Practical Tips & Tricks For CI/CD Success

Things you should and shouldn't ever do in your CI/CD setup

circleci

@zmarkan

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click

silence

Do you...

a) Sweat and wait to see if it blows up 😱

Do you...

a) Sweat and wait to see if it blows up 😱

b) Pack up, go home & enjoy the sunshine 😎

It all boils down to automation.

⚙️

PEBKAC
Tech support can't help you when you're the problem.

Hi, I’m Zan 👋

First of my name. Breaker of builds, downer of deploys, tanker of tests, YOLOer of YAML, and developer advocate at CircleCI.

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About CircleCI

- Founded in 2011, now at 600+ employees across 5 continents
- We help teams build better software, faster
- Currently the world’s largest shared CI/CD platform
- Running cool raffles and stickers downstairs
- Built for the cloud - 2.5M+ jobs per day on our platform

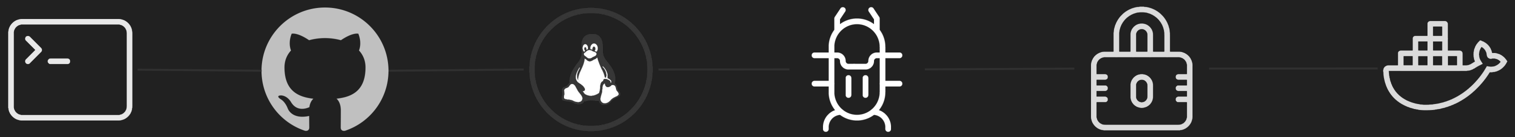
KICKSTARTER instacart IFTTT Udemy

coinbase Spotify segment Gatsby

GM cruise STITCH FIX greenhouse SONY

CI == Continuous Integration

the **practice** of verifying all contributions to a **shared** code repository



Code

Shared Code Repo

CI/CD Runtime

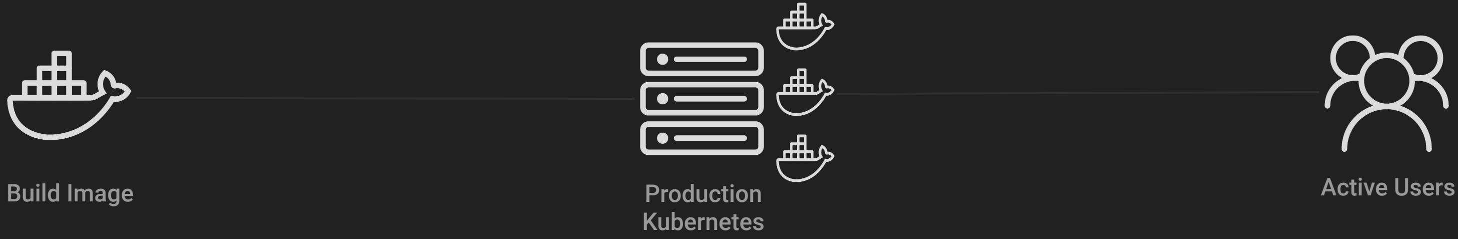
Test

Scan for Vulnerabilities

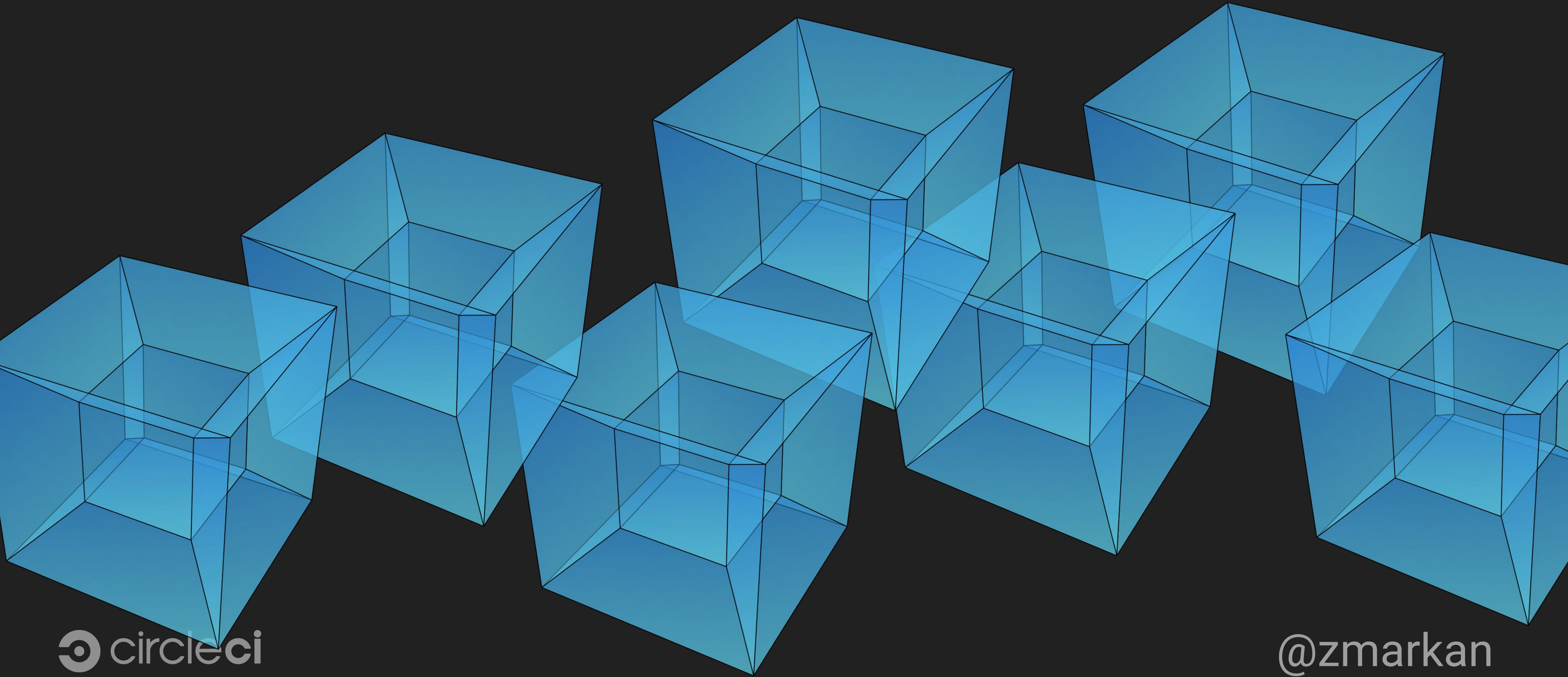
Build Image

CD == Continuous Deployment

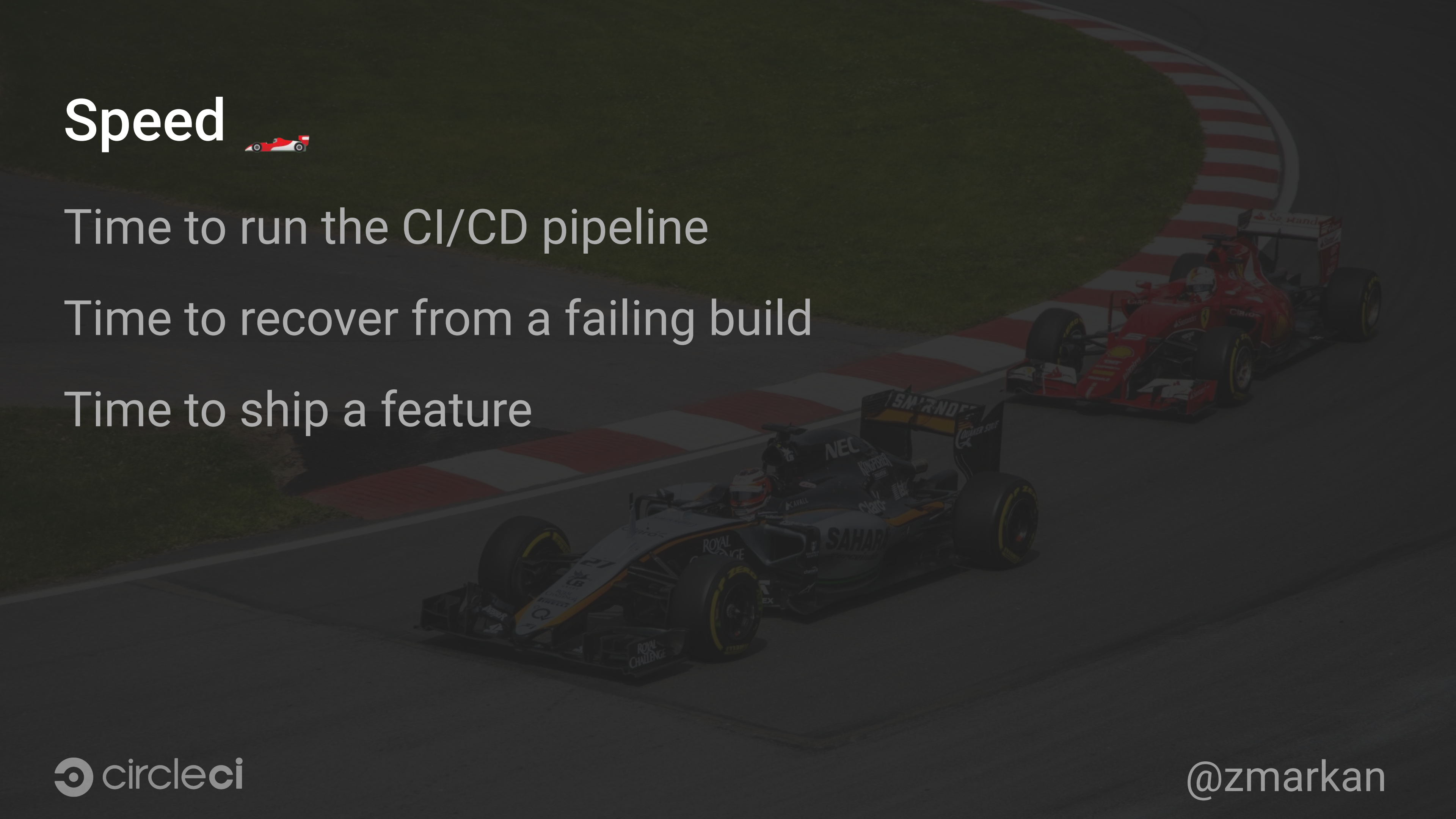
the **practice** of automatically deploying new software releases to **target environments**



Multiple dimensions of CI/CD success



SMIRNOFF
NEC
KINGFISHER
SAHARA
ROYAL CHALLENGE
27
QUAKER STATE
Santander
Claro
P ZERO

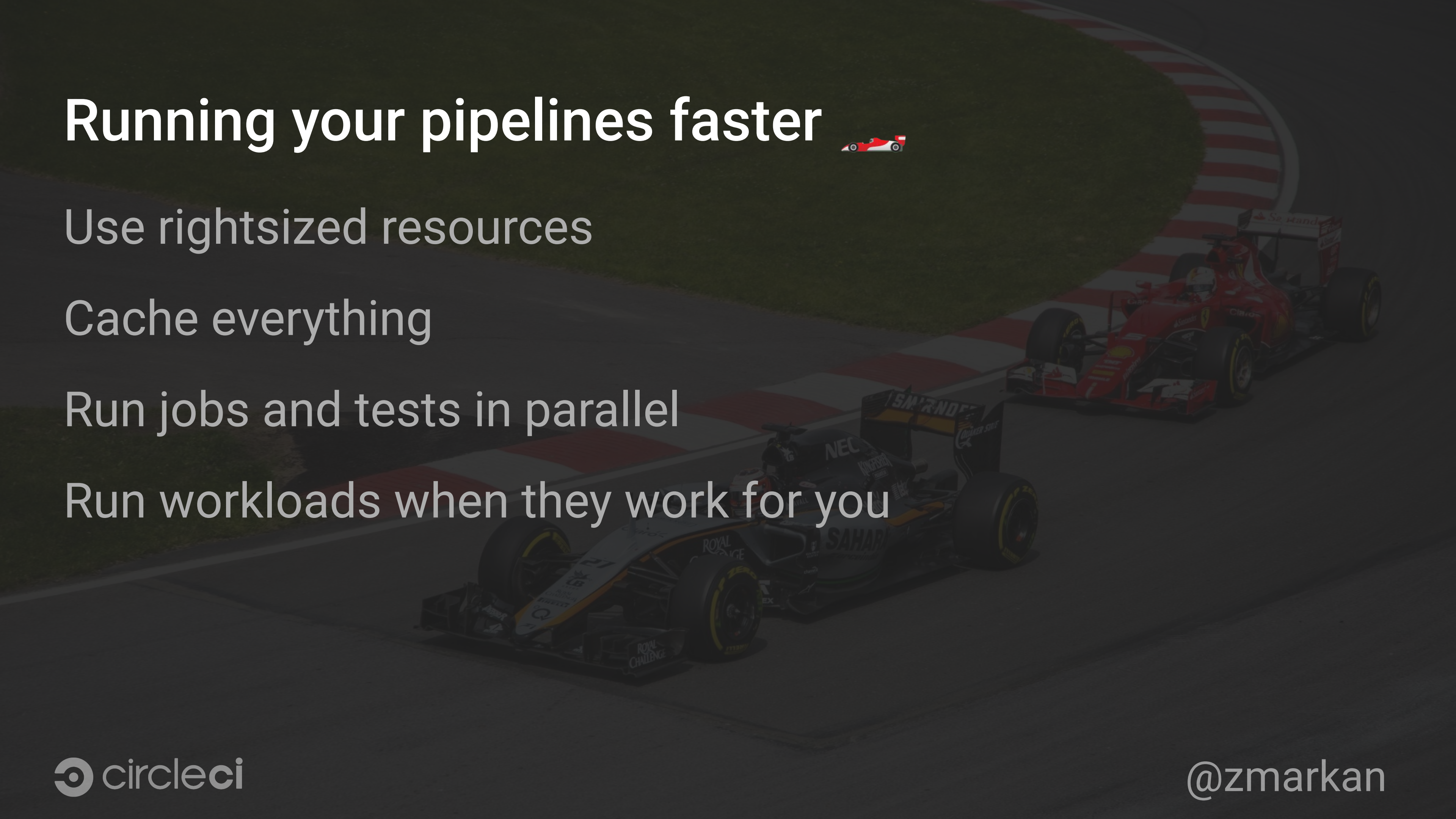


Speed 🏎️

Time to run the CI/CD pipeline

Time to recover from a failing build

Time to ship a feature



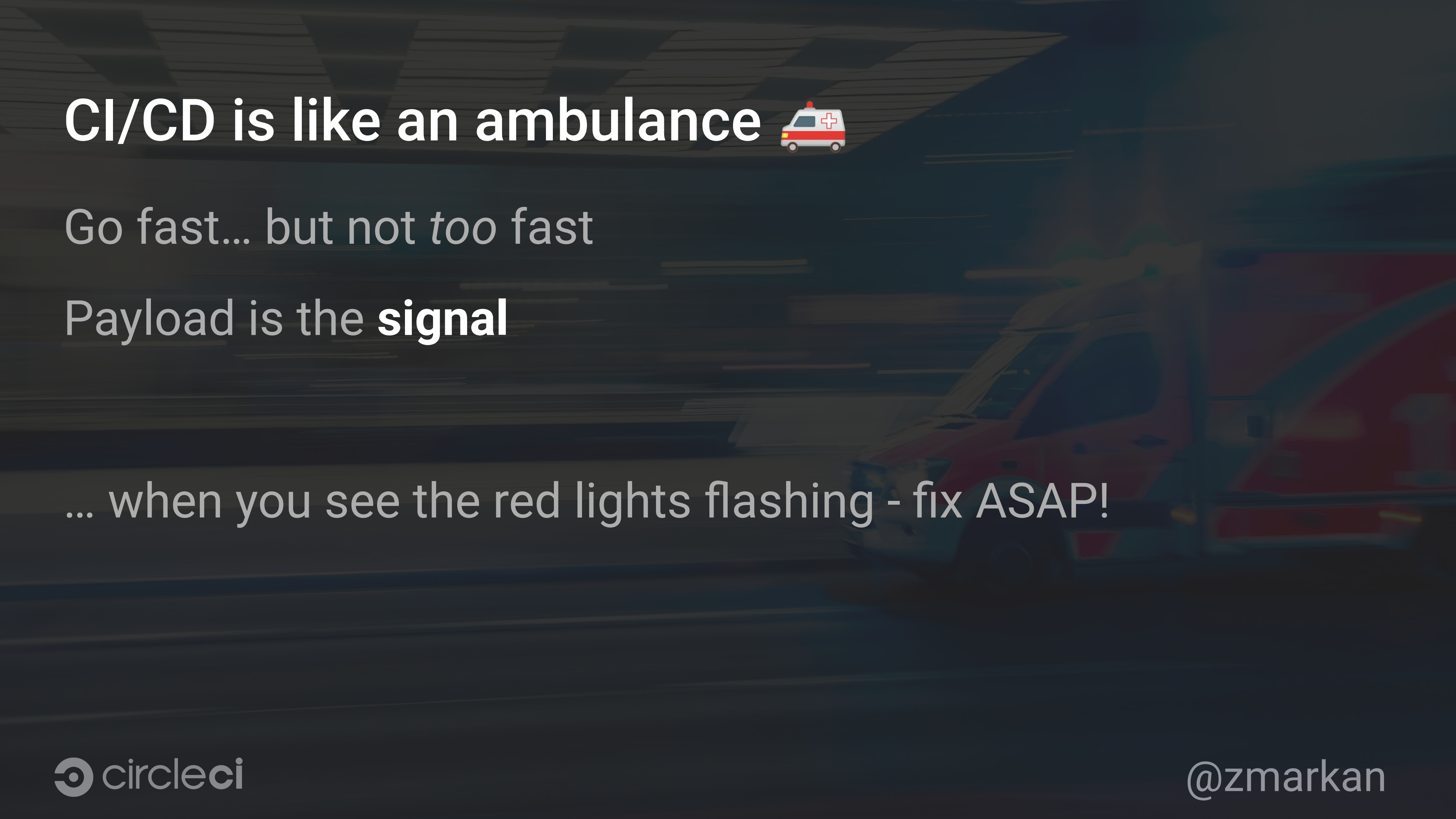
Running your pipelines faster 🏎️

Use rightsized resources

Cache everything

Run jobs and tests in parallel

Run workloads when they work for you

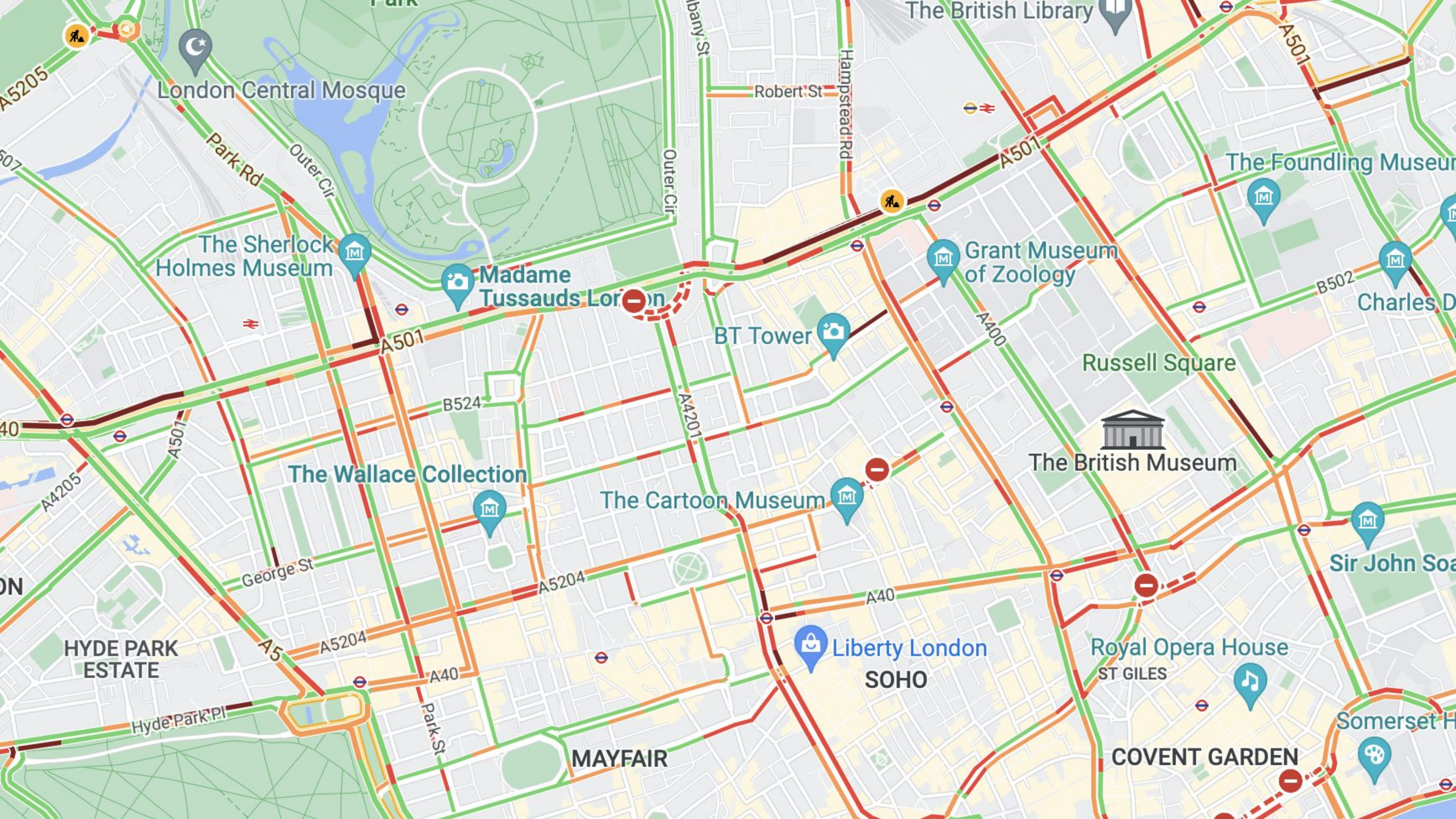


CI/CD is like an ambulance 🚑

Go fast… but not *too* fast

Payload is the **signal**

… when you see the red lights flashing - fix ASAP!


Park
The British Library
London Central Mosque
A5205
507
Park Rd
Outer Cir
bany St
Robert St
Hampstead Rd
Outer Cir
A501
The Foundling Museu
The Sherlock
Holmes Museum
Madame
Tussauds Lor on
Grant Museum
of Zoology
B502
Charles D
BT Tower
A400
A501
Russell Square
B524
40
A4201
A501
The British Museum
A4205
The Wallace Collection
The Cartoon Museum
Sir John Soa
George St
A5204
ON
A40
HYDE PARK
ESTATE
A5
A5204
Liberty London
Royal Opera House
ST GILES
A40
SOHO
Hyde Park Pl
Park St
MAYFAIR
COVENT GARDEN
Somerset H

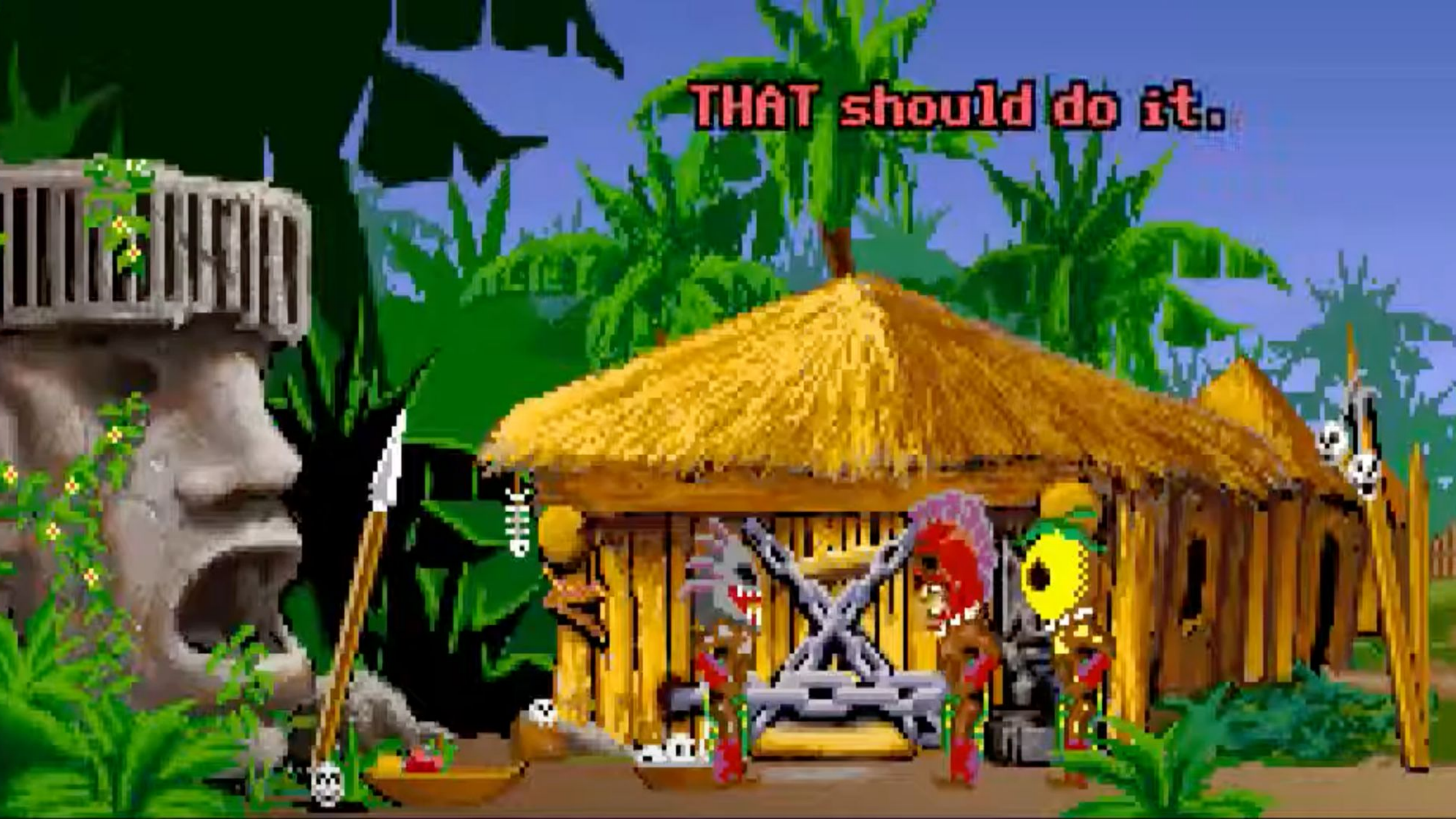
Recovering from failures 🩹

Insight into what’s happening with your workloads

Log everything

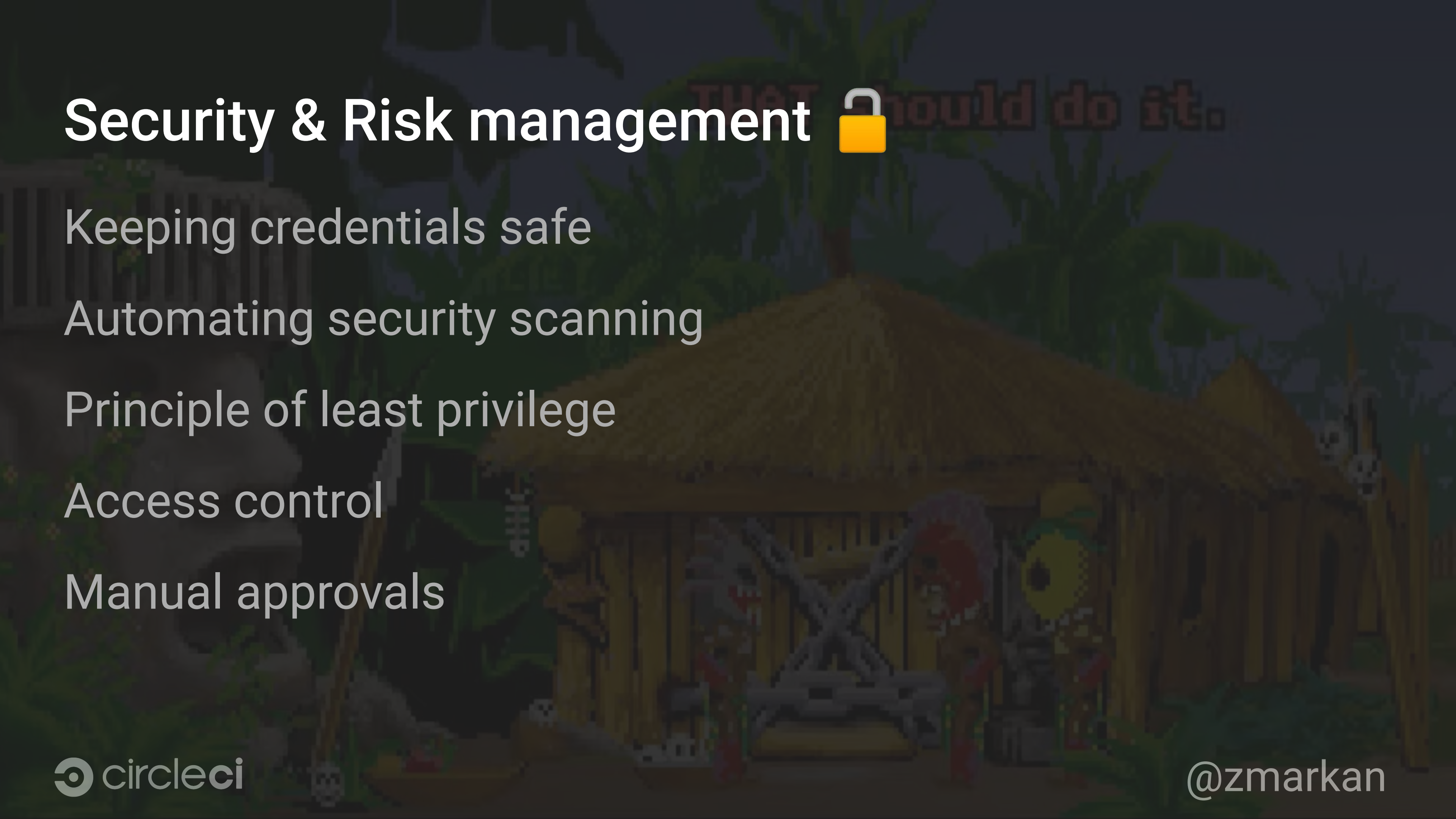
Easy access to logs & build artifacts

Debug your builds as they fail



THAT should do it.

Security & Risk management 🔓



Keeping credentials safe

Automating security scanning

Principle of least privilege

Access control

Manual approvals

Beyond the CI/CD tool ✨

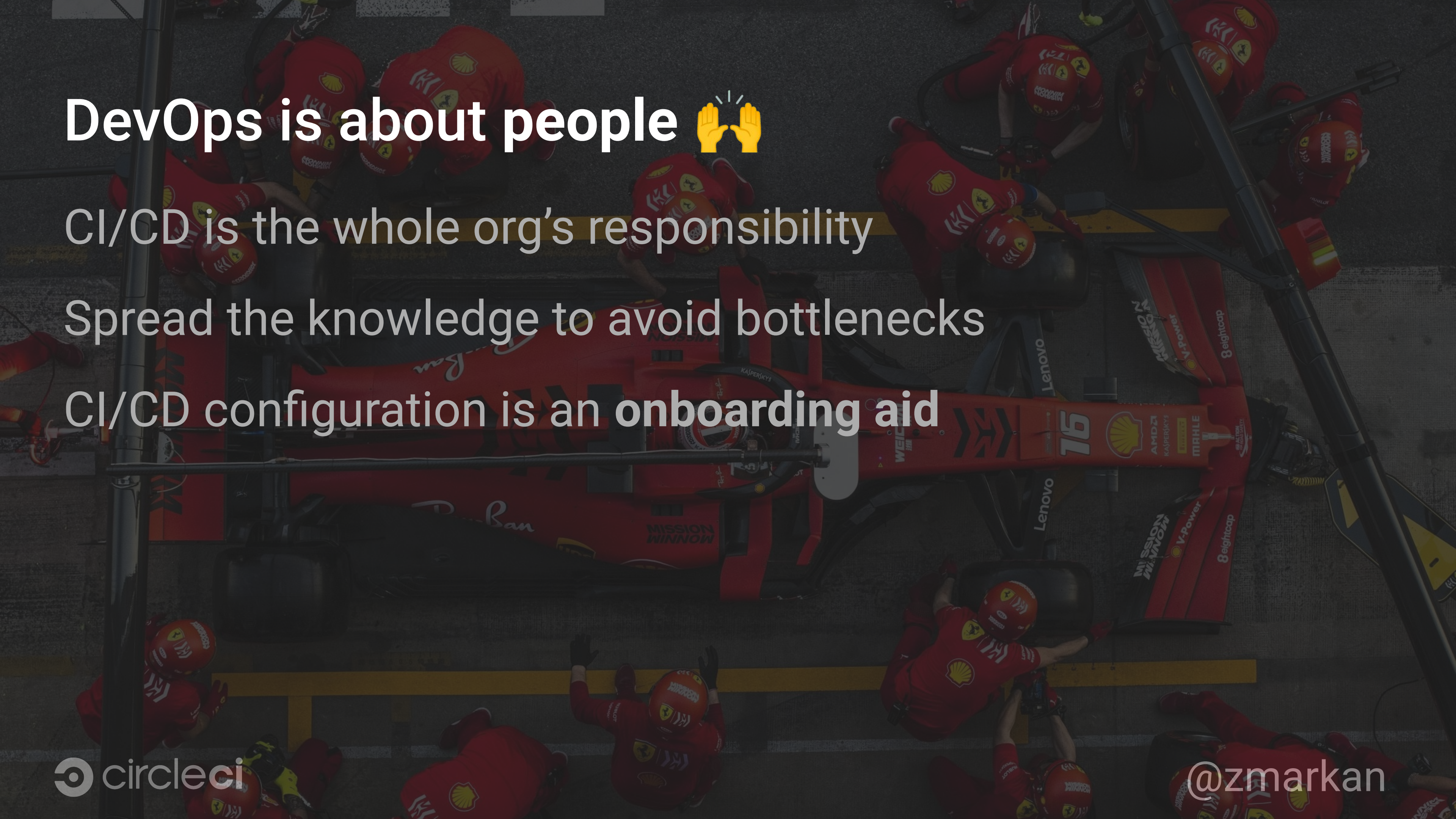
Validating changes in production

Integrating with other tools you use

Build/Deploy information - where you need it?

Who needs to know about it?

MISSION WINNOW
Ray-Ban
16
WEICHAI
Lenovo
V-Power
8eightcap
AMD
KASPERSKY
PIRELLI
MAHLE



DevOps is about people 🙌

CI/CD is the whole org’s responsibility

Spread the knowledge to avoid bottlenecks

CI/CD configuration is an **onboarding aid**

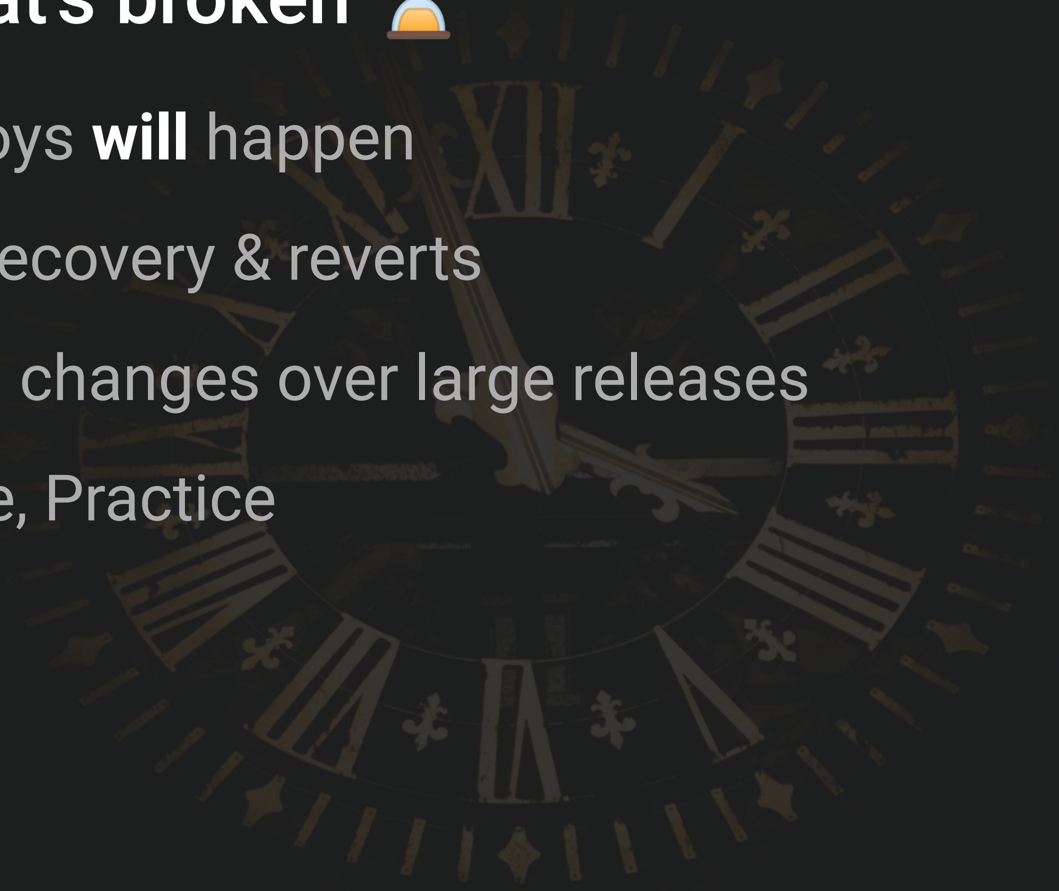
Revert what’s broken ⌛

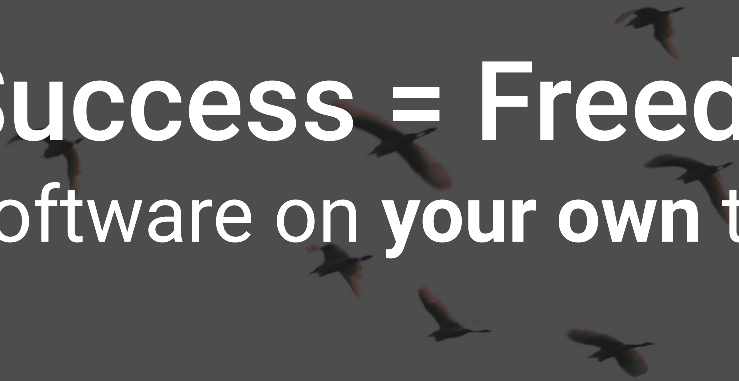
Broken deploys **will** happen

Enable fast recovery & reverts

Favour small changes over large releases

Plan, Prepare, Practice





CI/CD Success = Freedom

to deliver software on **your own** terms

CI/CD Success = Freedom 🕊️

Focus on quality and team wellbeing

Faster adaptation to changes

Self-documenting build/test/deploy

Easy recovery from failure (and Friday deploys)