

SH/FT

Don't Panic!

How to launch a large-scale website confidently and successfully

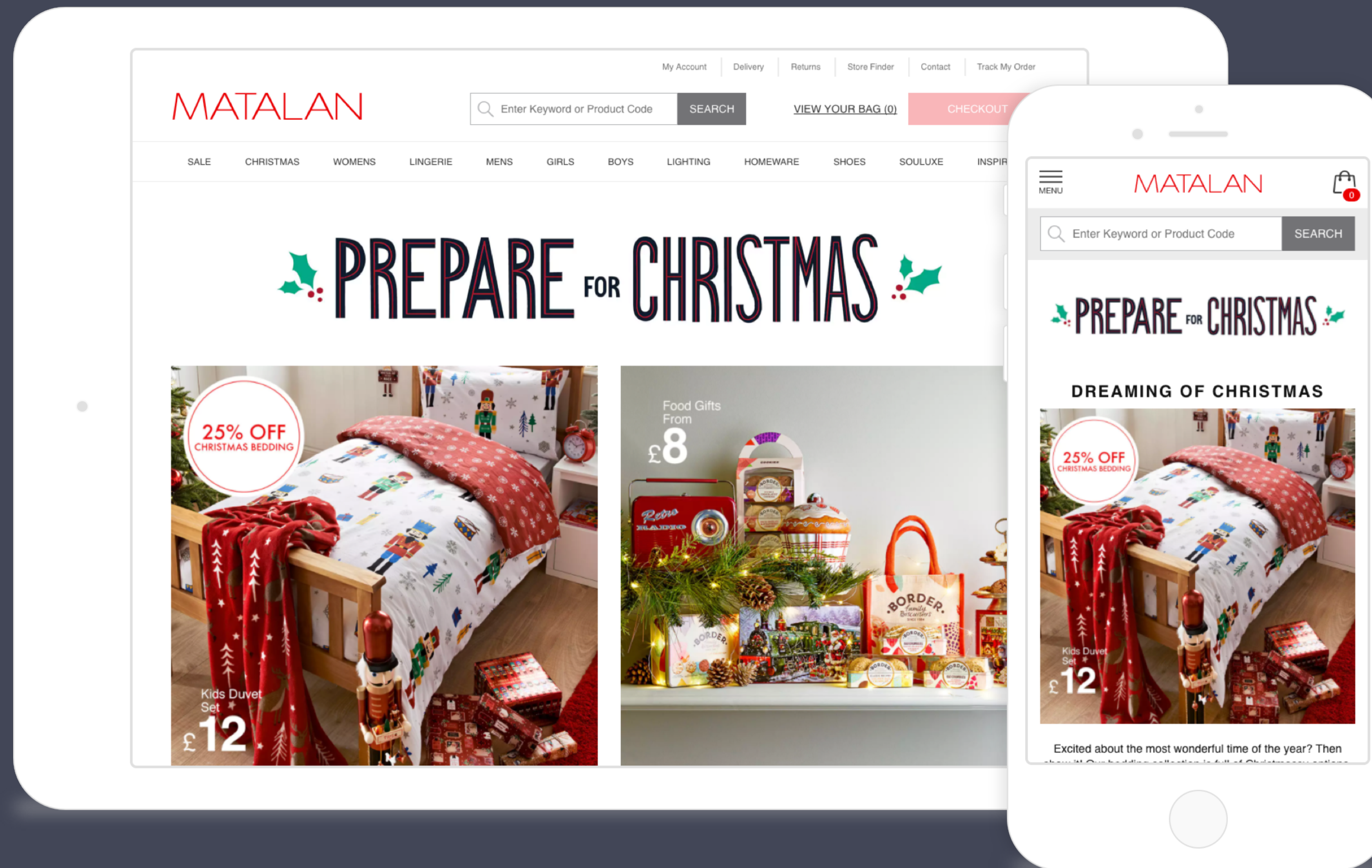
Who am I?

Ryan Townsend, CTO

SH/FT

 [@ryantownsend](https://twitter.com/ryantownsend)





MATALAN

Relaunched May 2017

“Just use auto-scaling and forget about it”

Kris Quigley – Lead Developer @ SHIFT

(sarcasm)

Timeline



- **Functional Testing**
- **Deployment Pipelines**
- **Configuration & Implementation**



Development

Keep Things Simple

Limit Project Scope

New Problem or New Technology

“Almost all the cases where I've heard of a system that was built as a microservice system from scratch, it has ended up in serious trouble.”

– Martin Fowler, ThoughtWorks CTO

Clear Decoupling



Use ~~Boring~~ Mature Technology

Load Testing

Don't wait until the end

It's A LOT harder than people let on

- **Use real metrics and logged user behaviour**
- **Use a wide variety of metrics, not just traffic**
- **Post-test validate the metrics at source**

Assume user behaviour will change

Stress Test

Web Performance Testing

Remember: it's not just for you!

Caching

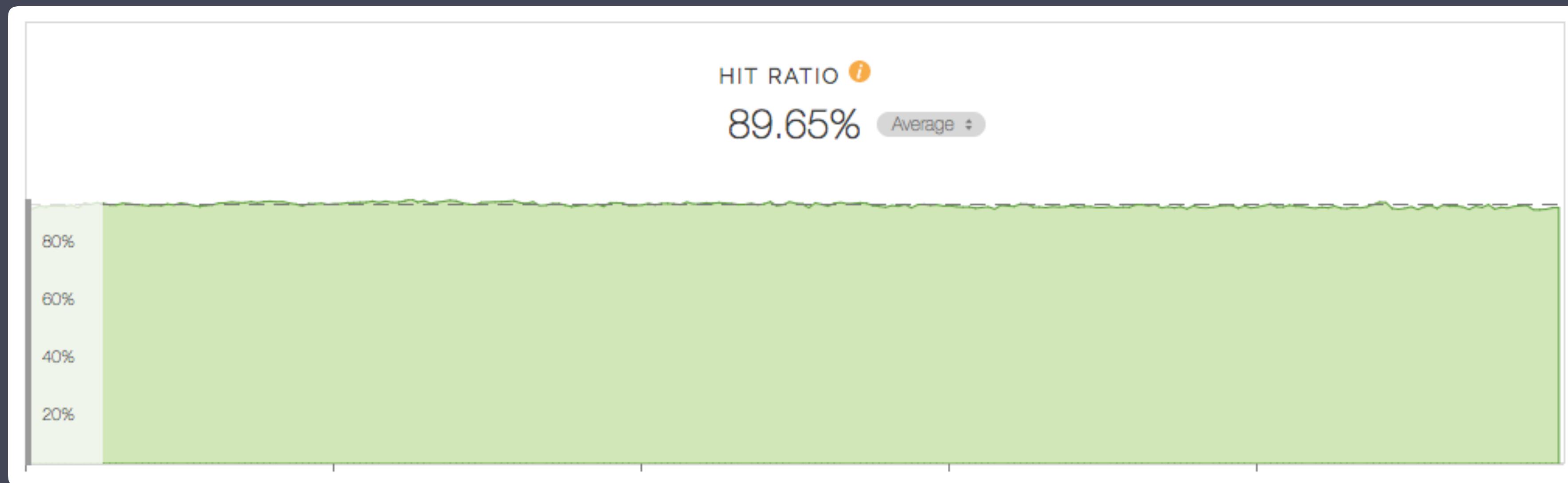
Client → **CDN** → **Application** → **Database**

```
graph LR; Client --> CDN; CDN --> Application; Application --> Database;
```


Write-through caches

Start small... low TTLs

**Front-end –
static assets & redirects**



Higher hit ratios = less traffic hitting our servers

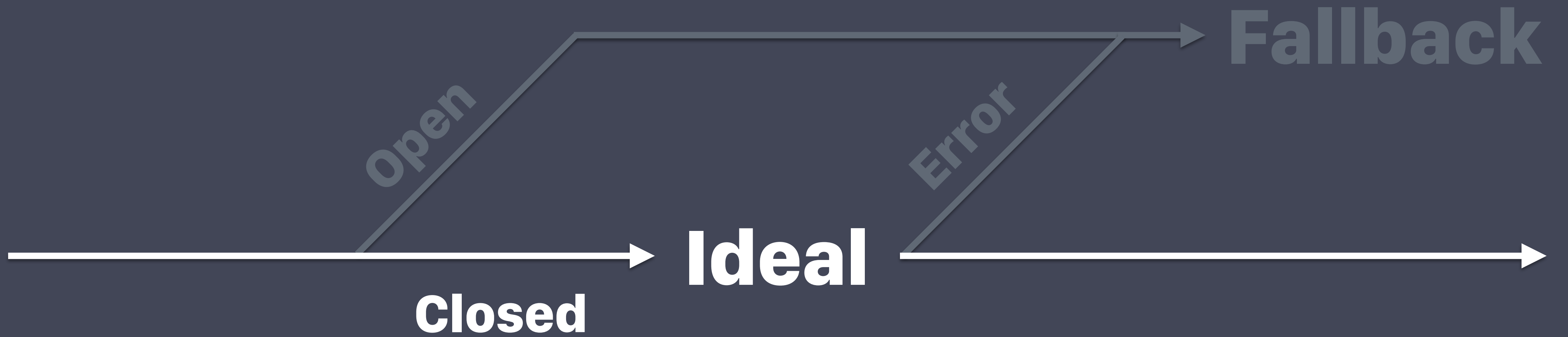
Feature Toggles

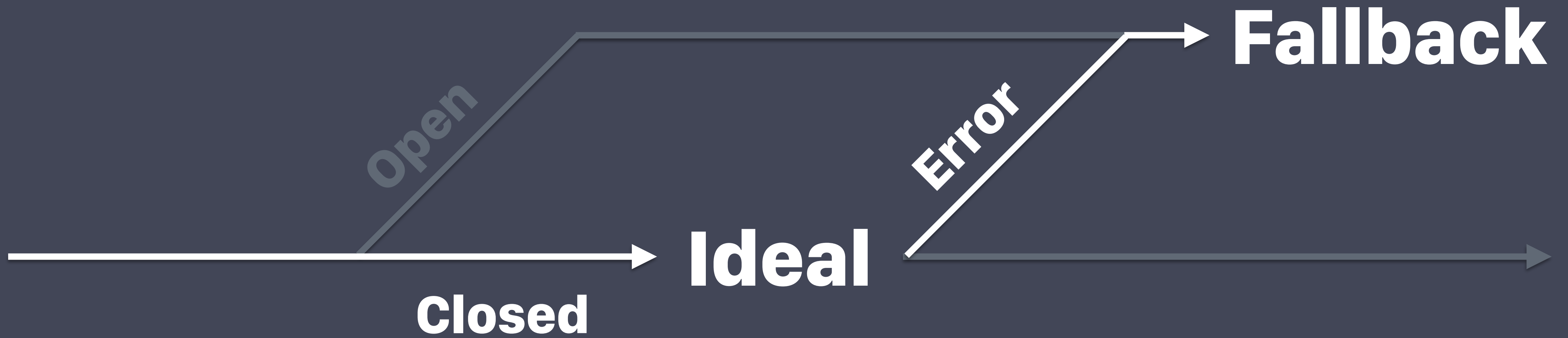


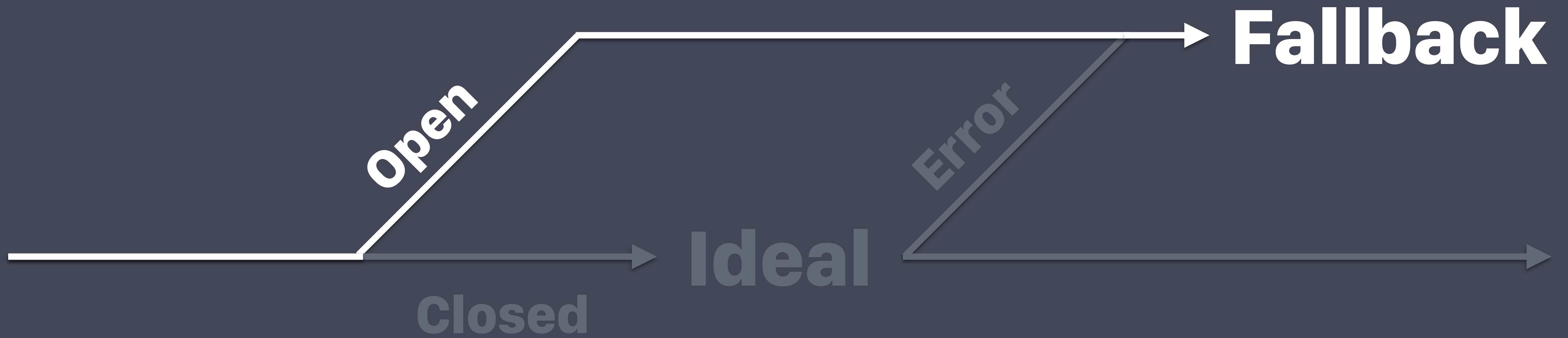


- **Built into your application**
- **Content Delivery Network**
- **A/B testing tool**

Circuit Breakers









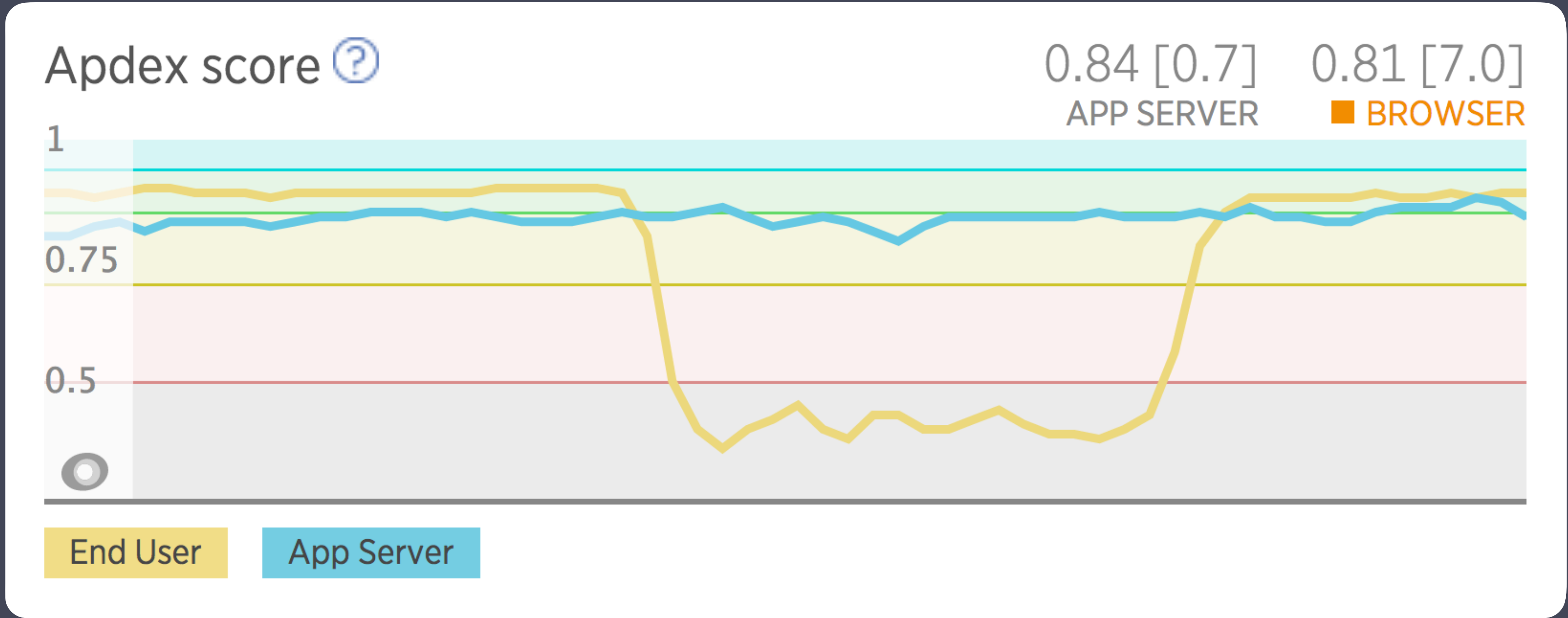
Pre-launch Preparations

Communication

- **Build a trusting relationship with stakeholders**
- **Understand their metrics**
- **Get their perspective**
- **Determine authority**

Visibility

- **System monitoring**
 - infrastructure & client-side
- **Client / stakeholder dashboards & reporting**
 - see what they see
- **Customer engagement**
 - social media, customer support
- **Instant access to logs**
 - filterable, searchable



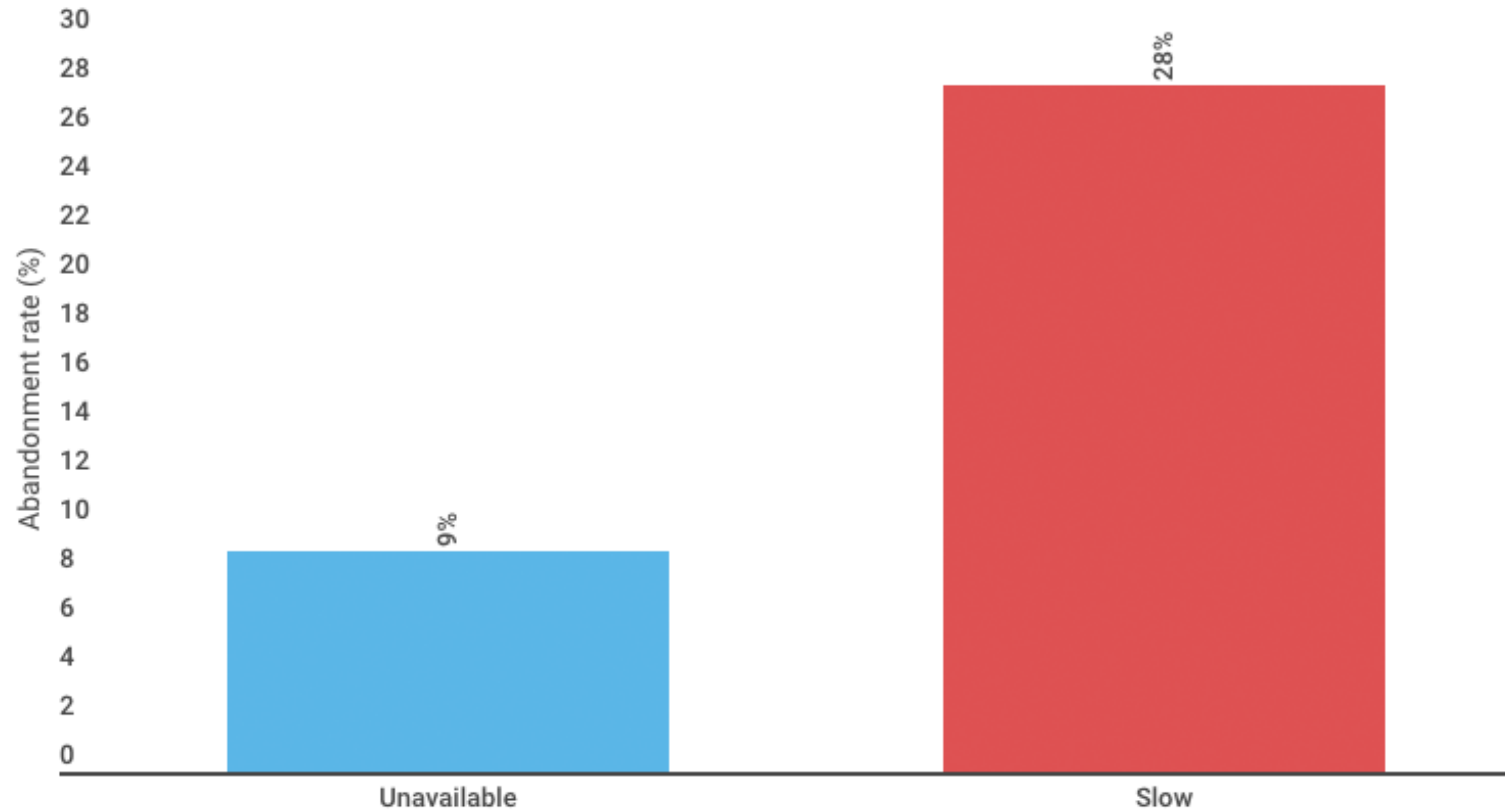
Above shows how New Relic tracked a 3rd party script harming site performance but the server-side was fine.

Roleplay

- **What could go wrong?**
- **Who would you escalate to?**
- **How would you solve?**
- **What people do you need access to?**
- **What systems do you need access to?**

Traffic Reduction

Permanent abandonment rate



Source: Akamai, The Impact of Web Performance on E-Retail Success

- **Avoid scheduling big campaigns**
- **Paid advertising is easy to turn off**
- **Reduce offering**

Launch Day

Scale-up

“Big Bang” vs Canary Release

Feature Toggles: Off

Keep Calm and Carry On

- **Expect issues**
- **Keep a level-head**
- **Remain professional**
- **You're an expert – you've got this** 🦵



Post-launch

Continue Building Confidence

- **Gather actual *real* metrics & usage patterns**
- **Revisit your load tests and re-assess**
- **Re-run load tests for future releases**
- **Ship some safe releases**
- **Ship small releases, often**

A photograph of two rockets launching from a launch pad. The rocket on the left is in the foreground, showing a large plume of fire and smoke at its base. The rocket on the right is further away, appearing smaller. The sky is blue with scattered white clouds. The text "Since Launch" is overlaid in the center in a white, bold, sans-serif font.

Since Launch

Optimising Caching

Strong Migrations

**Started working towards
~~micro~~ macro-services**

Event Sourcing

Static Site Generation

Communication is Paramount

Thank you 😊

SH/FT

 [@ryantownsend](https://twitter.com/ryantownsend)