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
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
Saying “No” Isn’t Scalable!
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Saying “No” Isn’t Scalable!
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 (go the heck home)
• make sure enough people are in the on-call rotation
• 4-hour incident-response shifts
Attritrion is a Reliability Risk

“I don’t want to have to backfill your a$@.

– Lex
Incident Lifecycle Process

SRE is involved in every incident we have, so we write and update how it’s done
Division of Responsibilities

- Dev
  - incident response
  - service health
- SRE
  - incident coordination
  - holistic platform health
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
Let’s do better

Use a template
Holistic View of Reliability

Image credit: dougwoods@Flickr https://www.flickr.com/photos/deerwooduk/579761138
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
The Human “Problem”
“Try Harder” is not a Remediation

“The beatings will continue until reliability improves.

– some combination of my colleagues
BLAME
The Design of Everyday Things

Donald A. Norman
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
TECHNICAL DEBT