Supercharge your SRE teams with Chaos Engineering

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Engineering

SKILup Day SRE
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Today's Talk

- What's Chaos Engineering?
- Why do SREs care?
- Innovation adoption lifecycle curve – where are we?
- Why Boring is good
- Chaos Engineering myths
- Getting CE on the roadmap

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Chaos Engineering

*"Chaos Engineering is the discipline of **experimenting** on a system in order to **build confidence** in the system's capability to **withstand turbulent conditions** in production."*

-- Principles of Chaos Engineering
https://principlesofchaos.org

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Chaos Engineering

“ *experimenting*
to ***build confidence***
to ***withstand turbulent conditions*** ”

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Why do SREs care?

*SRE is "what happens when a **software engineer is tasked with what used to be called operations**"*

-- Ben Treynor
founder of Google's Site Reliability Team

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Why do SREs care?

*Building **scalable** and **reliable systems***

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Reliability

1. The quality of being **trustworthy** or of **performing consistently well**.

   “A fundamental aspect to building relationships is providing reliability.’

-- Oxford dictionary

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Remarkably reliable

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https://unsplash.com/photos/HcgK4WoBwzg

Why do SREs care?

*Building **scalable** and **reliable systems***

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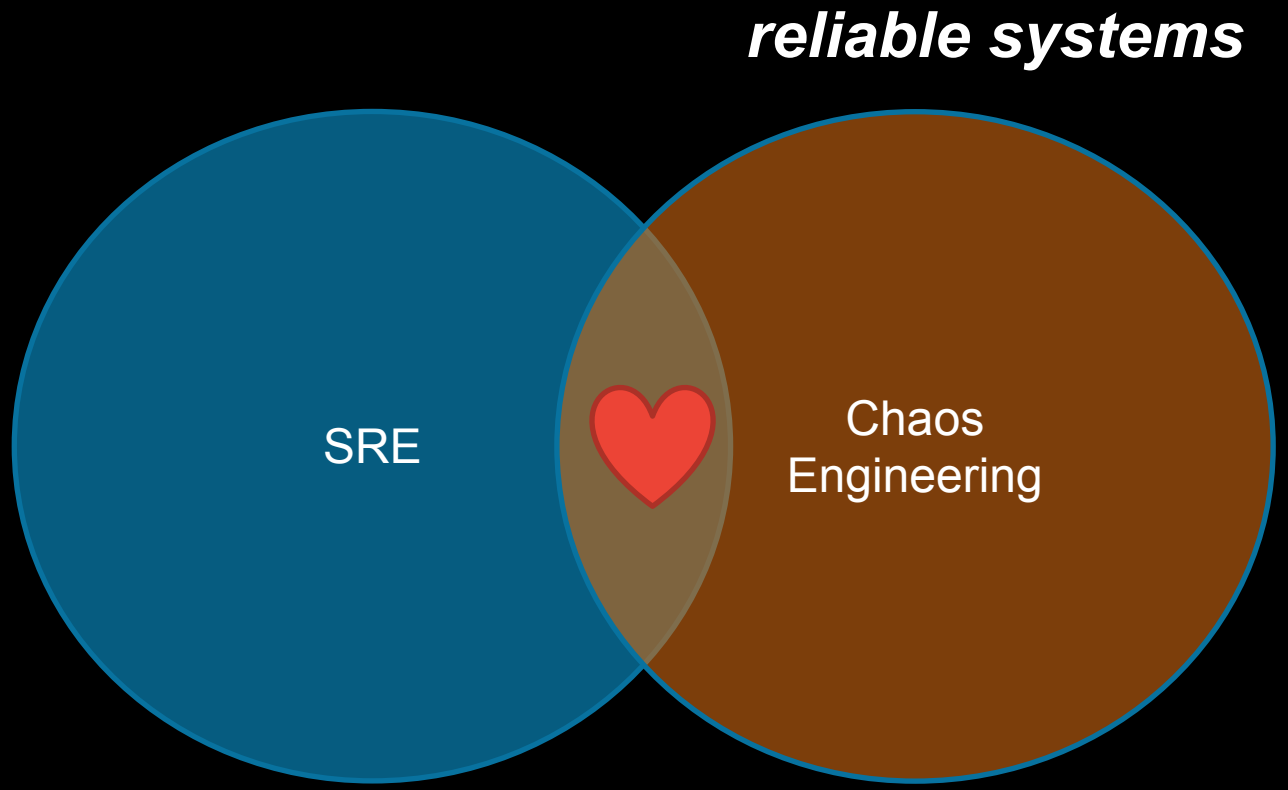
Why do SREs care?



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Testing

- *Unit tests*
- *Integration tests*
- *End-to-end (e2e) test*
- *Chaos Engineering*

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Chaos Experiment - ideas

What if?

- Network latency increases?
- Traffic spikes?
- Database becomes slow?
- We trigger circuit-breaker?
- The application needs to heal?
- …

4 steps to Chaos Experiment

1. *Ensure observability*
2. *Measure steady state*
3. *From hypothesis*
4. *Run experiment*

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4 steps to Chaos Experiment

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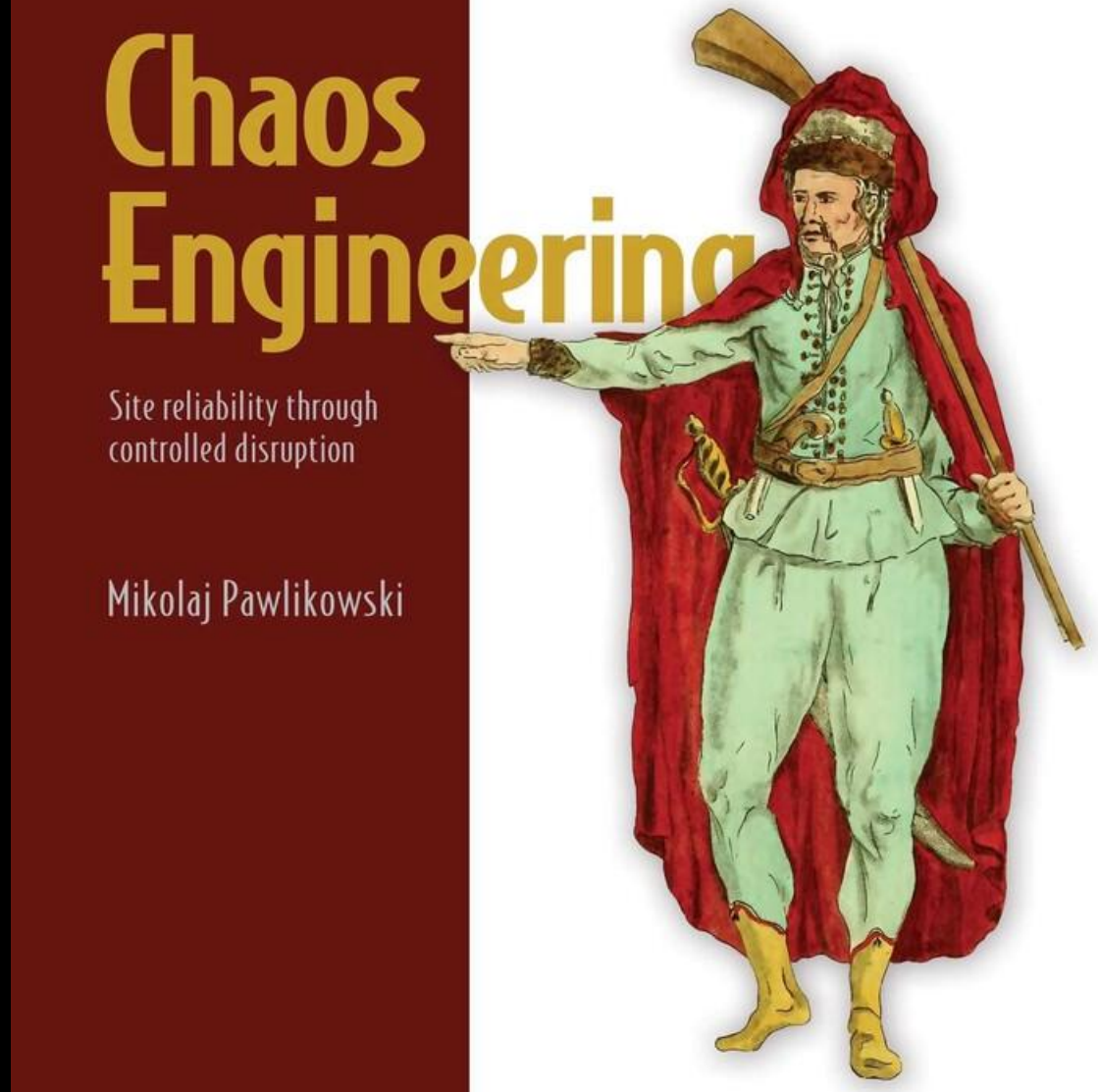

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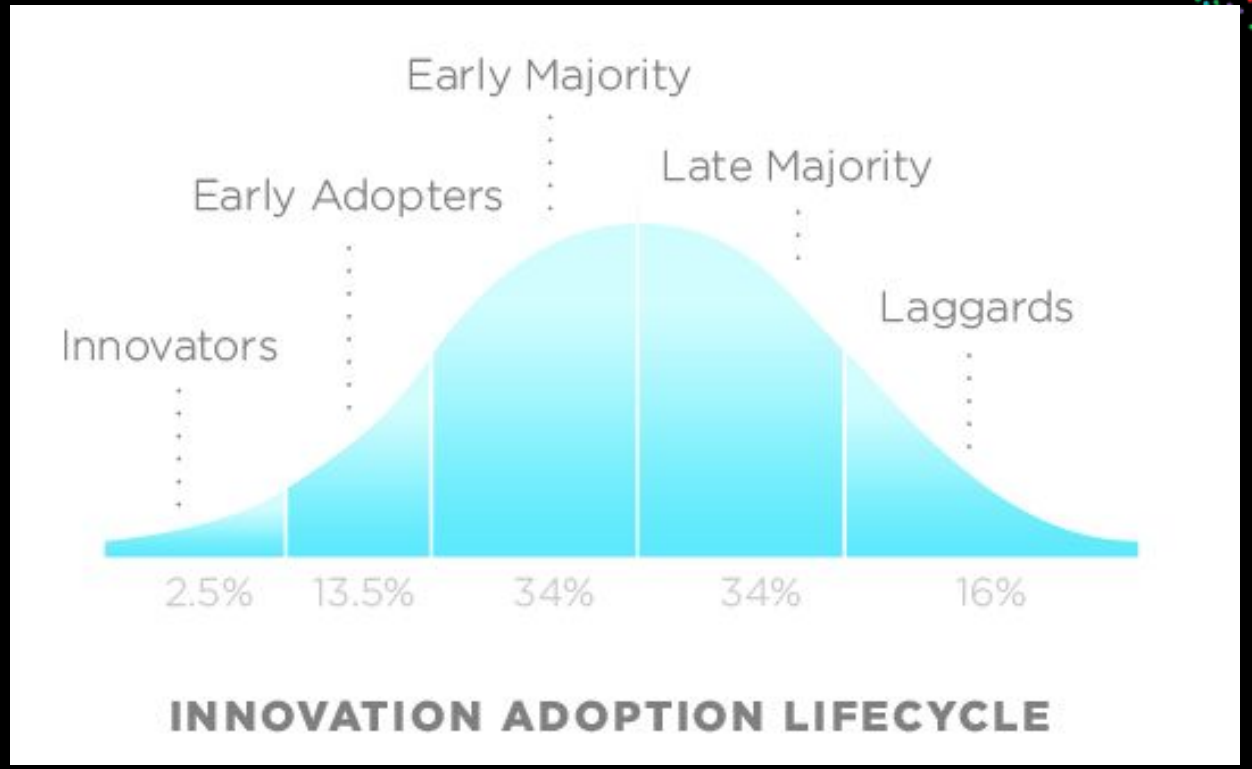
Innovation adoption lifecycle



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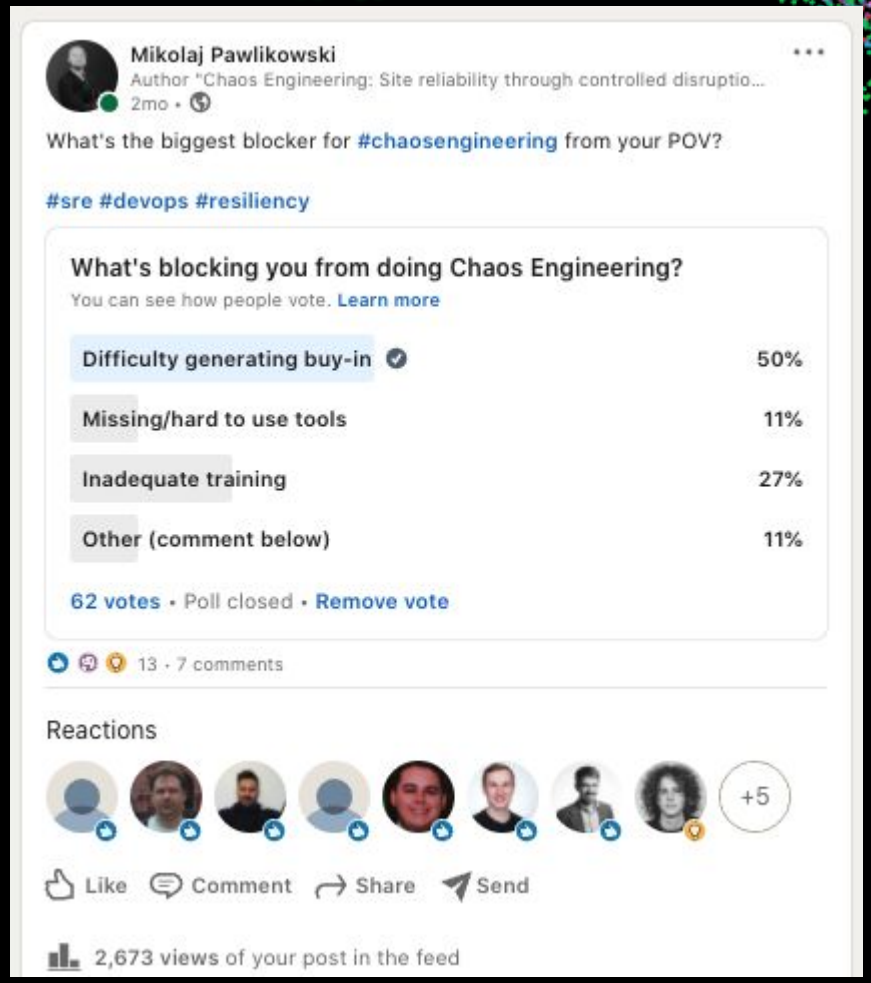
https://en.wikipedia.org/wiki/Technology_adoption_life_cycle

Boring is good



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https://www.linkedin.com/feed/update/urn:li:activity:6732991348066000896/

Chaos Engineering myths

- ”It’s Chaos Monkey, right?”/ “It’s breaking things randomly”
- “It’s testing in production”
- “It’s only for massively distributed systems”
- “We’re not mature enough for CE”
- ”We already have enough chaos ;)”

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https://www.linkedin.com/pulse/top-5-chaos-engineering-myths-debunked-mikolaj-pawlikowski/

Getting Chaos Engineering on the roadmap

- Risk vs. reward
- Getting called less

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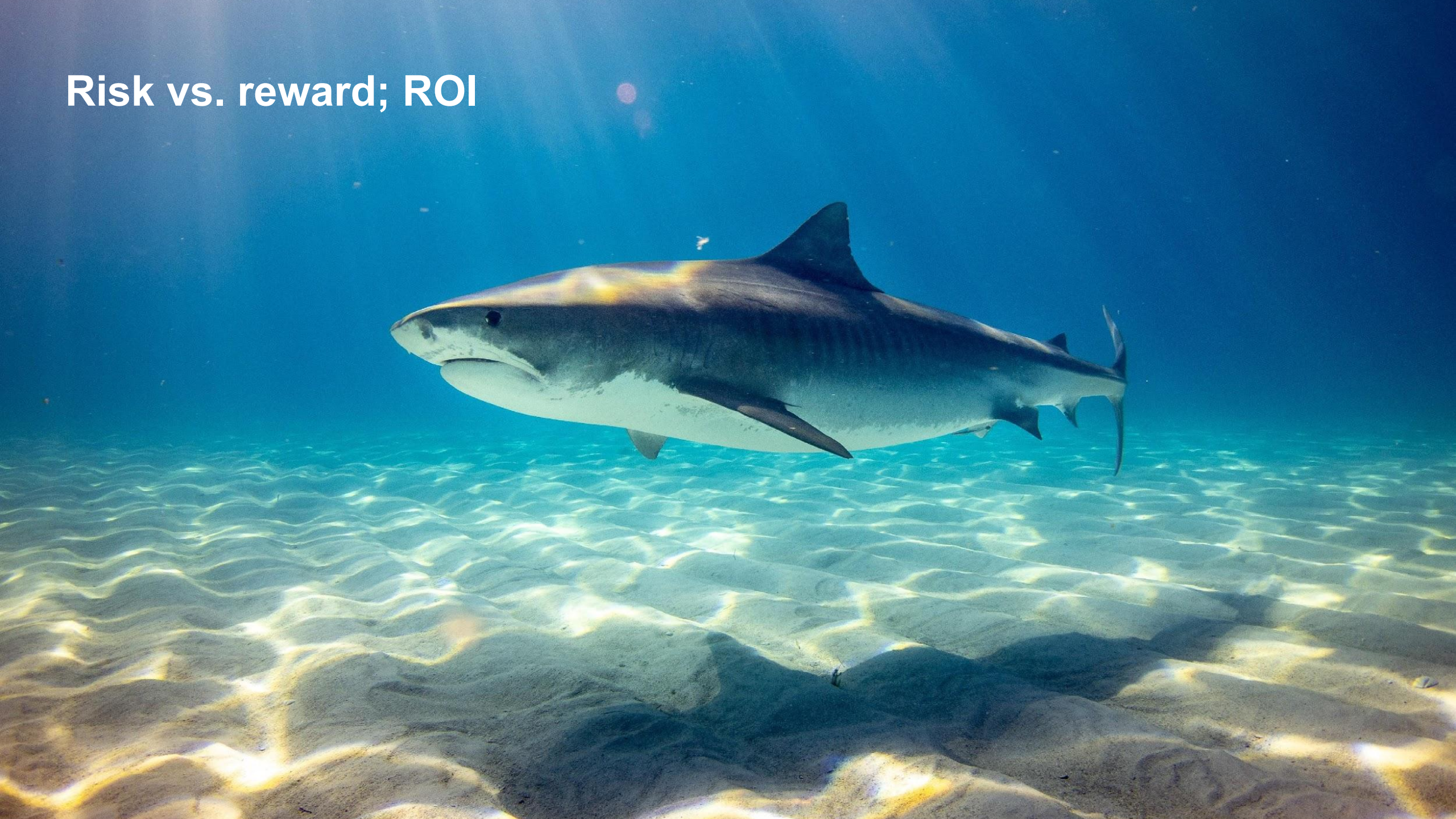
https://www.linkedin.com/pulse/chaos-engineering-getting-buy-in-mikolaj-pawlikowski/

Risk vs. reward; ROI



Leading Causes of Death

Data are for the U.S.

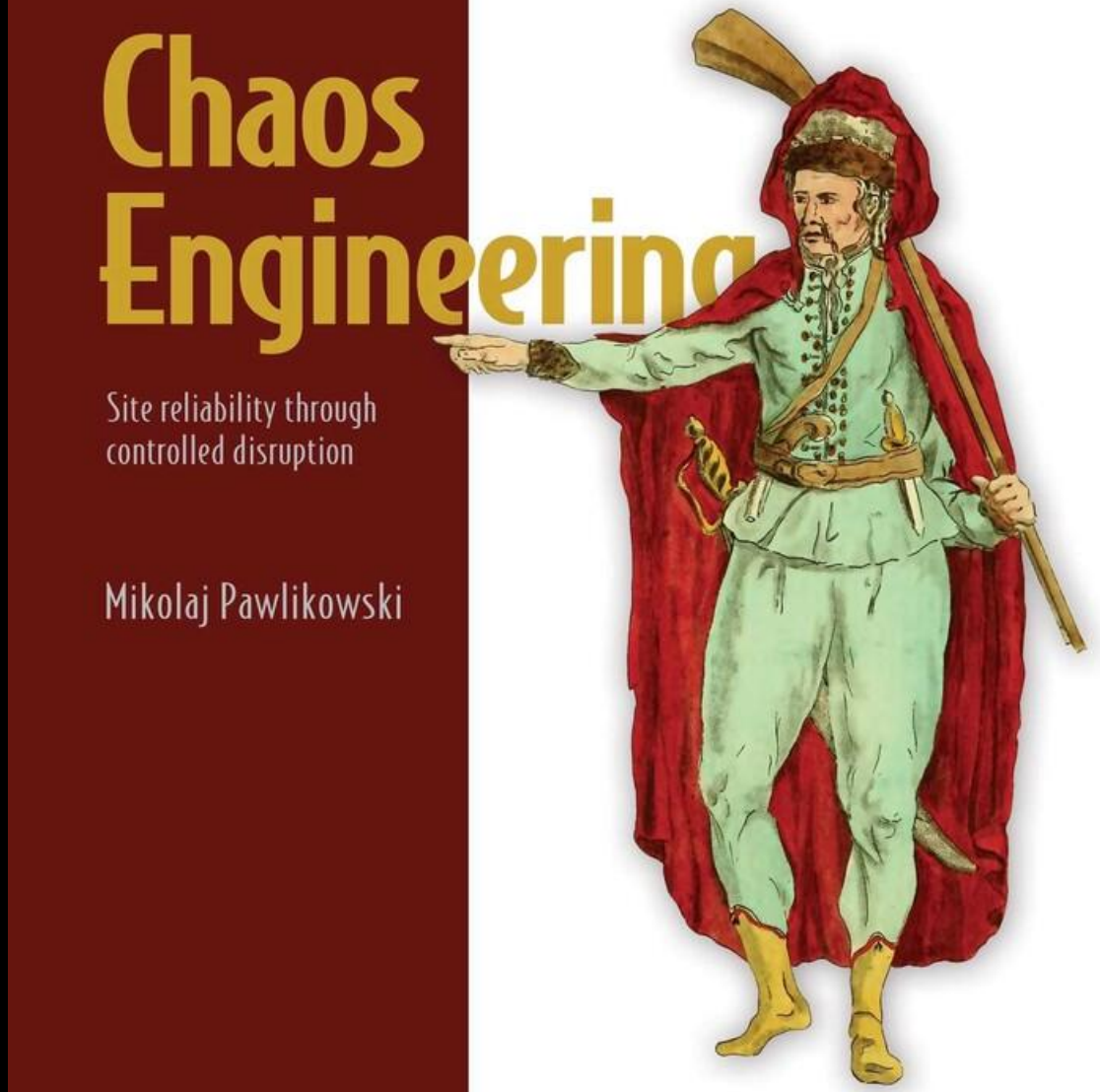
Number of deaths for leading causes of death

- Heart disease: 647,457
- Cancer: 599,108
- Accidents (unintentional injuries): 169,936
- Chronic lower respiratory diseases: 160,201
- Stroke (cerebrovascular diseases): 146,383
- Alzheimer's disease: 121,404
- Diabetes: 83,564
- Influenza and pneumonia: 55,672
- Nephritis, nephrotic syndrome, and nephrosis: 50,633
- Intentional self-harm (suicide): 47,173

https://www.cdc.gov/nchs/fastats/leading-causes-of-death.htm

Chaos Engineering:
Site reliability through controlled disruption

Manning
https://www.manning.com/books/chaos-engineering



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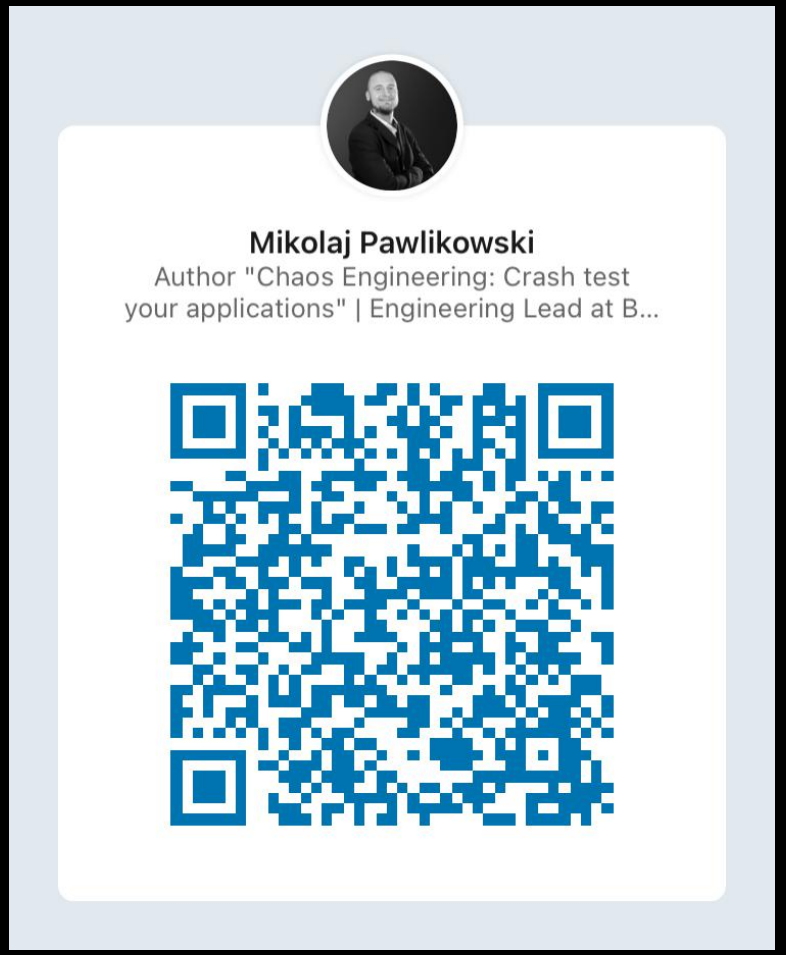
Let’s connect!



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