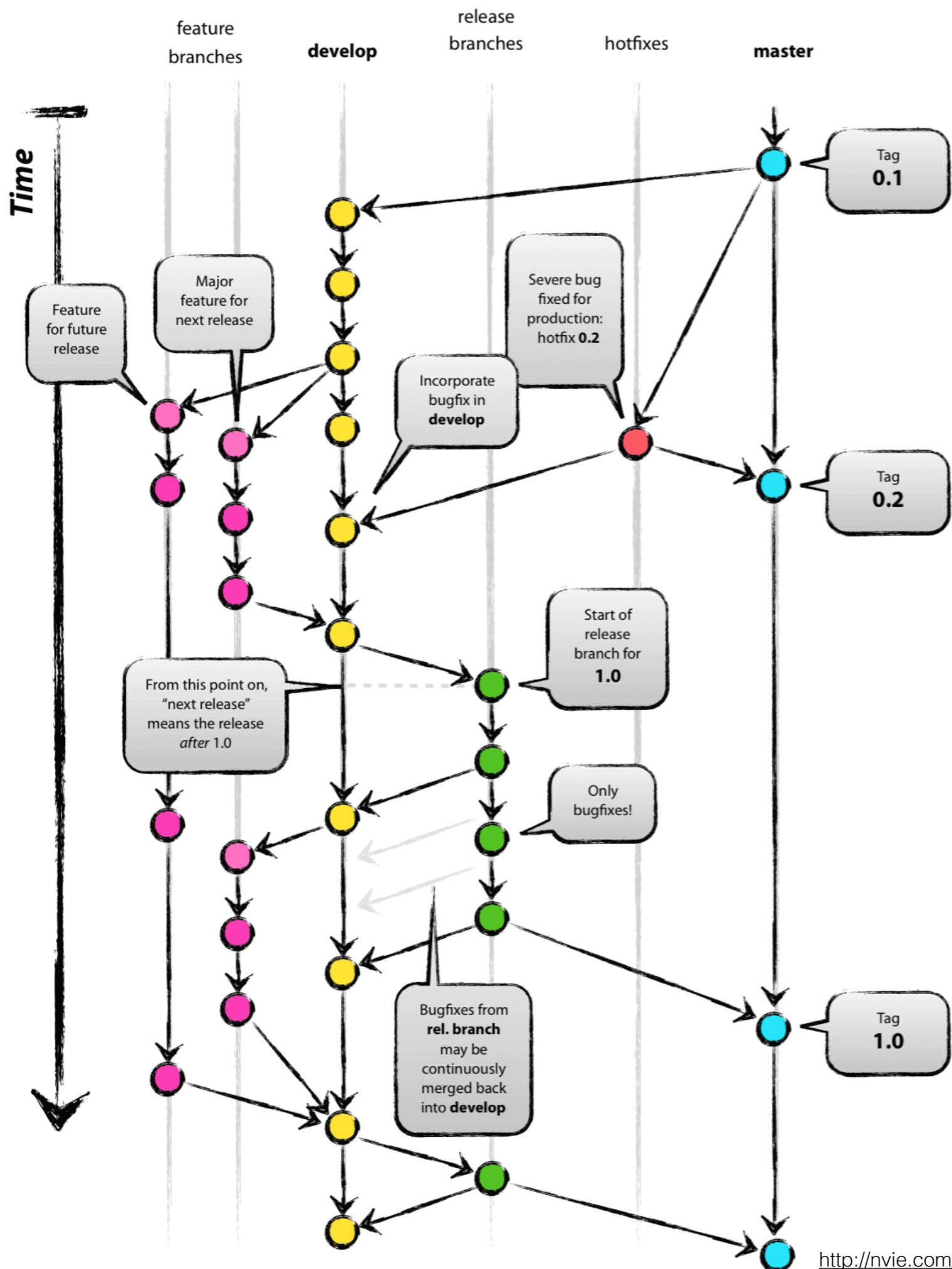


```
git clone https://github.com/user1/awesome
```



master





GitHub world readable!

Wiki

Issue tracker

GitHub alternativen

GitLab

Gitolite

Linux Server mit SSH

Continuous
Integration

CI

Wenn jemand code ändert:

Compiliert es noch?

Laufen die Tests durch?

Falls alles gut geht, deploy

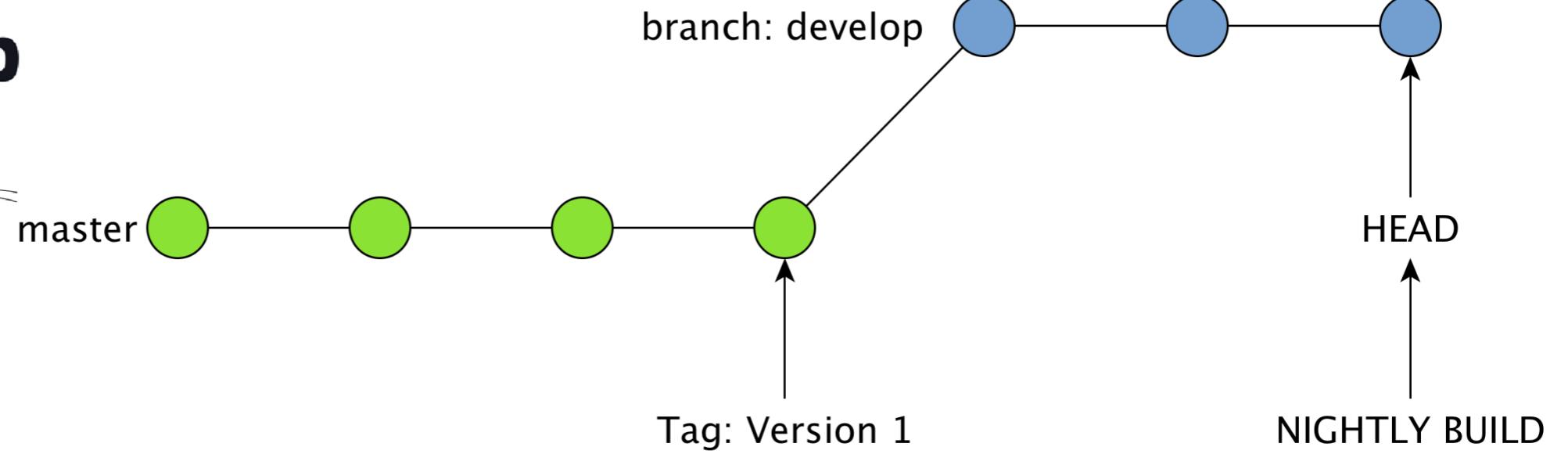
Installation in Docker oder
Vagrant für Demo



GitHub



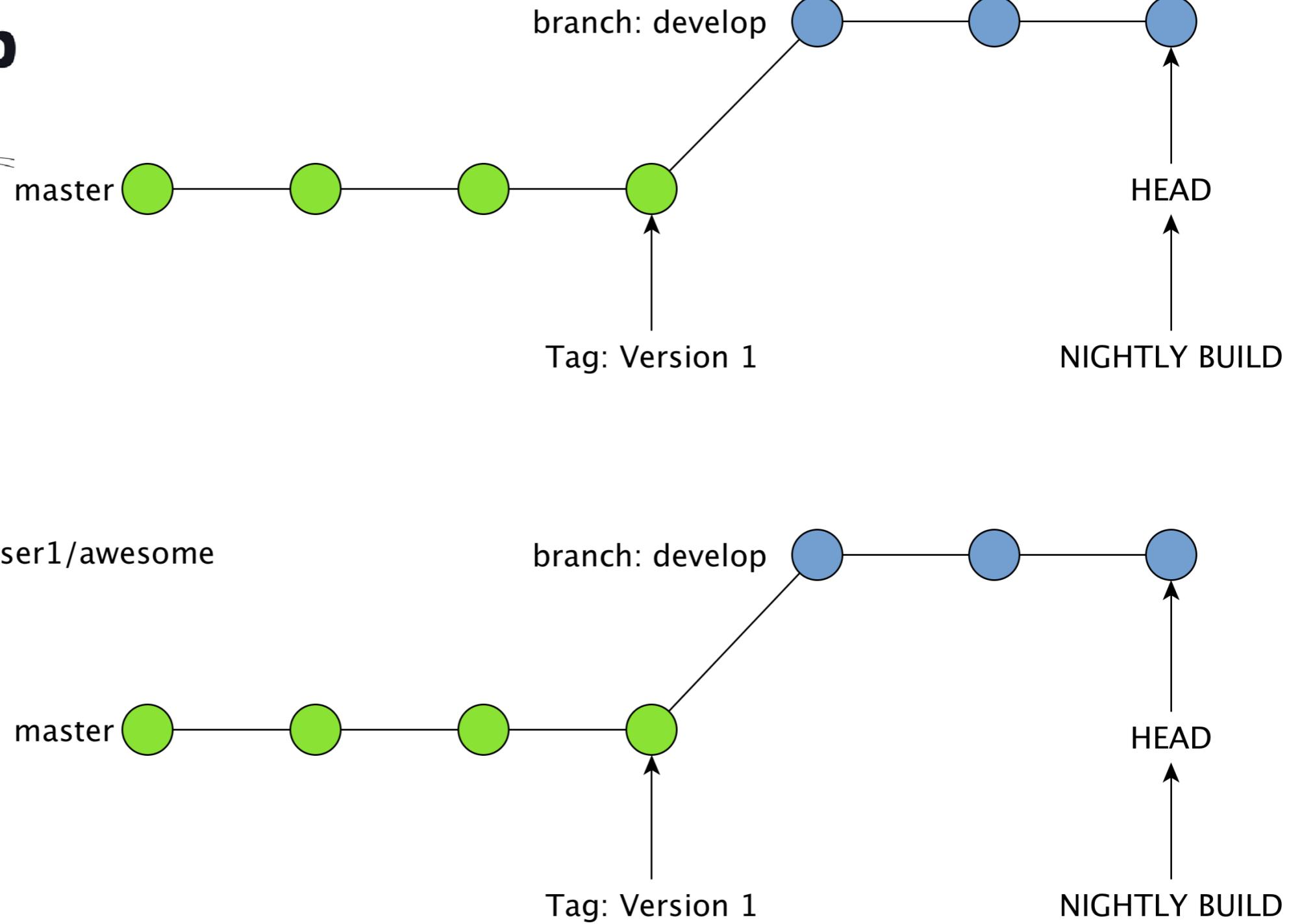
master



```
git clone https://github.com/user1/awesome
```



master





GitLab Server und VMs (Linux) an der HS-Fulda →
Christian Pape

ASTA, die haben IT für euch und freuen sich über
Hilfe ;)

Server mieten kostet nicht mehr viel → Owncloud,
Mailserver, Jabber

Probiert viel im Studium aus!

Quellen

- Github: <http://www.molecularecologist.com/2013/11/using-github-with-r-and-rstudio/>
- Hipster Essentials: <http://www.auditionsfree.com/2015/auditions-denver-colorado-short-film-hipster-essentials/>
- DevOps: <http://blog.cobia.net/cobiacomm/>
- mongoDB: <http://goo.gl/KBuvuH> <http://goo.gl/O7AHQY>
- Vagrant: <https://www.vagrantup.com/>
- JSON: <http://blog.synopse.info/tag/JSON>
- NoSQL: <http://www.codejobs.biz/es/blog/2013/11/24/hablemos-de-nosql-introduccion-y-equivalencias-en-mongodb>
- Oracle: https://blogs.oracle.com/partnernews/entry/register_today_for_the_oracle1
- Hipster Mütze: <http://maleknitting.de/maleknitting-monday-hippe-hipster-beanie/>
- Hipster Mütze: <http://www.maedchenflohmarkt.de/beanie-hipster-muetze-weinrot-mit-passendem-schal/681194.html>
- Tech Hipster: http://images.businessweek.com/cms/2012-05-29/0525_hipstercloud_630x420.jpg
- HTML5: <http://www.eternoalumno.com/manuales-html5/>
- Angular JS: <https://angularjs.org/>
- Apache Storm: <http://nathanmarz.com/blog/history-of-apache-storm-and-lessons-learned.html>
- Spark: http://en.wikipedia.org/wiki/Apache_Spark
- Insel: <http://www.traumstraende.org/2012/04/kleine-insel-mit-traumstrand-in-der-sudsee/>
- Wasserfallmodell: <http://de.wikipedia.org/wiki/Wasserfallmodell>
- User Story Mapping: http://www.amazon.de/User-Story-Mapping-Discover-Product/dp/1491904909/ref=sr_1_1?ie=UTF8&qid=1428431990&sr=8-1&keywords=user+story+mapping
- Scrum in a Nutshell: <https://www.scrumalliance.org/community/articles/2009/december/scrum-in-a-nutshell>
- Gitlab: <https://about.gitlab.com/>
- How to install GitoLite3: <http://askubuntu.com/questions/590150/how-to-install-gitolite3-on-ubuntu-server-14.04>
- A successful branching model: <http://nvie.com/posts/a-successful-git-branching-model/>