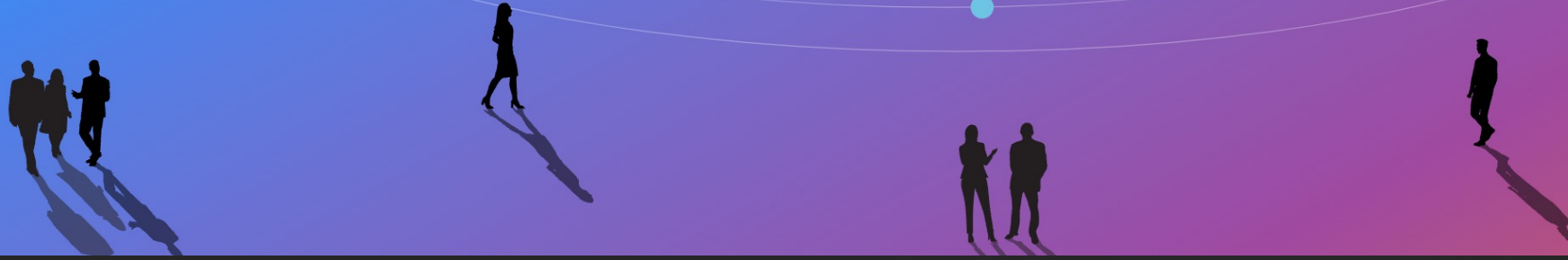


Extend. Expand. Exemplify.

The SGCI team continues to offer its services AND brings you a new Center of Excellence to Extend Access, Expand the Community, and Exemplify Good Practices for CI through Science Gateways.



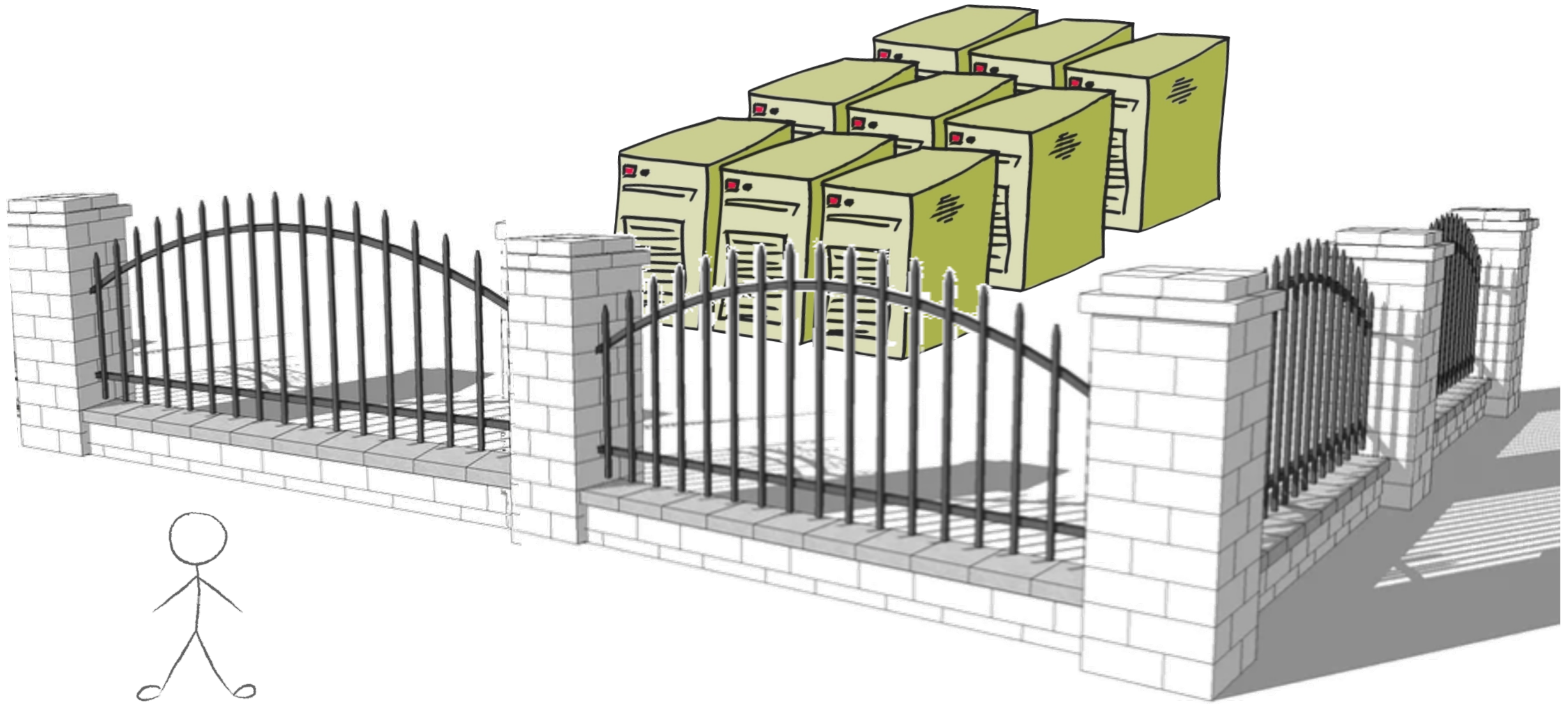
Impact of (Geo)AI on National Compute Resources

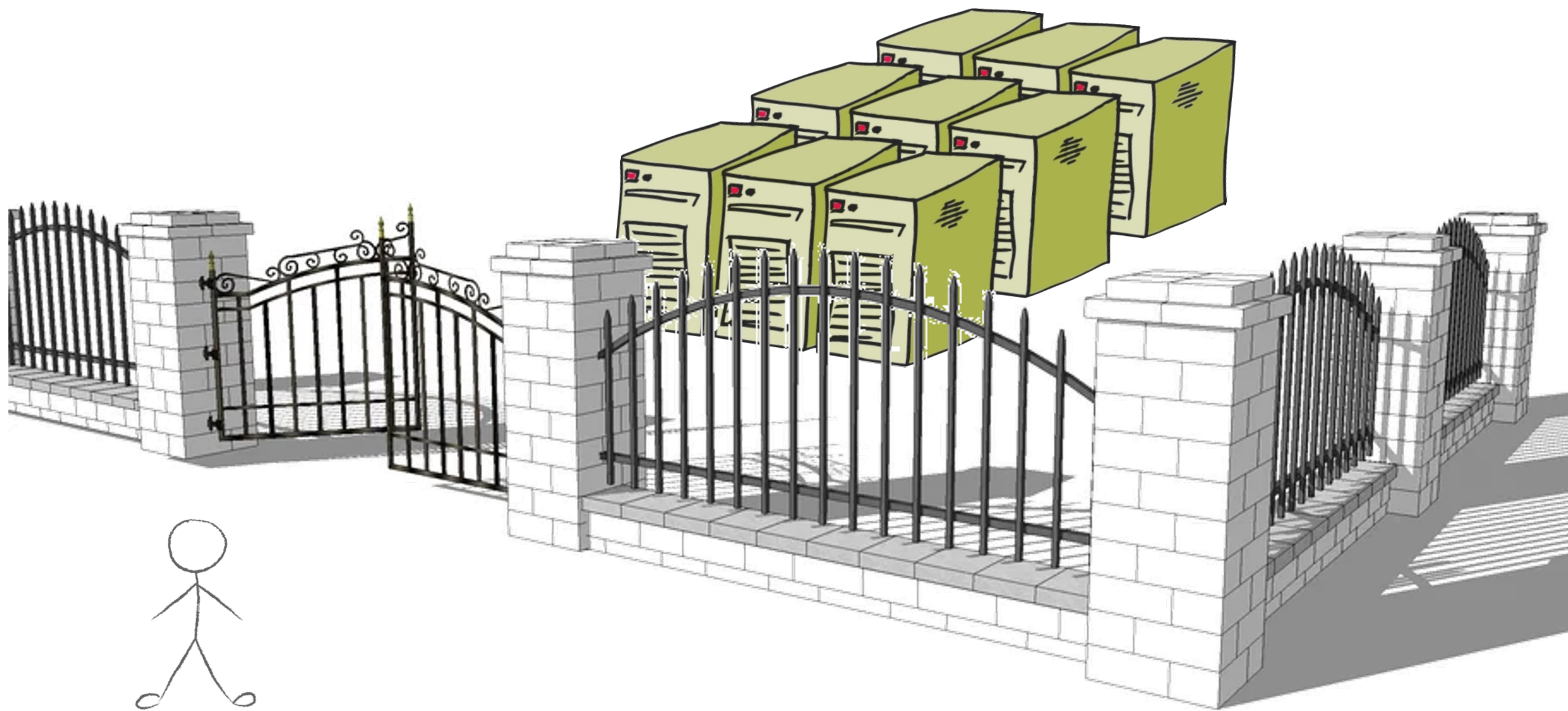
Michael Zentner
Division Director, Sustainable Scientific Software
Director, SGX3 Center of Excellence for Science Gateways
San Diego Supercomputer Center
University of California, San Diego

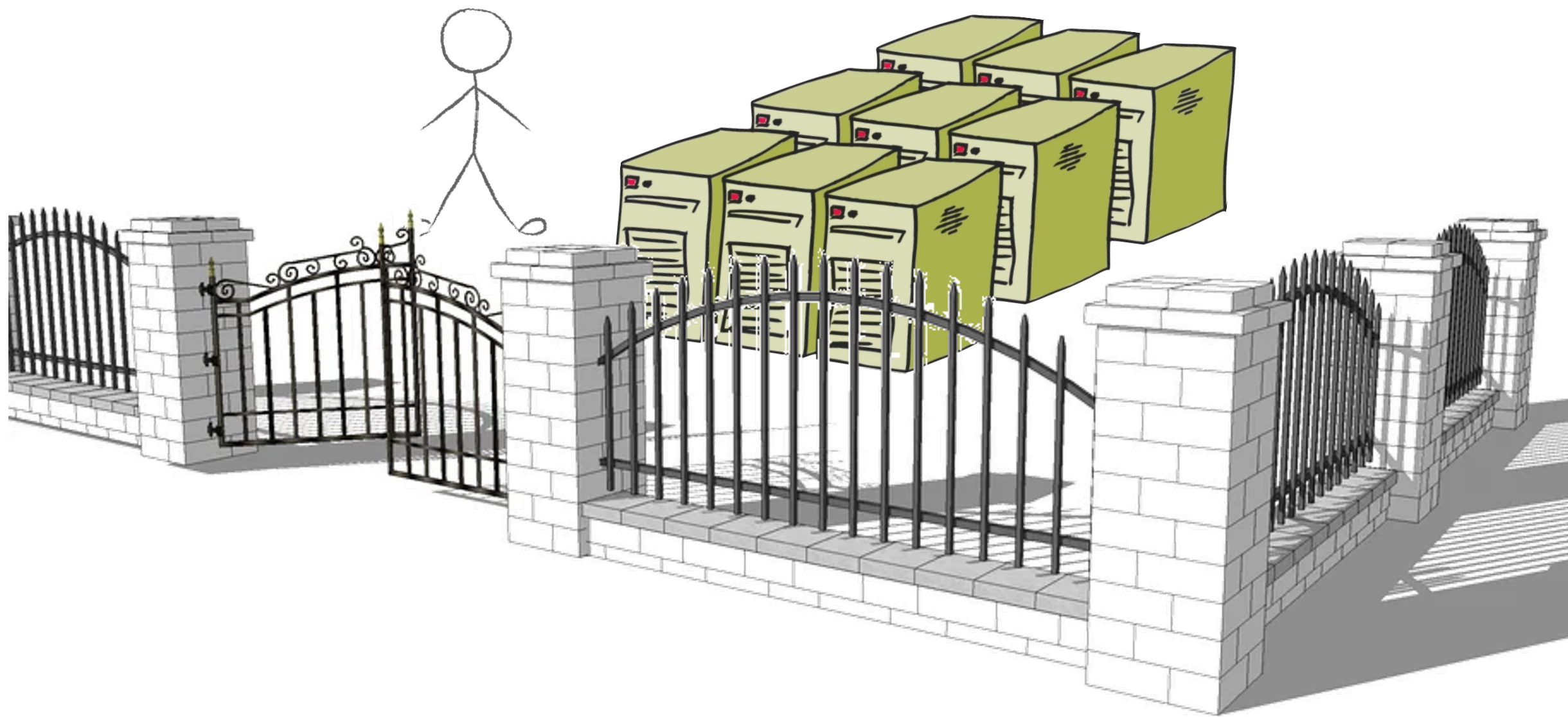


NSF awards
1547611
2231406











The NSF-Funded Center of
Excellence for Science Gateways

- Consulting Services
 - UX
 - Architecture
 - Gap Analysis
 - Sustainability
 - Science Gateway Construction and Operation
- Community Building
 - Workforce Development
 - Conference (Pittsburgh October 30-November 1)
 - Sustainability Focus Week & Jumpstart (September 12-14)
 - Domain Specific Roadshow
- Suggesting the Future – Blueprint Factories
- help@sciencegateways.org

Schrödinger

$$i\hbar \frac{\partial \psi}{\partial t} = -\frac{\hbar^2}{2m} \nabla^2 \psi + V\psi$$



Schrödinger

$$i\hbar \frac{\partial \psi}{\partial t} = -\frac{\hbar^2}{2m} \nabla^2 \psi + V \psi$$




Schrödinger

$$\Delta\psi = -k^2\psi$$

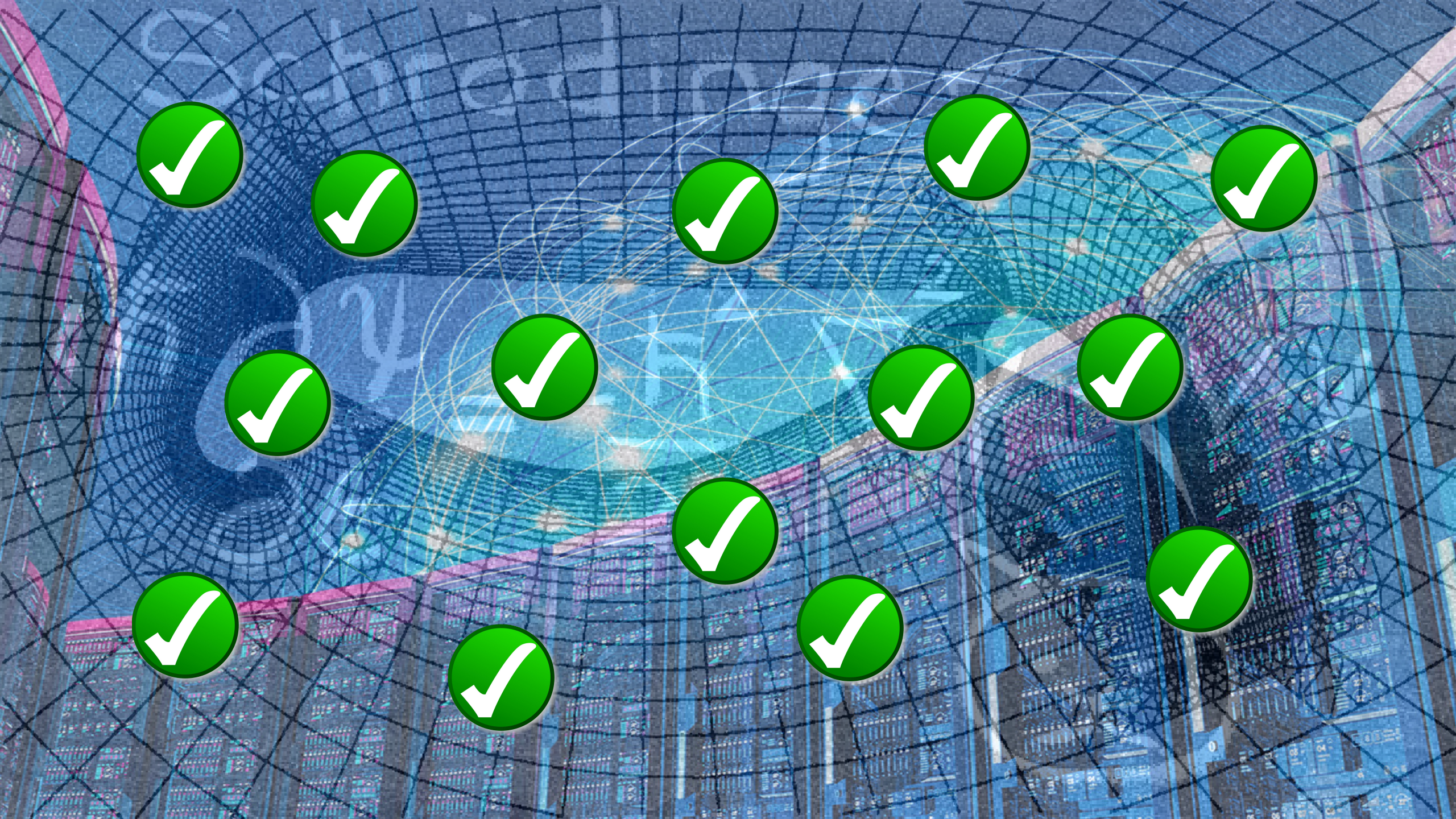


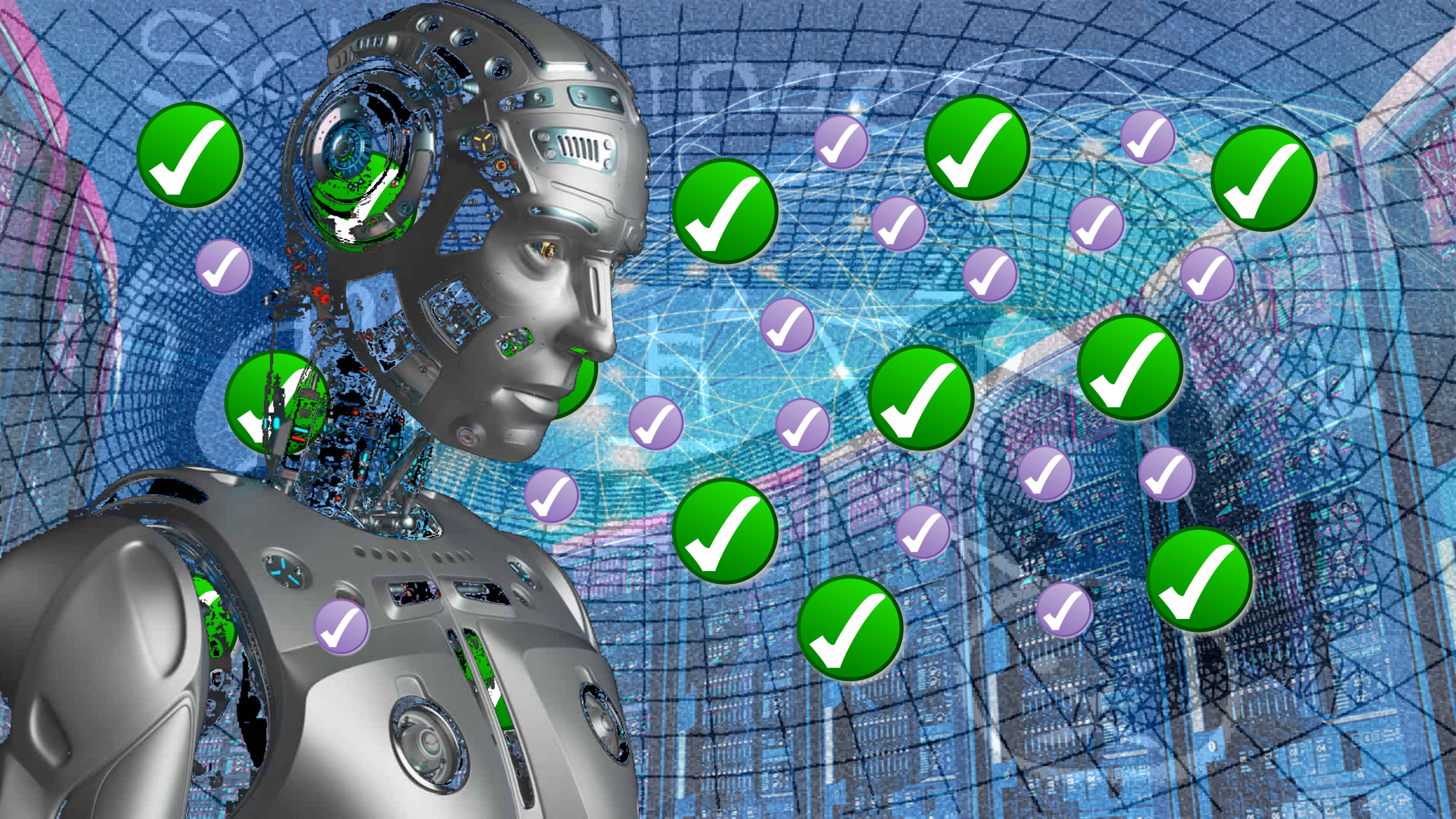


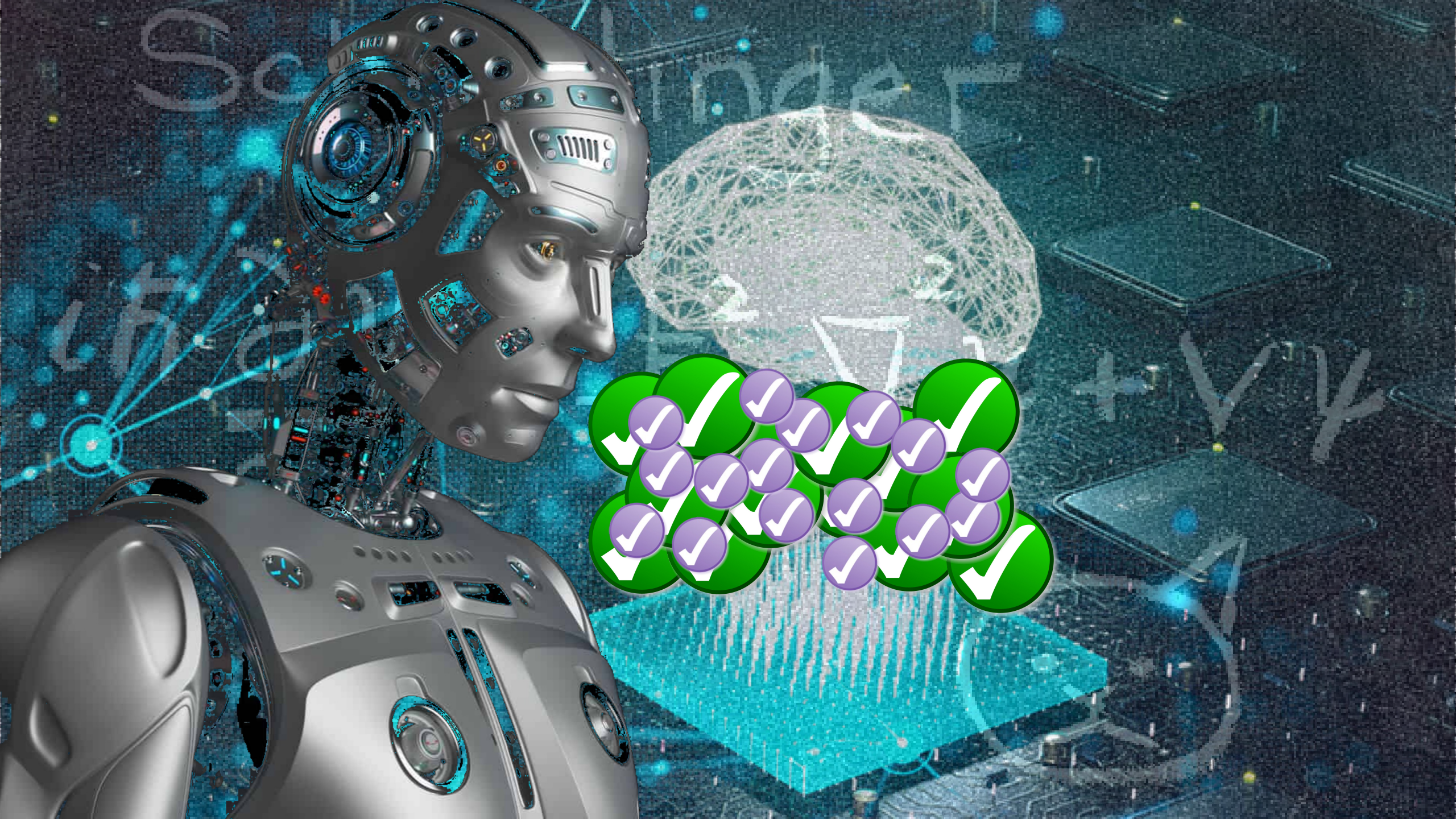


Just how
many
people do
this?

700+ Simulation Tools
~1,000,000 Simulations Annually







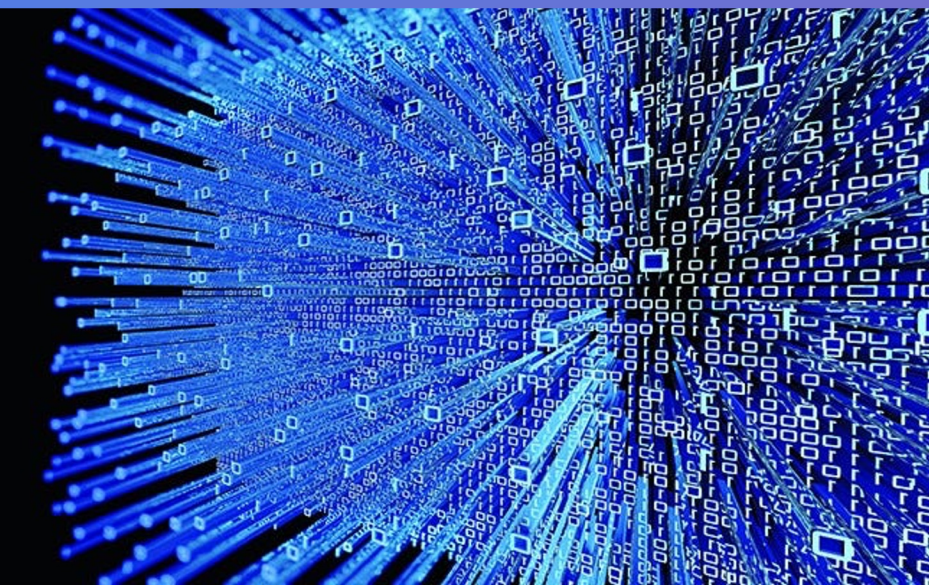




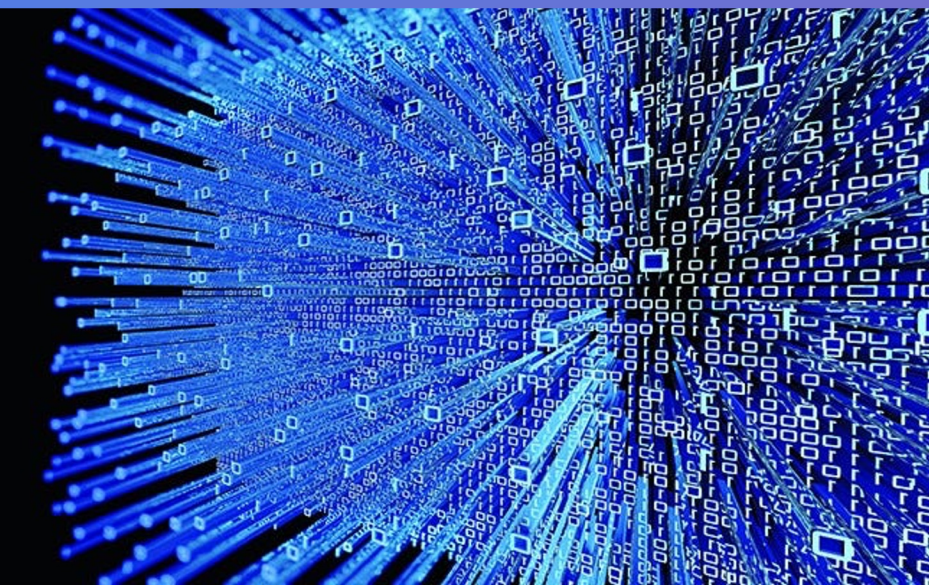
So What?



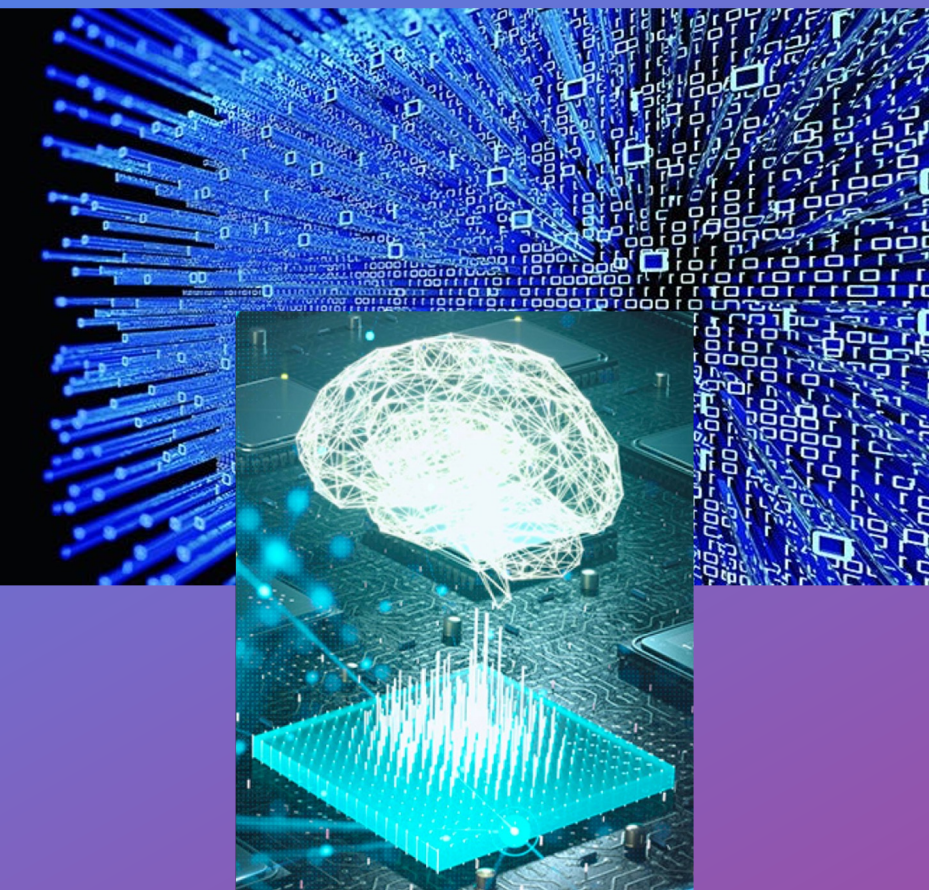
So What?



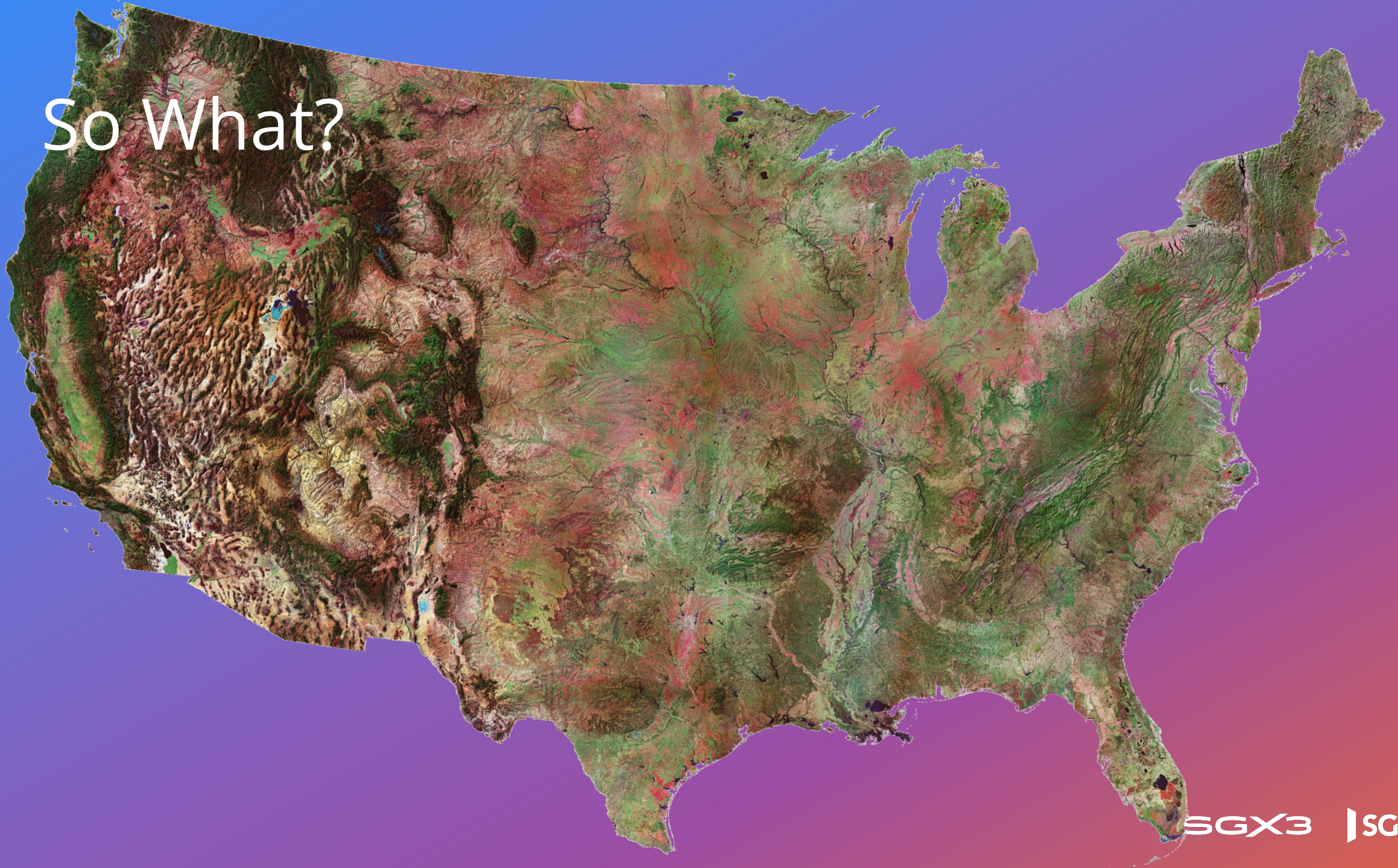
So What?



So What?



So What?



So What?



So What?



So What?



So What? (Relevance to Geo)

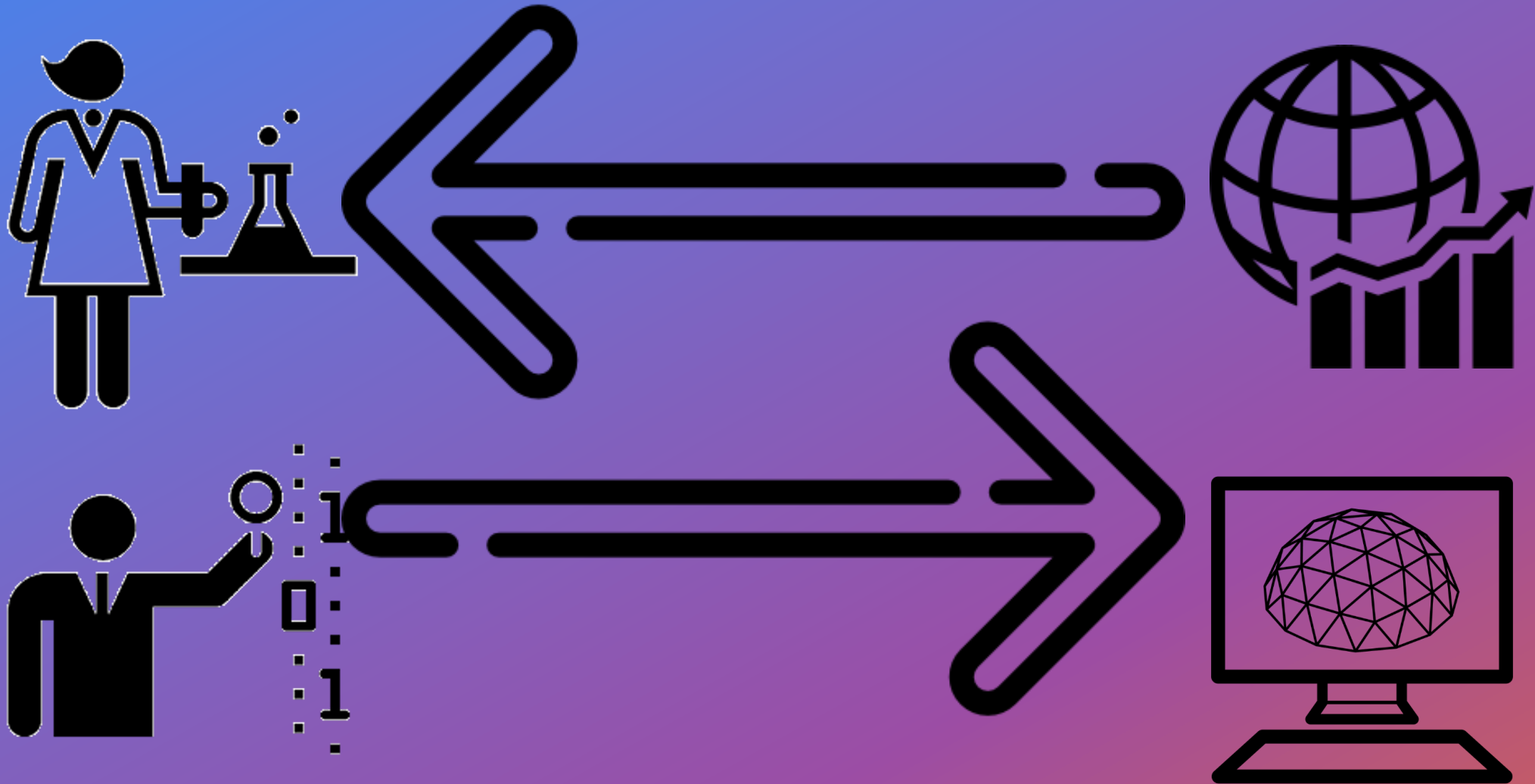
Where should I
deploy firefighters?

This field is showing
stress, what now?

How high will the
storm surge be?

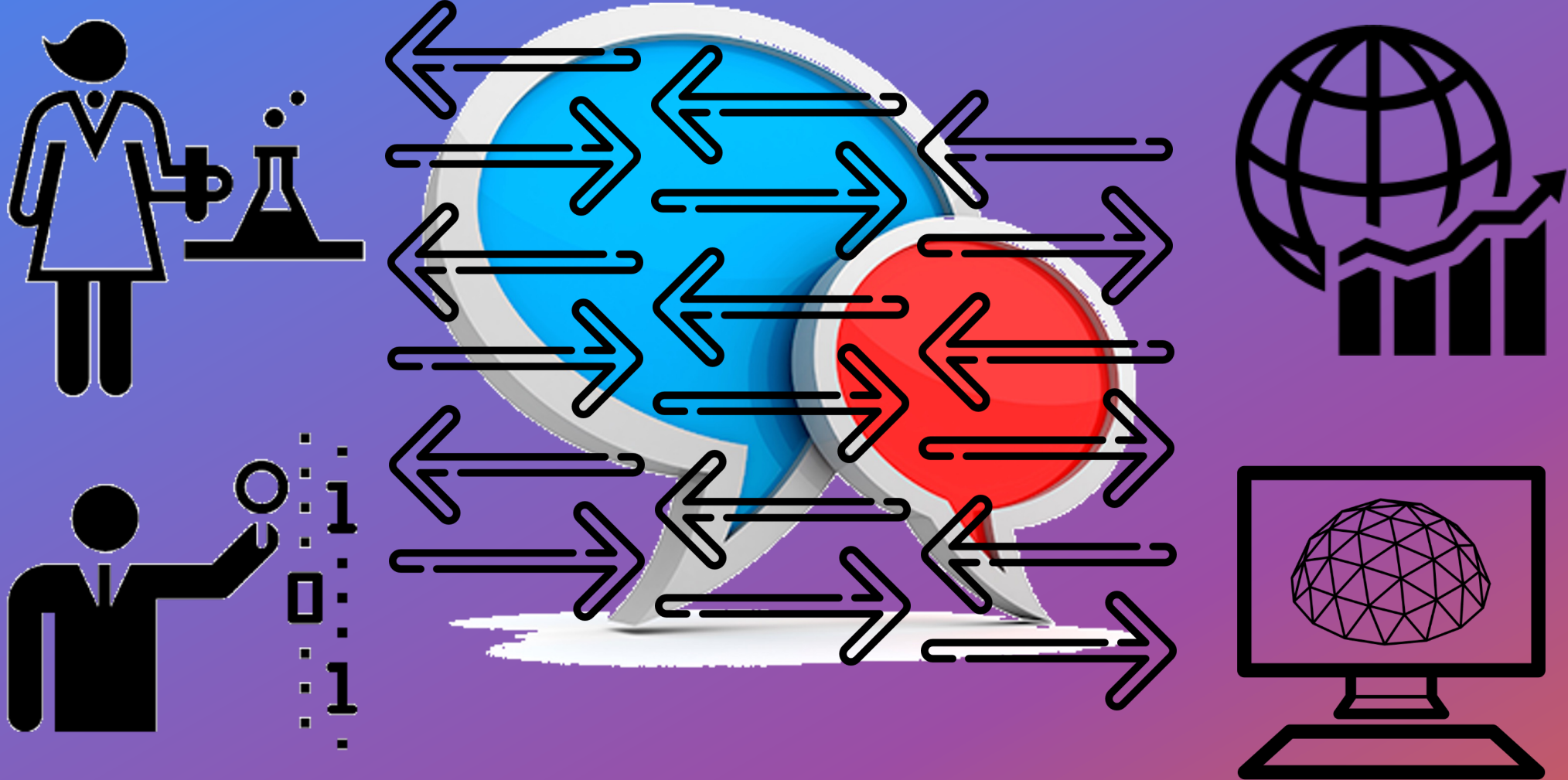
Is that a methane
leak in my pipeline?

So What?



So What?

Conversations with Data and Models!



So What?
Conversations = Understanding



BUT WAIT



THERE'S MORE

**Science Gateways
are engines of
Broader Impact...**

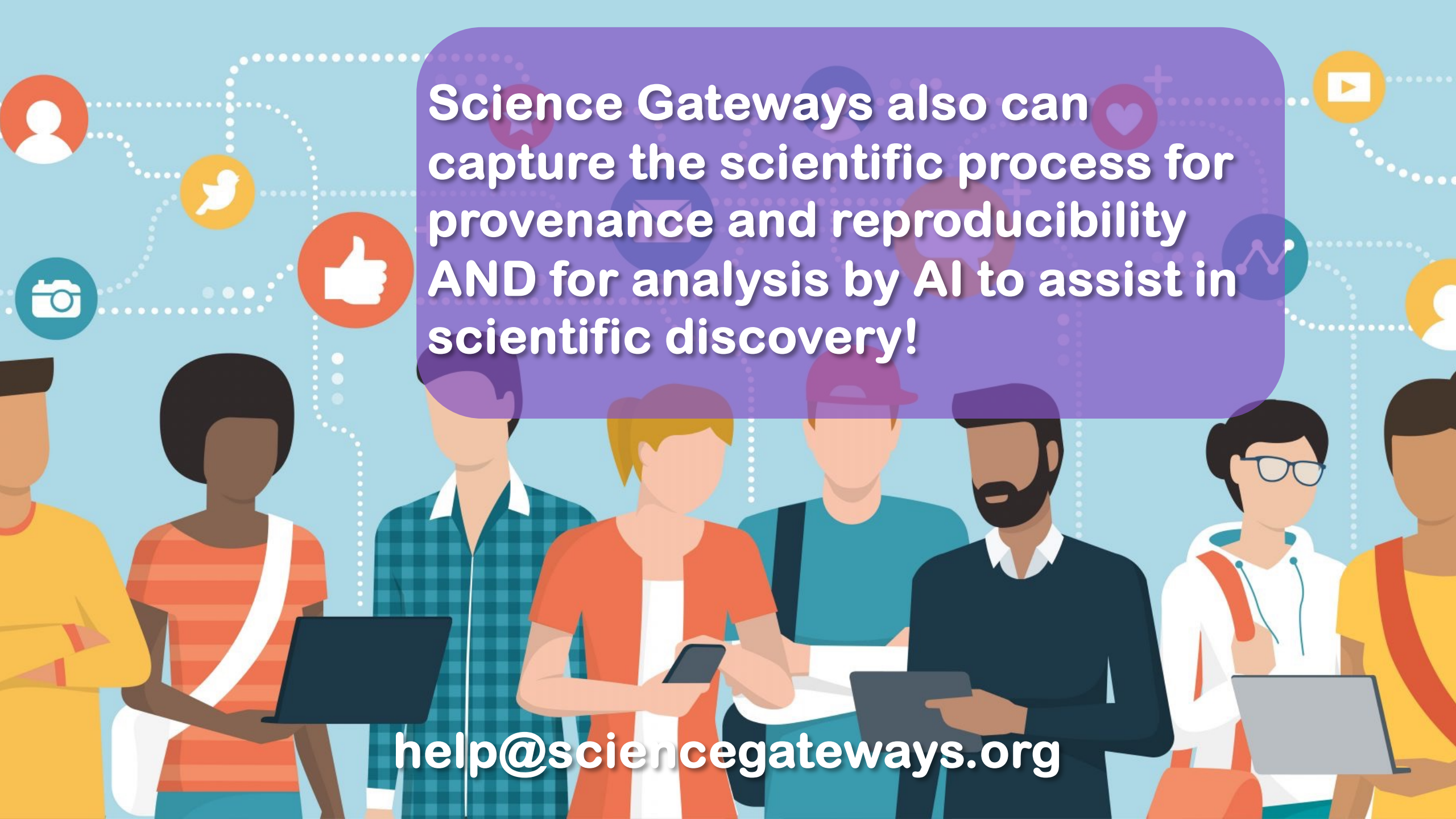


**...because they democratize
access and engage large,
diverse audiences.**



Science Gateways are sustainability habitats for scientific applications, scientific data sets, their creators, their users...

...because they are places many can pool together to address sustainability as a group.

The background features a light blue background with a network of white dotted lines. Various circular icons are scattered throughout, including a person silhouette, a Twitter bird, a thumbs-up, a camera, a play button, a heart, a star, and a line graph. In the foreground, a diverse group of stylized people are shown from the waist up. Some are holding laptops, tablets, or smartphones. A large, rounded purple rectangle is centered in the upper half of the image, containing white text. At the bottom, the email address 'help@sciencegateways.org' is written in white.

Science Gateways also can
capture the scientific process for
provenance and reproducibility
AND for analysis by AI to assist in
scientific discovery!

help@sciencegateways.org