SRE:
It’s People All the Way Down

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Heroku, a Salesforce.com company
$ heroku create sushi
Creating sushi... done
http://sushi.herokuapp.com/ | git@heroku.com:sushi.git

$ git push heroku master
-----> Heroku receiving push
-----> Rails app detected
-----> Compiled slug size is 8.0MB
http://sushi.herokuapp.com deployed to heroku
Total Ownership Model
Vision
Power
Control

Vision! Strategy!

ENGINEERING

OOPS

SERVICE

Backpressure
Pages
Incentives

- Dev’s incentives align with reliability
  - decreasing operational burden
  - increasing reliability
  - reduce false-positive pages
The Old Model

- Dev writes it, Ops runs it
- Dev: move fast
- Ops: protect their on-call
- Ops says “No” a lot
Ops Knowledge Gap

Ops

??!

Dev

ZZZ

 dorm

phone

alarm off
Saying “No” Isn’t Scalable!
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Saying “No” Isn’t Scalable!
In Scope for SRE

Word Cloud generated with Andreas Mueller's Wordcloud: github.com/amueller/word_cloud
Burnout

Image credit: https://www.nps.gov/features/yell/slidefile/history/1946_1999/structures/Images/15066.jpg
How to Make On-Call not Deadly

- primary/secondary pager rotation
- work-life balance
  - even during on-call
- 4-hour incident-response shifts
Attrition is a Reliability Risk

“I don’t want to have to backfill your ass.”

– Lex
Incident Lifecycle Process

SRE is involved in every incident we have, so we write and update how it’s done.
What happens when stuff goes wrong?

Incident Response
Division of Responsibilities

- Dev
  - incident response
  - service health
- SRE
  - incident coordination
  - holistic platform health
hold on for dear life
Incident Commander

Eng Team 1

Eng Team 2

Support

Vendor

Exec

Comms
Incident Retrospective

What happened, and how can we prevent it from happening again?
Complex failures

“The loads that created significant leakage were the combined effects of all accumulations of water, including rain after the wind storm, longitudinal flow on the surface of the bridge, and pumping through Nov. 24, 1990. These loads caused static moments [...] that exceeded the threshold for leakage. [E]xisting cracks were open[ed] sufficiently to allow water to leak into the pontoon. Progressive and accelerating sinking began at this time.”

This was almost a good retrospective
Gotta catch ‘em all

Retrospective process
People forget things

Hold it within 7 days
Context clues are the best clues

Have a template
Everyone’s perspective helps

Invite all the responders (don’t take no for an answer)
Big issues benefit from extra attention

Consider selecting a senior facilitator
How did Courtney break the vase?

Ask how, not why
Human Error is not a Root Cause

“...human error as a root cause isn’t where you should end, it’s where you should start your investigation.”

– John Allspaw, referencing Sidney Dekker, David Woods, and others
“Try Harder” is not a Remediation

“The beatings will continue until reliability improves.”

– some combination of my colleagues
The Human “Problem”
Conway’s Law

organizations which design systems ... are constrained to produce designs which are copies of the communication structures of these organizations

--Melvin Conway, in 1968

GOSSIP

It’s a sign of human connections
Everything is a people problem

Figure out how to love and support your people
Thanks for listening <3

No Q&A – please come talk to us!