Sticking Together ...together while Staying Apart ...apart

Resilience in the time of global pandemic

Aaron Aldrich
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LaunchDarkly

Everything’s a little bit broken all of the time… but it keeps working anyway

Million-to-one chances... crop up nine times out of ten.

—(GNU) Sir Terry Pratchet

Resilience

Resilience

Rebound

Robustness

Graceful Extensibility

Sustained Adaptability

Rebound

Return to “normal” after a surprise or traumatic incident. Work done ahead of time.

Robustness

The ability to withstand and absorb well-modeled disturbances. Known-knowns

Graceful Extensibility

The ability to stretch with challenges to operational boundaries.
Opposed to brittleness.

Sustained Adaptability

Recognizing and managing adaptive capabilities over long timescales

Bone

- Continuously created and destroyed
- Reconstruction directed by mechanical strain
- Process directed by signals through layered networks at cell-level

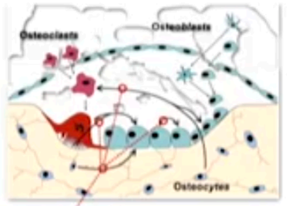
The marvelous resilience of bone

Resilience engineering…

- …is engineering applied to a resilient system.
- …depends for its success the presence of resilience.
- …requires understanding how resilience plays out.
- …can be successful even without understanding the mechanisms of resilience.
- …benefits from greater understanding of the sources and modulators of resilience.

~3500 yrs old

Resilience engineering…



signals *(partial list)*

OSM	EphB4
PTHrP	Sema3a
sclerostin	OSM
TGFb	RANKL
IGF-1	Sema3B
CT-1	Wnt5a
Sema4D	OPG
S1P	OSM
ephrinB2	interleukins
	RANKL

- …alters the resilience mechanisms of a system.
- …depends for its success on deep understanding resilience.
- …seeks to retard the loss of adaptive capacity.
- …generates new types of hazard.

~5 yrs old

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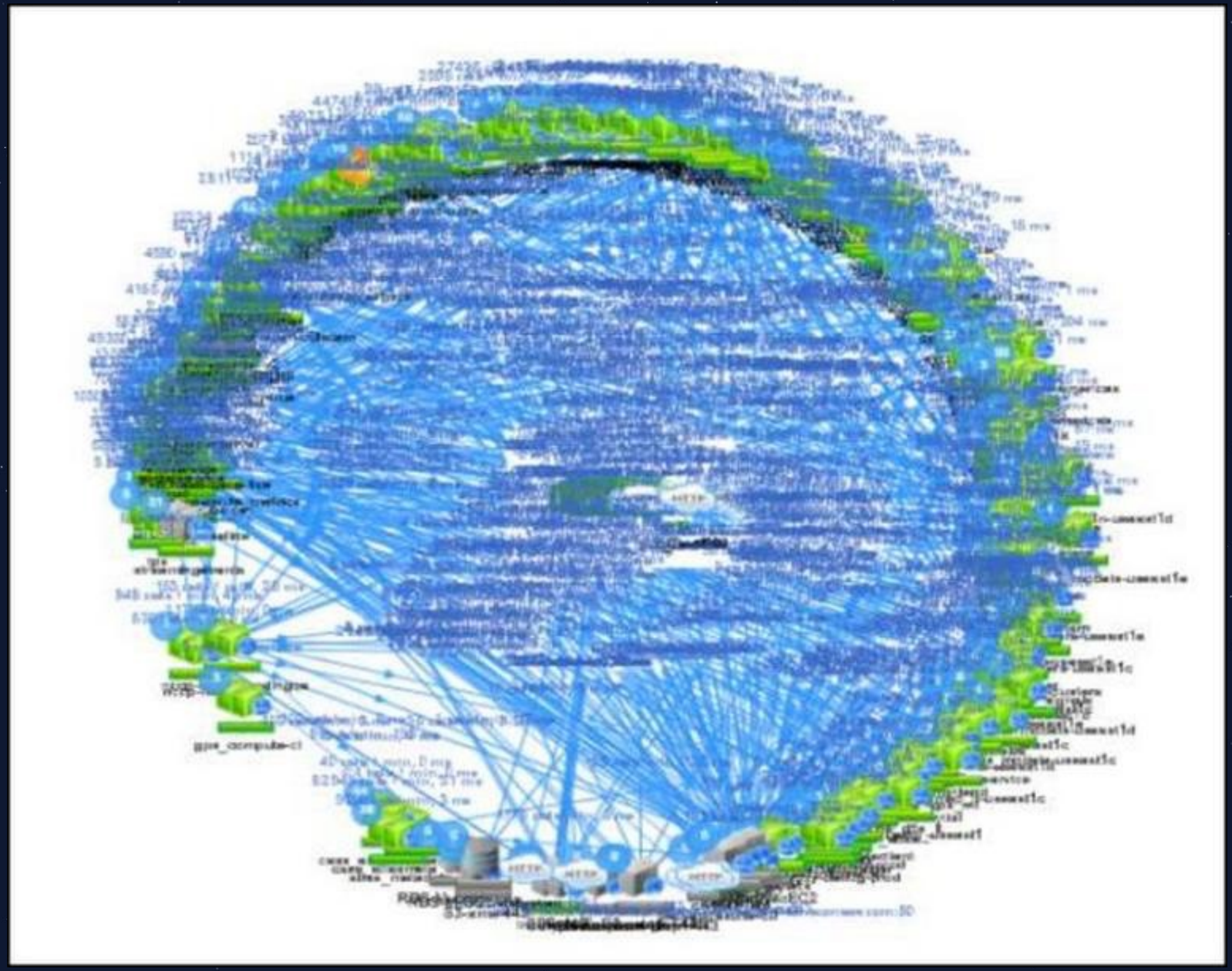
REdeploy



Rebound

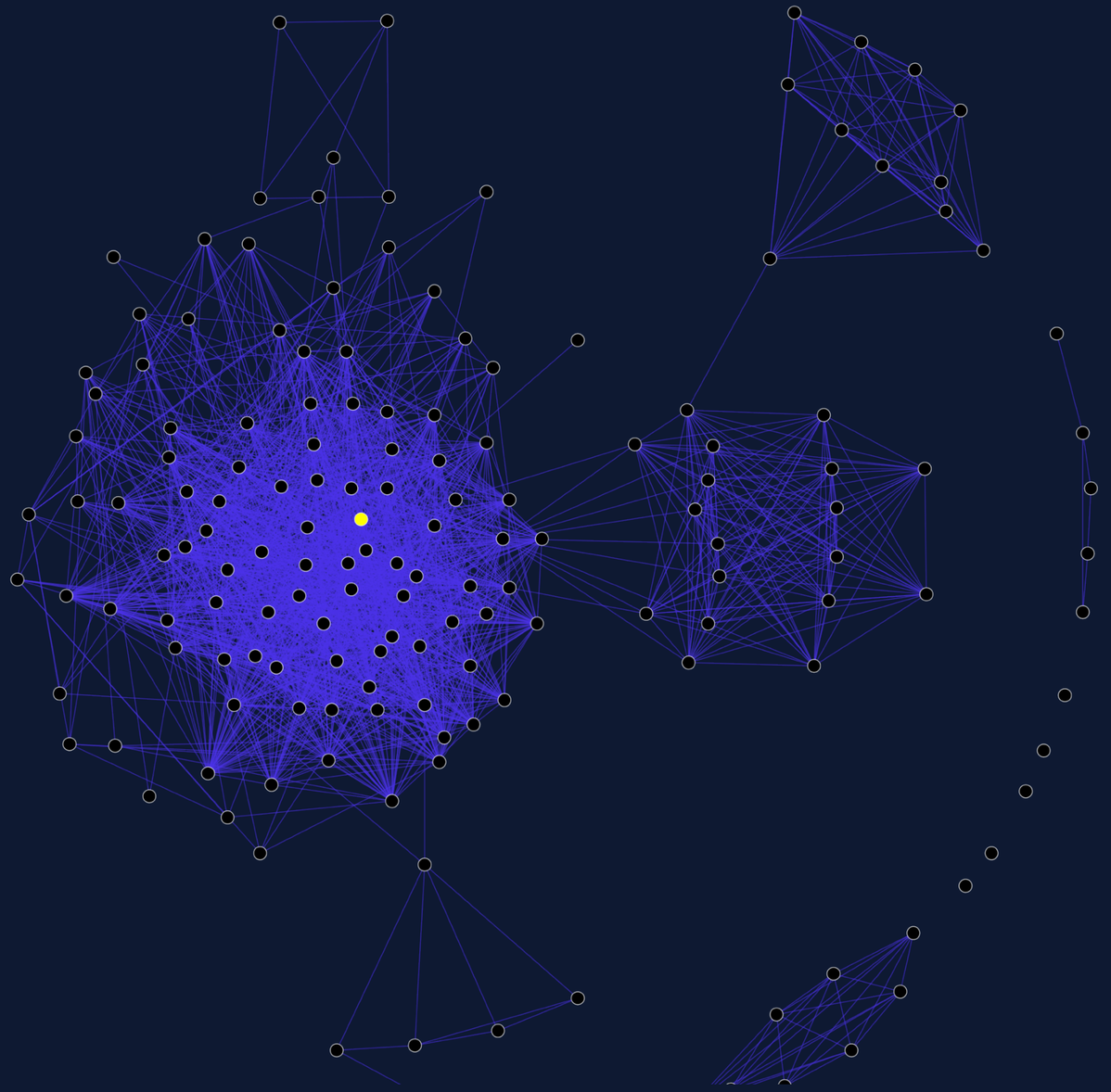
Robustness

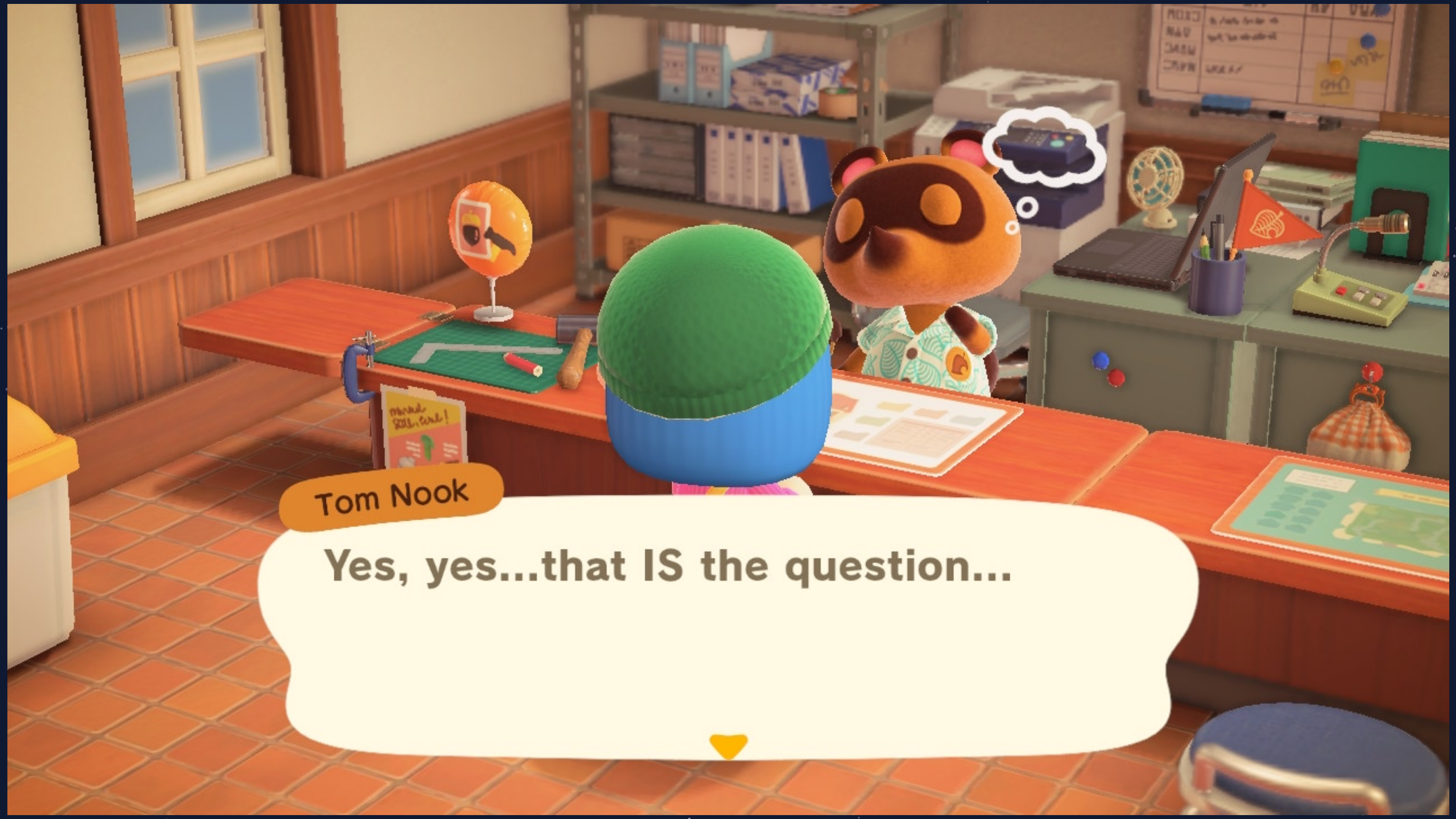
Graceful Extensibility

Socio-Technical Systems

Conway's Law

Designed systems represent an organization's communication structure




Tom Nook
Yes, yes...that IS the question...

Blunt end

Removed from experience, upstream decision makers

Sharp end

Closest to the work, practitioners

Sharp end

Closest to the work, practitioners

- Constantly building and destroying systems
- **Strong signaling**
- Improve systems based on strain
- **Will do so naturally given ownership**

Teams that do well dealing with impact [surprises/incidents] are those that have a strong common ground

—J. Paul Reed (@jpaulreed), Failover Conf

If we want to improve a team’s resilience, we must build a strong common ground

—Me, Just now.

Common Ground

- Basic Compact
- Goal Alignment/ Commitment
- Inter-predictability
- Sustain & Repair

Building Common Ground

- Blameless Postmortems
- Chaos Engineering
- Game Days
- Modeling Vulnerability

1
Psychological Safety
Team members feel safe to take risks and be vulnerable in front of each other.
2
Dependability
Team members get things done on time and meet Google's high bar for excellence.
3
Structure & Clarity
Team members have clear roles, plans, and goals.
4
Meaning
Work is personally important to team members.
5
Impact
Team members think their work matters and creates change.
re:Work

1

Psychological Safety

Team members feel safe to take risks and
be vulnerable in front of each other.

Matt Stratton

Kick 'Em or Keep 'Em -
Collaborating on our own
Deserted Islands

Deserted Island DevOps

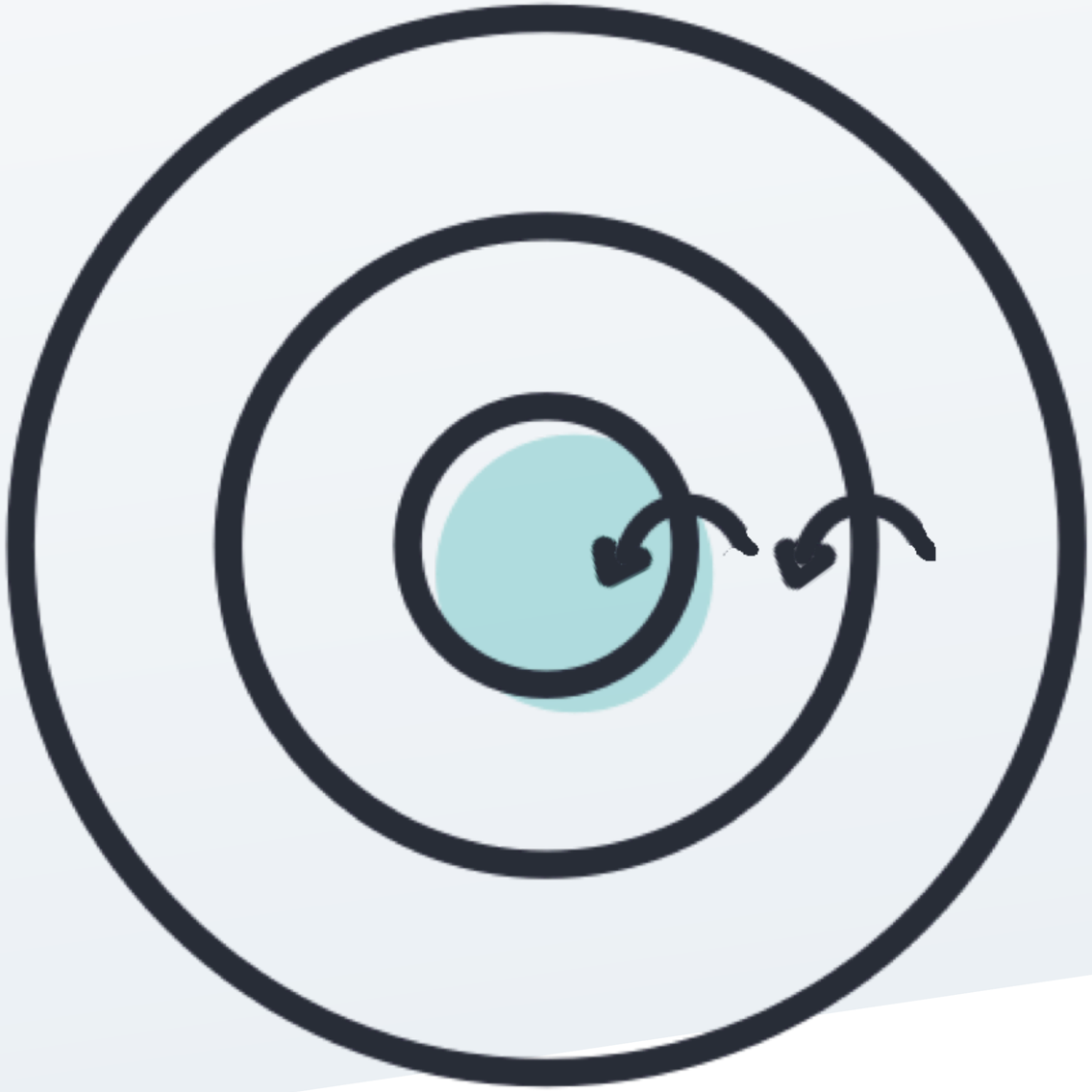
Register at desertedislanddevops.com

April 30th, 2020

Starting 10 AM ET

Resilience is about creating the conditions that maximize everyone’s potential

—Rein Hendrichs, >Code Podcast, 174: Resilience



What happens when governments fail?

It's left to us

Community Building is Resilience Engineering

—Me again, just now again.

Strong Communities

- Diverse
- High Trust & Safety
- Sustain & Repair
- Inter-predictability
- Loosely Coupled, layered networks

Fearing shortages, locals across Upstate SC are sewing face masks for healthcare workers

Zoe Nicholson and Ken Ruinard, Greenville News Published 6:09 a.m. ET March 24, 2020

U.S.

Rent Strike Planned for May 1 as Pain of Coronavirus Deepens

Most residents at 17 buildings near Elmhurst Hospital Center in Queens, N.Y., have committed to stop paying rent, organizers say

MONEY

Stores offer shopping time for vulnerable customers amid coronavirus: Target, Aldi, Walmart and more

Kelly Tyko USA TODAY

Published 12:39 a.m. ET Mar. 18, 2020 | Updated 1:19 p.m. ET Mar. 31, 2020

Missisquoi Valley School District to begin free meals Thursday

By MESSENGER STAFF Mar 17, 2020

How To Save Your Community When The Government Fails

March 23, 2020 • 66 min

Cody, Robert and Katy talk to Scott Crow from Common Ground Collective about how we can help each other and build solidarity while the government debates about tax incentives and means testing. Learn more about your ad-choices at https://news.iheart.com/podcast-advertisers

Share Mark as Played

Katy @TheKaterTot · Apr 14

Sometimes the first thing we have to do to take care of our communities is take care of ourselves. Be gentle with yourself.

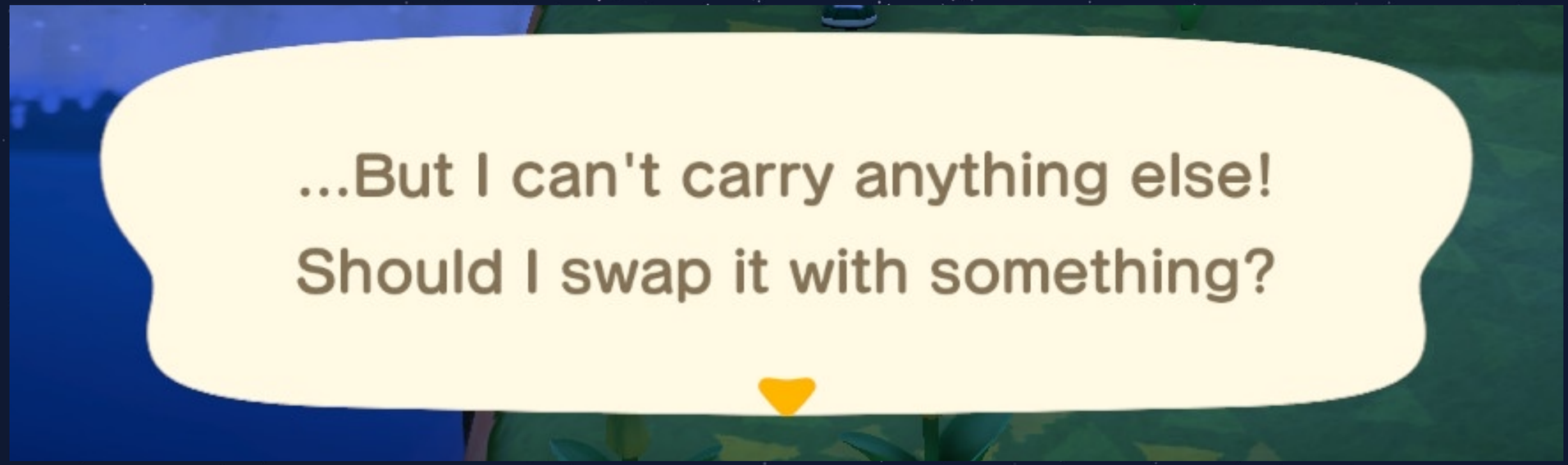
1 10

DreadPirateSparklePony @thelongshanx · Apr 15

You can't pour from an empty cup

1 1 4

Katy @TheKaterTot · Apr 15
Yes! And it's hard to fill the cup if it's cracked and leaking.
GIF
1
2



https://bit.ly/2Ym7Tp9

Aaron Aldrich
Rich Burroughs
Tiffany Longworth
Jason Yee

Deserted Island DevOps
Streaming on twitch.tv!
The Greatest Minds in DevOps... in Animal Crossing
Register at desertedislanddevops.com
4/30/20 - 10 AM ET

Katy Farmer

You've Got A Friend In Me

Deserted Island DevOps

Register at desertedislanddevops.com

April 30th, 2020

Starting 10 AM ET

Enable potential and get out of the way

Slides & Resources

speaking.crayzeigh.com

OSMIhelp.org

http://😀 http://😞 http://😫 http://😔

EmotionalAPI.com

devopsdays.org

Aaron Aldrich

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I love you

Be safe out there

We’re all in this together

Further Reading/Watching/Listening

Four concepts for resilience and the implications for the future of resilience engineering - David Woods
https://bit.ly/3bITTdc

The Marvelous Resilience of Bone - Dr. Richard Cook, REdeploy 2019
https://www.youtube.com/watch?v=8LbePBiOvZ4

Greater Than Code, 174: Resilience
https://www.greaterthancode.com/resilience

The Worst Year Ever, How to Save your Community When The Government Fails
https://ihr.fm/3eVNFbI

Further Reading/Watching/Listening

Behind Human Error(2nd Edition) - Woods, Dekker, Cook, Johannessen, Carter

The Woolworths Experiment
https://safetydifferently.com/the-woolworths-experiment/

The Field Guide to Understanding Human Error - Sydney Dekker

Literally every video from REdeploy:
https://www.youtube.com/channel/UCHbJcl6KfyxfIRqdv26b3Qw

On Borrowing From Yourself - Aaron Aldrich
https://dev.to/crayzeigh/a-reflection-on-borrowing-from-yourself-3jhf