DEVOPS THAT MATTERS

Demystifying CI/CD and Build Pipelines

DEVOPS TORONTO

JFrog

Melissa McKay

@melissajmckay

DEVELOPER ADVOCATE at JFROG

WHY SHOULD A DEV CARE ABOUT DEVOPS?

- Define DevOps
- Describe Components
- Your IT Value Stream
- Some Stories/Suggestions

WHAT IS DEVOPS … DEVSECOPS?

The Phoenix Project

Gene Kim, Kevin Behr, George Spafford

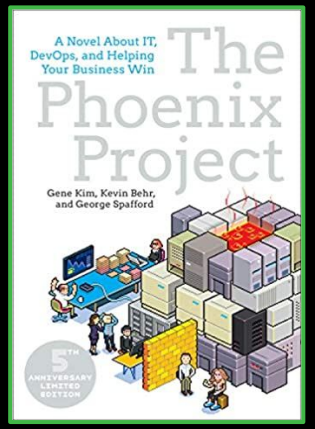
"Every person involved in a failed IT project should be forced to read this book."
—TIM O'REILLY, Founder & CEO of O'Reilly Media

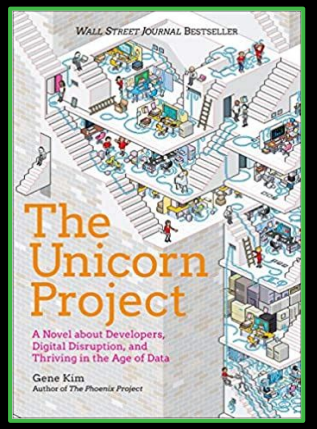
The Unicorn Project

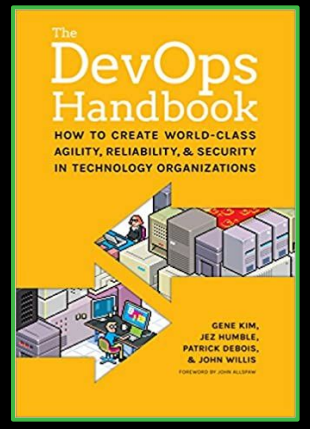
Gene Kim

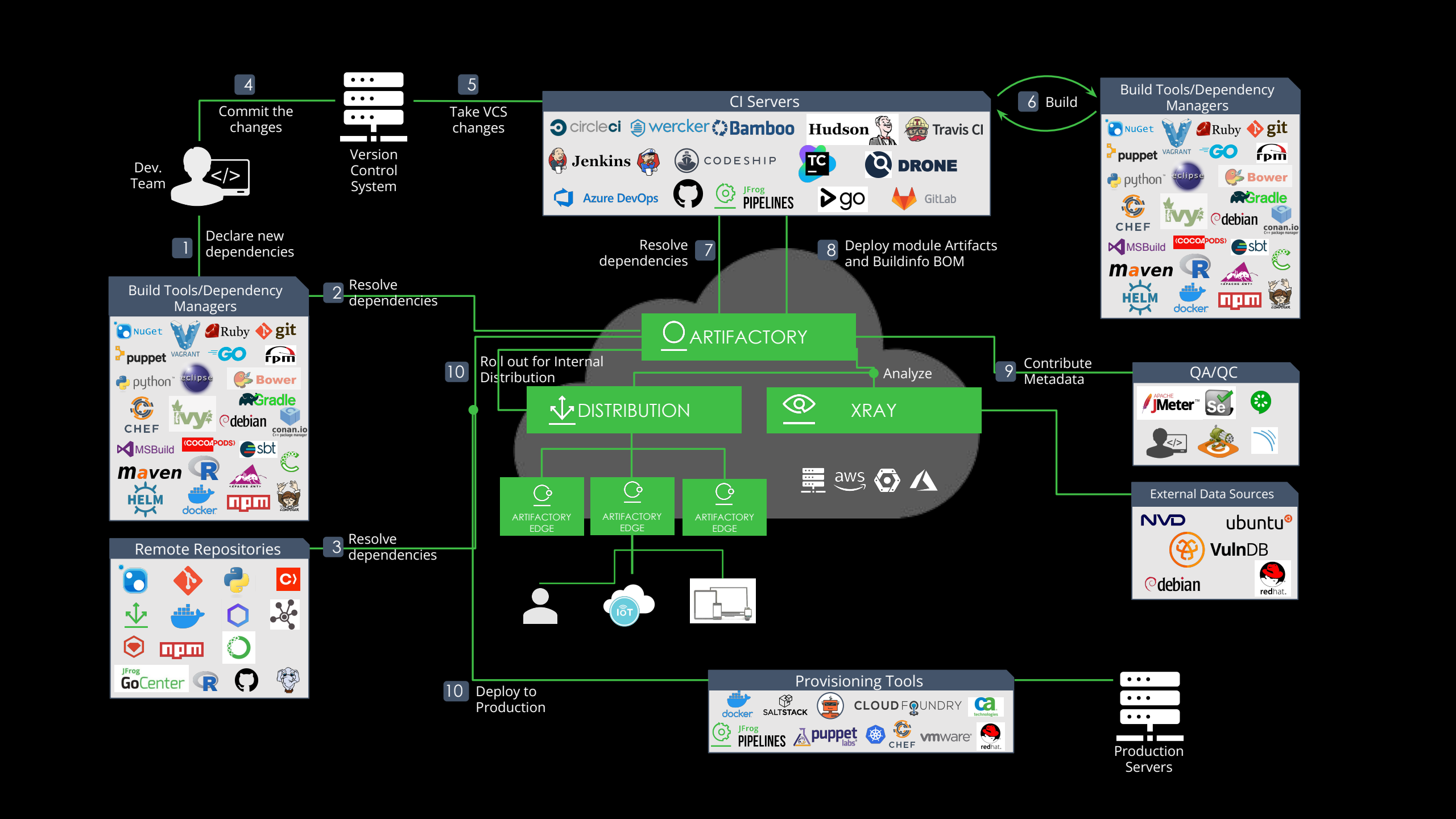
The DevOps Handbook

Gene Kim, Patrick Debois, John Willis,
Jez Humble, John Allspaw








4
Commit the changes
Version Control System
5
Take VCS changes
CI Servers
6 Build
Build Tools/Dependency Managers
Dev. Team
1
Declare new dependencies
Resolve dependencies
7
8
Deploy module Artifacts and Buildinfo BOM
Build Tools/Dependency Managers
2
Resolve dependencies
ARTIFACTORY
10
Roll out for Internal Distribution
Analyze
9
Contribute Metadata
QA/QC
DISTRIBUTION
XRAY
ARTIFACTORY EDGE
ARTIFACTORY EDGE
ARTIFACTORY EDGE
External Data Sources
Remote Repositories
3
Resolve dependencies
10
Deploy to Production
Provisioning Tools
Production Servers

DEV(SEC)OPS COMPONENTS

Single Source of Truth

Build and test on every integration

Full bill of materials and binary history for traceability

Deep scanning of dependencies and containers

Automated deployment to the edge and beyond

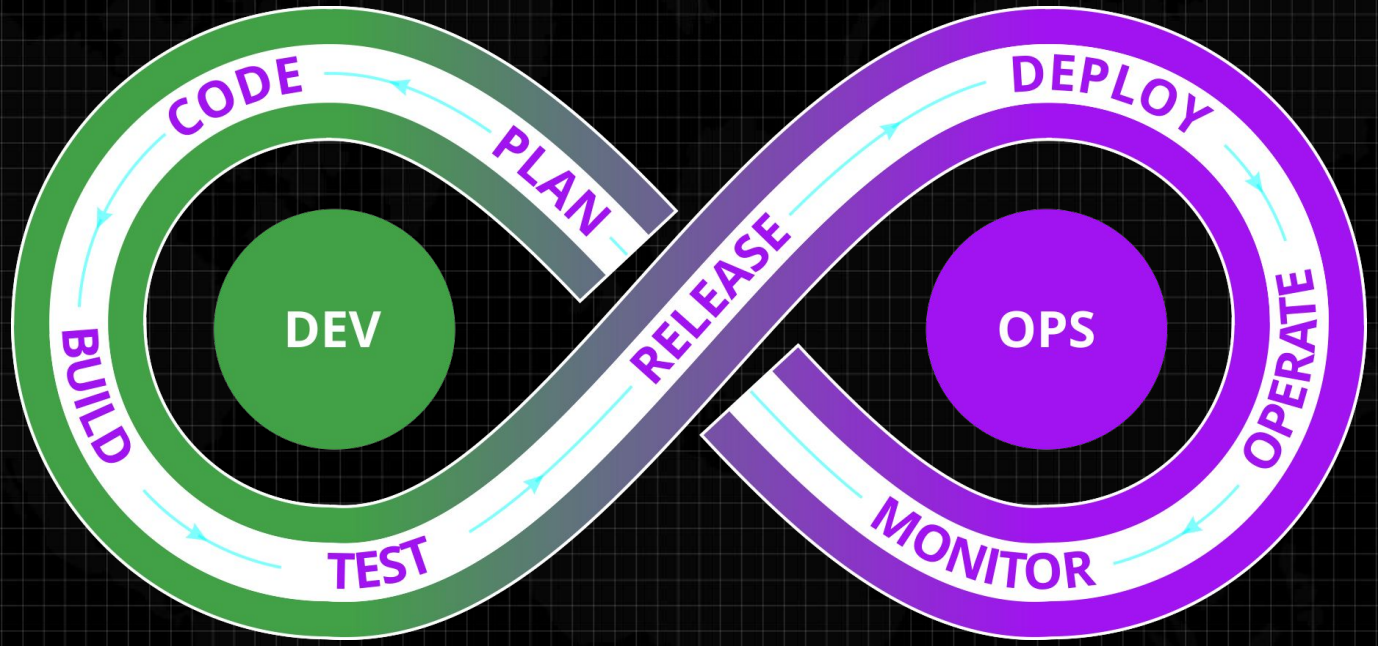
WHAT DO YOU REALLY CARE ABOUT?

- Fast?
- Efficient?
- Reliable?
- Economical?

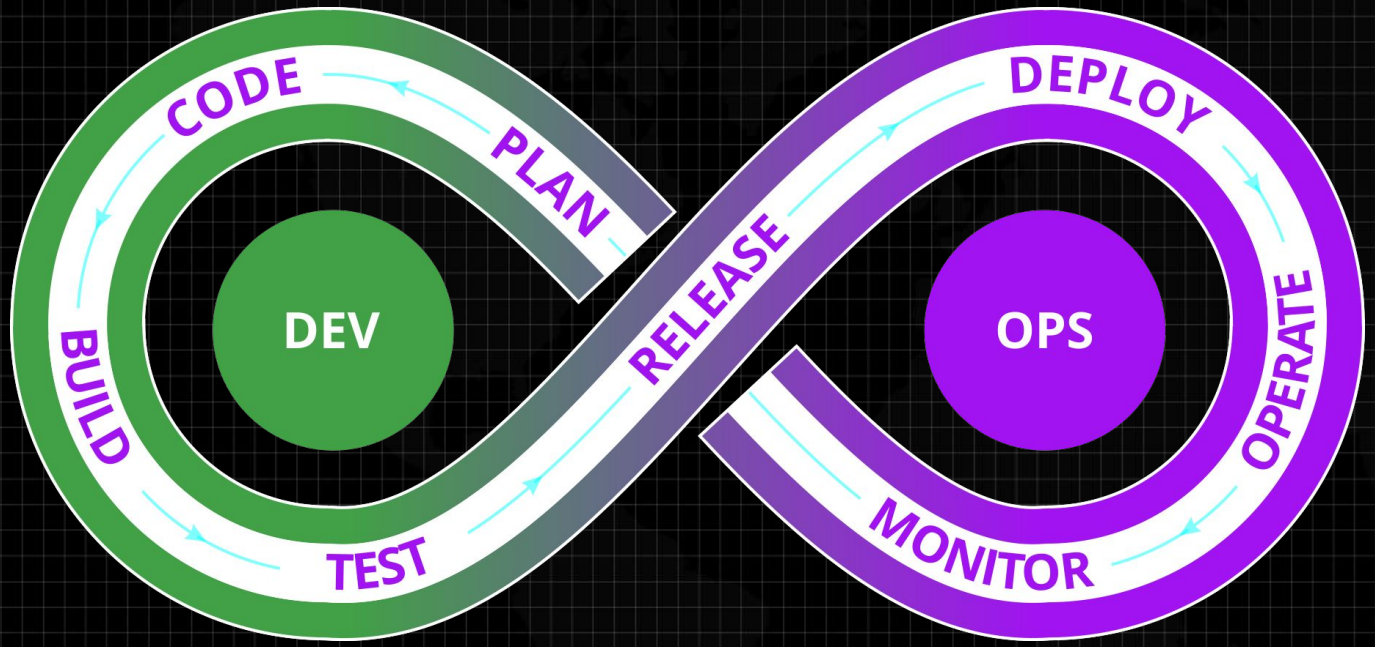
```
LOGGER.info("In function transformMedia");
```

ELIMINATE SILOS!

YOUR IT VALUE STREAM

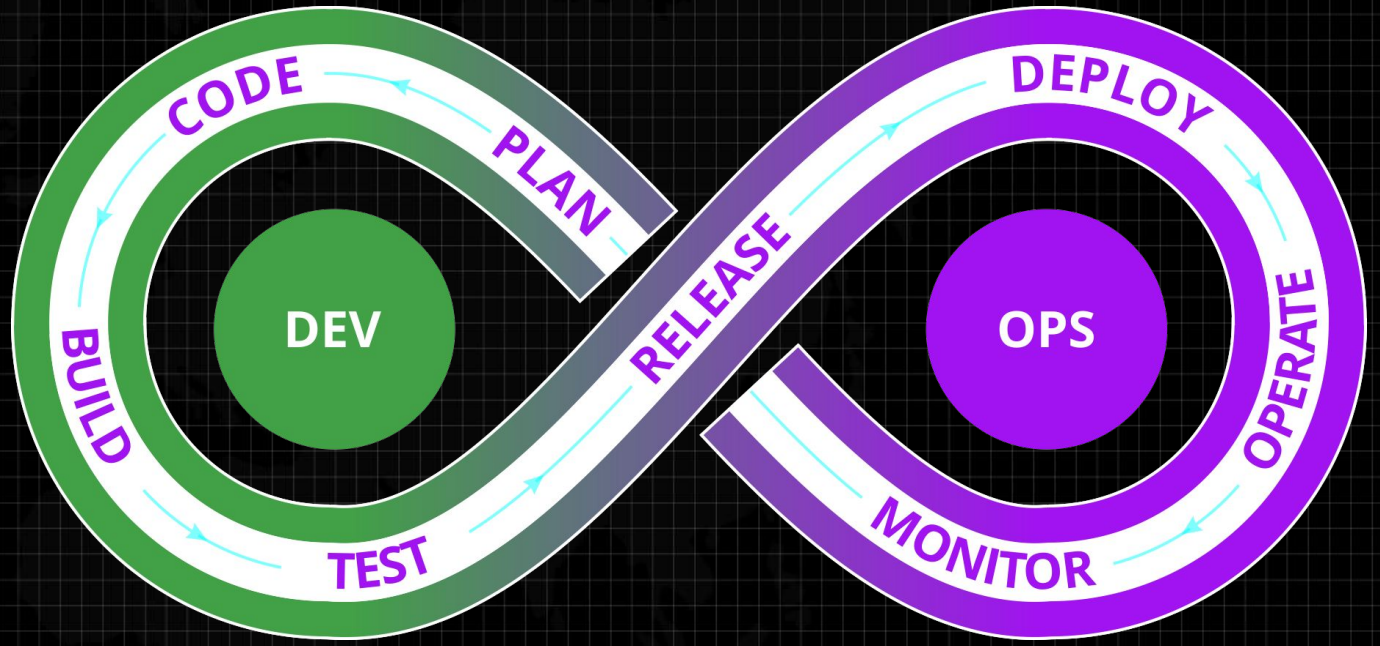


LET'S TALK PIPELINES



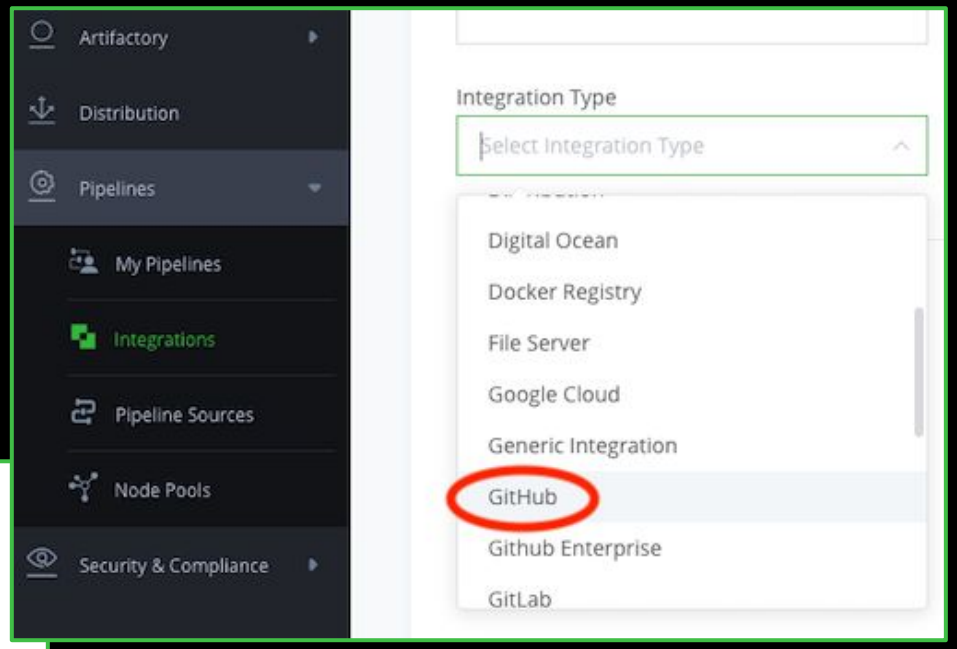
IMPROVE BY 1%

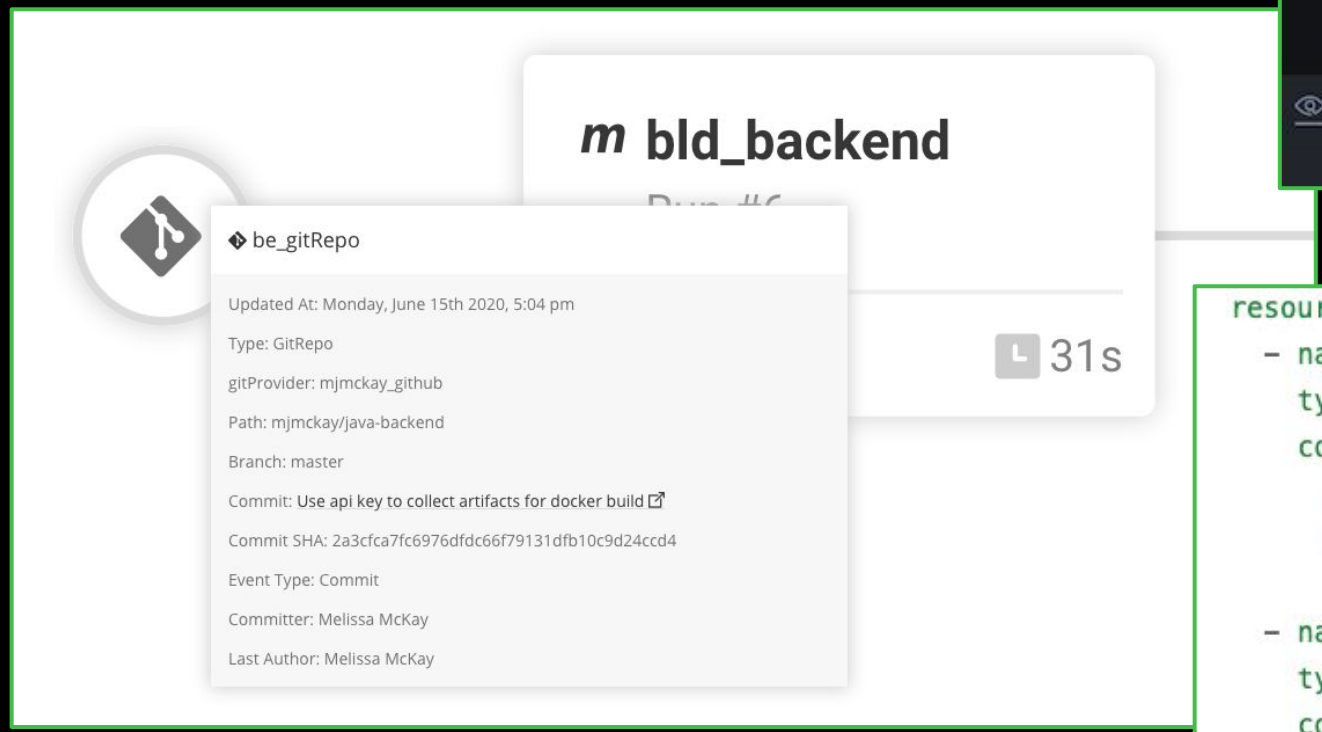
- Fast Enough?
- Efficient Enough?
- Reliable Enough?
- Economical Enough?



RECOGNIZE THE PROBLEM

CODE, TEST, CHECK-IN, REPEAT

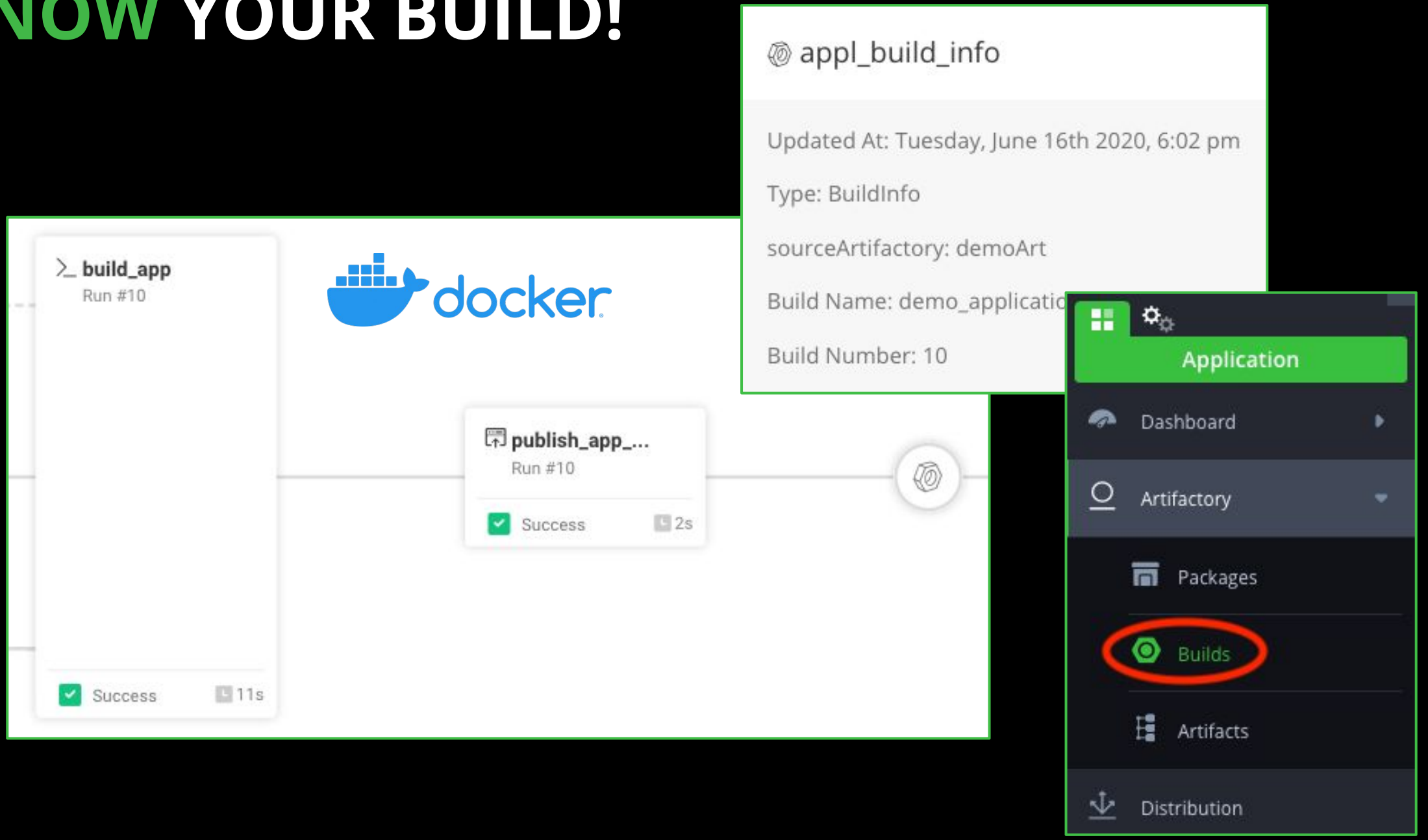




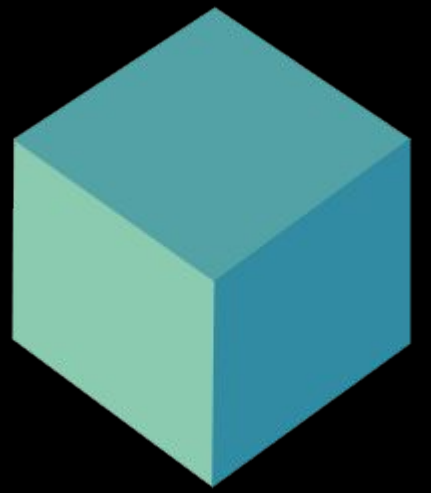

```yaml
resources:
  - name: be_gitRepo
    type: GitRepo
    configuration:
      path: mjmckay/java-backend
      gitProvider: mjmckay_github

  - name: fe_gitRepo
    type: GitRepo
    configuration:
      path: mjmckay/vue-frontend
      gitProvider: mjmckay_github
```

KNOW YOUR BUILD!

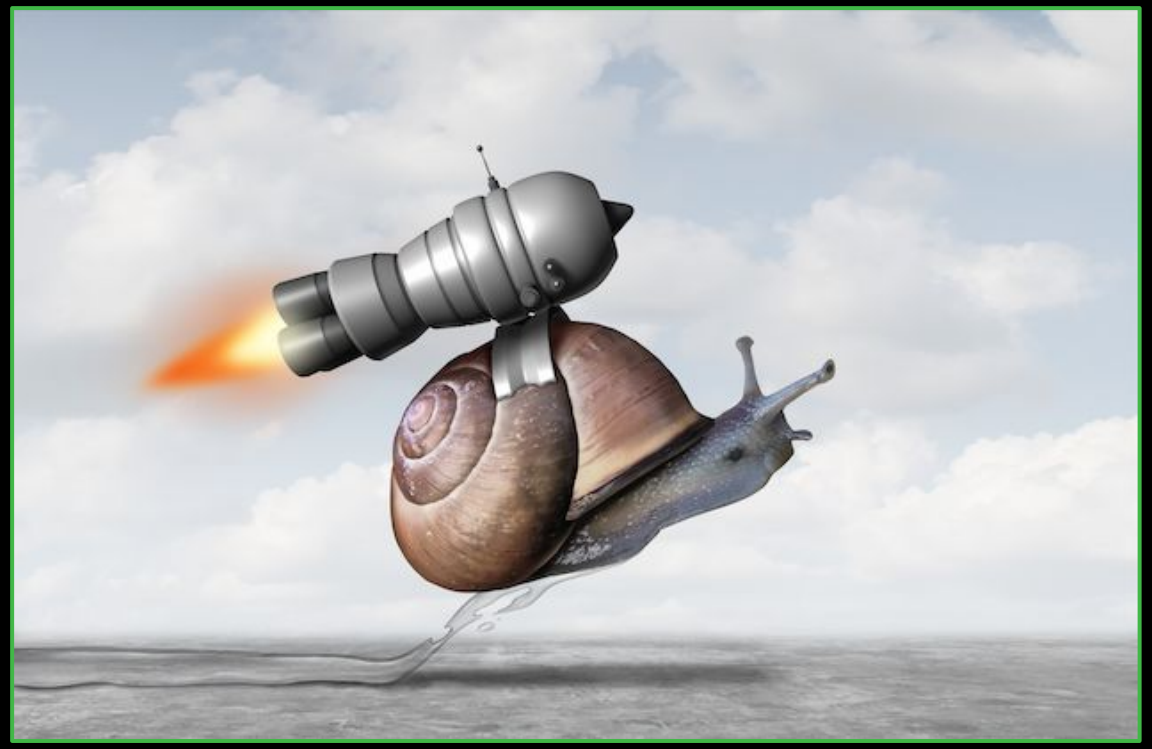


TEST, TEST, & TEST



www.testcontainers.org

HOW DO YOU DEPLOY?



SUMMARY

1. Understand your project's business value and goals (eliminate silos).
2. Document your flow/pipeline.
3. Prioritize and improve by 1%.
4. Make your work and your metrics for success visible.
5. Master your CI/CD (source control management, testing, artifact management, and deployment).
6. Automate where it makes sense.

Q & A

THANK YOU!