

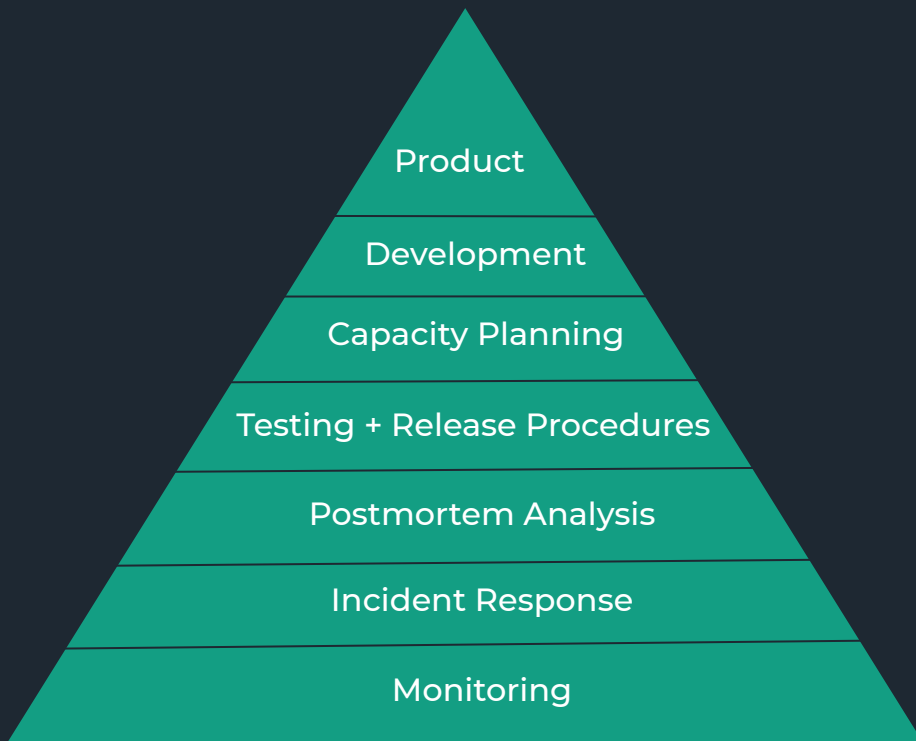
# What is SRE?

Tammy Butow  
Principal SRE @ Gremlin



# Agenda

1. What is SRE?
2. SRE Phases
3. SRE Use Cases
4. SRE Success Stories



# What is SRE?



# What is SRE?

Site Reliability Engineering (SRE) is a software engineering strategy and methodology. The term SRE was coined by Ben Treynor (Google) in 2003.

Site Reliability Engineering involves both ops work -- *tickets, on-call & manual tasks* -- and development work -- *internal tooling, SRE tools and building automatic systems*.

The percentage of time spent on ops/development depends on the needs of your organisation. It's an important metric to track! Over time the ops % for each system should decrease.

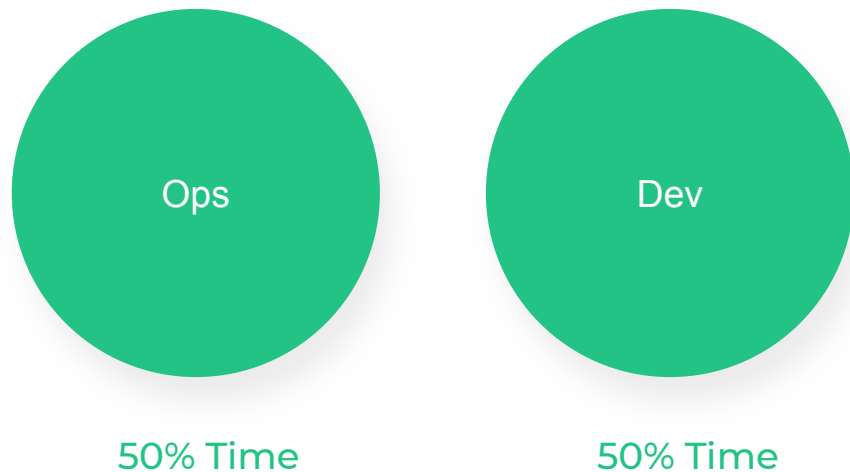


“Our work is like being a part of the  
**world’s most intense pit crew.**  
We change the tires of a race car  
as it’s going 100mph.”

- Andrew Widdowson (SRE @ Google)



# What is SRE?

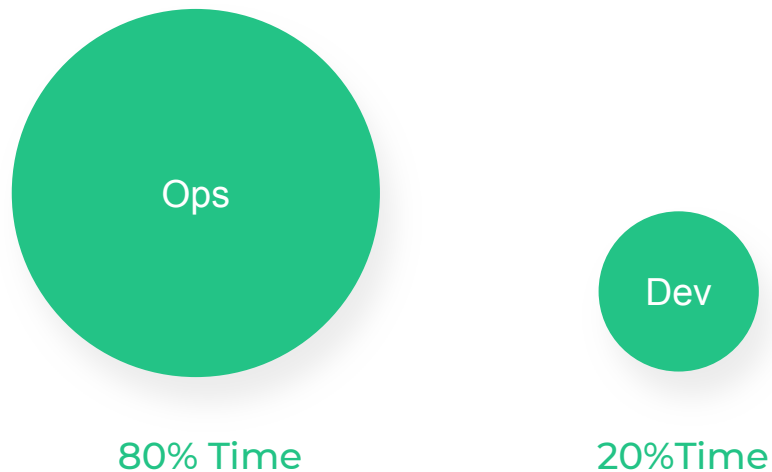


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A day in the life of an SRE



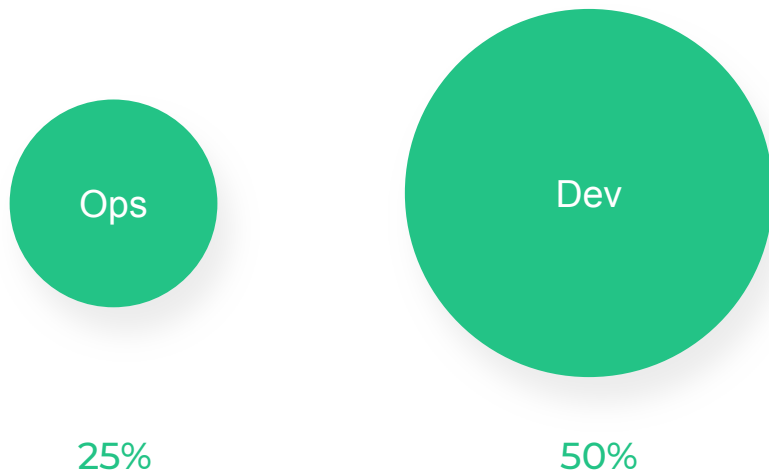
# What is SRE?



A day in the life of an SRE



# What is SRE?



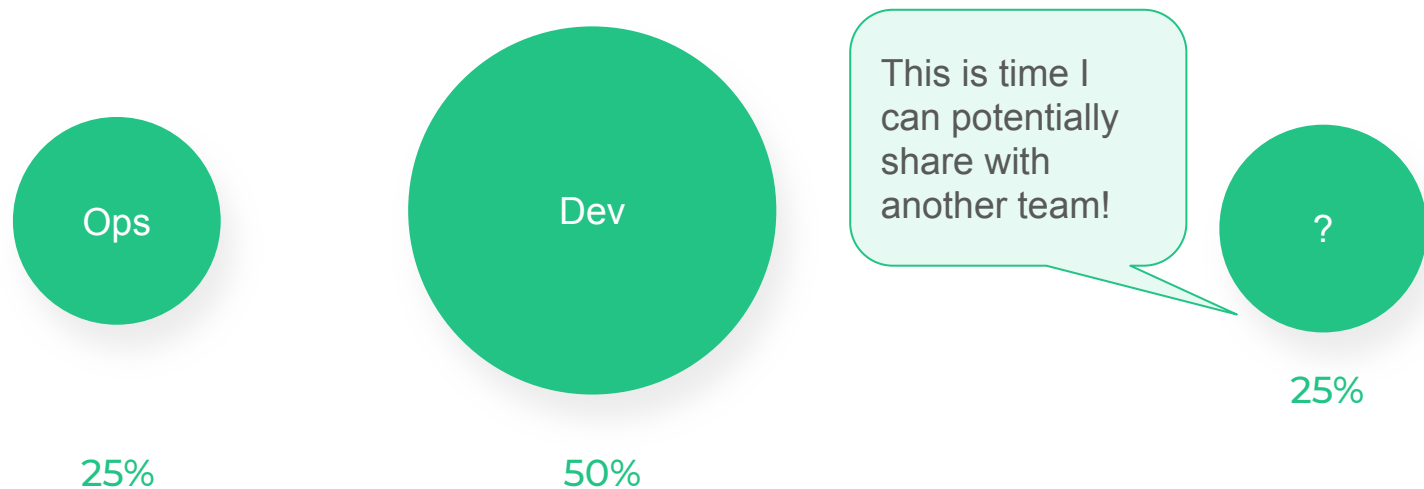
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A day in the life of an SRE





# What is SRE?



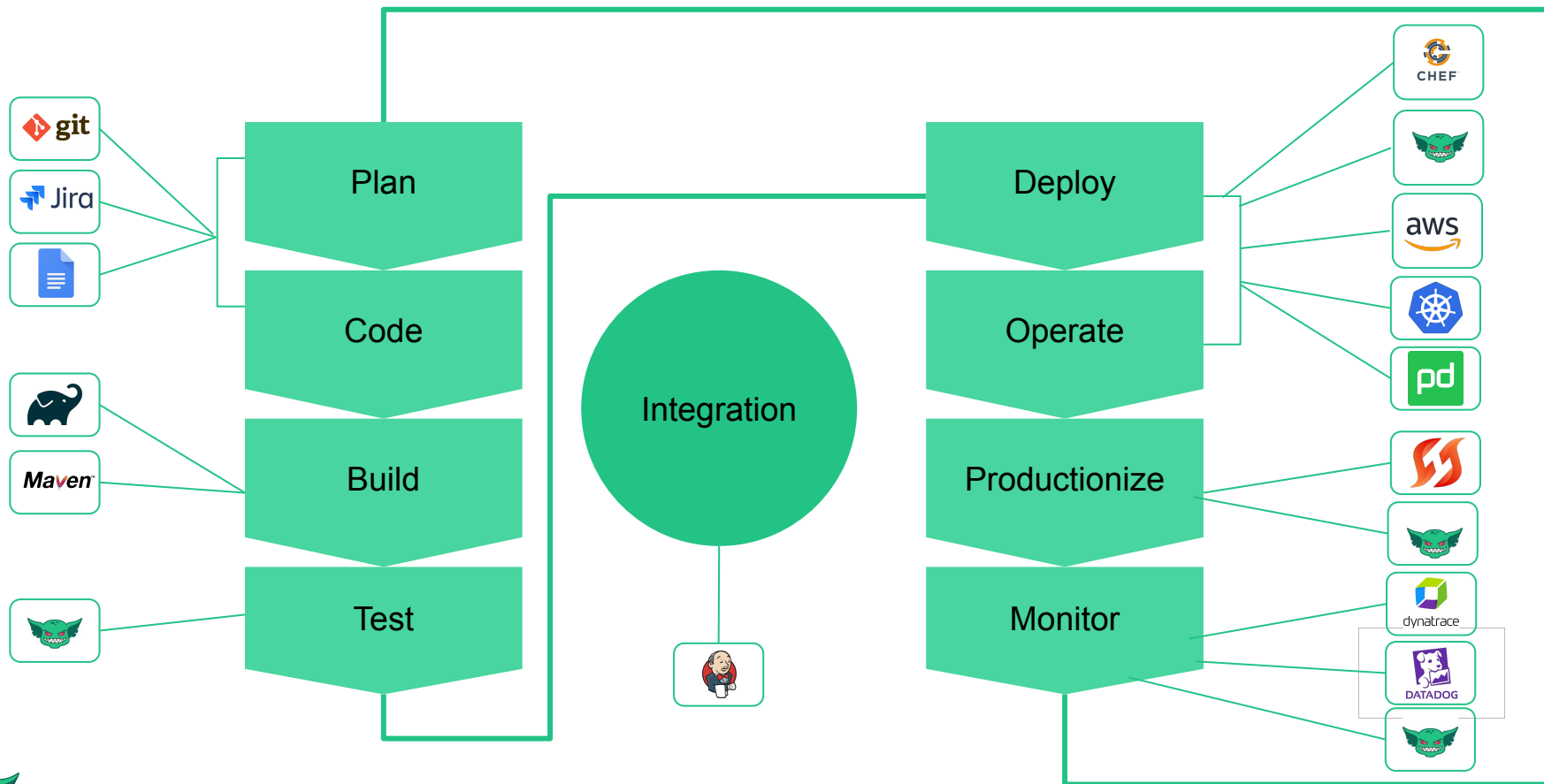
A day in the life of an SRE



# SRE Phases

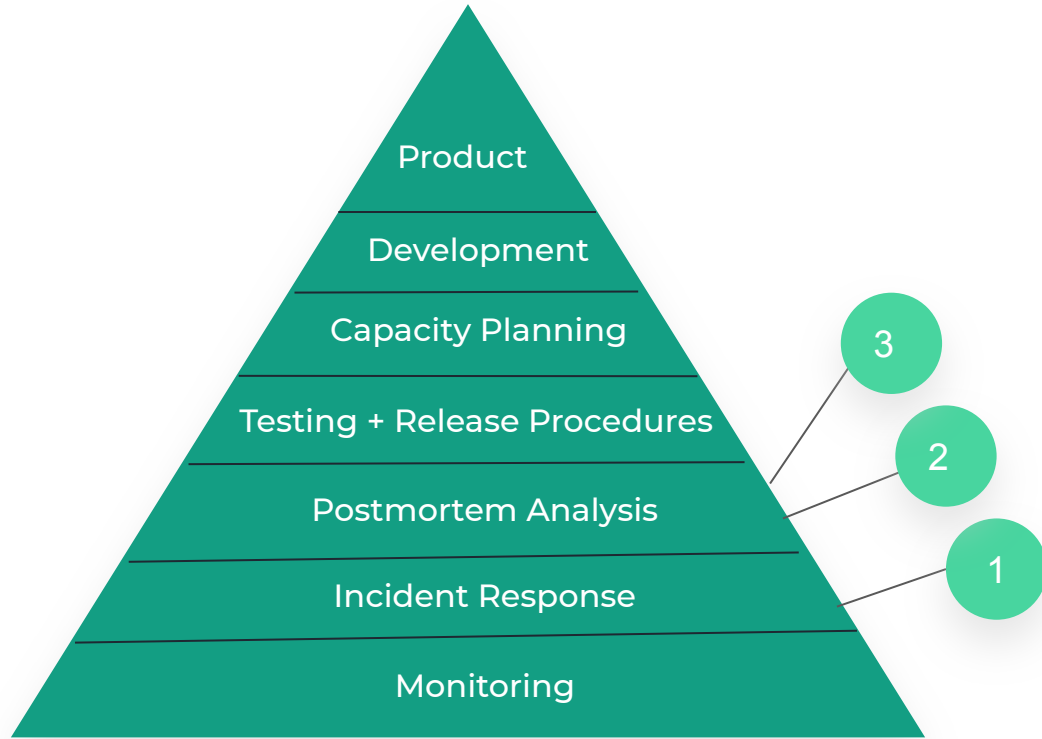


# SRE Phases



# SRE Use Cases





# **SRE Use Case 1: Incident Response**



# SRE Use Case 1: Incident Response

DETECTION	DIAGNOSIS	MITIGATION	PREVENTION	CLOSURE	DETECTION
Alert & page for SEV	Discover source of SEV	Introduce fix and mitigate impact of SEV	Understand root cause and complete all SEV action items	GameDay to replicate SEV and confirm fix is reliable	Alert & page for SEV
TTD (Time to Detection)		TTR (Time to Recovery)	TTD (Time to Detection)		TBF (Time between failures)
TTI (Total time of Impact)					

## ROLES & RESPONSIBILITIES

### Incident Manager On-Call (IMOC)

The IMOC leads and coordinate the SEV team through the SEV lifecycle.

### Tech Lead On-Call (TLOC)

The TLOC settles in the trenches and stays laser-focused on technical problem solving



# **SRE Use Case 2: Postmortem Analysis**





# SRE Use Case 2: Postmortem Analysis

**Postmortem:** SEV 0 Slow Walrus

**Owner:** IMOC (), TLOC ()

**Status:** Final/Draft

**Incident Date:**

**Published Date:**

## Executive Summary

**Impact:**

**Root causes:**

## Problem Summary:

**Duration of problem:**

**Product(s) affected:**

**% of product affected:**

**User Impact:**

**Revenue Impact:**

**Detection:**

**Resolution:**

**Root Causes & Trigger:**

**Timeline / Recovery efforts:**

**Lessons Learned:**

What went well?

What went poorly?

- Outage
- Recovery

Where did we get lucky?

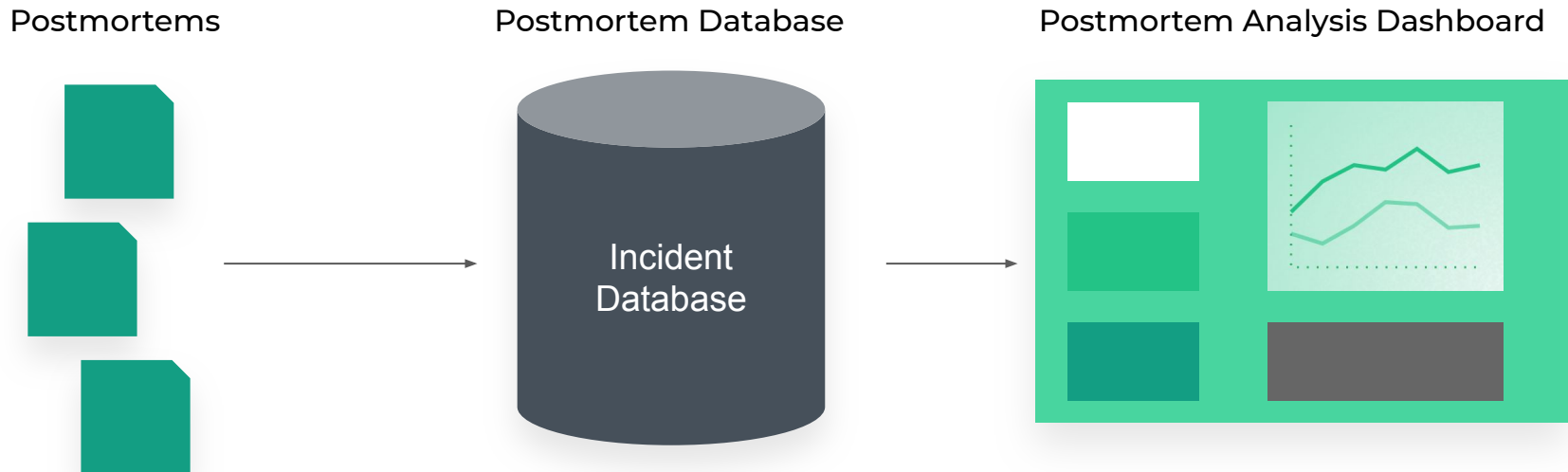
**Action Items:**

**Glossary:**

**Appendix:**



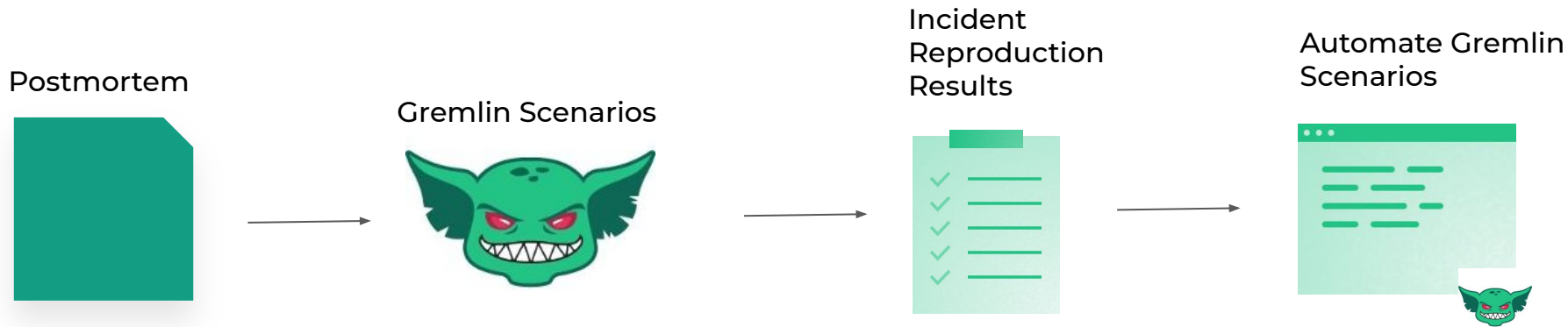
# SRE Use Case 2: Postmortem Analysis



# **SRE Use Case 3: Incident Reproduction**



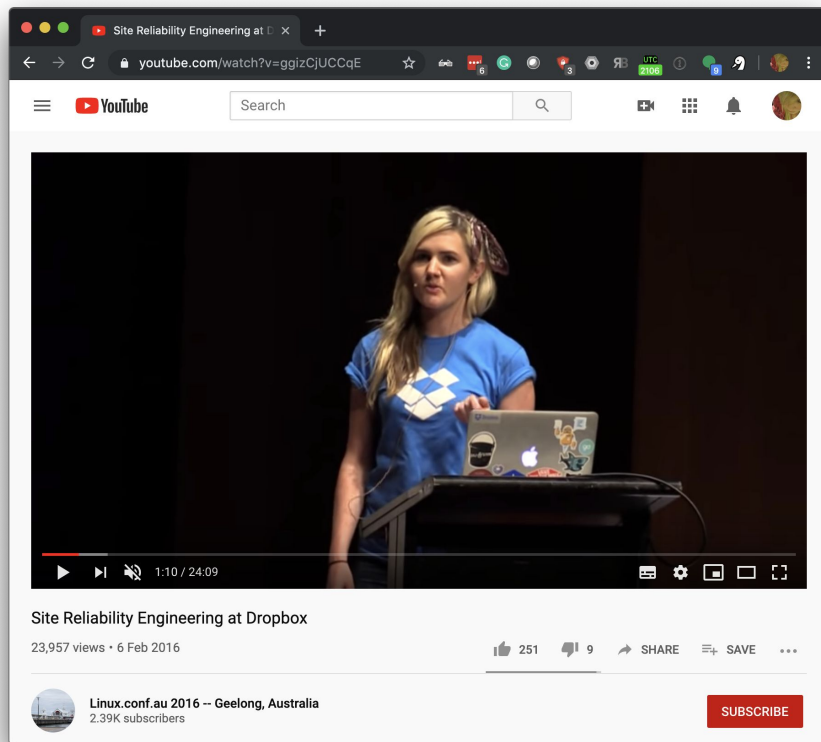
# SRE Use Case 3: Incident Reproduction



# SRE Success Stories



# SRE Success Stories: Dropbox



10x reduction in incidents in 3 months

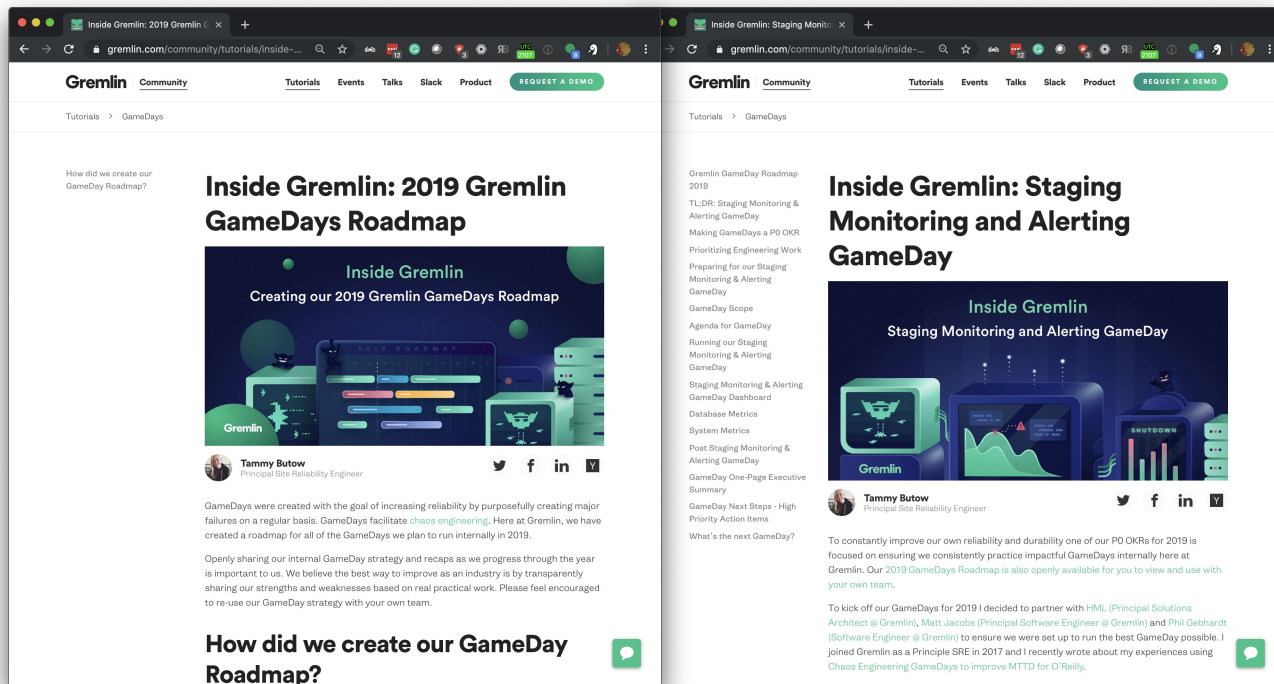
No SEV 0s for 12+ months

Increase in team engagement

Reduction in on-call time %



# SRE Success Stories: Gremlin



Regular monthly  
GameDays

Identification of 10+  
critical issues

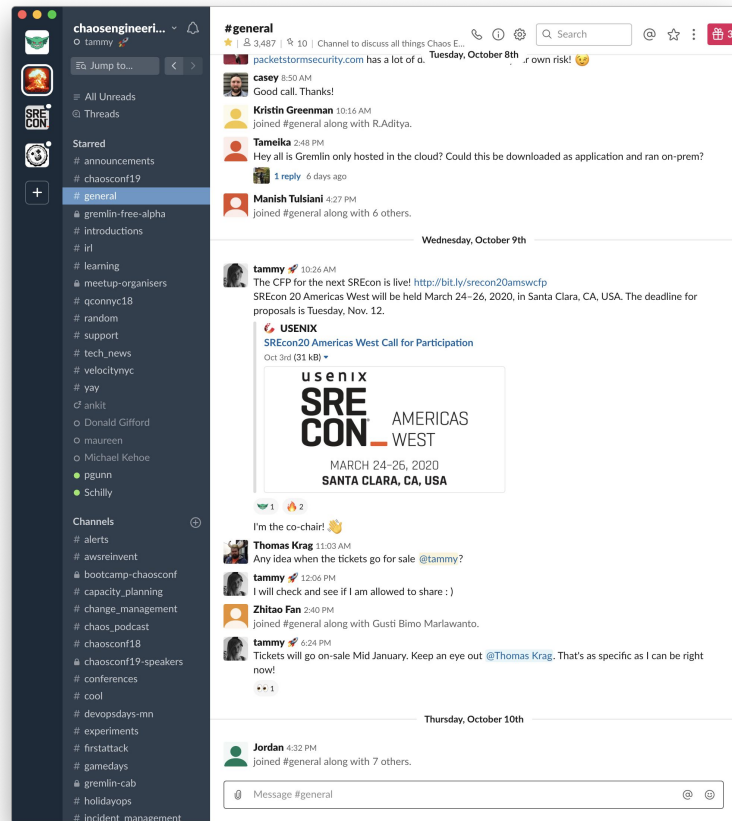
Increase in team  
knowledge

Reduction in on-call  
training time



# Join the community

[gremlin.com/slack](https://gremlin.com/slack)





# Thank You

[tammy@gremlin.com](mailto:tammy@gremlin.com)

[linkedin.com/in/tammybutow/](https://linkedin.com/in/tammybutow/)



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