



ALL DAY DEVOPS

NOVEMBER 6, 2019

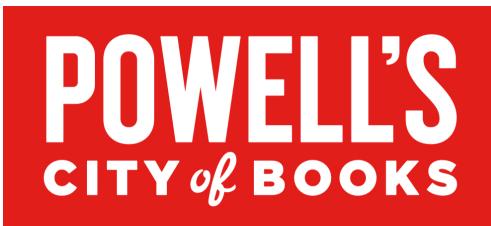
Maarika Krumhansl

Embracing On-Prem Delivery with DevOps



WHOAMI

- DevOps Manager at Powell's Books
- Volunteer with PDX Women in Tech



WHOAMI

- Earthquake Preparedness
- Estonian Dancing
- Reading



Story time

Smallish Tech Company

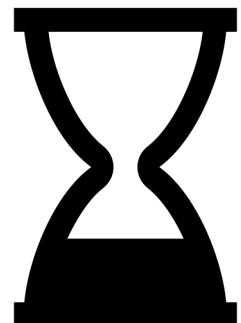
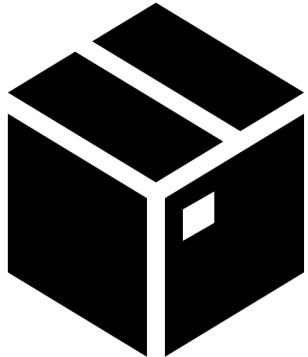
Requirements, Test &
Risk Management

Legacy Java Webapp

- Cloud & On-Prem
- Monolithic .war artifact
- Vertical scaling

Automotive
Medical Devices
Semiconductor
Aeronautics and Space

The Downside

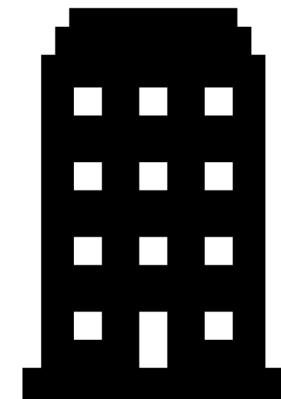


Test & Deploy On-Prem every 6 months

- Waterfall
- Manual
- Painful & Disruptive

Architecture would not scale

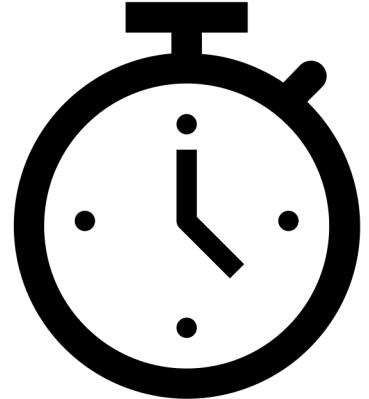
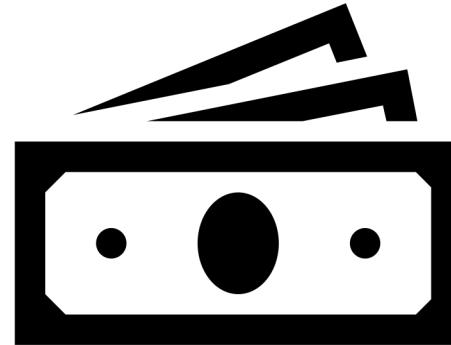
DEFINITIONS



FIRST PIECE OF ADVICE

Avoid on-prem if you can.

Dual-deployment model is expensive

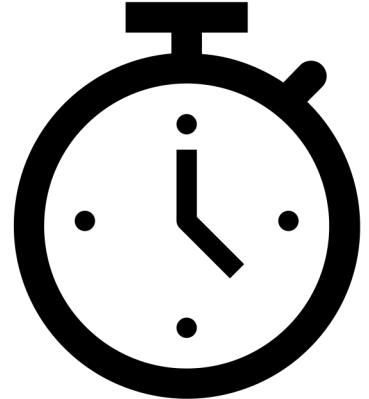
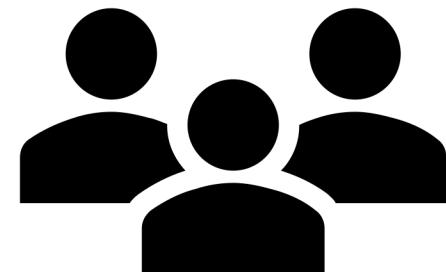
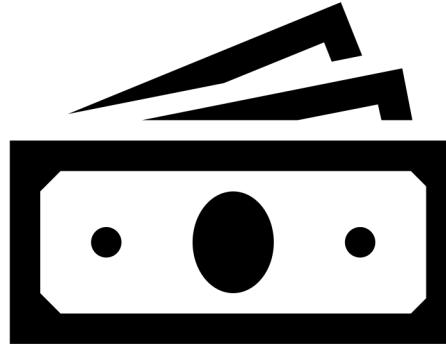


Time

Develop and test
Backport critical fixes

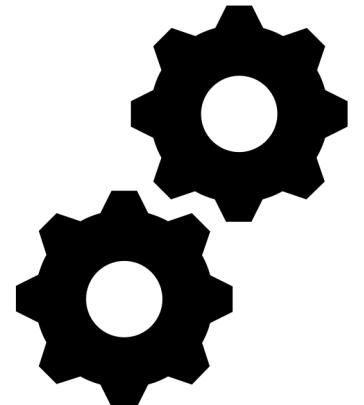
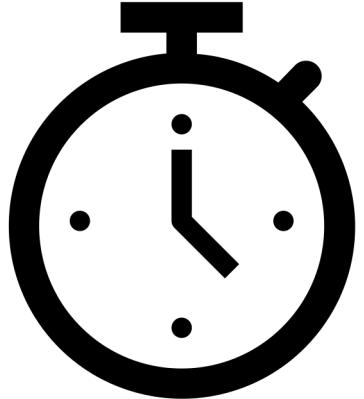
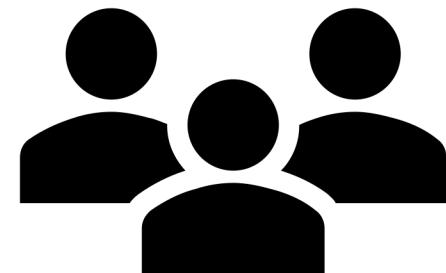
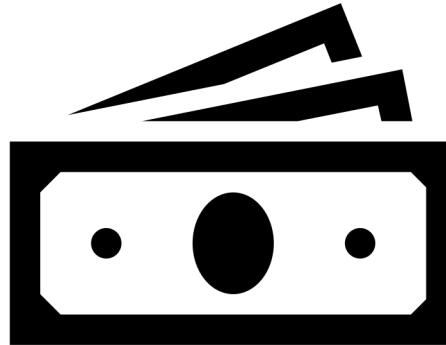
Dual-deployment model is expensive

People
Eng x 2
Customer Support



Dual-deployment model is expensive

Technology
Can't cost-optimize
Tech Debt

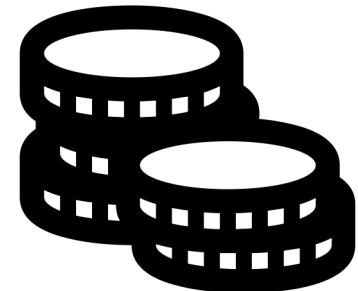
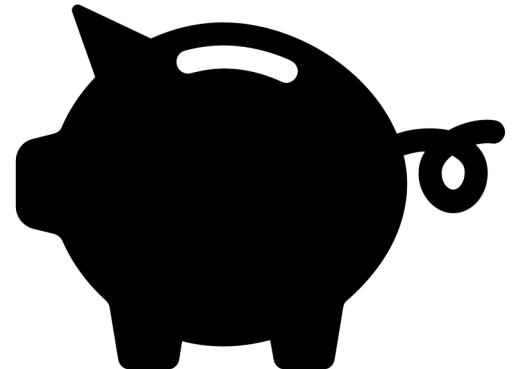


Reasons you may not be able to avoid on-prem

Target customer cannot Cloud

- Upgrade schedule
- Security
- Airgap

Business decision



Considerations

Bifurcate?

- App code vs deploy code

Microservices?

- No serverless

Containers?

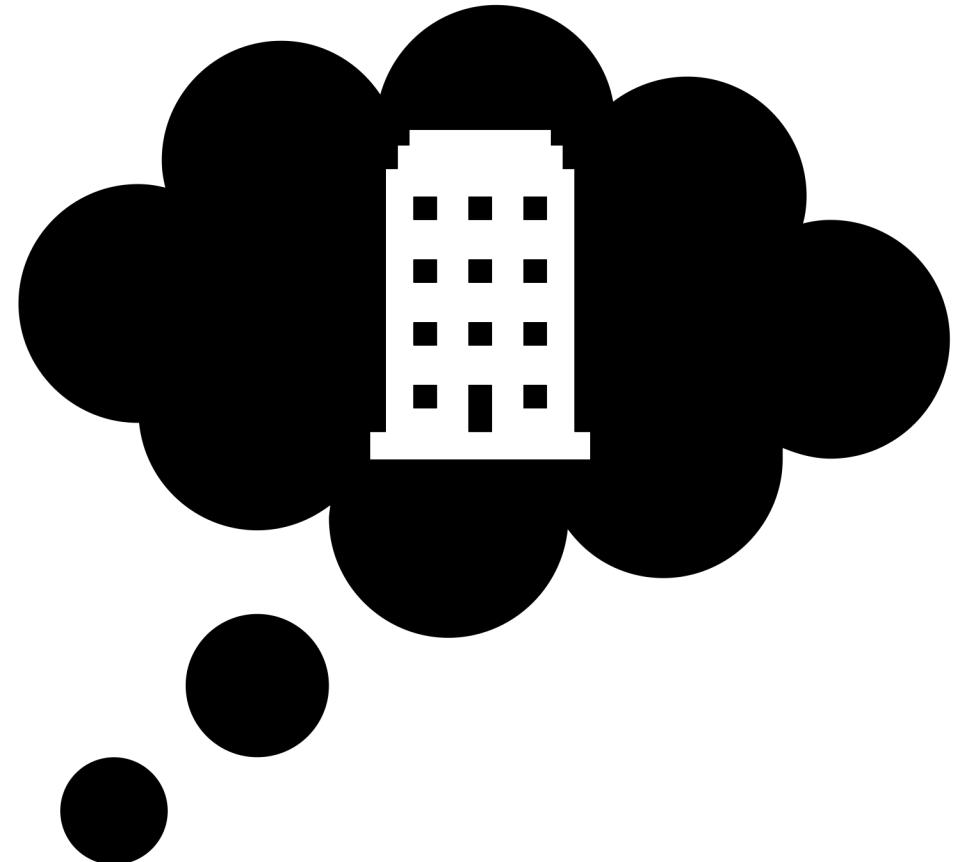
- “Install wizard”

Environment?

- OS, DB and resources

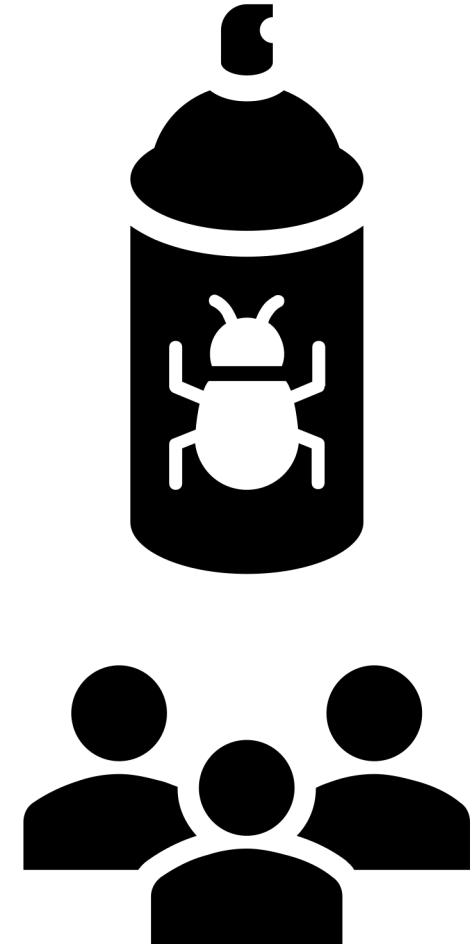
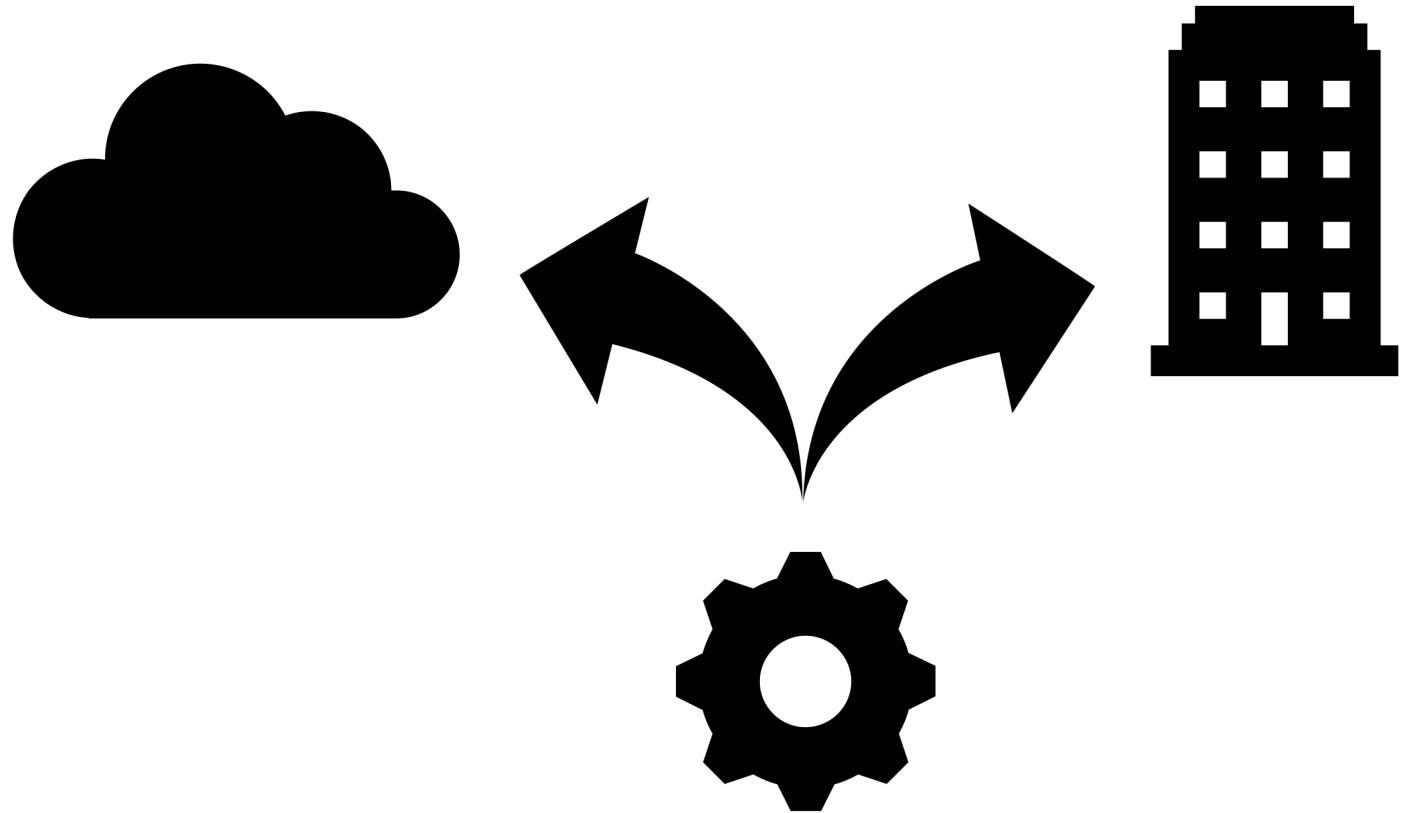
Hotfixes?

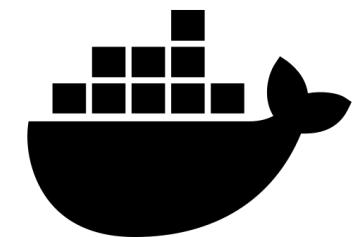
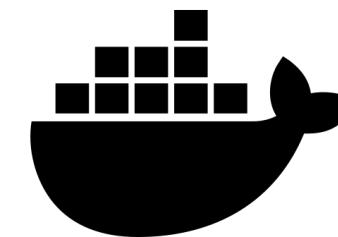
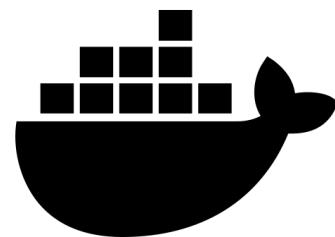
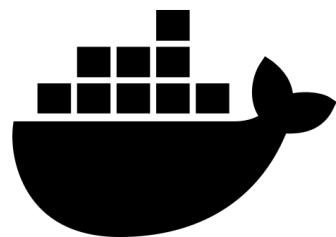
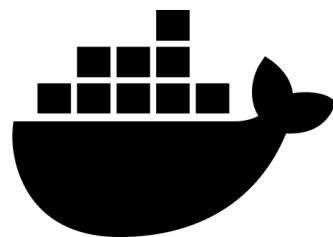
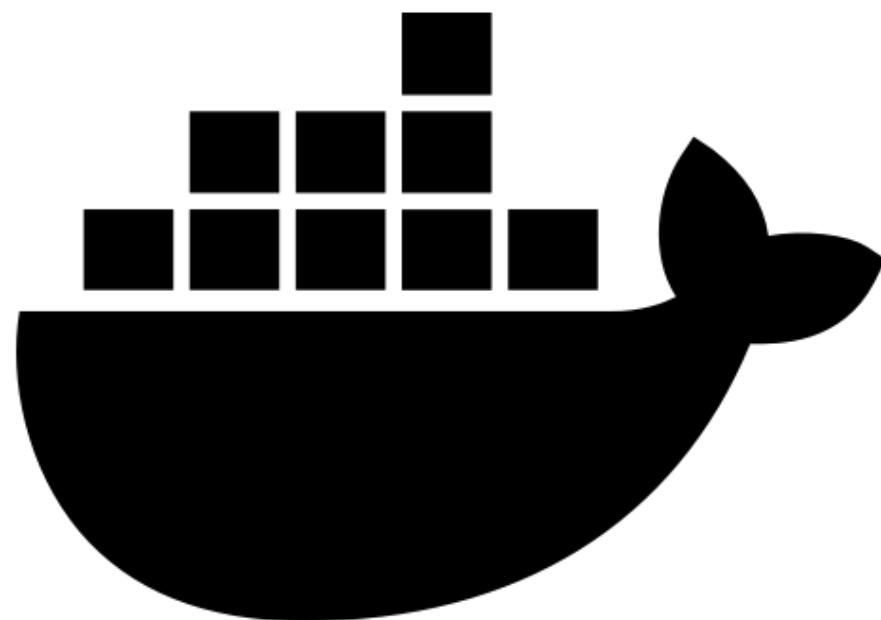
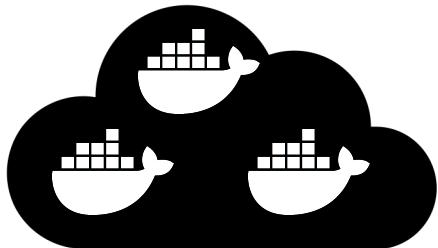
- Build definition in VCS



SECOND PIECE OF ADVICE

If you can't avoid on-prem, limit complexity.



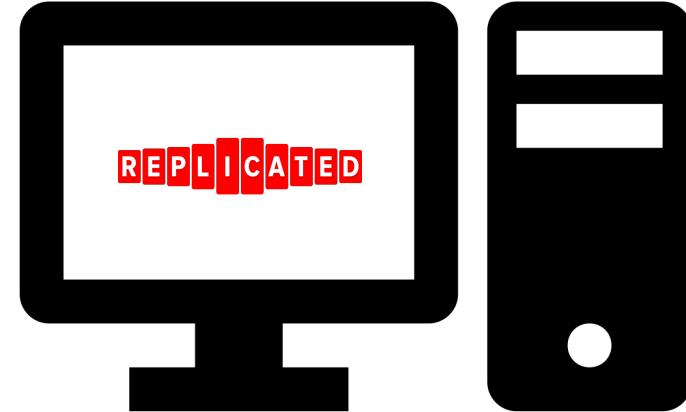


REPLICATED

Customer side

Install Admin Console

- Licenses



Pre-flight Check

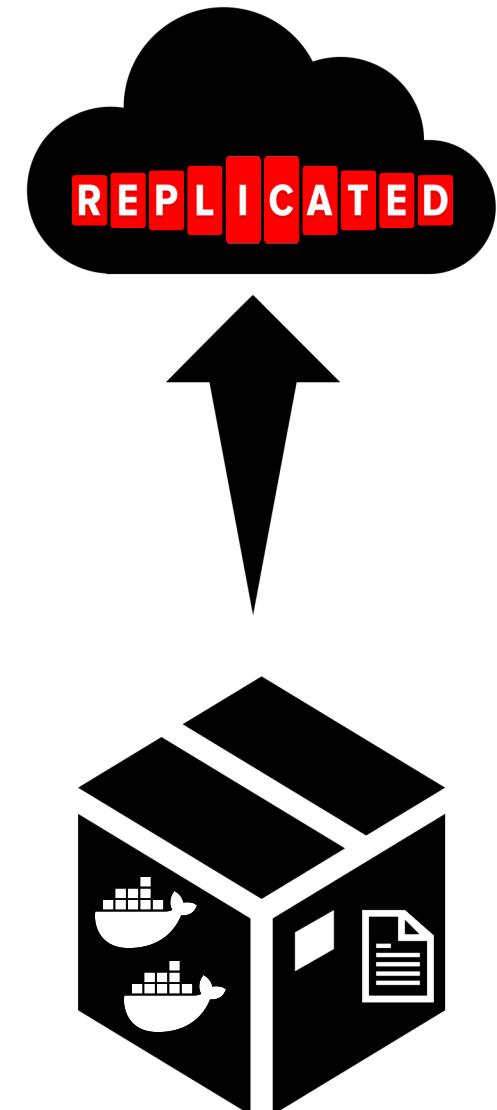
- OS
- Resources
- Supporting software
- etc



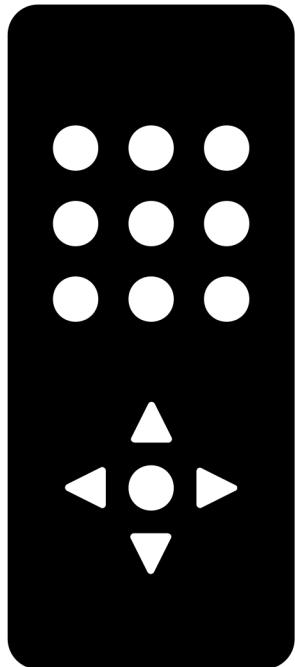
Vendor side

Build Automation

- Docker images
- .yaml config file

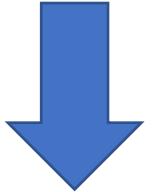


Channels

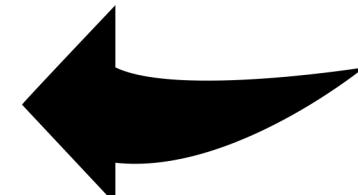
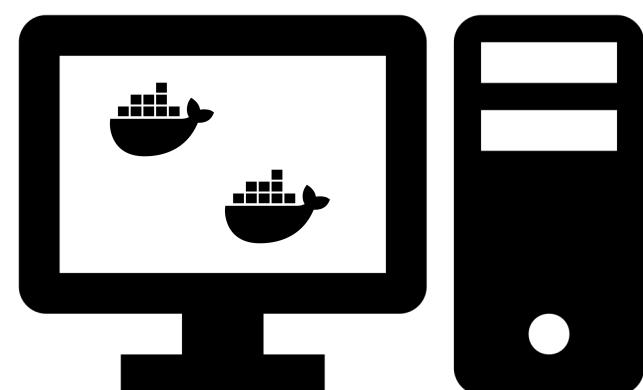


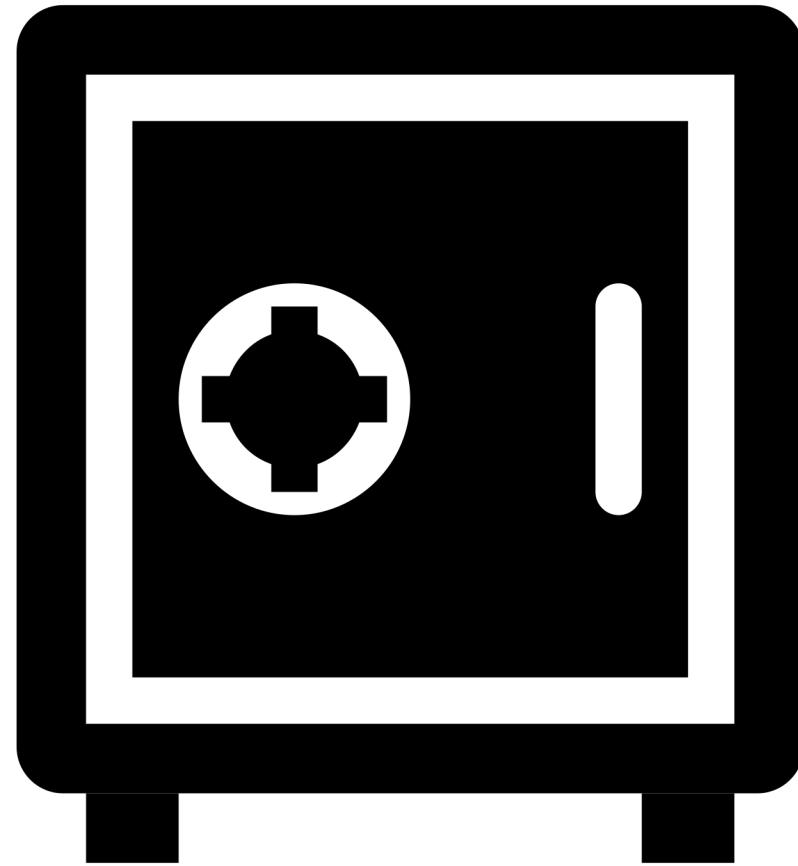
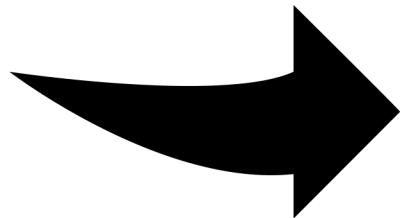
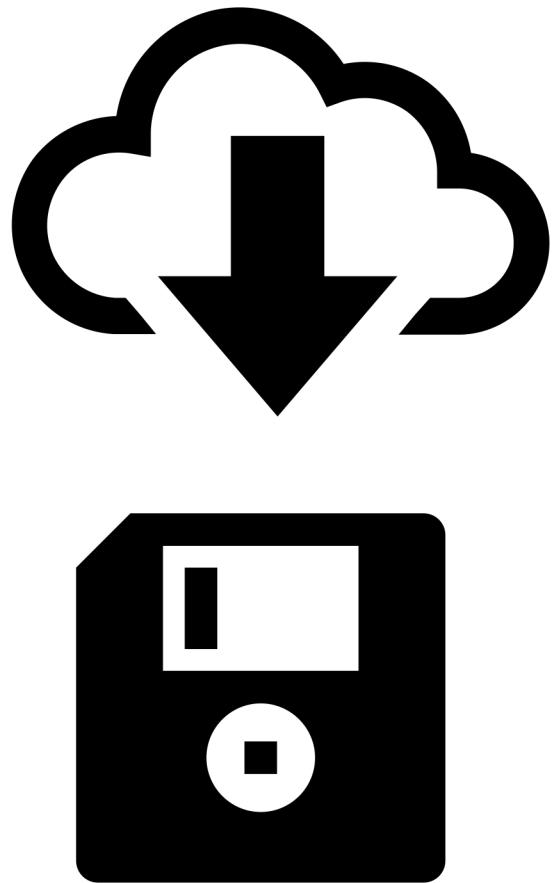
Build ID	Internal Channel	Production Channel
1010	Staging 1	
1011	Staging 2	
1012	Staging 3	Version 8.2.0
1013	Staging 4	
1014	Staging 5	Version 8.3.0

One-click Upgrade

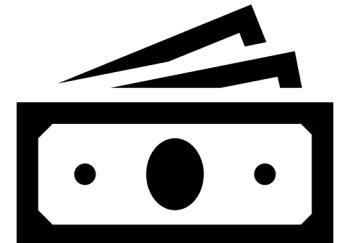
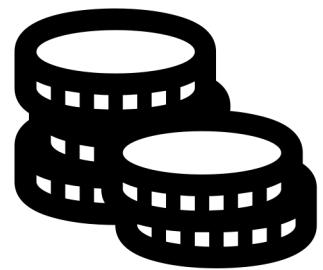
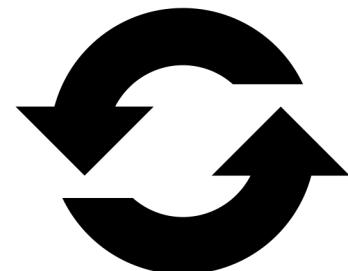


New	master 028d669 (1996)	Mar 19, 2019 11:44 AM	Never	Release Notes	Install
New	master 3c4f4c7 (1995)	Mar 19, 2019 11:10 AM	Never	Release Notes	Install
Current	Current (1971)	Mar 8, 2019 11:14 AM	Mar 27, 2019 11:27 AM	Release Notes	





On-prem container orchestration



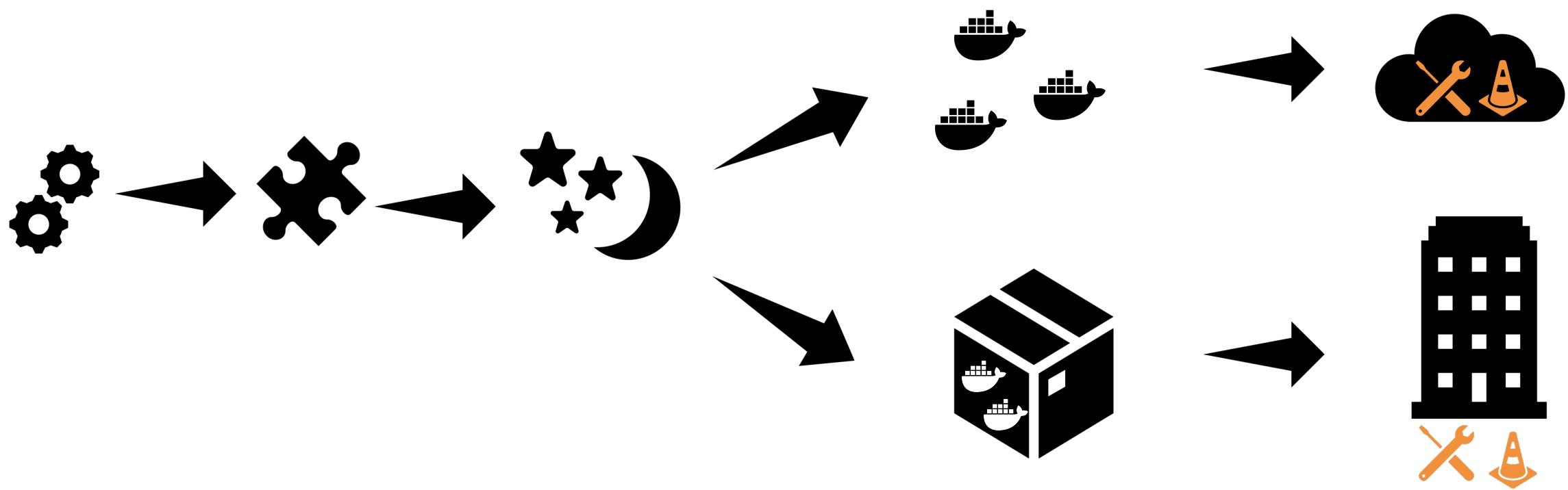
THIRD PIECE OF ADVICE

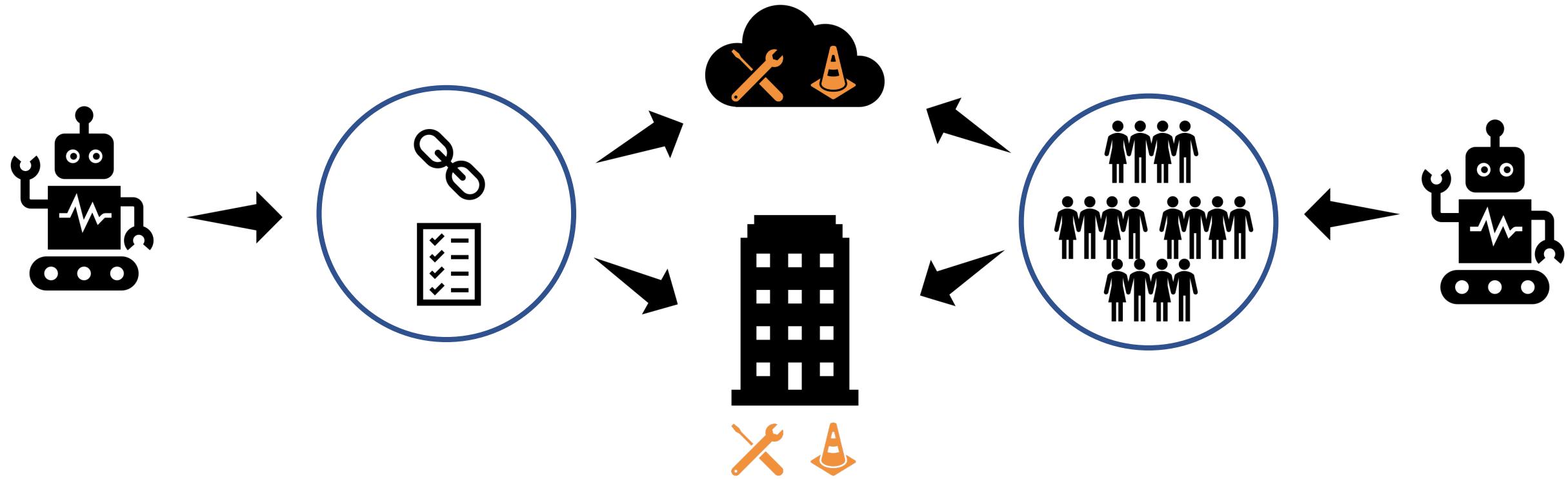
If you support an On-Prem option,
treat it like a first-class citizen.

IF IT'S PAINFUL, DO IT MORE OFTEN

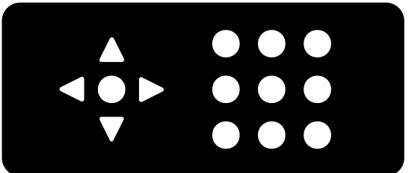
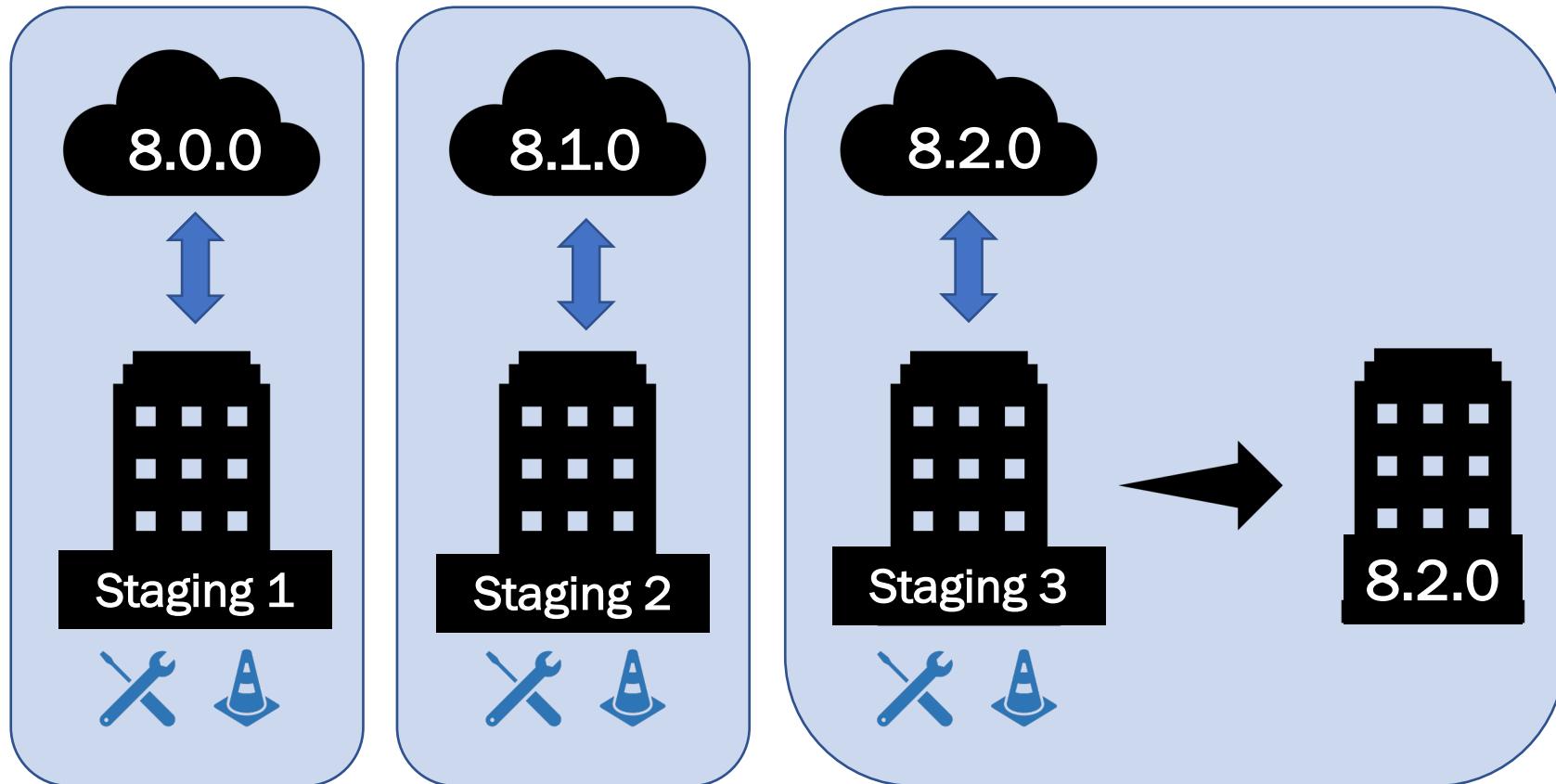
- *DevOps Proverb*







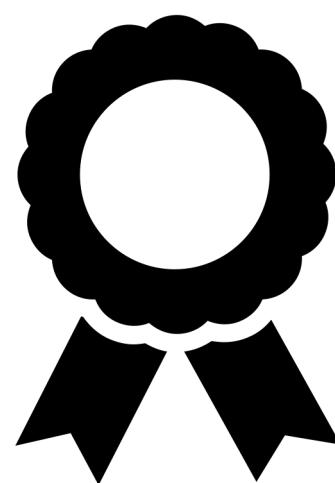
Continuous Delivery of On-Prem



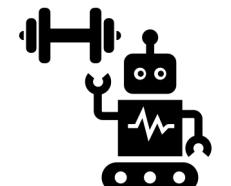
Internal	Production
Staging 1	
Staging 2	
Staging 3	8.2.0

Today On-prem is routine

Benefits to Customer



Benefits to Vendor





THE JOURNEY IS NOT OVER



Takeaways

- Avoid On-Prem if you can.
- If you can't avoid On-Prem, limit complexity.
 - Example: On-Prem Docker orchestration
- If you support On-Prem, treat it like a first-class citizen.

Thank you!

REFERENCES

"So You Wanna Go On-prem Do Ya" by John E. Vincent
<http://blog.lusis.org>

“AWS re:Invent 2018: The Hard Road Was Worth It: Making Jira Cloud-Native on AWS”
https://youtu.be/LgqJ_GZsowE



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