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ALL DAY DEVOPS

NOVEMBER 12, 2020

SRE Track

Site Reliability Engineering:
Anti-patterns in Everyday Life
and What They Teach Us

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Site Reliability Engineering: Anti-patterns in Everyday Life and What They Teach Us

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Site Reliability Engineering

Hello
my name is

Jennifer Petoff
(aka Dr. J)
Google Ireland

Image: Public domain, https://commons.wikimedia.org/wiki/File:Hello_my_name_is_sticker.svg

- Ph.D. in Chemistry
- 13 years at Google
- Lead the SRE EDU team
- Co-editor of the SRE Book
- Part-time Travel Blogger at Sidewalk Safari

Why Antipatterns?

Site Reliability Engineering Patterns



Users should never notice an outage before you do.



Engineer solutions to eliminate classes of errors rather than being satisfied with point fixes.



Don't feed the machines with human toil.



Failure is an opportunity to improve, not to brandish pitchforks.

Coffee Calamity At An Auckland Cafe











This is fine...

Oh? Really?



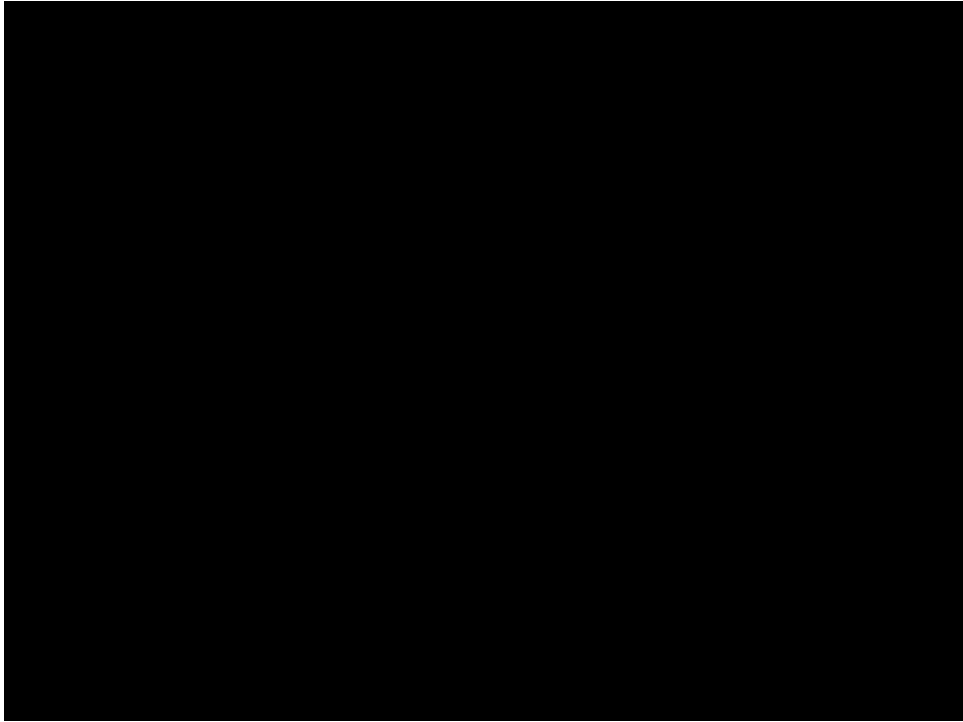




What Can We Take Away From This Story?

- If you don't meet the expectations of your customers, they will leave you → Set and meet SLOs aligned with customer happiness
- Overloading the system leads to things falling over → Avoiding Cascading Failure is paramount
- Corollary: it's about people not software. If you burn-out your people your systems and your business are in trouble → Avoid Ops Overload
- Adequate provisioning is key → Actively plan and manage your serving capacity

The Hotel Lock That Didn't



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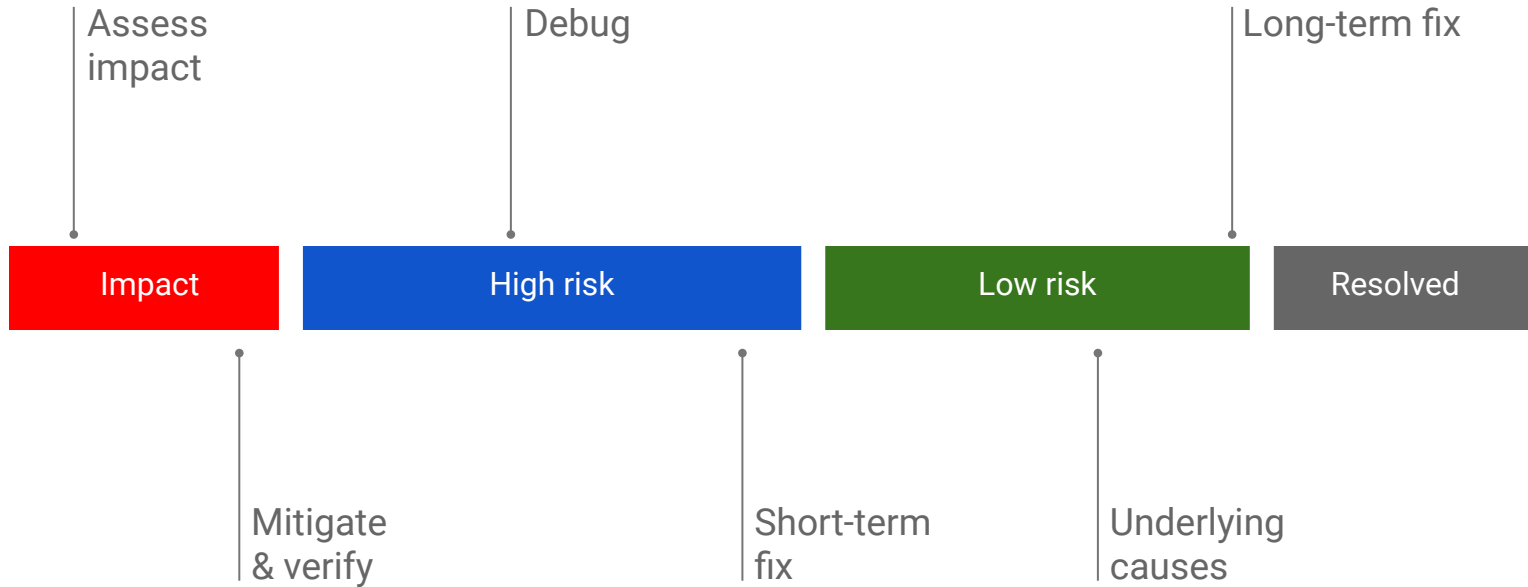


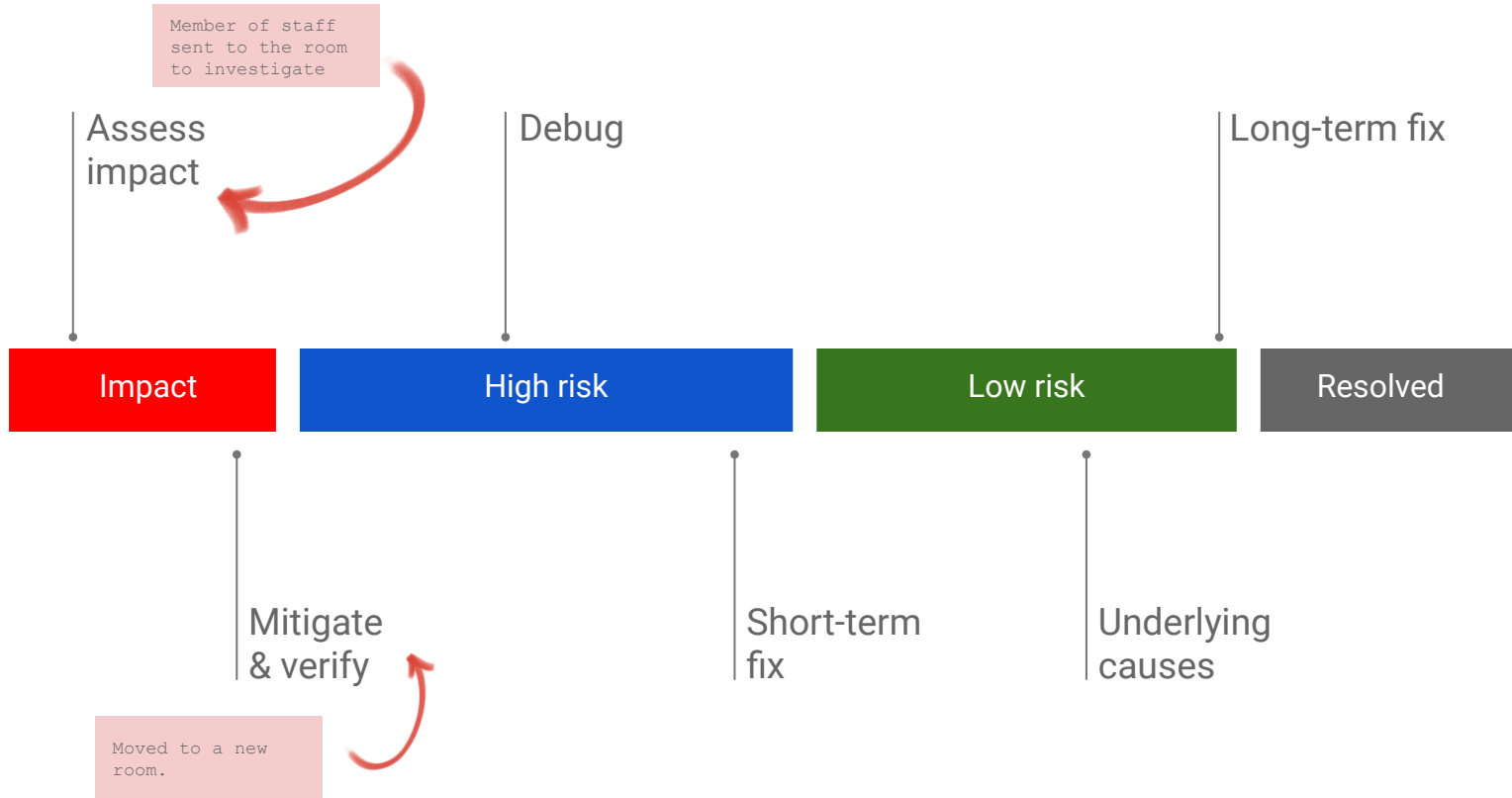




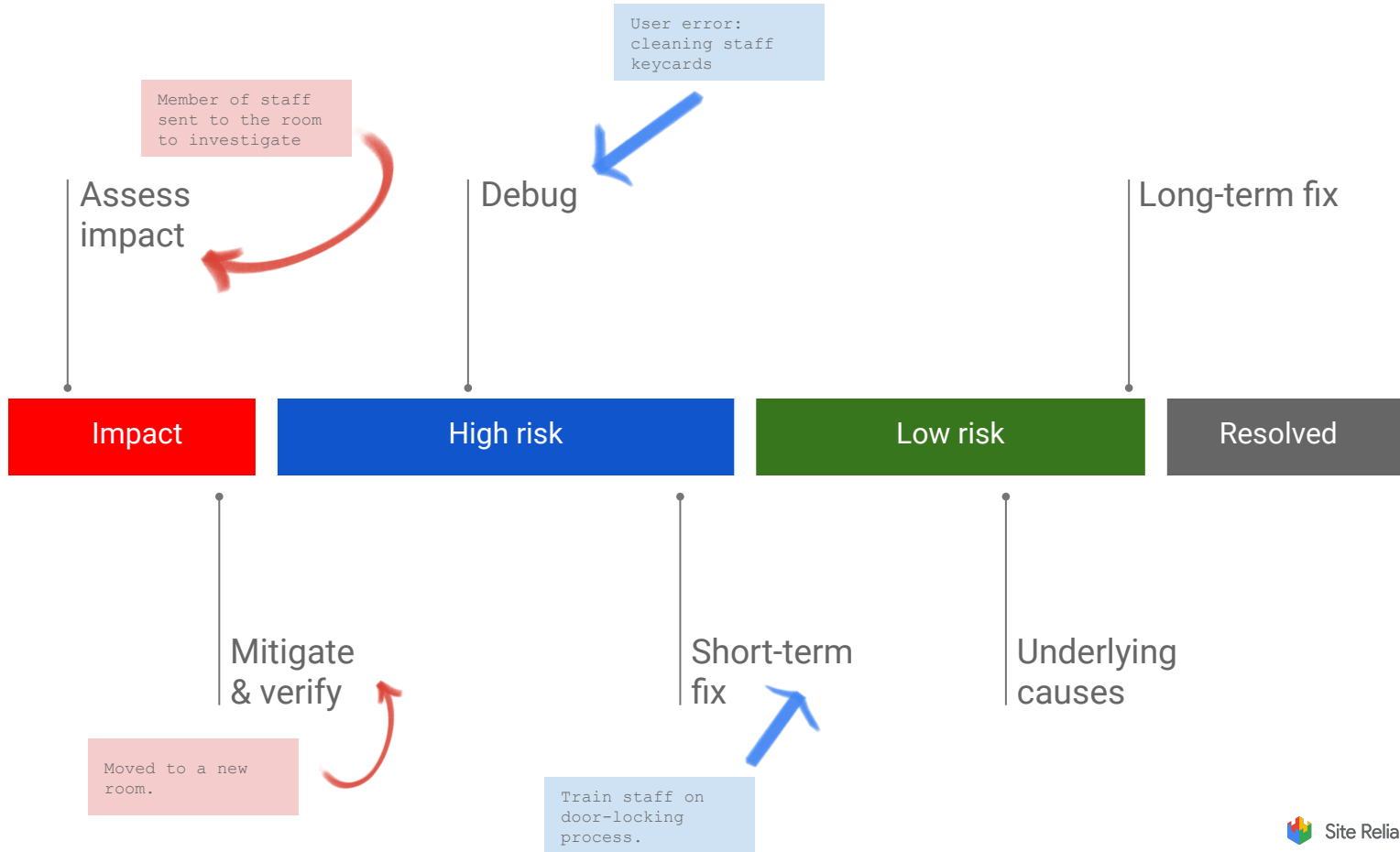








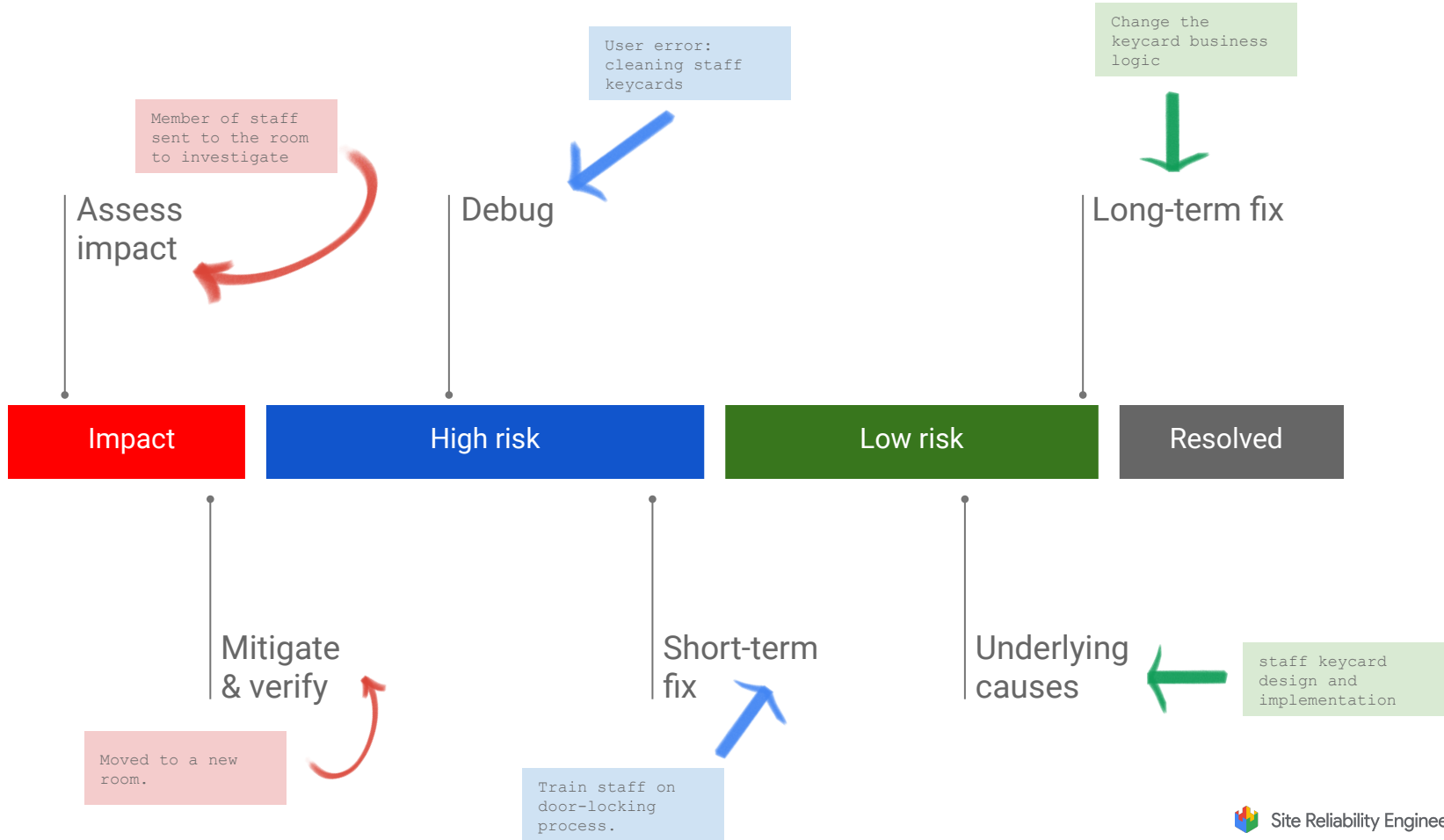






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**“Human”
errors are
really systems
problems.**



Trust



What Can We Take Away From This Story?

- Trust is hard to gain and easy to lose → Customer empathy is critical.
- Lack of ownership → empower teams to mitigate and resolve issues.
- It's never human error → Human errors are really systems problems
- Don't settle for point fixes → put long term fixes in place that eliminate classes of errors.

When Things Go Nuclear

“ I'm extremely angry right now. People should lose their jobs if this was an error.

--Hawaii State Representative Matt Lopresti
(in reference to the 2018 Hawaii nuclear alert false alarm)



The Case for Blamelessness

- Failure happens. There is no way around it.
- Embrace failure to improve MTTD and MTTR.
- Proactively addressing failure → more robust systems.

What Can We Take Away From This Story?

- Put away the pitchforks → They don't help system reliability.
- You've already paid a price in an outage → reap a return on that unplanned investment by learning as much as you can.
- It's never human error → Human errors are really systems problems.
- If you blame employees for mistakes they don't go away, they'll simply stop telling you about them → Transparency and blamelessness lead to more robust systems.

Failure is an
opportunity to
improve.

(so, put away the pitchforks!)

Site Reliability Engineering Patterns



Users should never notice an outage before you do.



Engineer solutions to eliminate classes of errors rather than being satisfied with point fixes.



Don't feed the machines with human toil.



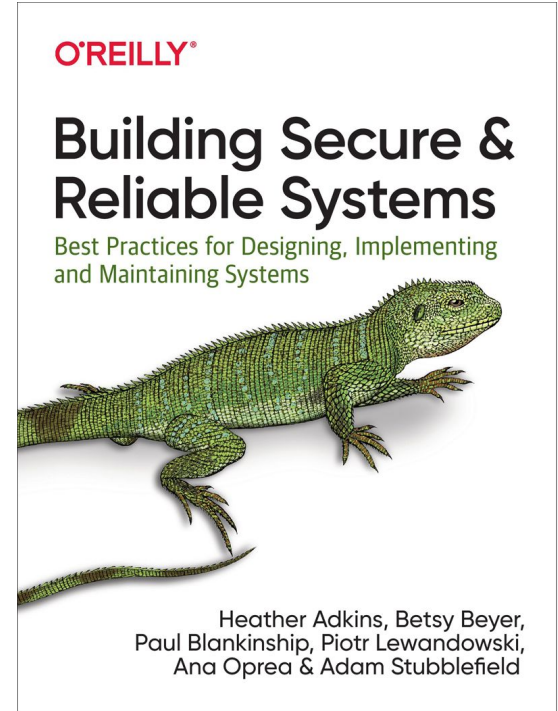
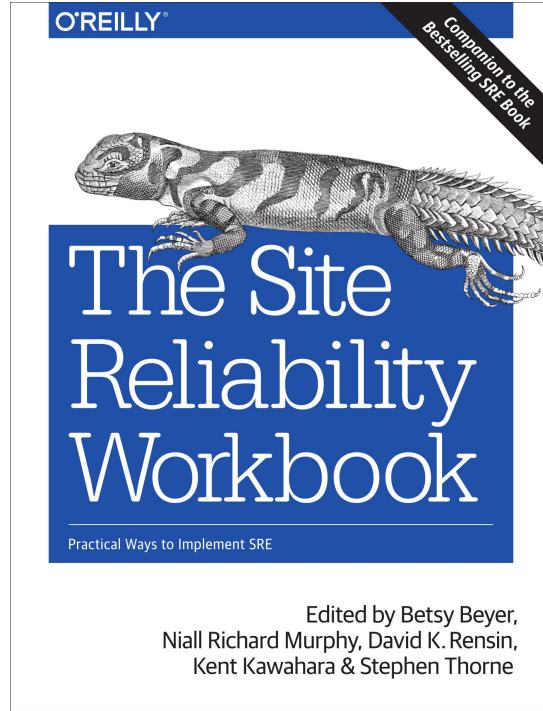
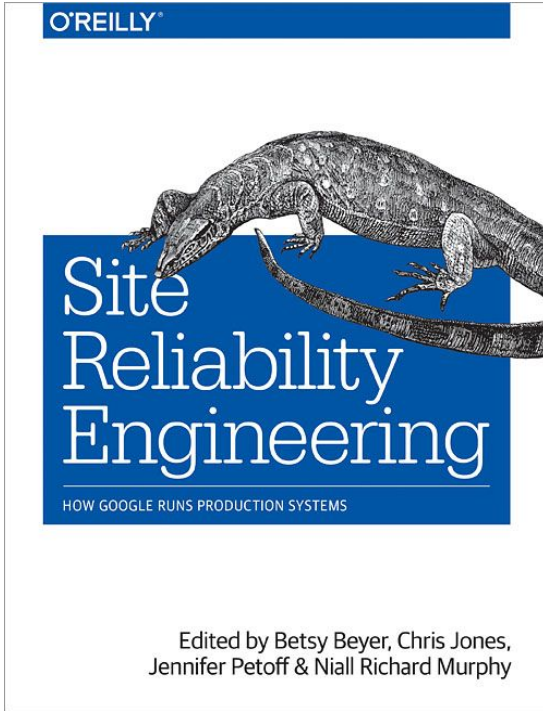
Failure is an opportunity to improve, not to brandish pitchforks.

Injured on Vacation? Applying Principles from Site Reliability Engineering to a Travel Emergency

bit.ly/sre-travel-emergency



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