



# What is Resilience Engineering? By Piet van Dongen.

Photo by Westwind Air Service on Unsplash

A photograph of a man and a woman in a modern office environment. The man, wearing glasses and a dark jacket, is looking towards the camera. The woman, with long blonde hair, is seen from behind, looking at a screen. In the background, there are shelves with books and boxes, and a sign that reads 'luminis'.

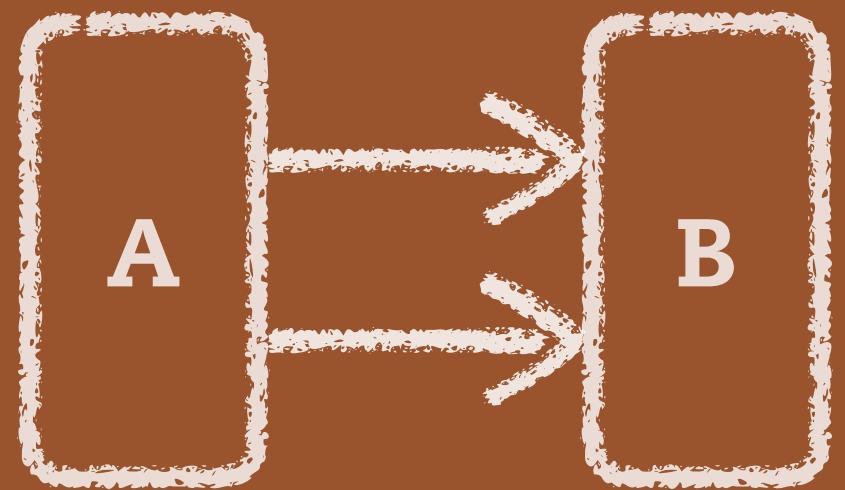
My name is Piet van Dongen.  
I call myself a Cloud  
Transformation Consultant.



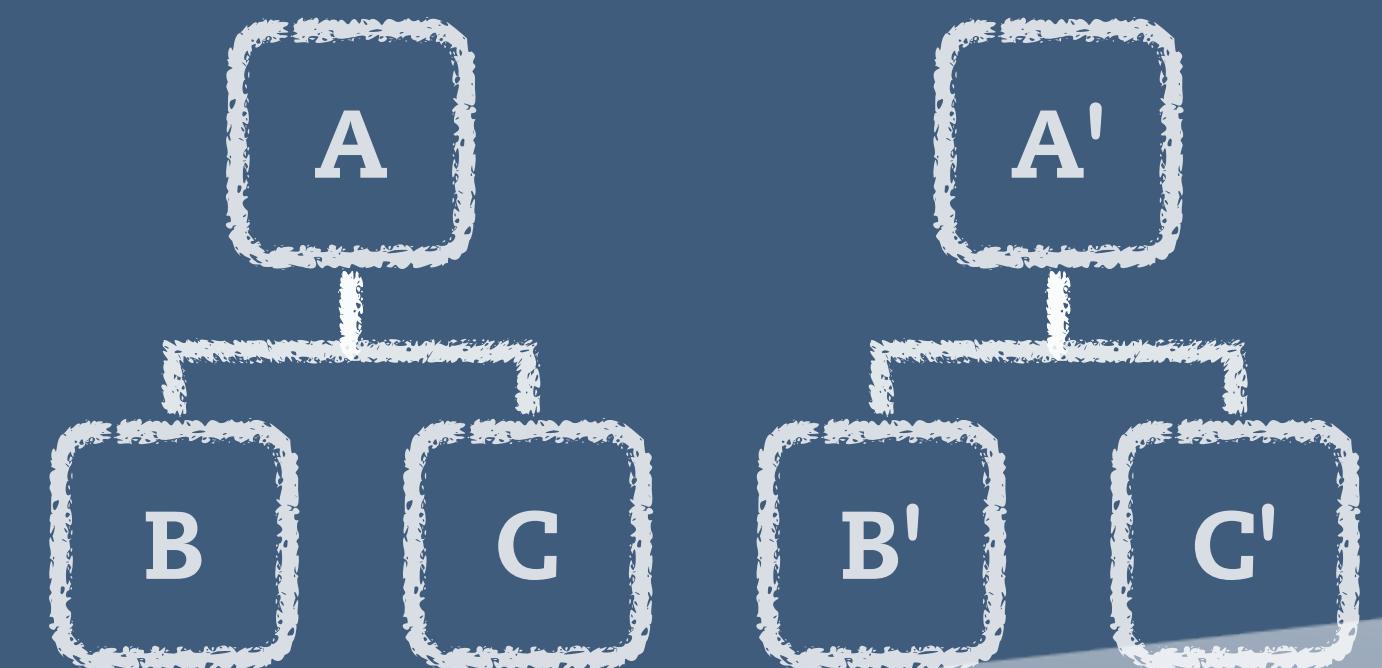
What is resilience?  
Safety science. Systems thinking.  
Socio-technical system.  
And thus, resilience engineering.

Photo by NASA on Unsplash

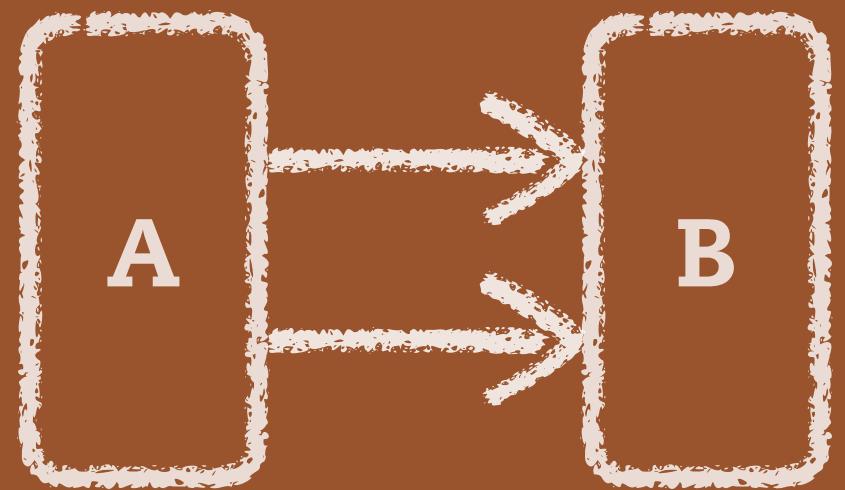
# Redundancy.



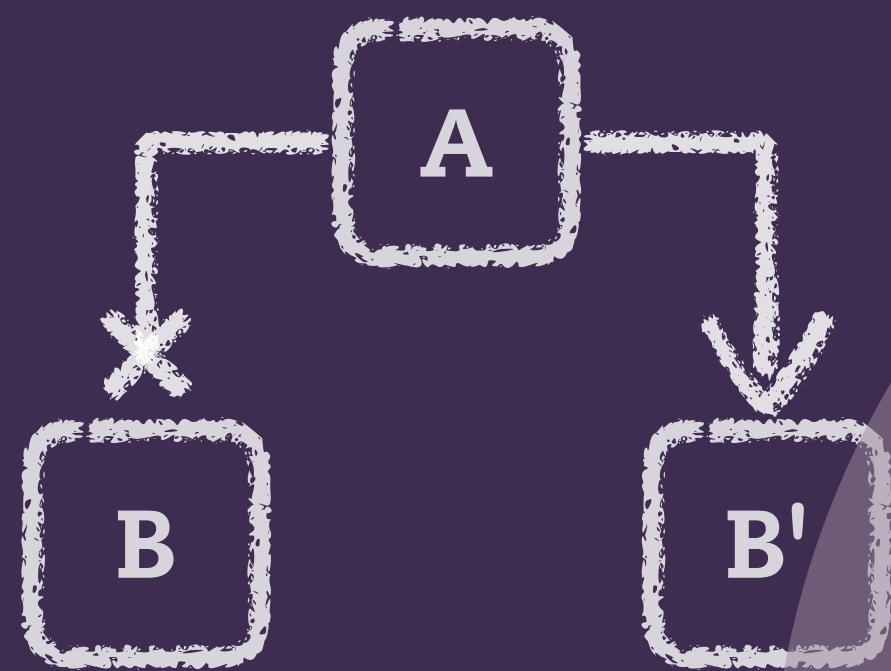
# Fallbacks.



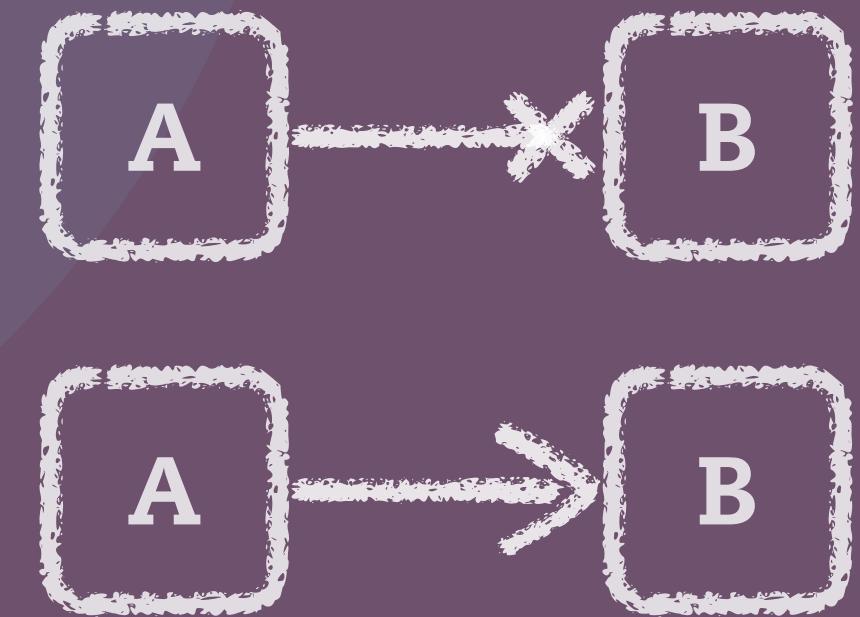
# Redundancy.



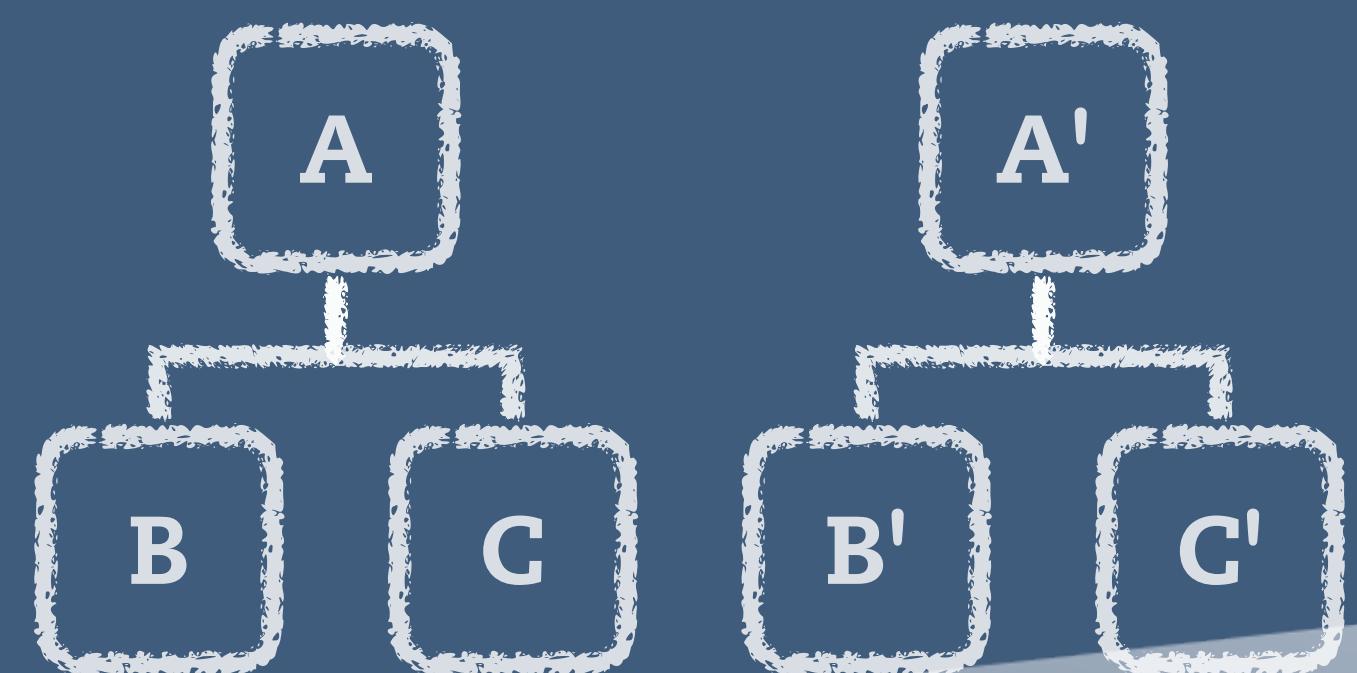
# Failovers.



# Retries.



# Fallbacks.



Lots

Awareness



Little

Knowledge

Lots

Photo by David Glode on Unsplash

Lots

Awareness

### Known Unknowns

*“We know there are things we cannot predict.”*

### Known Knowns

*“Some things we understand really well.”*

### Unknown Unknowns

*“We don't know what we don't know.”*

### Unknown Knowns

*“Others know things we don't know about (yet).”*

Little

Knowledge

Lots

Photo by David Glode on Unsplash

Lots

Awareness

### Known Unknowns

Cannons, guns, rocket launchers, tanks.

### Unknown Unknowns

Virus-transmitting nanobots dropped from drones.

Little

Use resilience

Knowledge

Lots

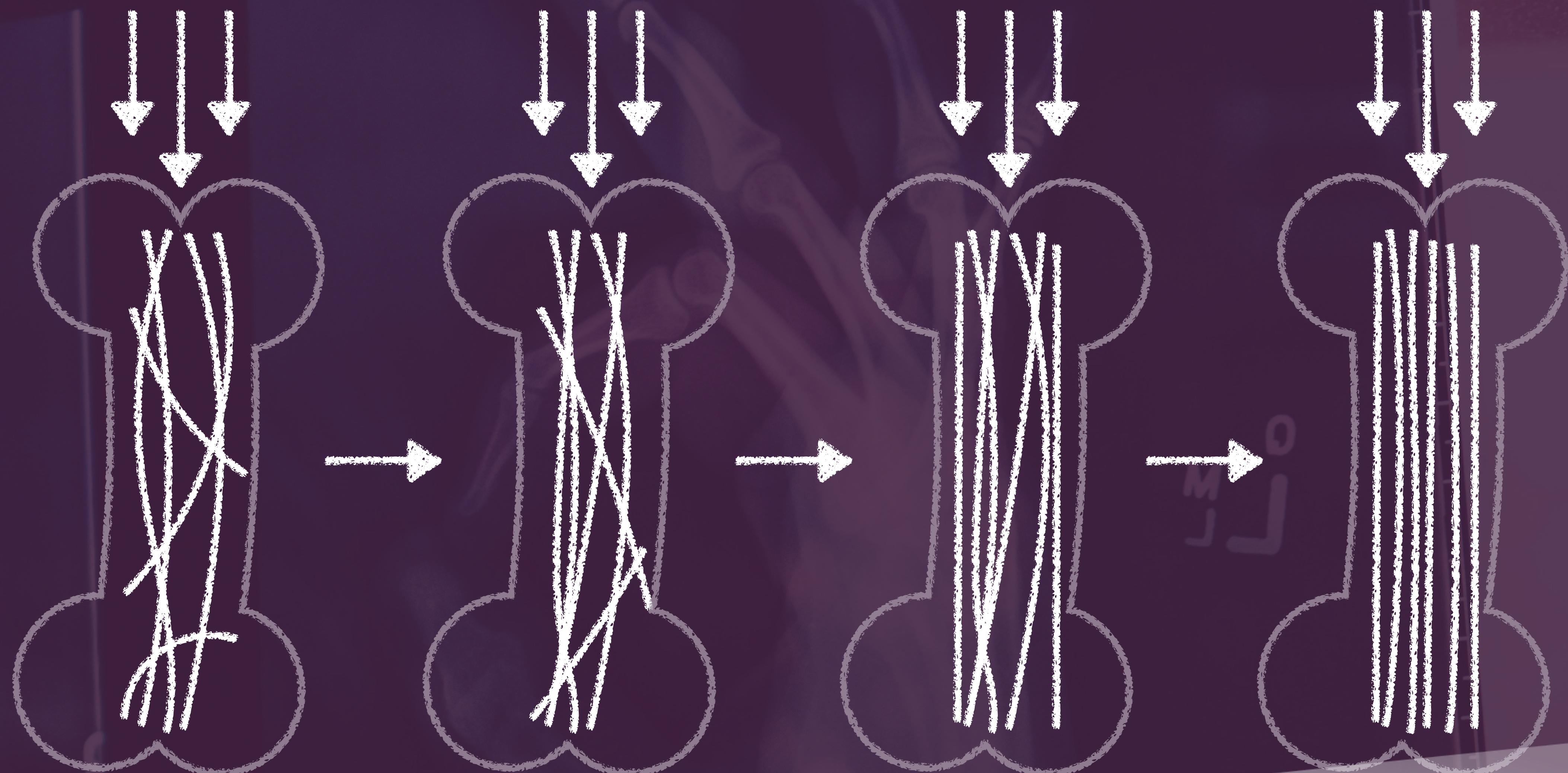
Use robustness

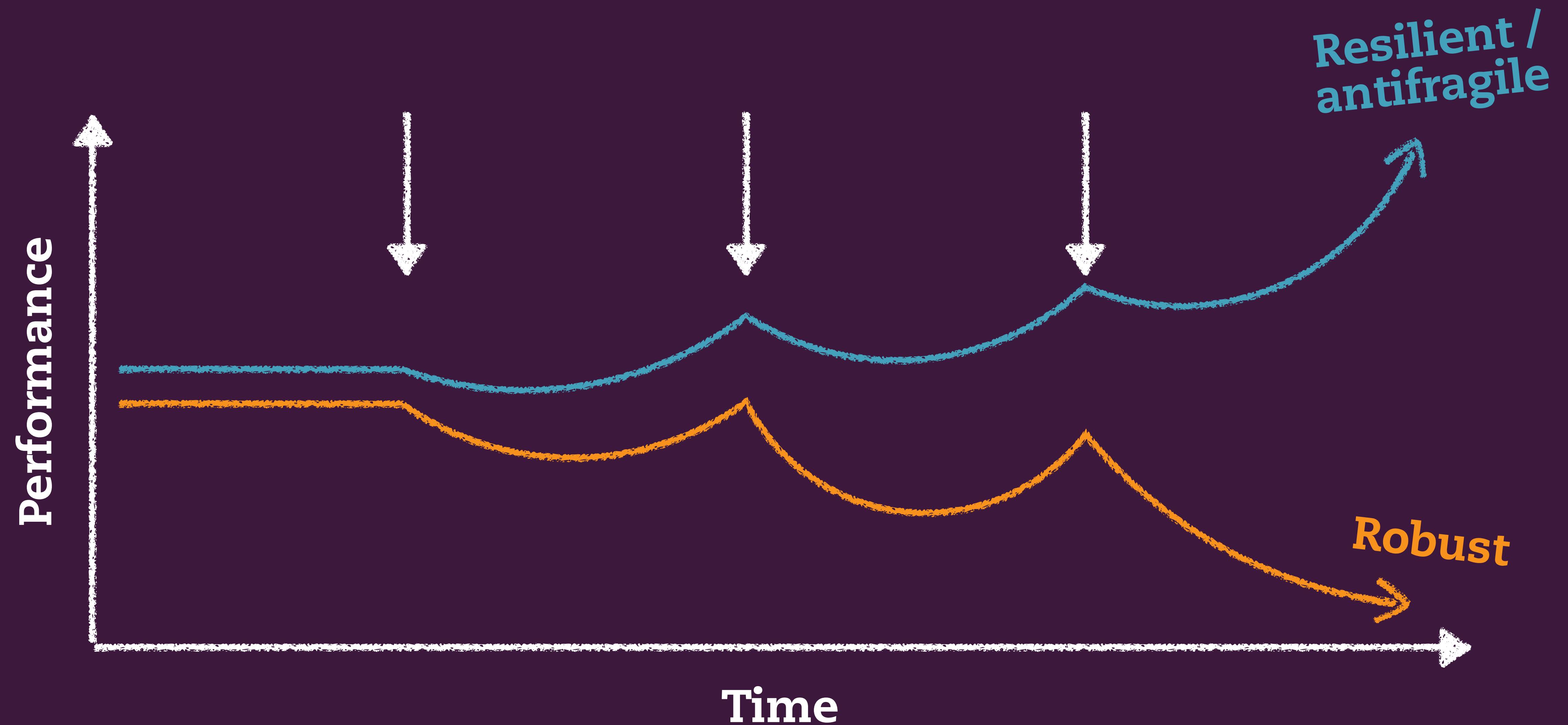
### Known Knowns

Bows and arrows, trebuchets, battering rams, siege towers.

### Unknown Knowns

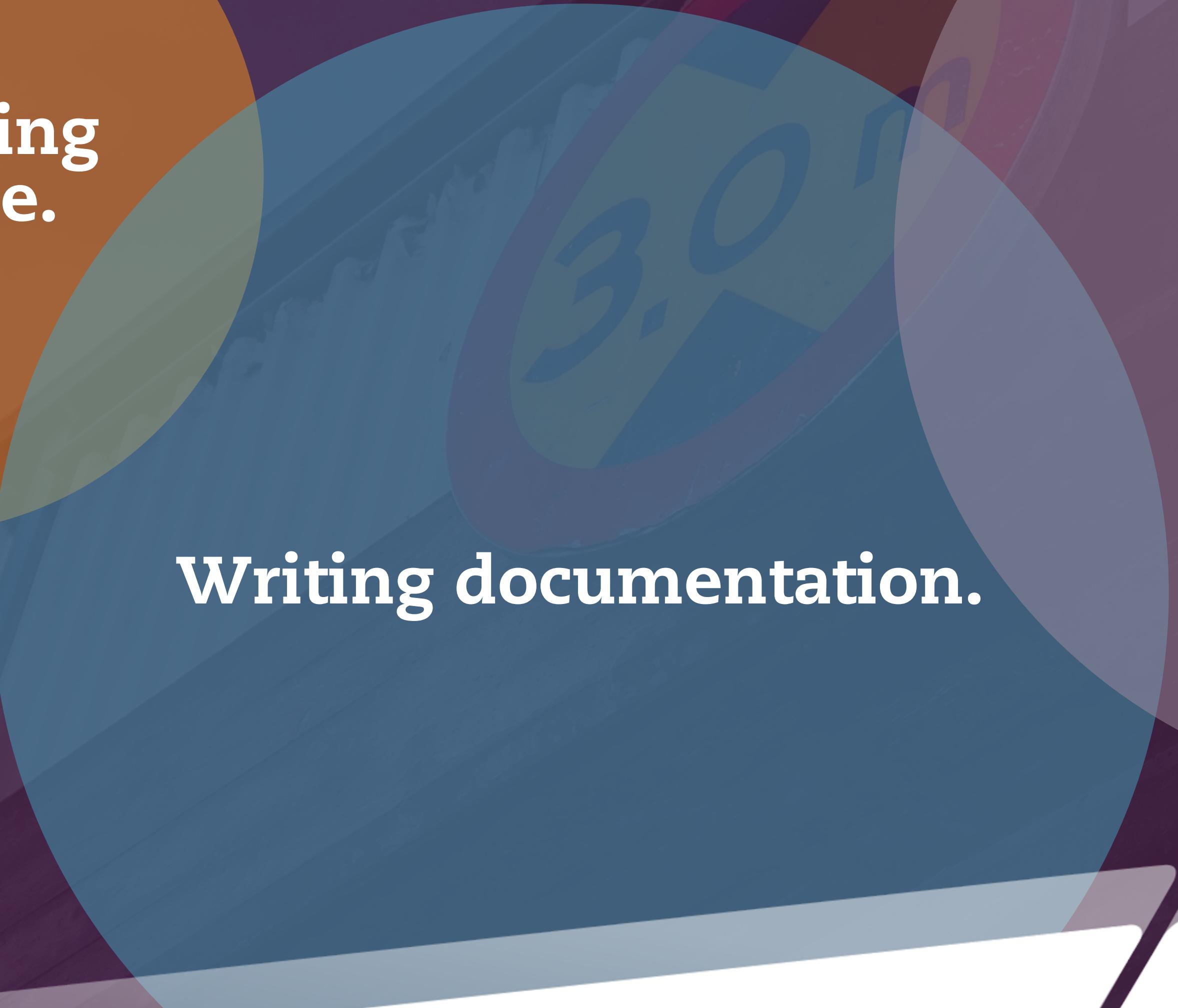
Super advanced siege towers, new types of trebuchets.







**Minimizing  
variance.**



**Writing documentation.**



**Enforcing.**



From: what goes **wrong**, sometimes.  
To: what goes **right**, most of the **time**.

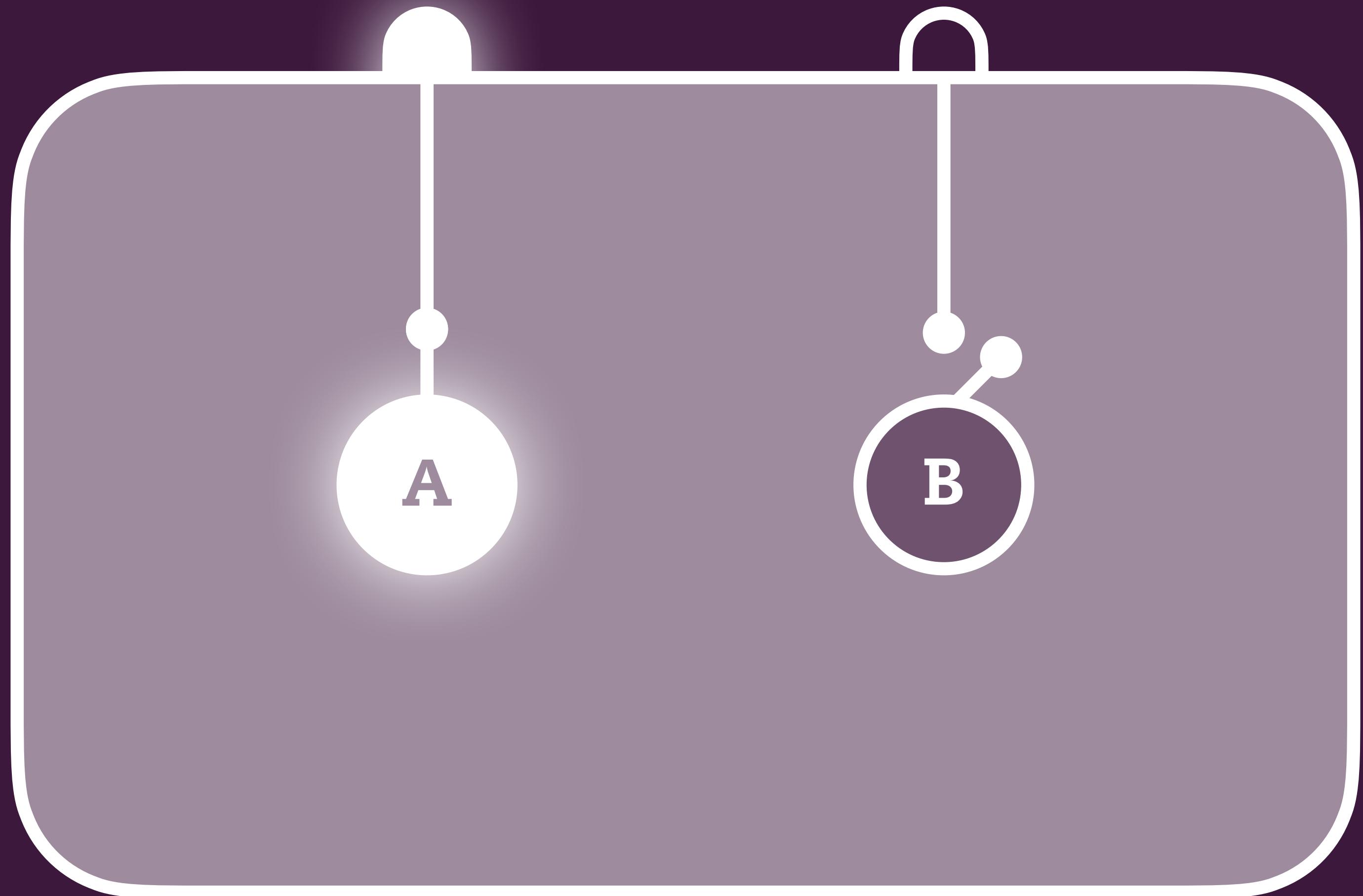
Photo by Vladyslav Cherkasenko on Unsplash

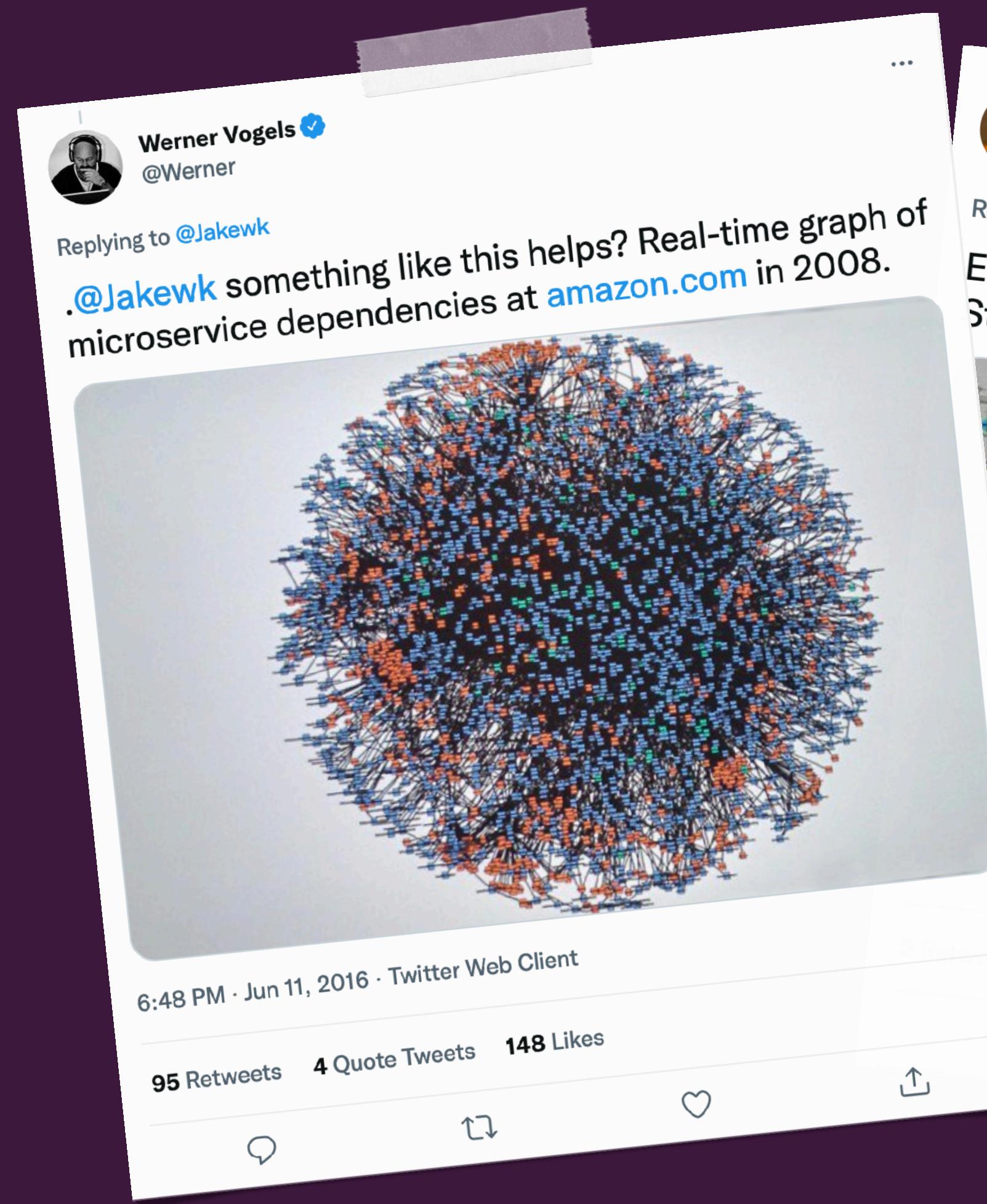
The **socio-technical** system.  
Also: **systems thinking**.

Photo by Andrew Leu on Unsplash

The system as imagined  
is different from the actual system.

Photo by Michel Didier Joomun on Unsplash







We are trying to control and improve  
the **socio-technical** complex system.

Photo by Harlie Raethel on Unsplash

There is no root cause.



Photo by Jeffrey F Lin on Unsplash



Resilience is **not robustness.**  
Create **success.**  
It's about **humans & technology.**

Photo by Salmén Bejaoui on Unsplash

Thank you for listening! Questions?  
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luminis-resilience.](http://tinyurl.com/luminis-resilience)  
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[twitter.com/pietvandongen.](http://twitter.com/pietvandongen)