Hi

@ChrisSinjo

Hiring SREs

@ChrisSinjo

Hiring SREs may be

@ChrisSinjo

Hiring SREs may be

literally

@ChrisSinjo

Hiring SREs may be literally impossible

@ChrisSinjo

An SRE

GOCARDLESS

An conference

An friend

An dumb comment

“Hiring SREs may be literally impossible”

–Some dumbass

Except it's

literally

true

People at all kinds of companies

People can't hire quickly enough

1. The problem

2. A solution

What's the problem?

"Even by Google's overall standards, SRE candidates are difficult to find and even harder to interview effectively."

–SRE Book, Part IV: Management

SRE is weird

Full of breadth

Databases

Caches

Queues

Proxies

Networking (L4, L7)

DNS

Operating systems

Observability

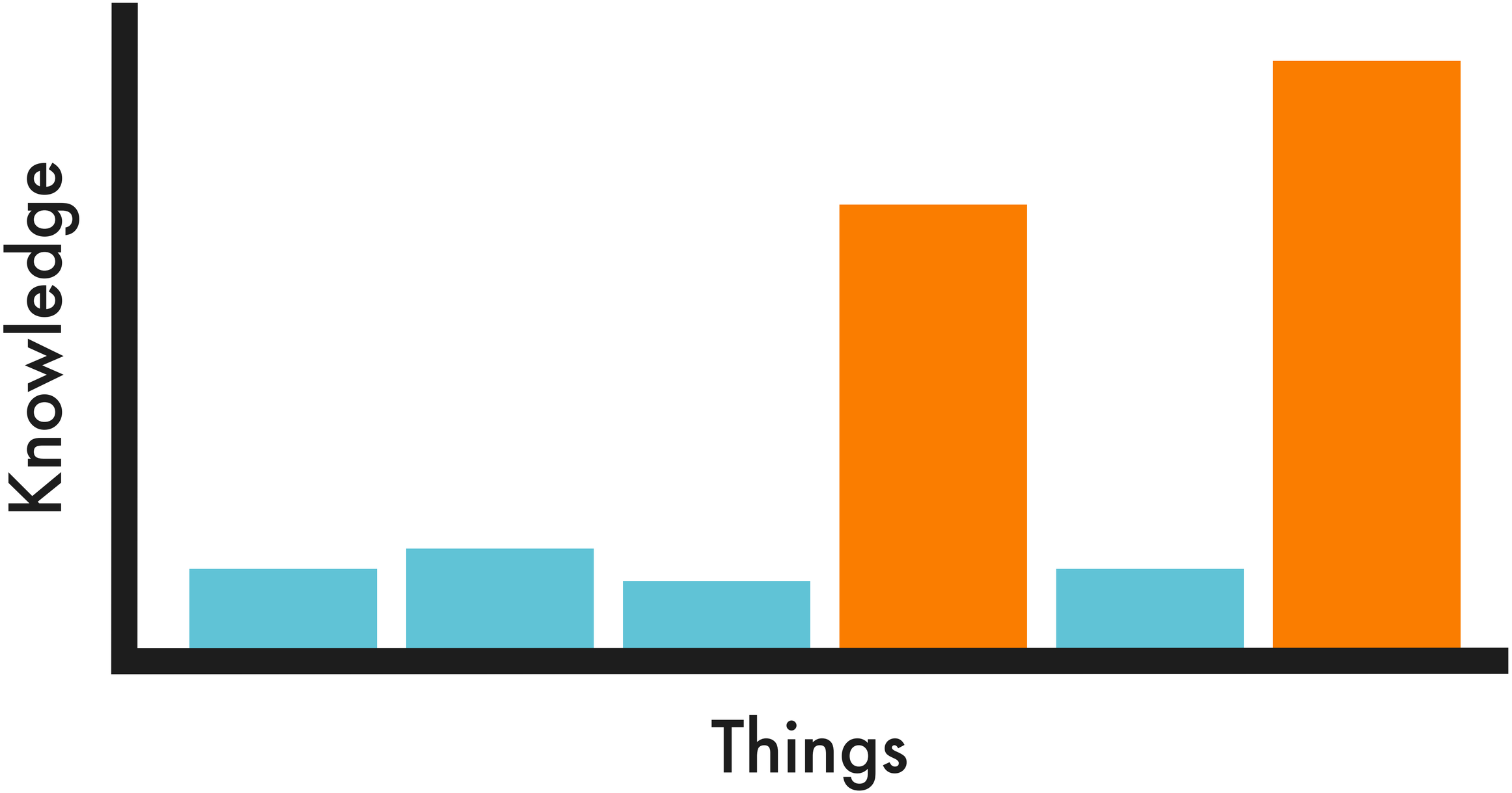
Provisioning

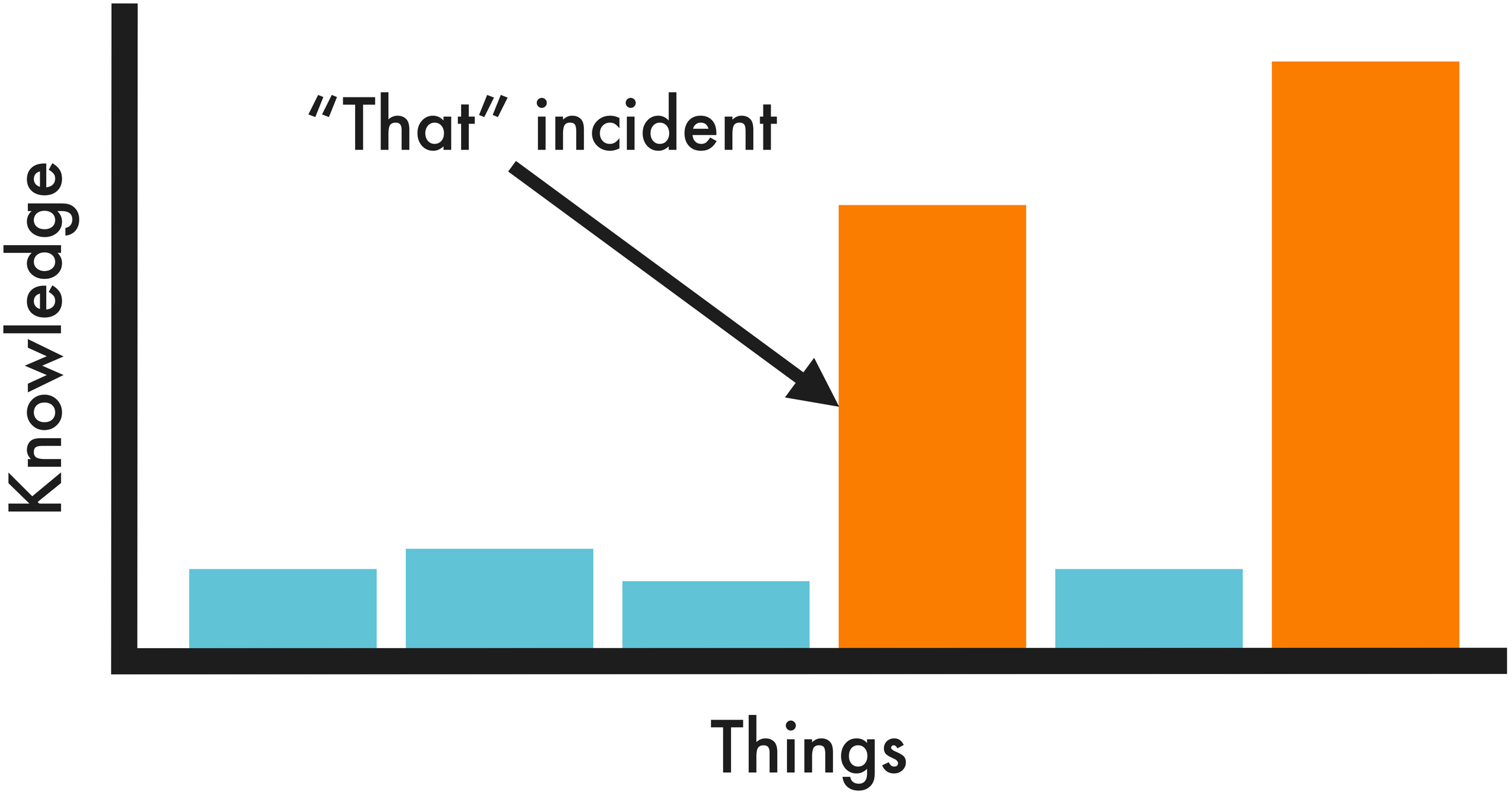
Packaging & deployment

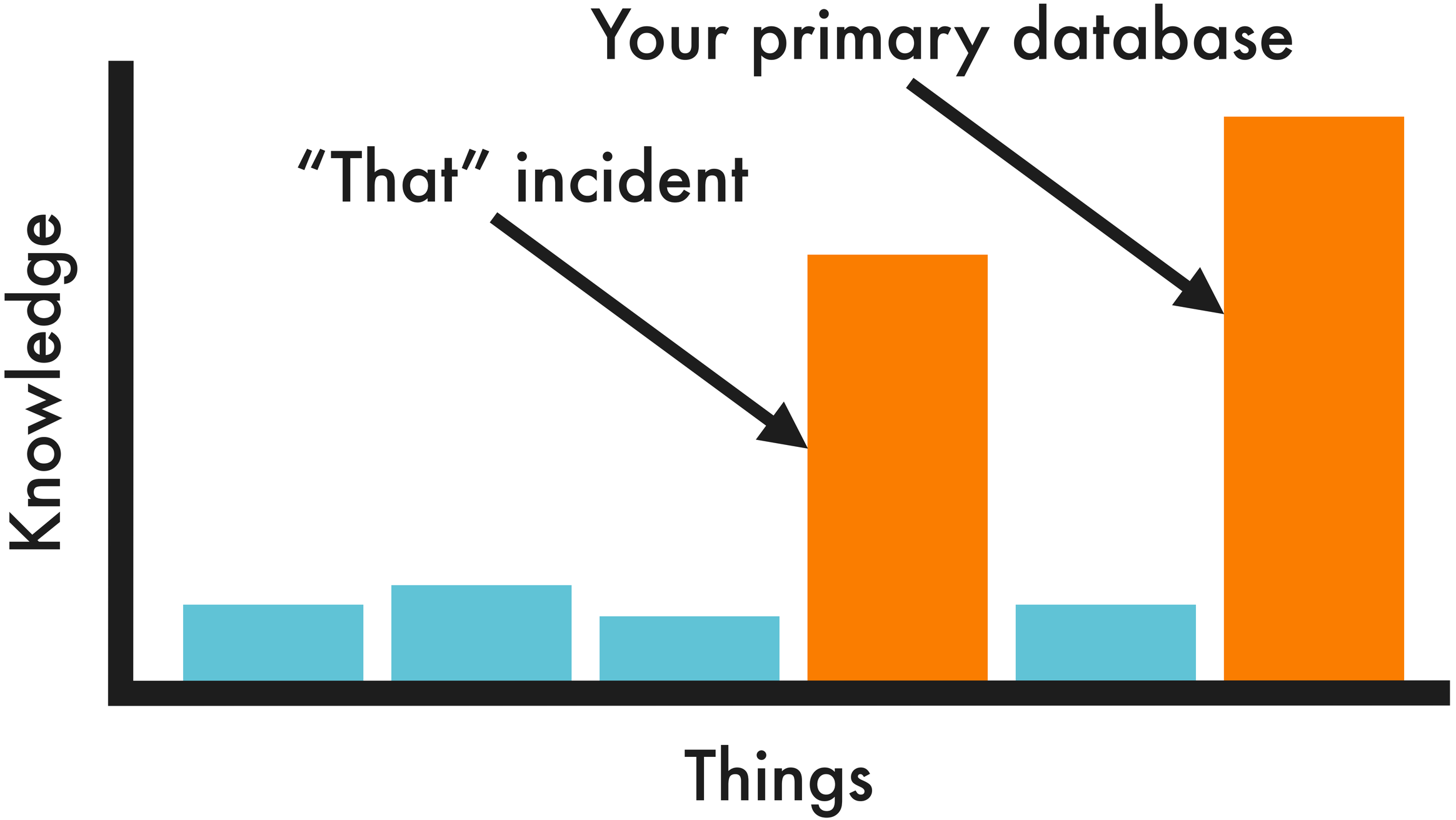
etc

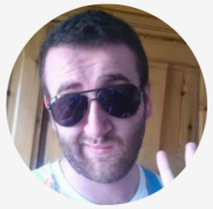
https://jvns.ca/blog/so-you-want-to-be-a-wizard/

Full of depth


Knowledge
Things


"That" incident
Knowledge
Things


Your primary database
"That" incident
Knowledge
Things



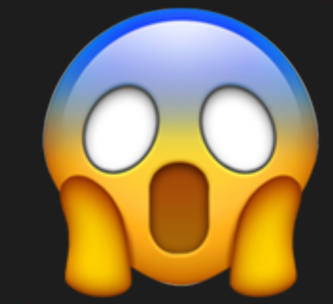
Chris Sinjakli and Norberto Lopes in Engineering August 20, 2015

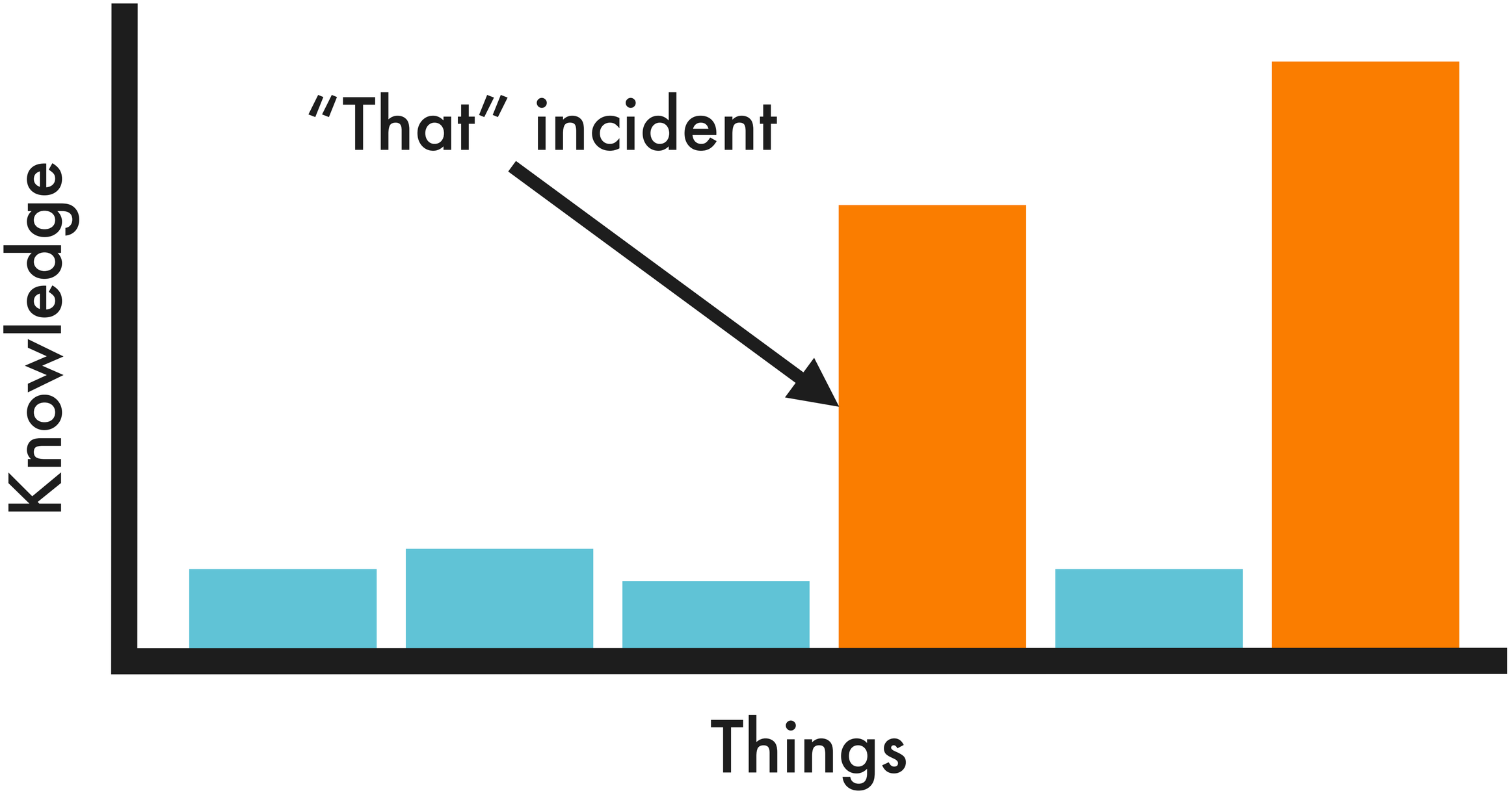
In search of performance - how we shaved 200ms off every POST request

While doing some work on our Pro dashboard, we noticed that search requests were taking around 300ms. We've got some people in the team who have used Elasticsearch for much larger datasets, and they were surprised by how slow the requests were, so we decided to take a look.

https://gocardless.com/blog/in-search-of-performance-how-we-shaved-200ms-off-every-post-request/

On-call is daunting




"That" incident
Knowledge
Things

NOTES

SEAN,

THIS THING BEEPS REALLY LOUD. CAN YOU PLEASE TAKE IT WITH YOU OR HIDE IT?

:) MANDY

A new take on existing roles

Sure, we have

DevOps

DevOps is
an approach,
not a role

SRE is more specific

How are we doing?

2017 so far

2017 so far

160 applicants

2017 so far

160 applicants

45 VM challenge

2017 so far

160 applicants

45 VM challenge

15 final round

2017 so far

160 applicants

45 VM challenge

15 final round

2 offers

2017 so far

160 applicants

45 VM challenge

15 final round

2 offers

2 hires

The odds are against us

1. The problem

2. A solution

Where else can we find SREs?

Internal hiring is a thing

Some of your devs would love the role

Hi

How do you do it?

3 parts

Find

Find

Show

Find

Show

Mentor

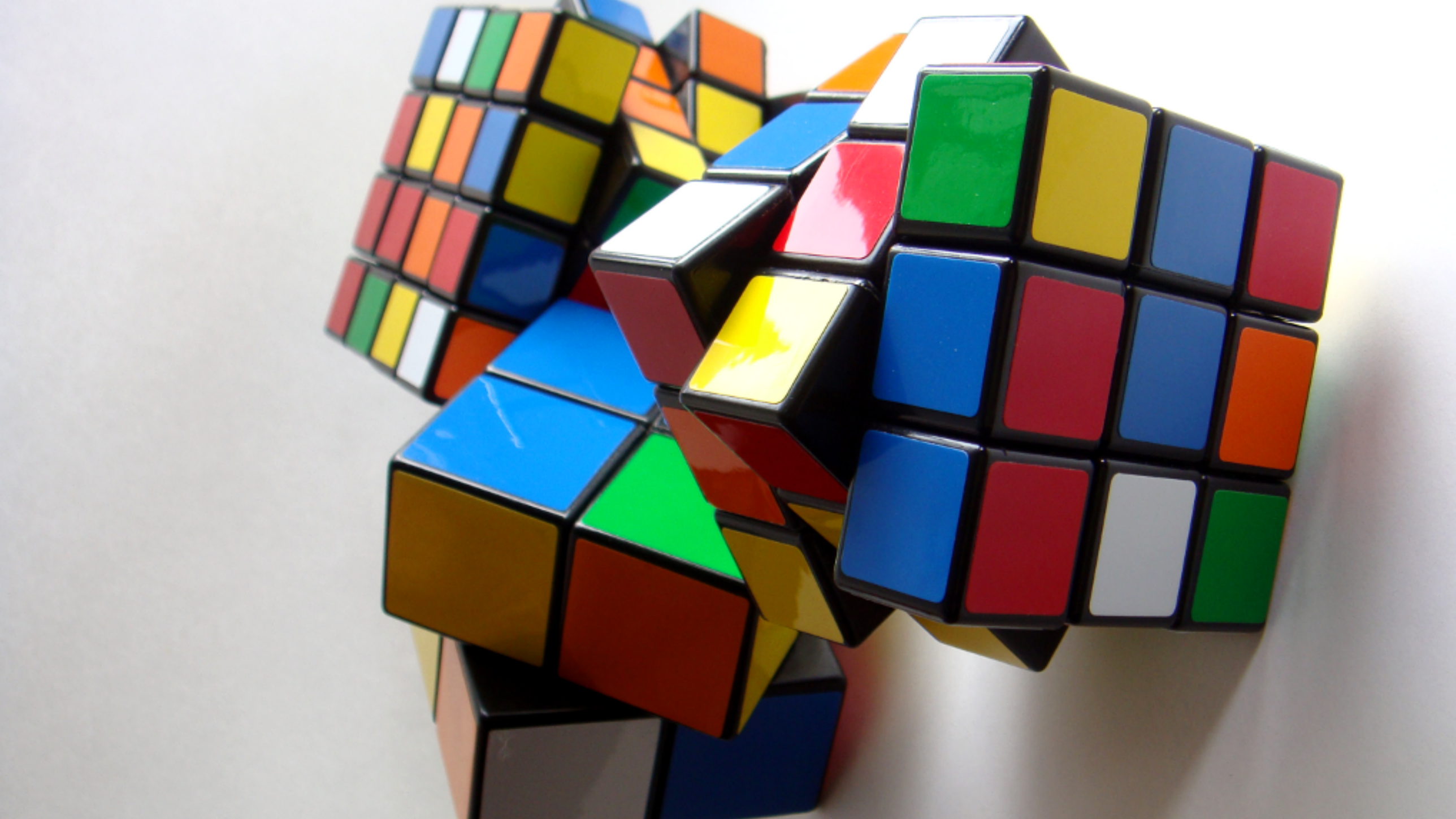
Find

Show

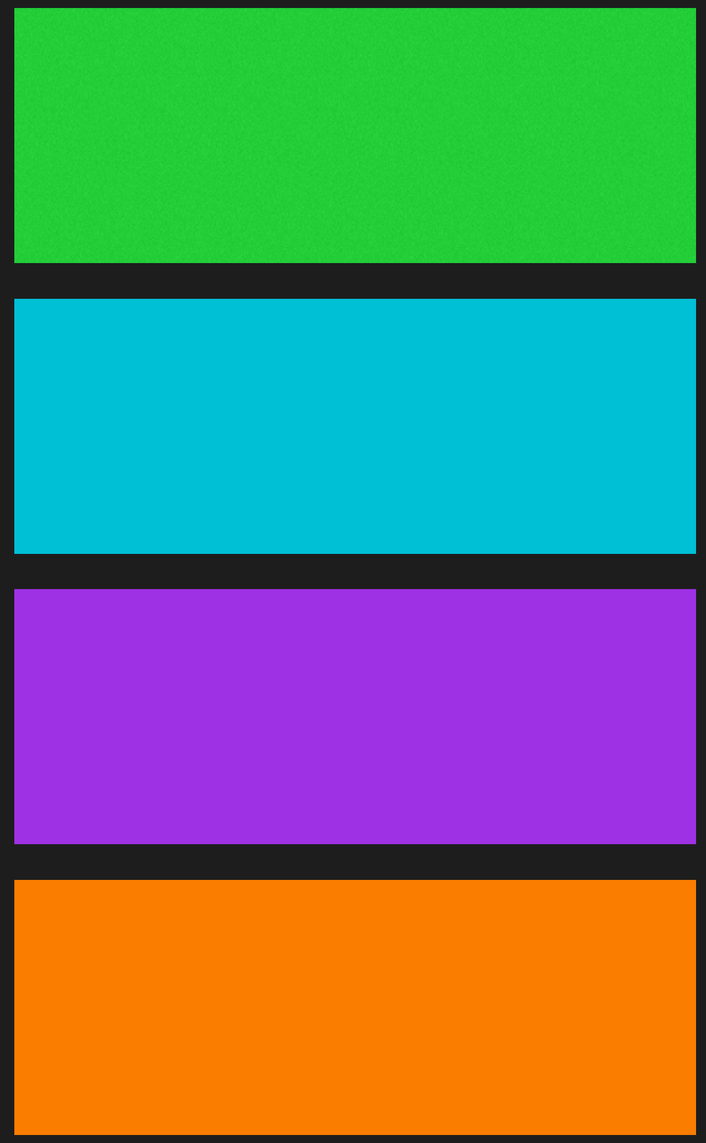
Mentor

3 main signals

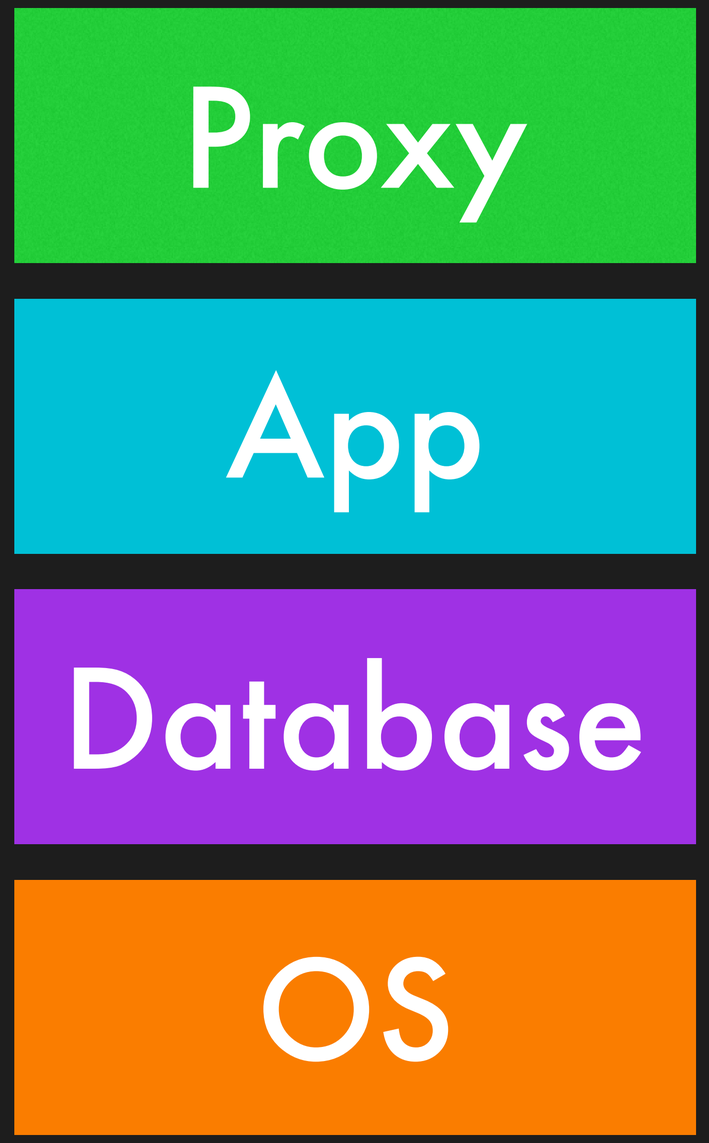
They jump at tricky problems



They peel back the stack



They peel back the stack



They show empathy when things break

[redacted] [redacted] 3:01 PM

Let me know if I can help too, even if it's with drafting comms etc. (I know there's lots of people want to make myself available ✋)

GoCardless Slack excerpt

Real talk:
People learn things

Find

Show

Mentor

Find

Show

Mentor

Build an open operational culture

2016/03/07 - PostgreSQL failover downtime (connections exhausted)

Customer impact

- For close to a minute, our merchants' API requests failed and their dashboards were inaccessible.

Timeline

- 11:04:17: PostgreSQL clustering fails to perform health check on the primary server
- 11:04:17: Email alerts arrive, pager goes off
- 11:04:24: Cluster asks the current Postgresql primary to shutdown and starts promoting a new primary
- 11:04:45: PostgreSQL finishes promotion on the new primary and becomes available
- 11:04:50: New primary has been promoted and VIP is available - new connections start coming

GoCardless post-mortem excerpt

[redacted] 7:42 PM

I'm 5m away. Could you take a quick look at what may be going on? It's transient but not enough that triggers [redacted]

[redacted] 7:45 PM

I'm looking at https://kibana[redacted]

We have some clear timeouts to S3

I don't understand why the splash pages are hitting this too.

Shouldn't it all be cached in [redacted] now?

GoCardless Slack excerpt

“The weird team in the corner”

Projects as well as ops

20 to 50%

Postgres Cluster Improvements Scoping: Phase 1 - Postgres Upgrades

Overview

Goals

- Be able to upgrade Postgres patch versions without noticeable impact to the API and dashboards
  - This allows us to stay on top of security and reliability updates for our database software
  - e.g. 9.4.2 → 9.4.8, **not** 9.4 → 9.5
- Be able to apply configuration changes which require restarts of Postgres without noticeable impact to the API and dashboards

GoCardless project scoping excerpt

“The weird team in the corner”

The public stuff helps

We love to be open about the work we do. Some examples are:

- Moving to a container-based infrastructure.
- Dealing with the realities of running a relational database at scale.
- Building a high-availability PostgreSQL cluster.
- Improving performance with investigative work.

https://gocardless.com/blog/tagged/site-reliability-engineering

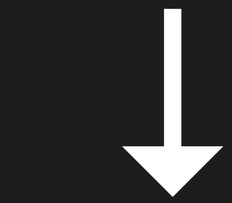
It's for your coworkers too

Take the sting out of the pager

Don’t support a horror show

Post-mortem action items

Bump memory limit



Add connection limiter

Don´t foster a

hero culture

On-call

Catch up on sleep after an incident

Post-mortems are blameless, but question everything

You can always ask for help

Life happens, ask for cover

On-call

Catch up on sleep after an incident

Post-mortems are blameless, but question everything

You can always ask for help

Life happens, ask for cover

Pay

your damn on-call

Find

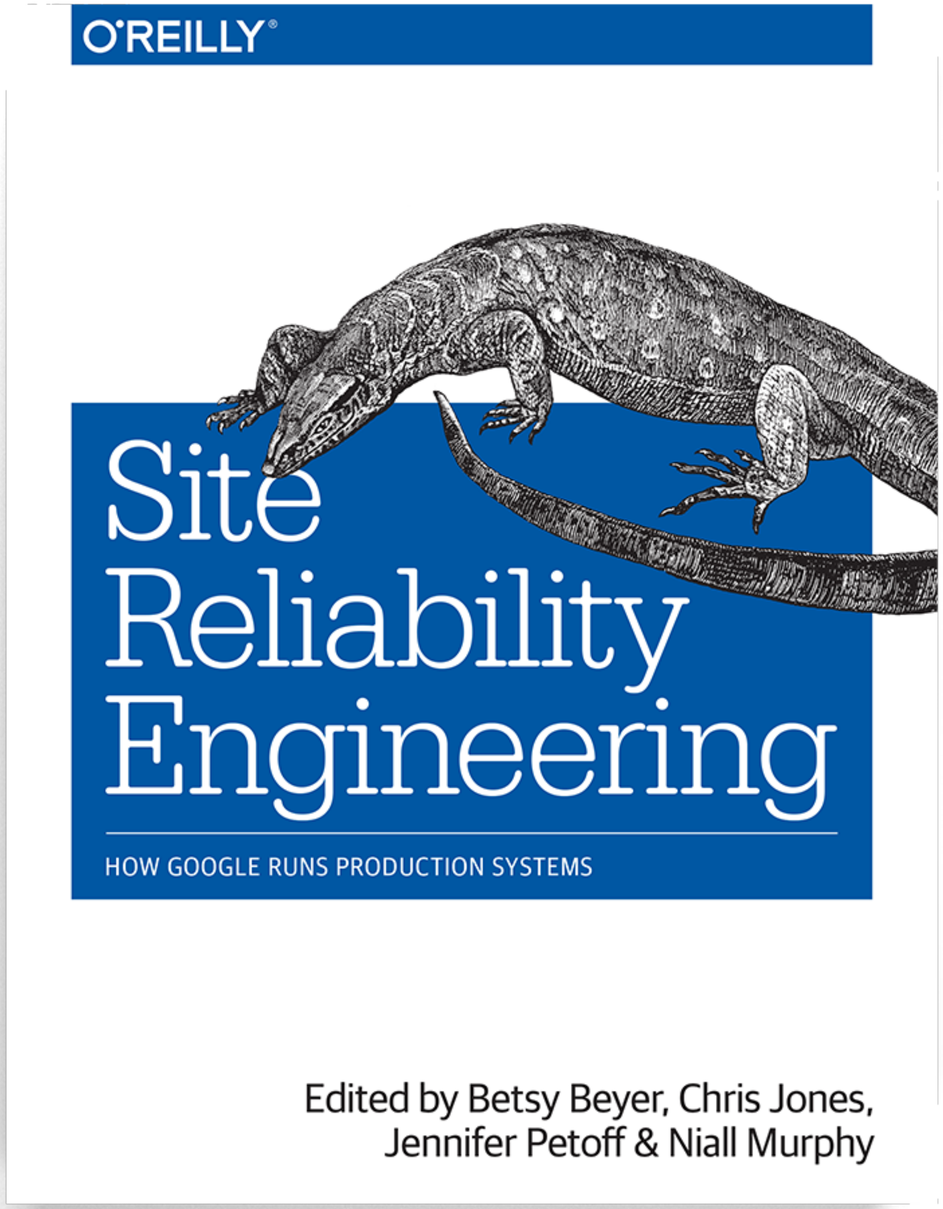
Show

Mentor

Find

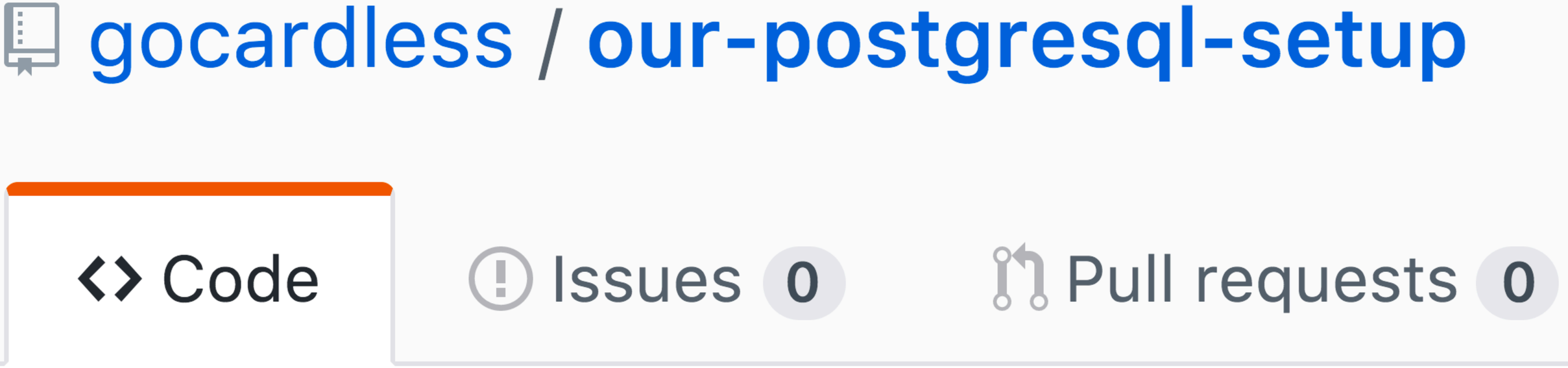
Show

Mentor



Part IV: Management

Disaster simulation

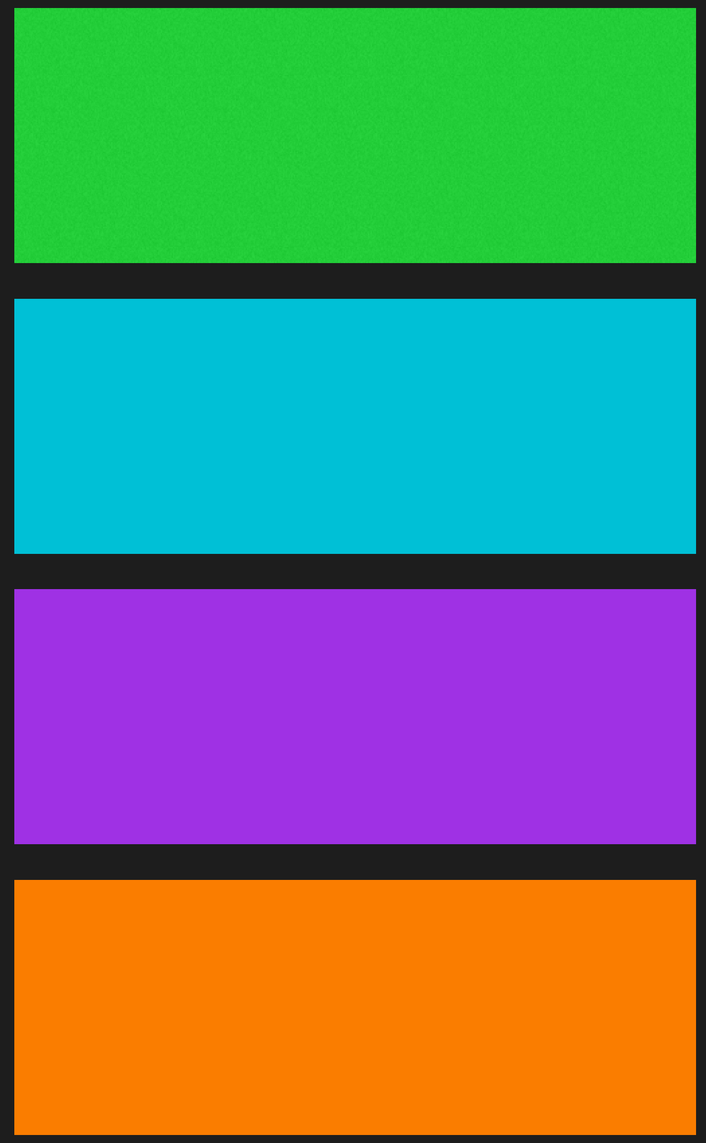


https://github.com/gocardless/our-postgresql-setup

Disaster simulation

Reverse engineering

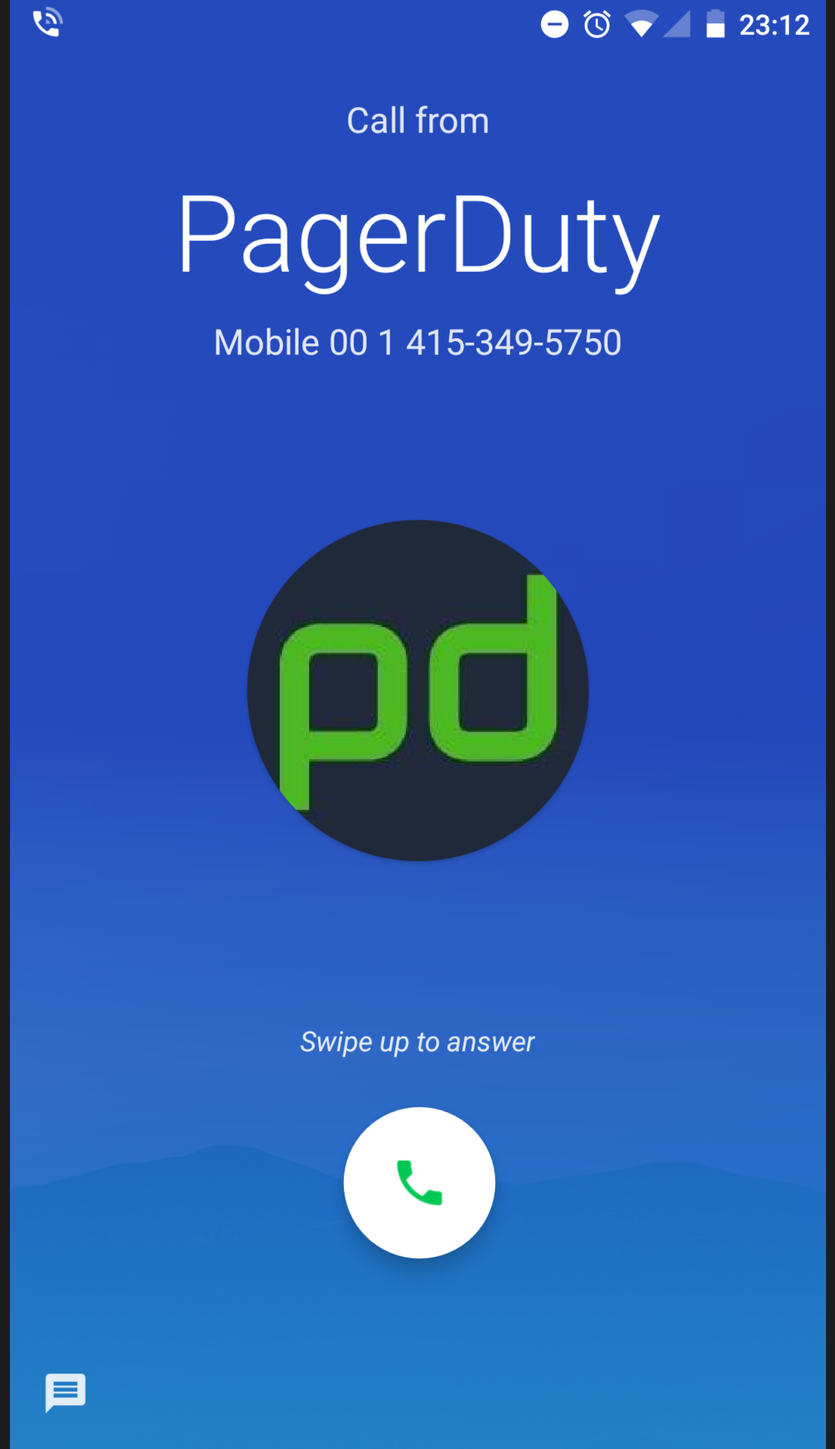
They peel back the stack



Disaster simulation

Reverse engineering

Pager shadowing


23:12
Call from
PagerDuty
Mobile 00 1 415-349-5750
Swipe up to answer

My favourite: guided tours

Databases

Caches

Queues

Proxies

Networking (L4, L7)

DNS

Operating systems

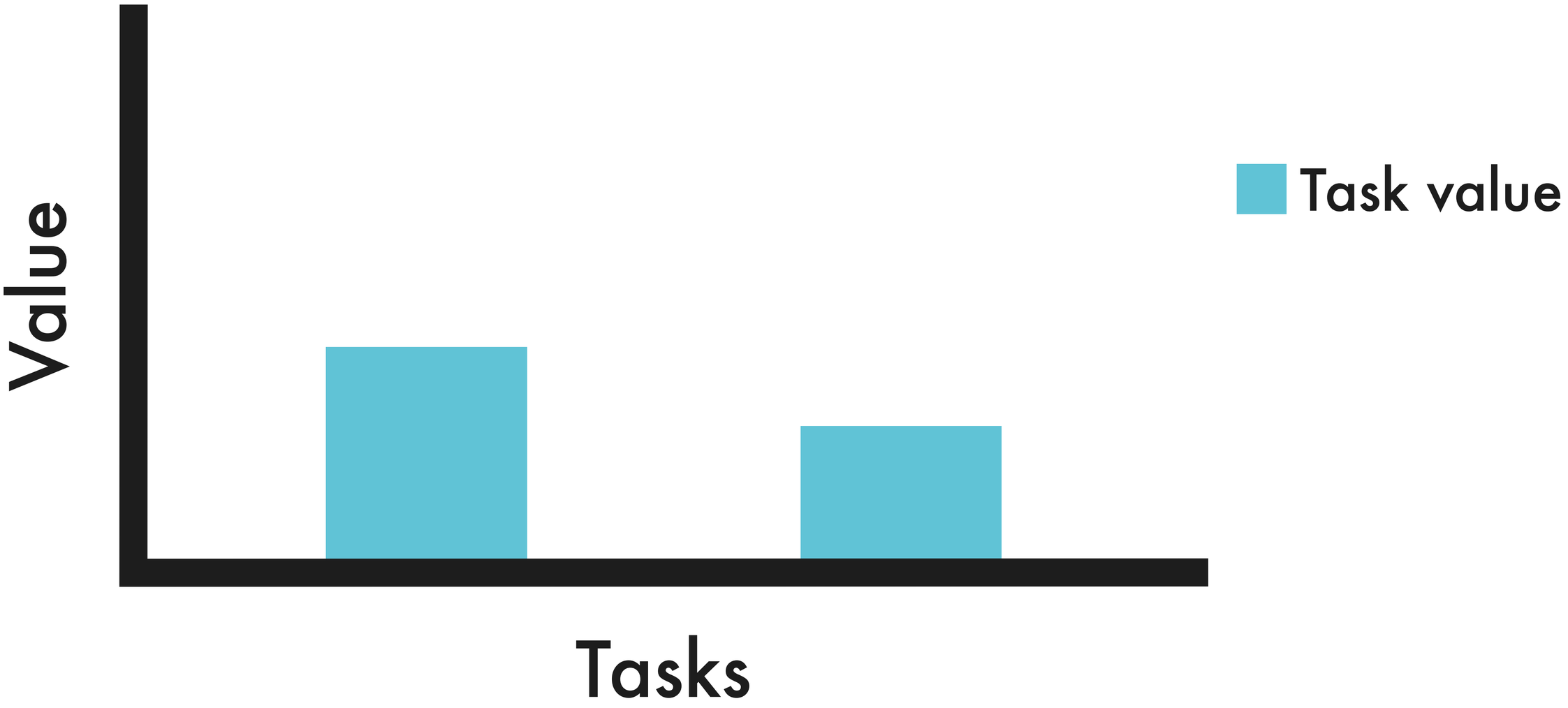
Observability

Provisioning

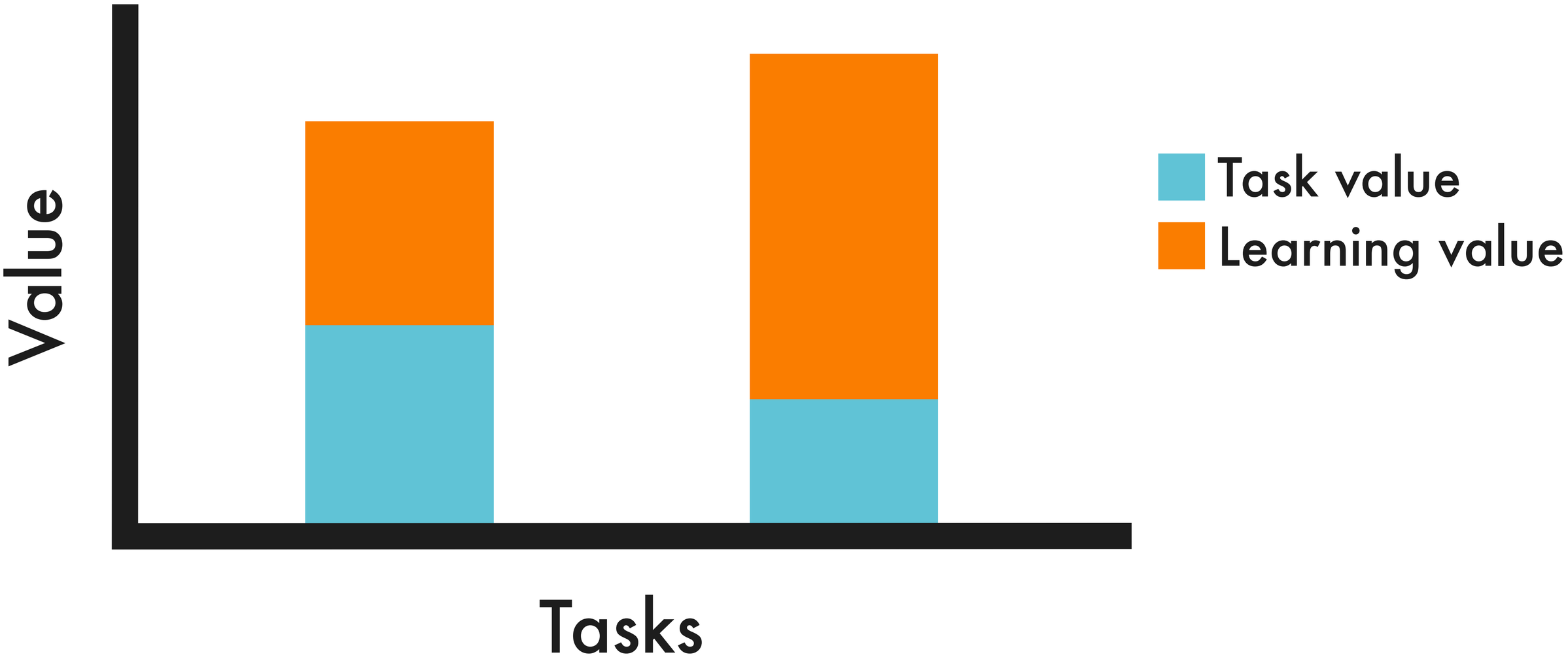
Packaging & deployment

Tours
Start
Here

Extremely scientific graph



Extremely scientific graph



What they bring to you

Please don't
trample us;
we are trying
to grow!

So how's it going?

2017 so far

160 applicants

45 VM challenge

15 final round

2 offers

2 hires

Our team over time

Our team over time

8 people (former and current)

Our team over time

8 people (former and current)

3 joined GC as devs

Our team over time

8 people (former and current)

3 joined GC as devs

2 dev → infra elsewhere

Hi

IT FREAKIN' WORKS

Hiring SREs may be literally impossible

@ChrisSinjo

Hiring enough SREs may be

literally

@ChrisSinjo

impossible

Coach some

new ones

Mentoring people is awesome anyway

Thank you

✌️❤️

@ChrisSinjo
@GoCardlessEng

We're hiring

@ChrisSinjo
@GoCardlessEng

Questions?

✌️❤️

@ChrisSinjo
@GoCardlessEng

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