The Limits of Continuous Delivery

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2.
Auflage
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Continuous Delivery
Der pragmatische Einstieg
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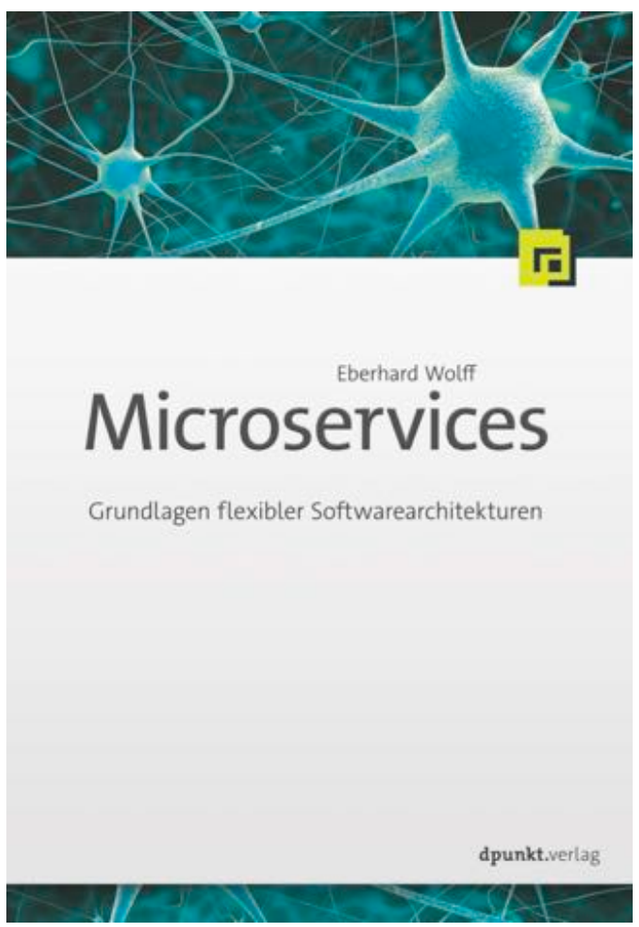
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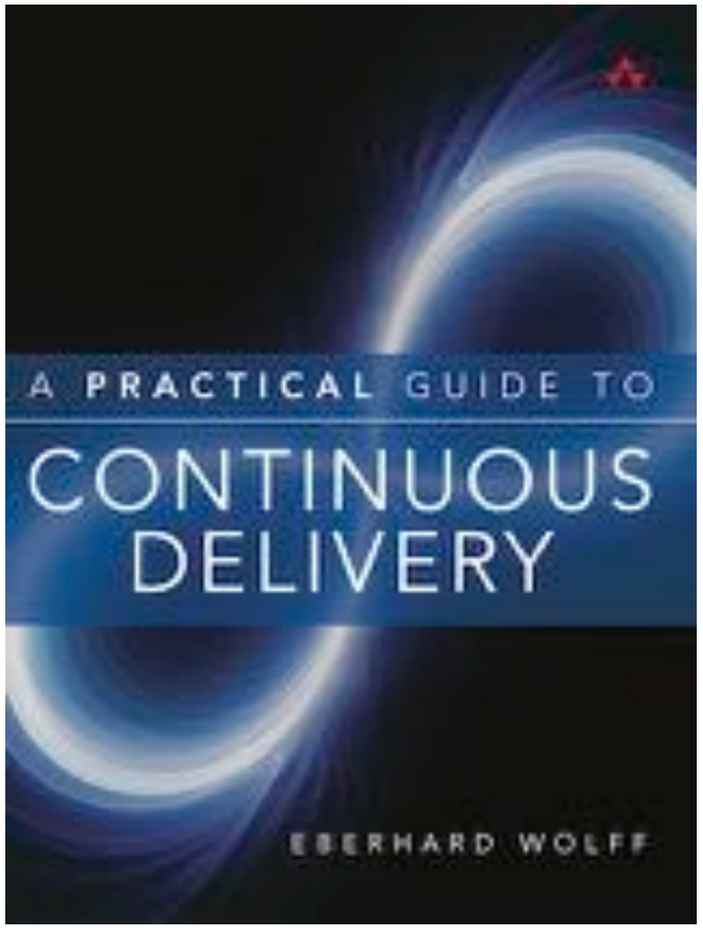
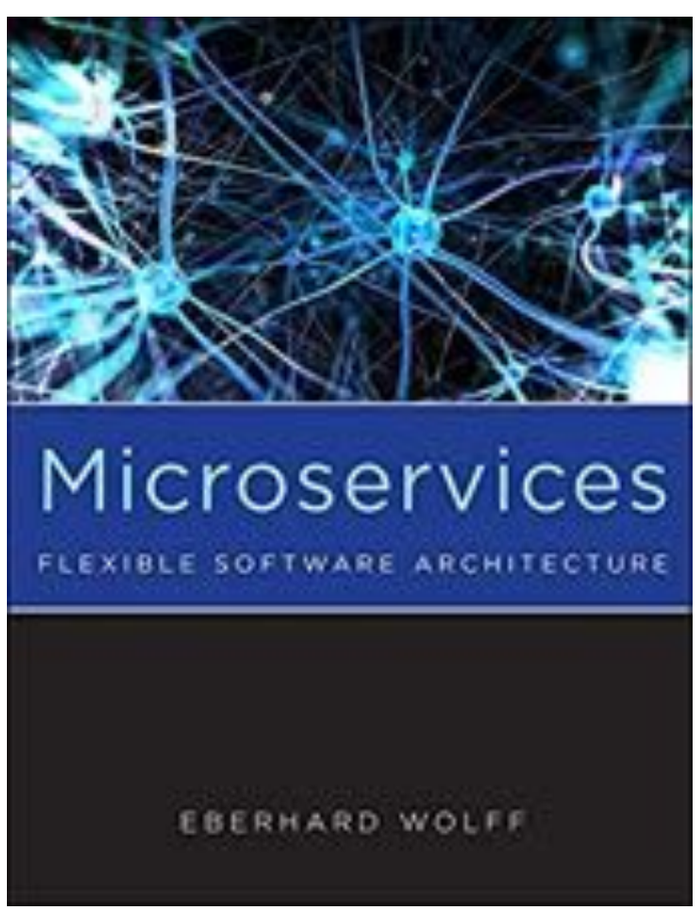

A PRACTICAL GUIDE TO
CONTINUOUS DELIVERY
EBERHARD WOLFF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FLEXIBLE SOFTWARE ARCHITECTURE
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Microservices

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Microservices Rezepte

Technologien im Überblick

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Microservices Primer

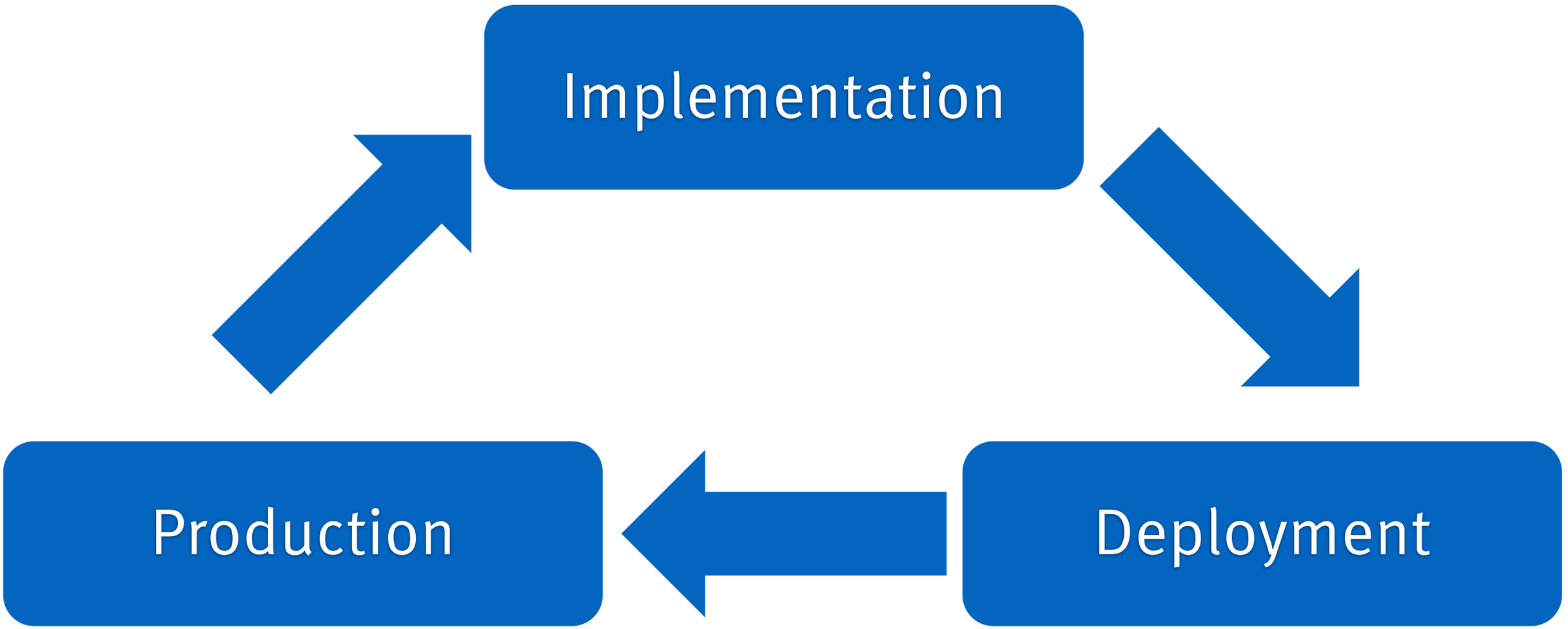
A Short Overview

innoQ

FREE!!!!

Continuous Delivery – Why Do I Even Care?

Faster Feedback



Lower Risk

Daily
Release

- Fewer changes deployed
- Lower risk of a bug
- Easier to fall back
- ...or add other safeguards

Higher Reliability

- Automated deployment and tests
- ...easy to reproduce
- ...faster
- ...executed frequently

Principles Agile Manifesto

Our highest priority is

to satisfy the customer

through early and

continuous delivery

of valuable software.

Continuous Delivery: Why Do I Even Care?

- Faster Feedback
- Lower Risk
- Higher Reliability
- Value to the customer

- I’m in!

Provable Fast and Low Risk

Pic: Eberhard Wolff

https://puppet.com/resources/whitepaper/state-of-devops-report

Continuous Delivery = Technical Issue?

Continuous Delivery is People.

People

Continuous Delivery

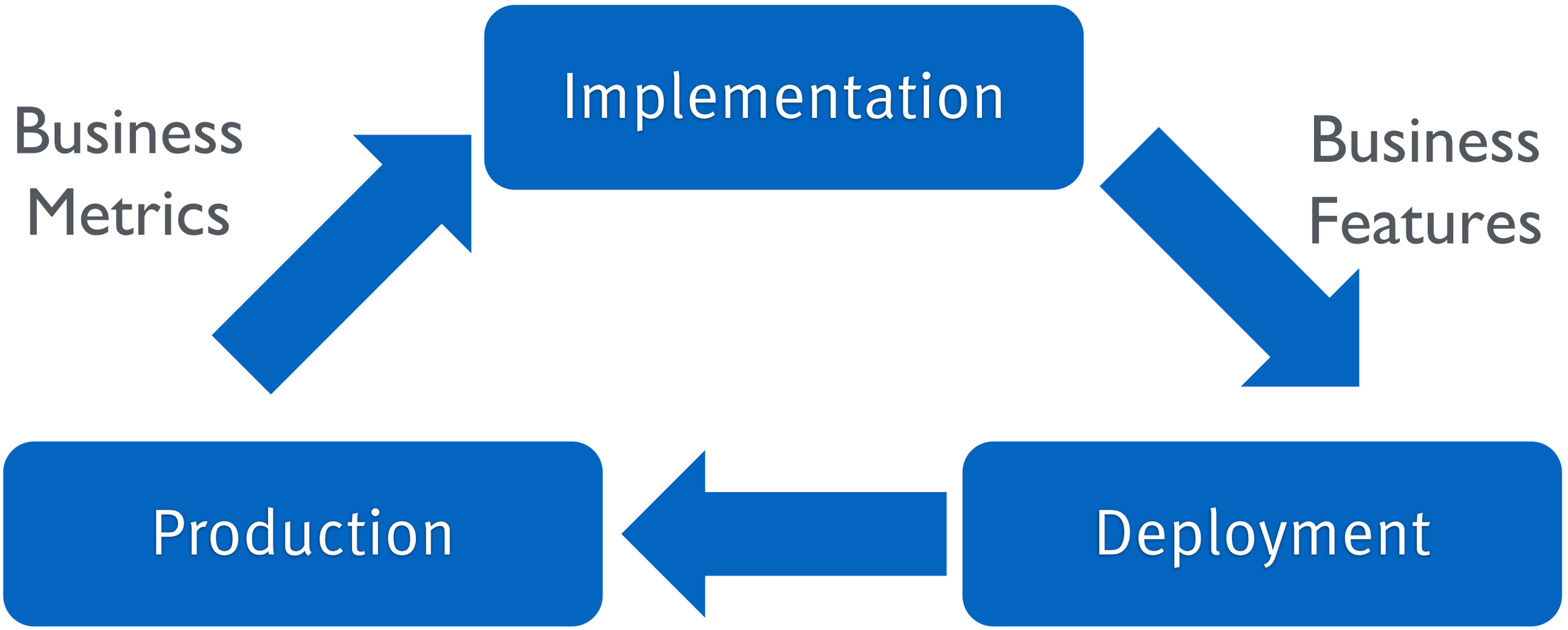
Business

Management Buy-In

Frontier:

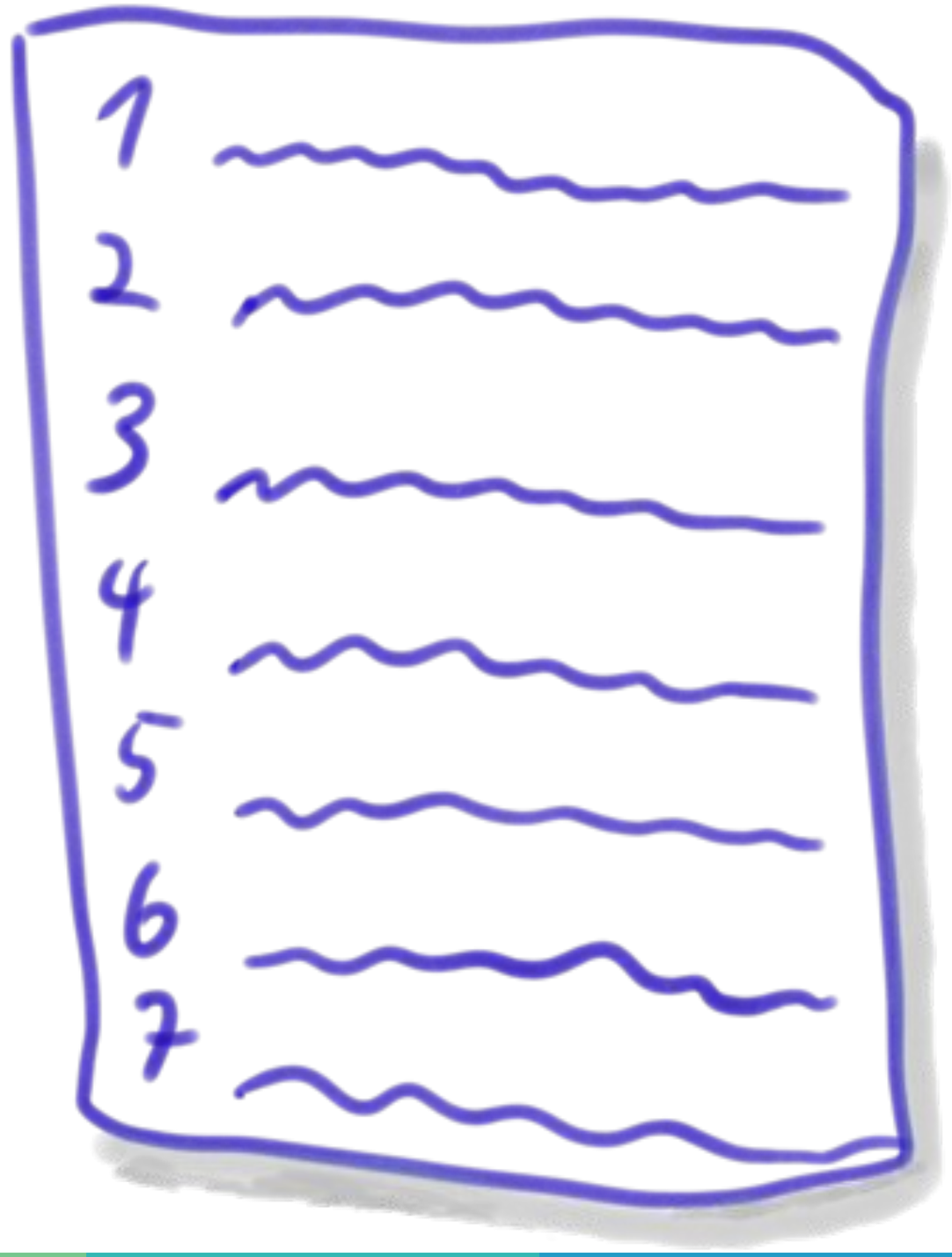
Business

Faster Feedback



How Business Works

- Release Q1/2018
- Here are the features!

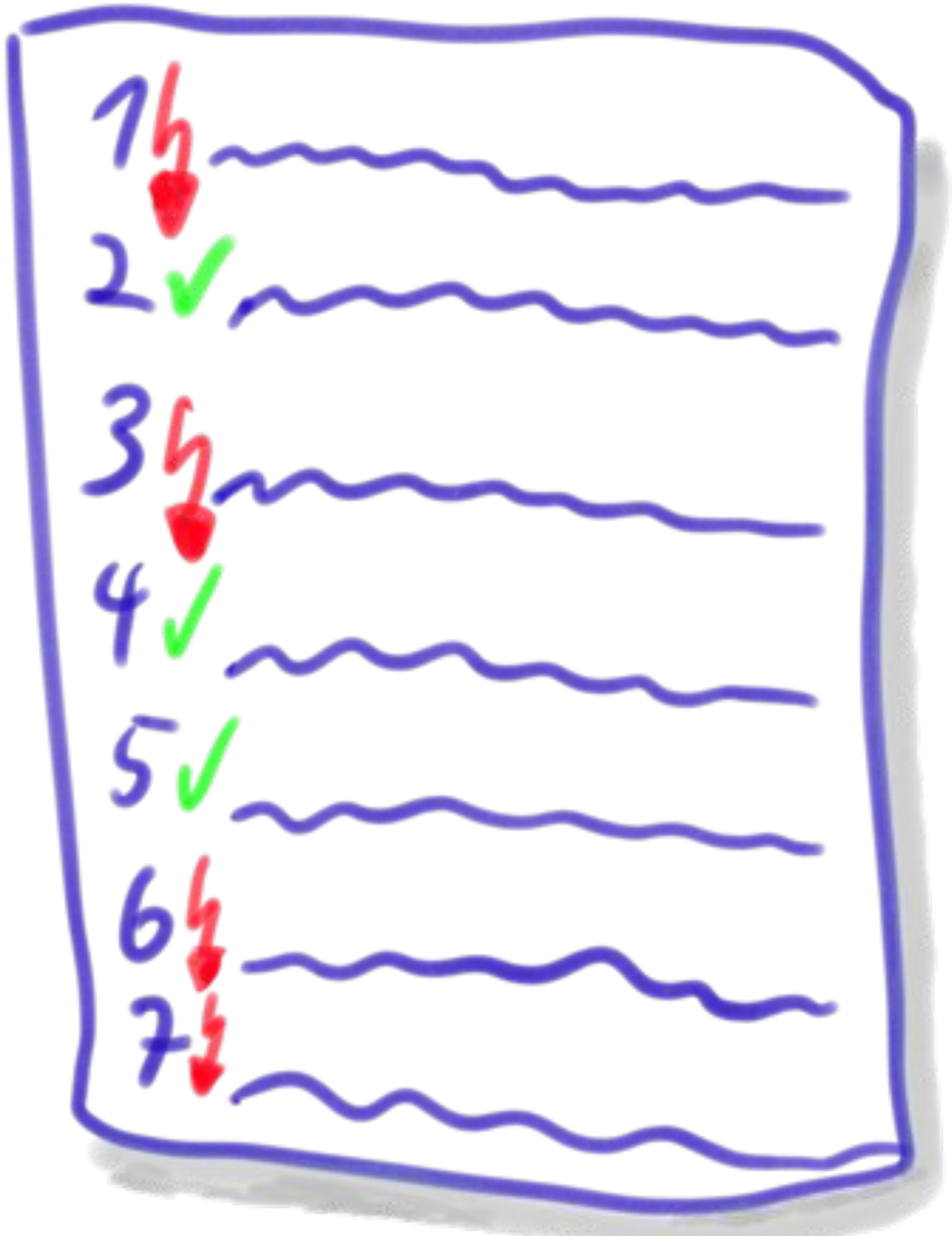


60%– 90% of ideas do not improve the metrics they were intended to improve

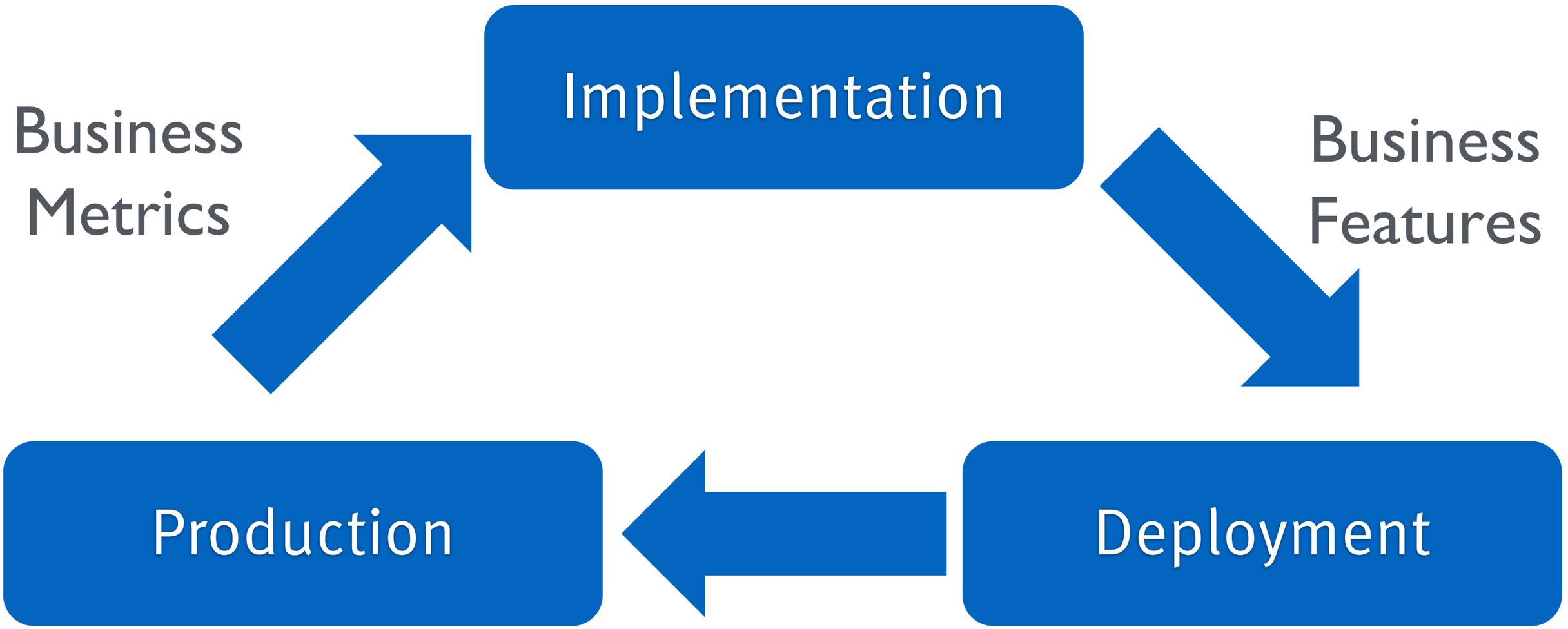
Ronny Kohavi
Former Head Data Mining and Personalization group
Amazon
Source: Lean Enterprise, Humble et al

Just Waste

- More than half of the features are worthless...
- ...or hurt business goals.



Run a minimal feature by users.



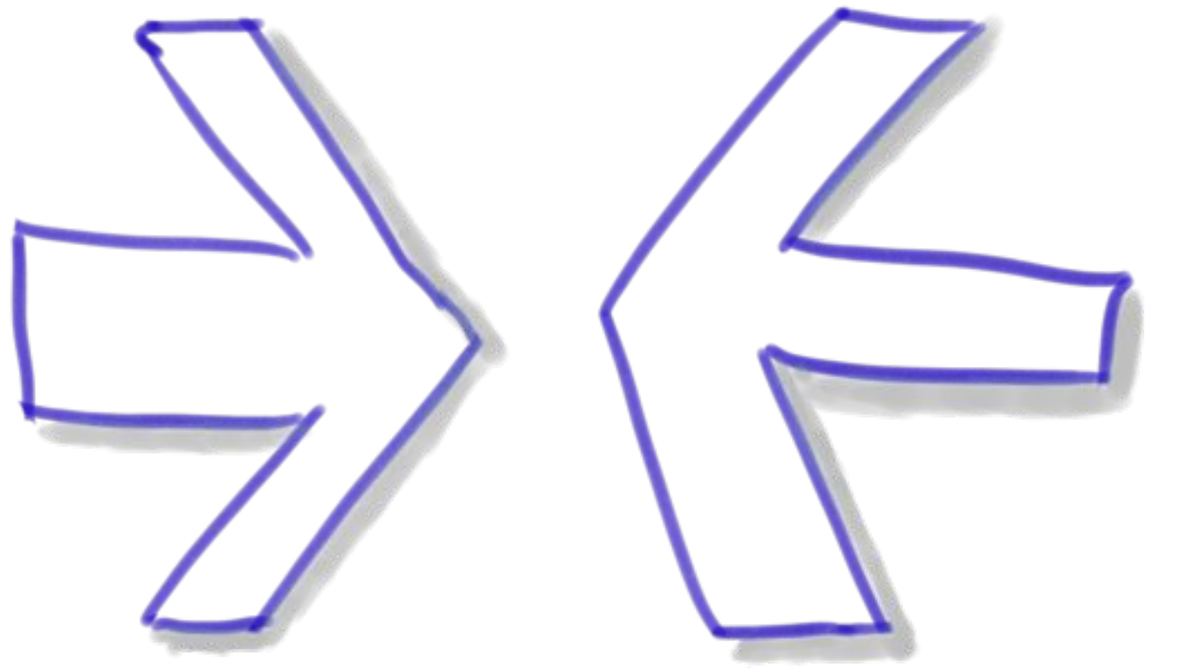
Related to MVP (Minimal Viable Product)

Survival is Optional.

IT Chauvinism

Ways to Compete

- More features faster
- ...or...
- Trust
- Existing customer relations



- Would your grandpa choose a FinTech over a bank?

No Continuous Delivery

- Diesel update at VW and Audi
- 4.000.000 cars going to the garage just for a software update.
- How much does that cost?
- Per car 70€
- Total 280.000.000€

https://heise.de/newsticker/meldung/Volkswagen-Haendler-Software-Update-taugt-nicht-3834343.html

http://www.handelsblatt.com/my/unternehmen/industrie/volkswagen-vier-millionen-diesel-autos-erhalten-update/20139344.html

Continuous Delivery

- Tesla
- Over the air updates
- New features like
- ...more speed
- ...more range during hurricane Irma
- ...self-driving
- ...summoning

Pic: Steve Jurvetson, Wikipedia

Continuous Delivery: Yes

- What about these cars is not software?

Pic: Steve Jurvetson, Wikipedia

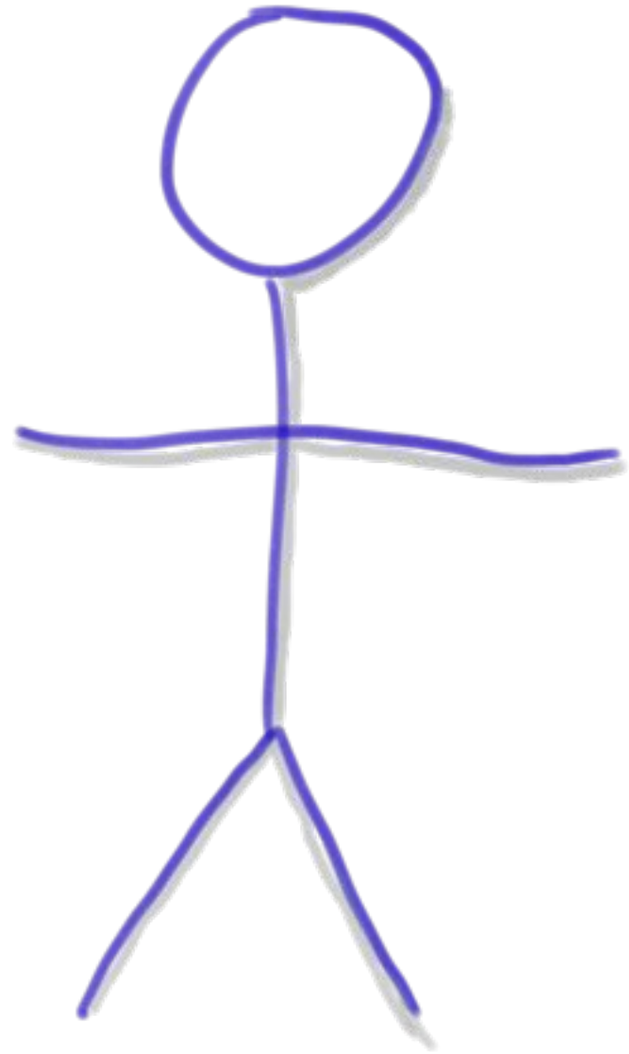
Extending the frontier

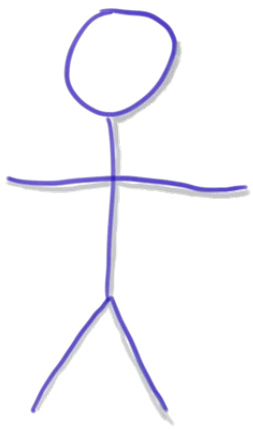
Is Continuous Delivery worth it without business support?

YES!!

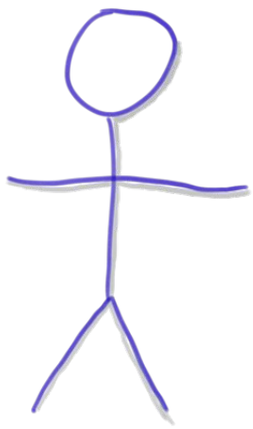
- Faster Feedback
- Lower Risk
- Higher Reliability
- ~~Value to the customer~~

Frontier: People

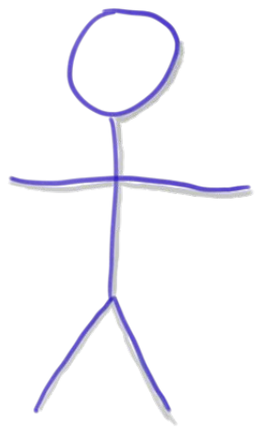




Dev



Customer



Ops

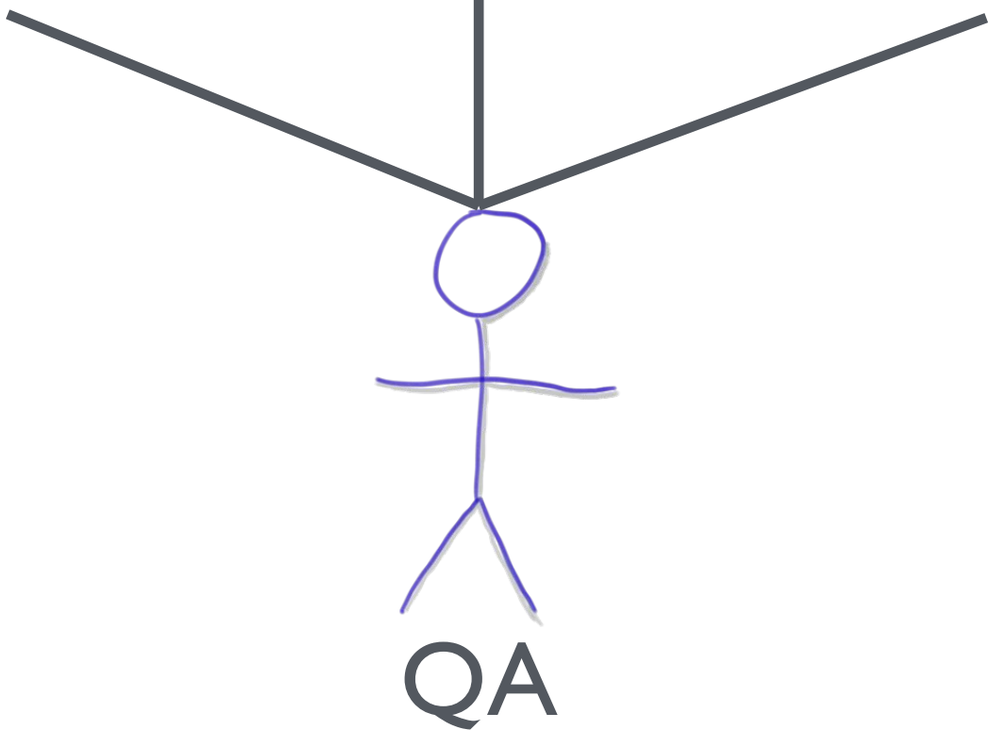
Commit Stage

Automated Acceptance Testing

Automated Capacity Testing

Manual Explorative Testing

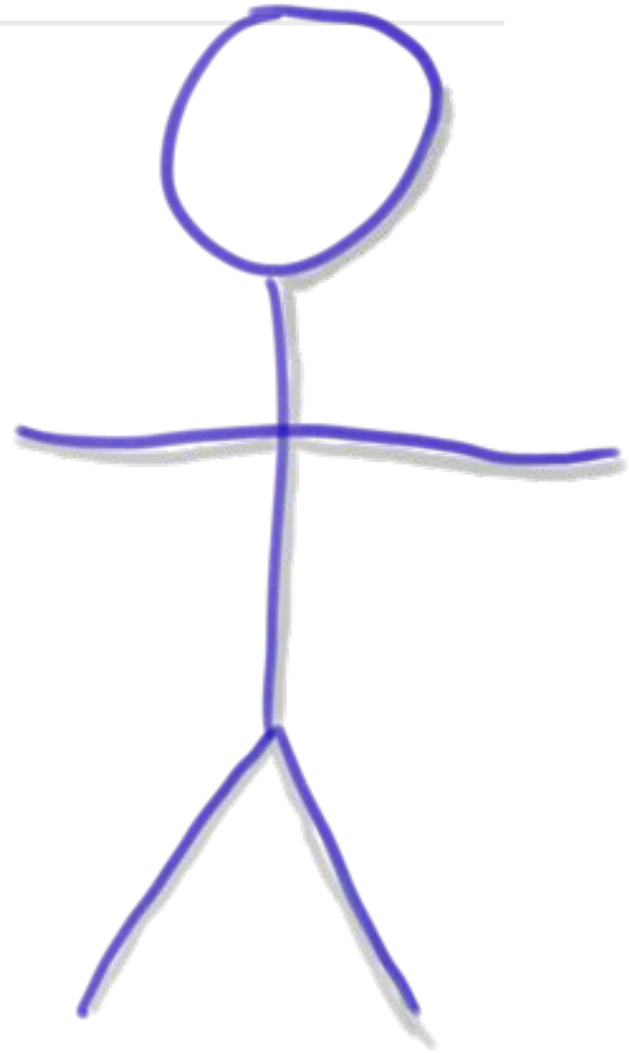
Release



QA

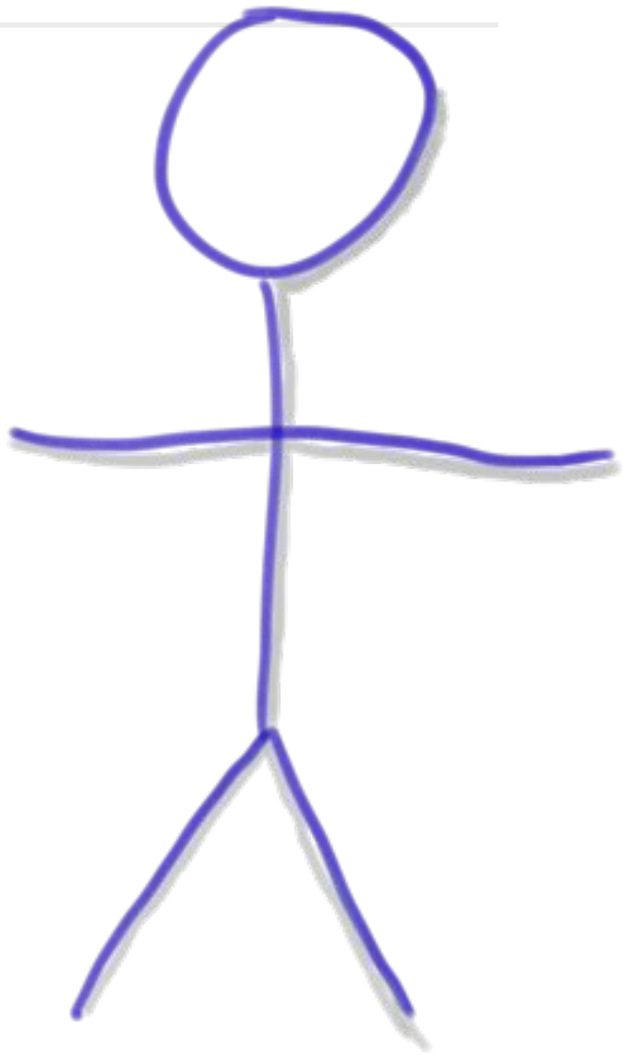
QA & CD

- Quality Assurance (QA) must provide tests
- ...or at least support testing
- Automated tests
- Manual tests too slow
- ...and too error prone
- Traditional Quality Assurance (QA) focuses on manual tests.



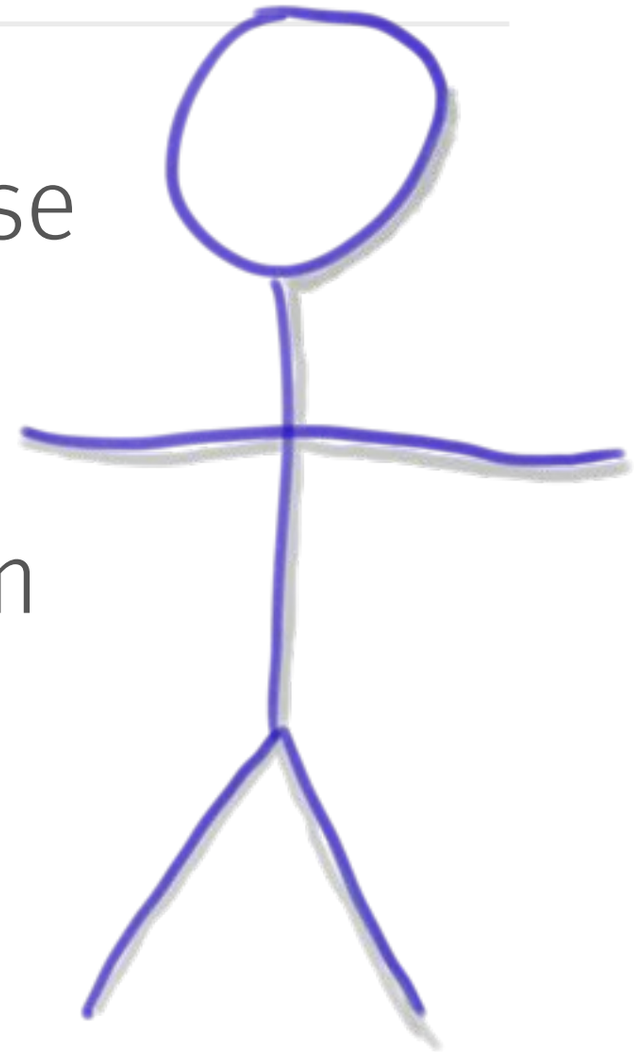
Customer

- Customer must provide information for automated acceptance test
- No more manual sign-off
- Needs trust
- ...and trust!
- ...and some technical literacy



Ops

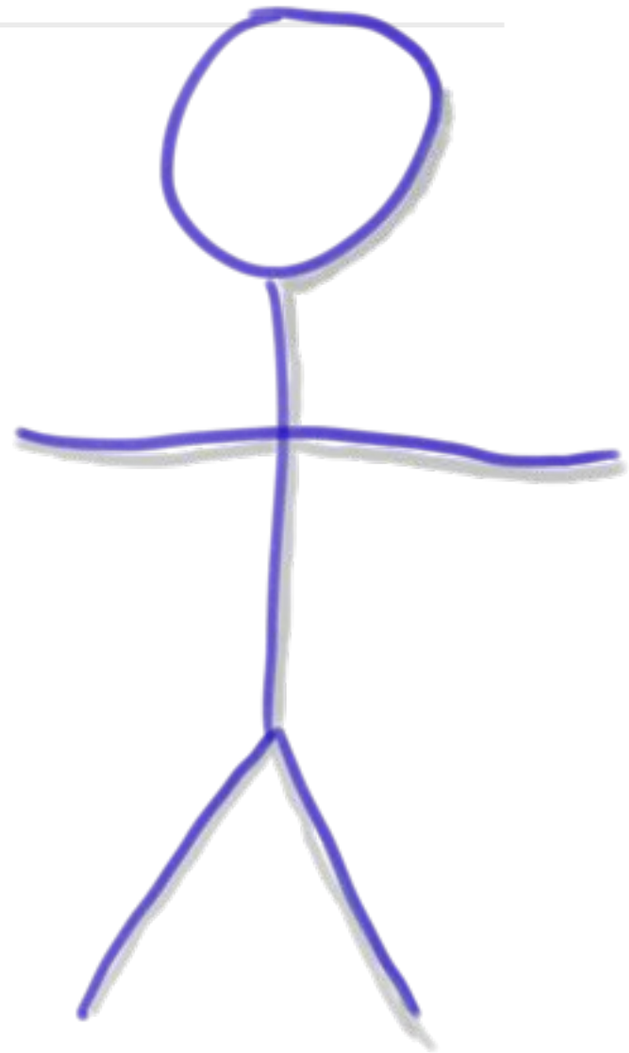
- One month waiting for a database
- ...that is cheaply provided
- ...by a highly optimized Ops team
- ...for “cost”



- Ops has very different incentives
- ...and doesn‘t work in projects.

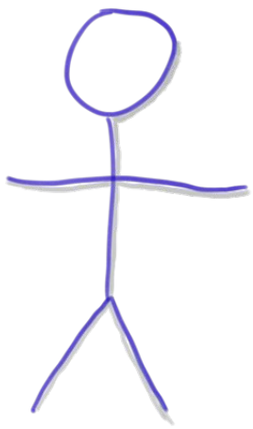
Dev

- Can automate
- i.e. develop software
- ...but have limited knowledge about QA and Ops.



Software = Automation

Extending the frontier



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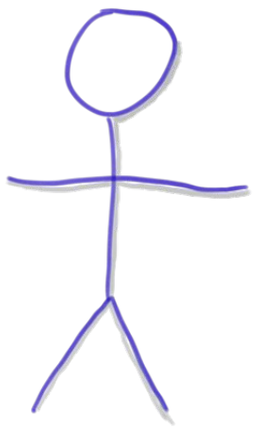

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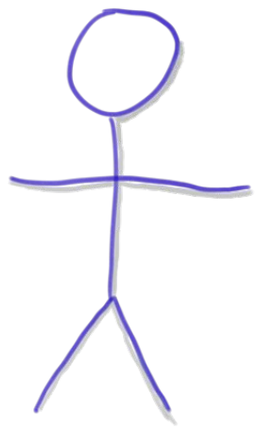

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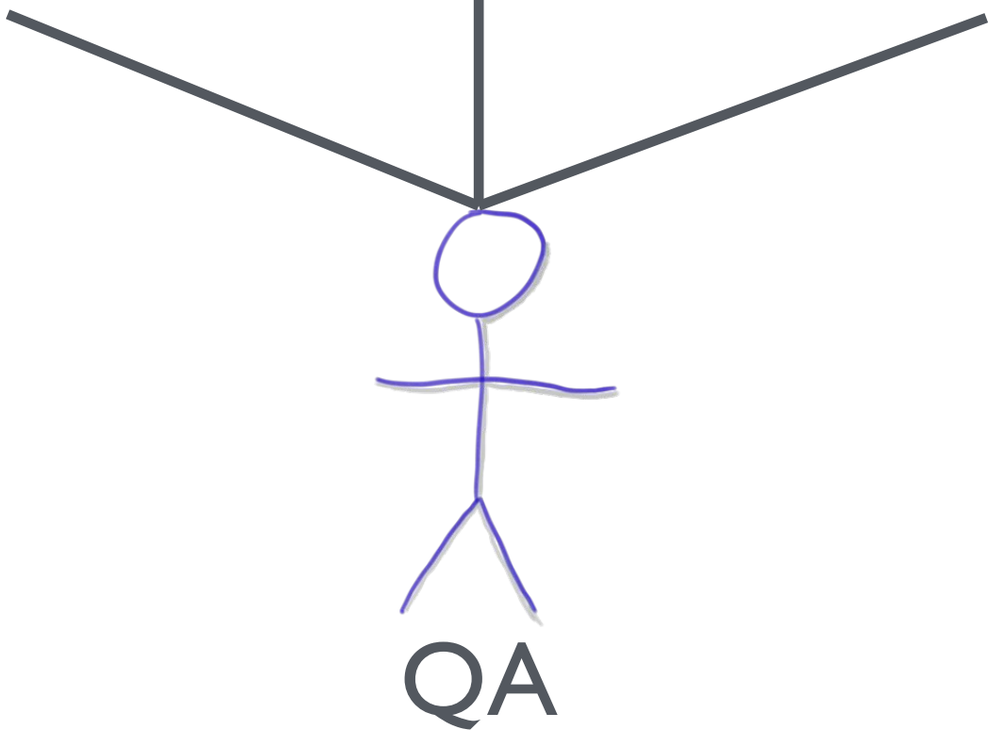
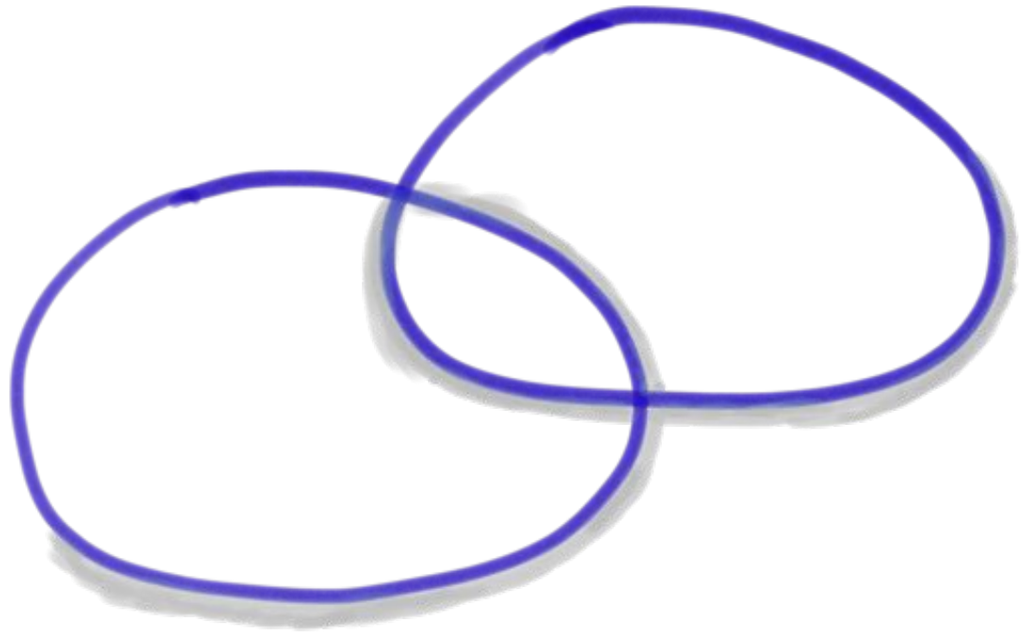
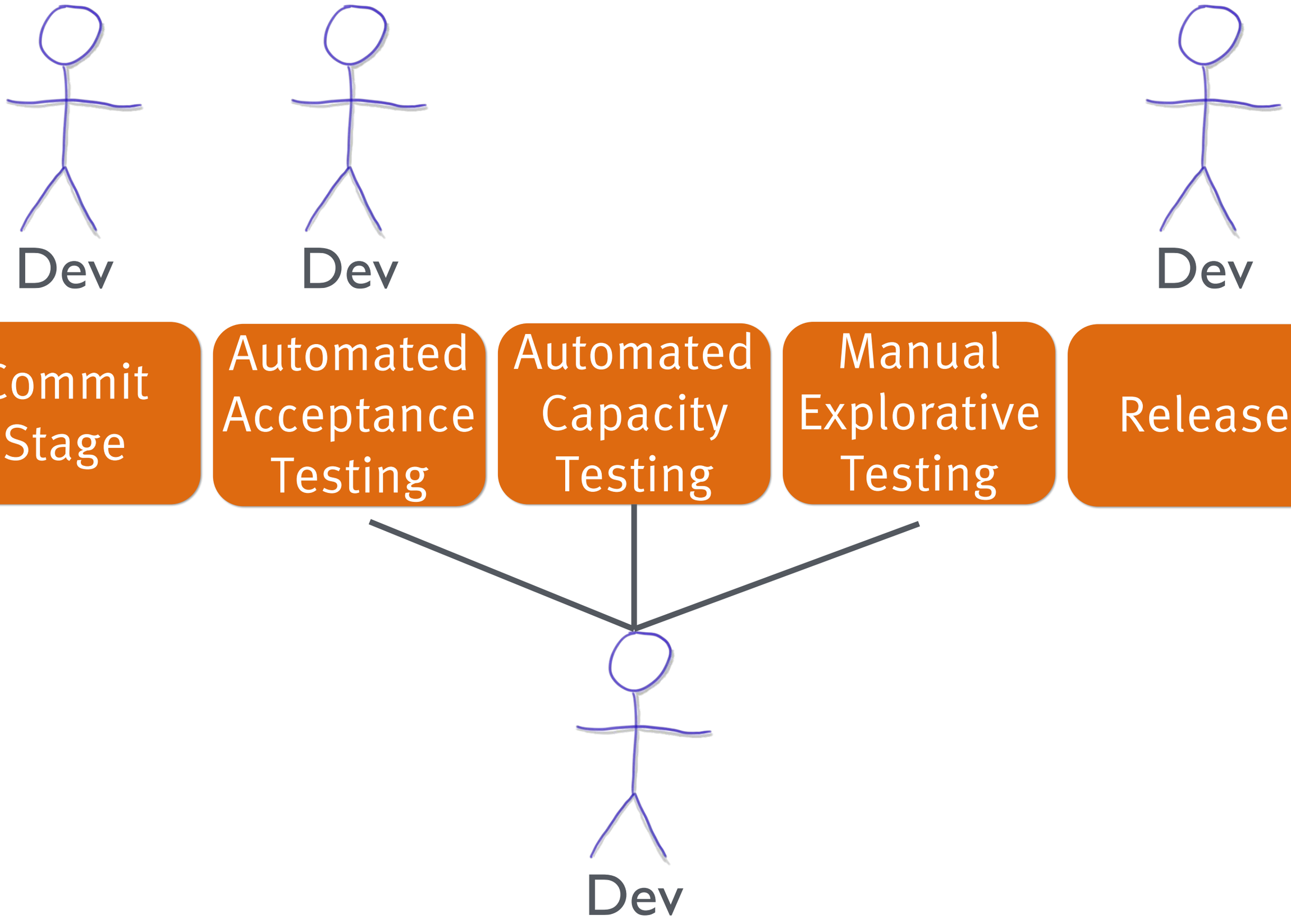


QA

Educate & Collaborate

- Dev do automation all day.
- Make all aware of the needed collaboration
- Encourage collaboration
- Not necessarily an org chart change




Dev
Dev
Dev
Commit Stage
Automated Acceptance Testing
Automated Capacity Testing
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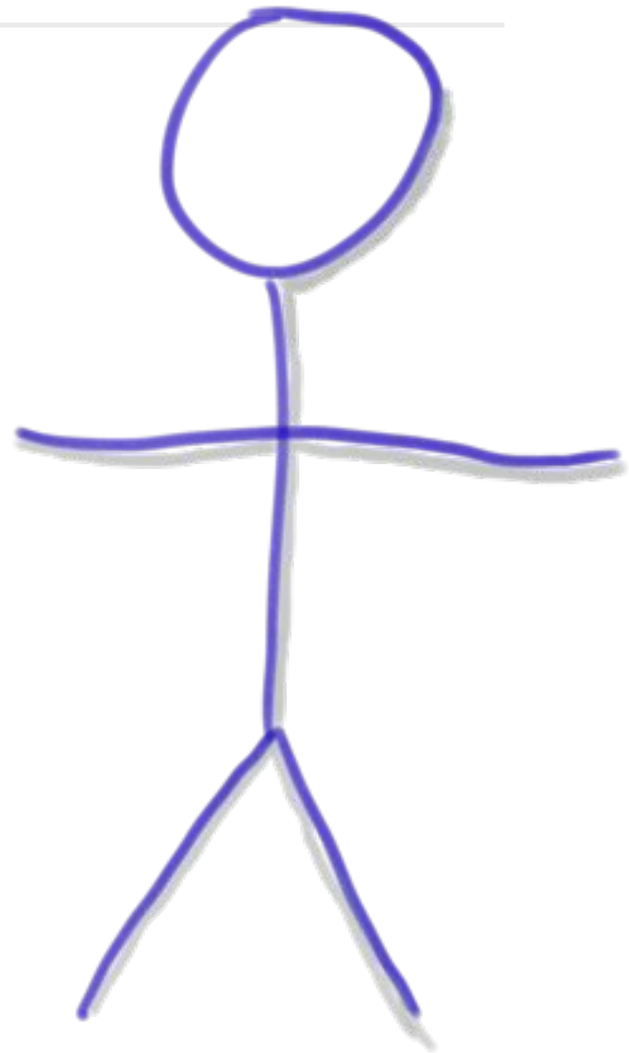
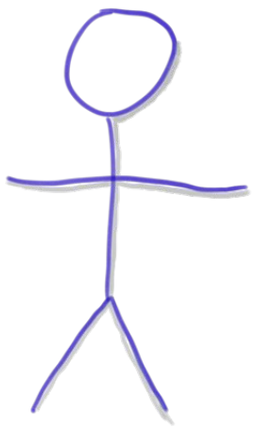
Release
Dev

Dev

- Dev takes over the other roles.
- Happening in practice
- ...but not a strategy
- Unused QA / Ops skills



Dev is learning Ops skills (e.g. Docker).



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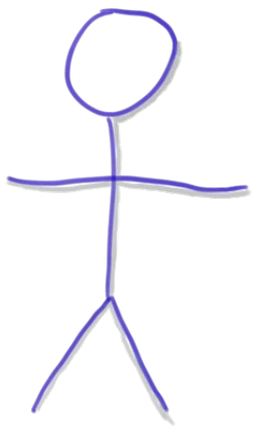

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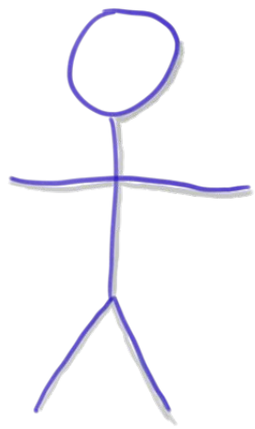

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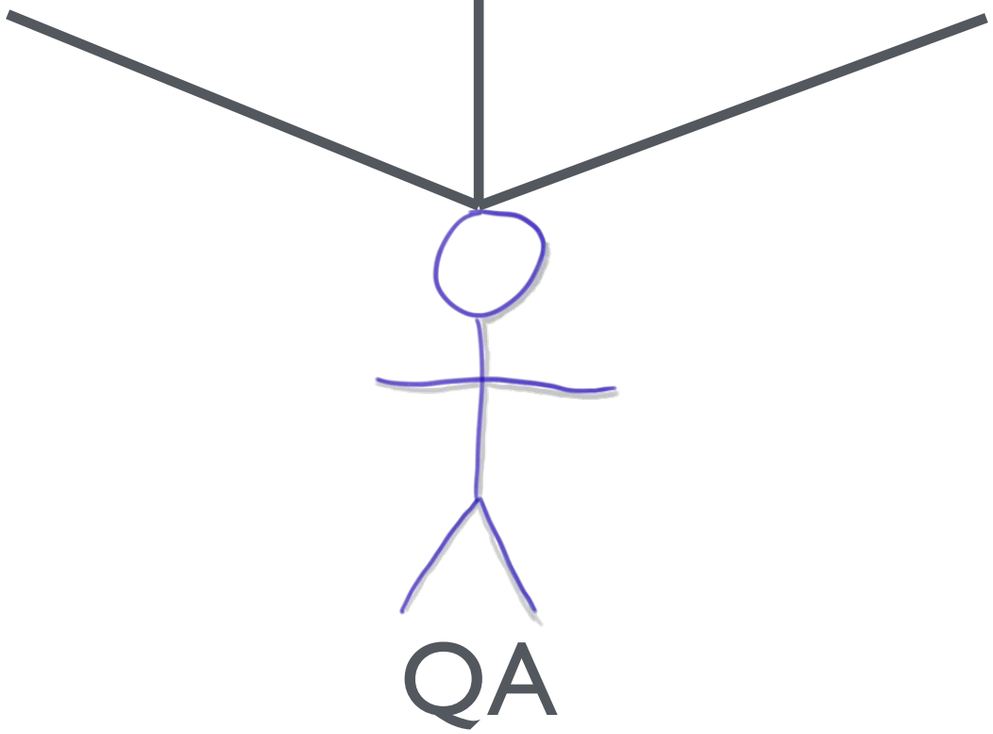
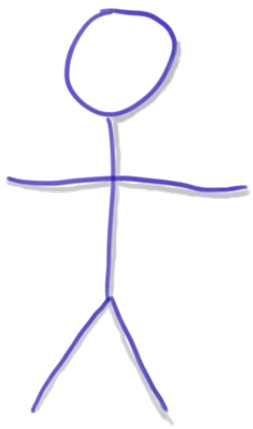


QA



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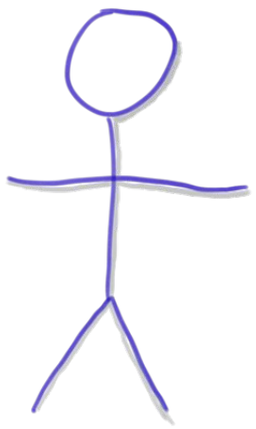

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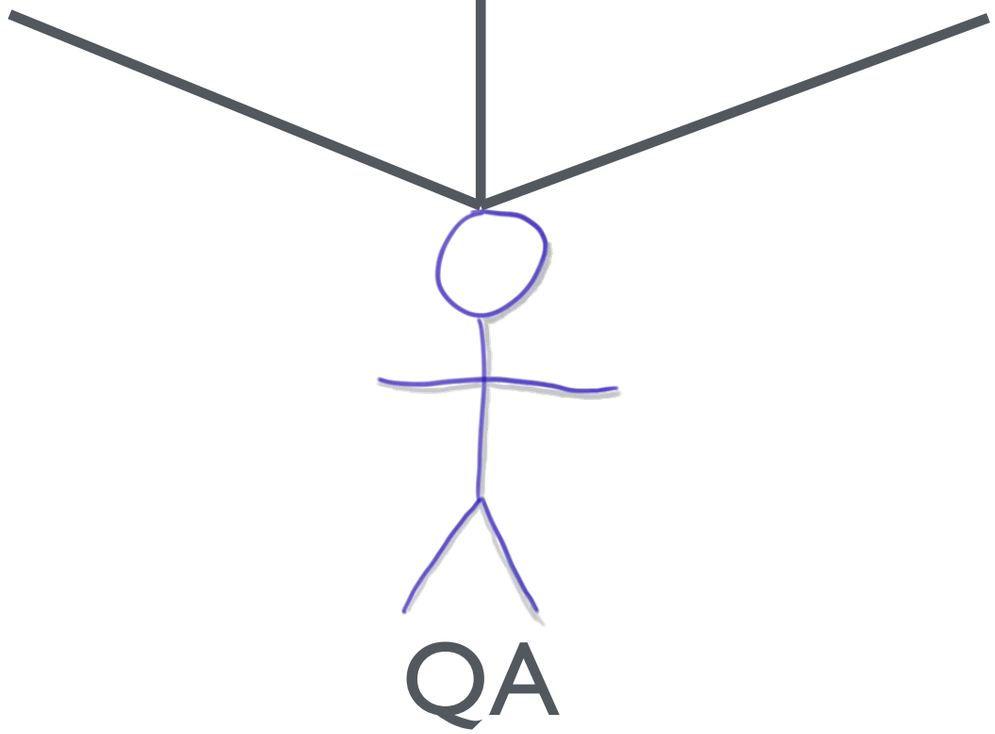
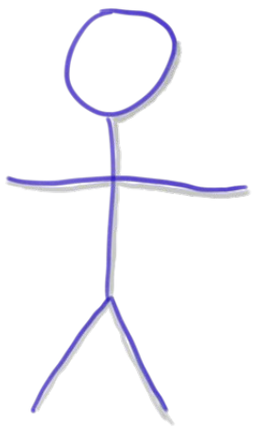


QA

PaaS

- Cloud Foundry,
  Openshift, Kubernetes

- Install PaaS once
  All future deployments via PaaS
- Technology to solve the social
  DevOps issue



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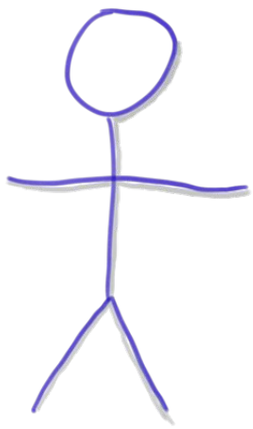

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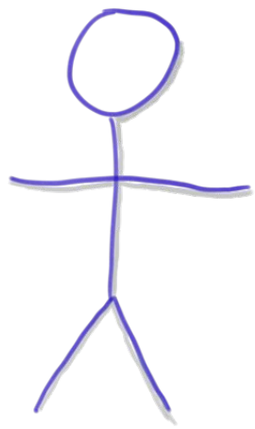

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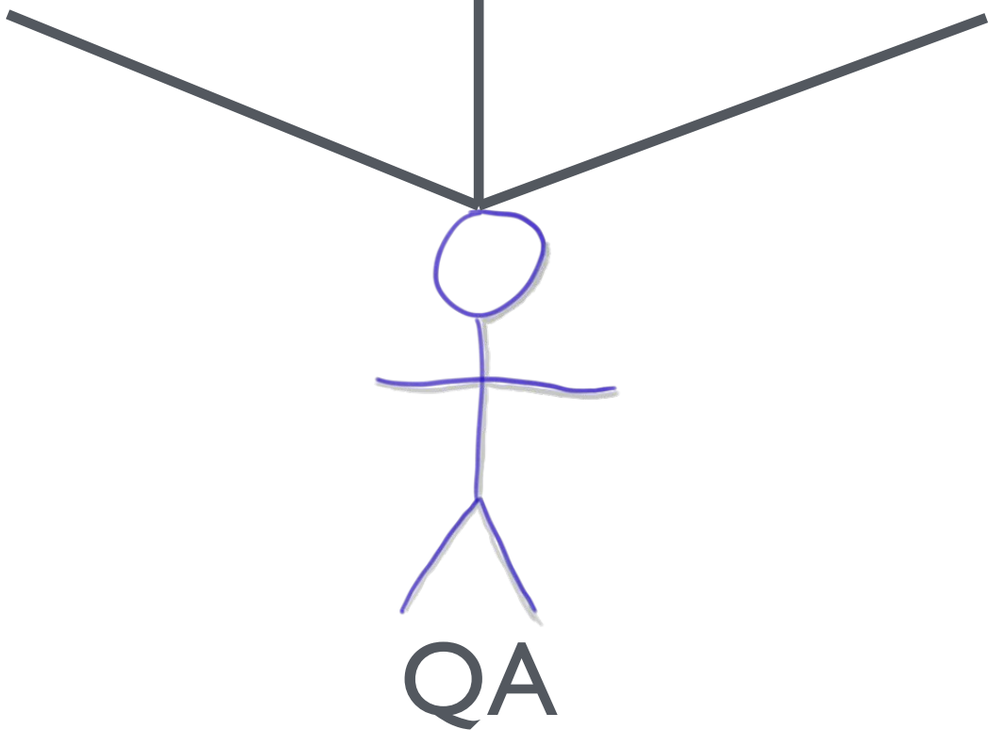
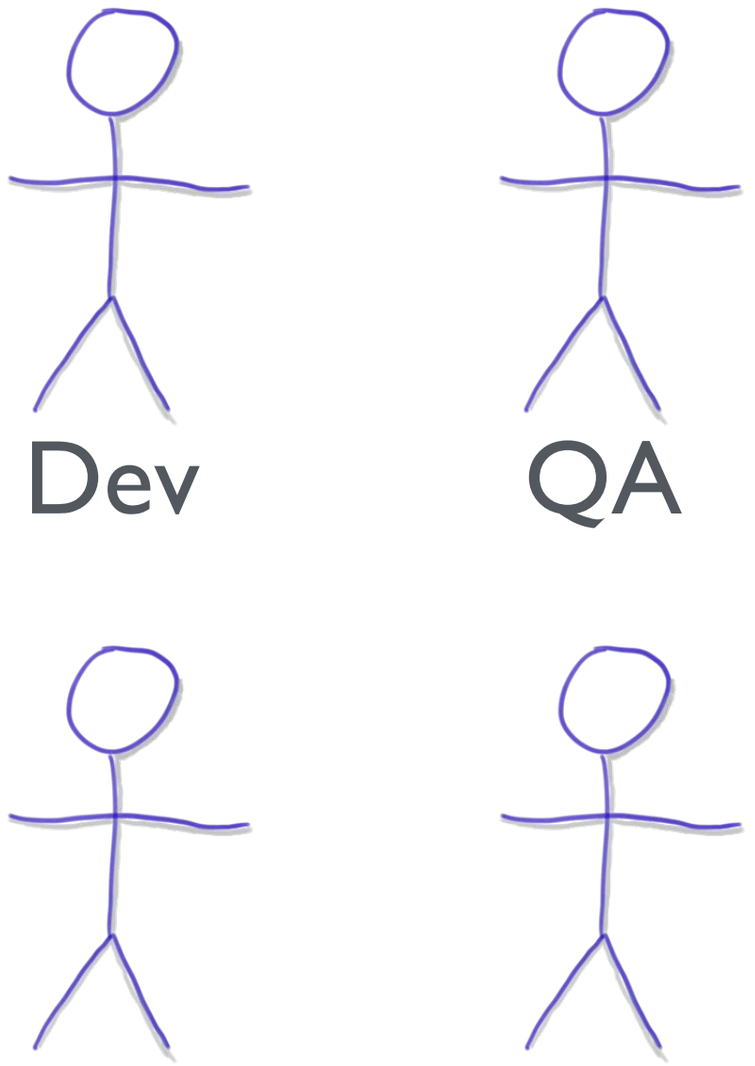


QA

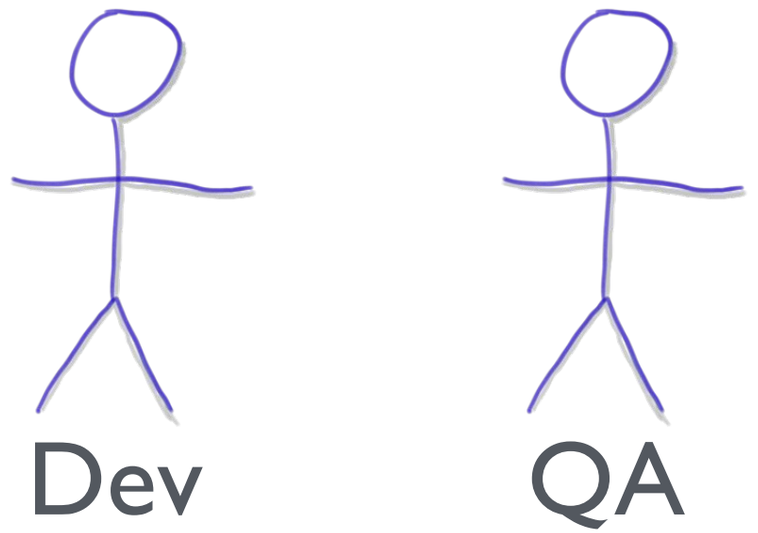
Cross-functional Team

- Include QA, Ops
- ...even business
- Might build guilds to foster knowledge exchange
- Spotify

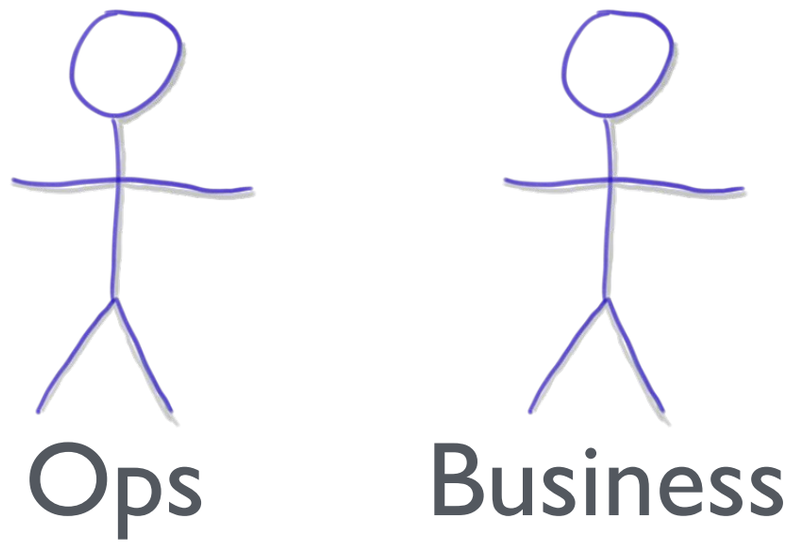


Cross-functional Team

- Can be led by business goals
- Can enable self organization



- Huge organizational shift
- What happened to managers???
- Management buy-in?



Frontier: Management Buy-in

Just like Agility

Agility in the Nineties

- Grassroots movement
- Teams want to do it.

- Management: Na, how can you delivery software without a huge sophisticated plan?

Agility Now

- Management: We do Scrum
- Teams skeptical or uninterested
- Business finds it hard to reap the benefits
- Still traditional product development.

Agility Now

- Need more than lip service
- ...convincing

Extending the frontier

CD & Management Buy-In

- Management buy-in won‘t solve the problems!
- It just means there will be other problems.

Conclusion

People !

Continuous Delivery

Business ?

(Management Buy-In)