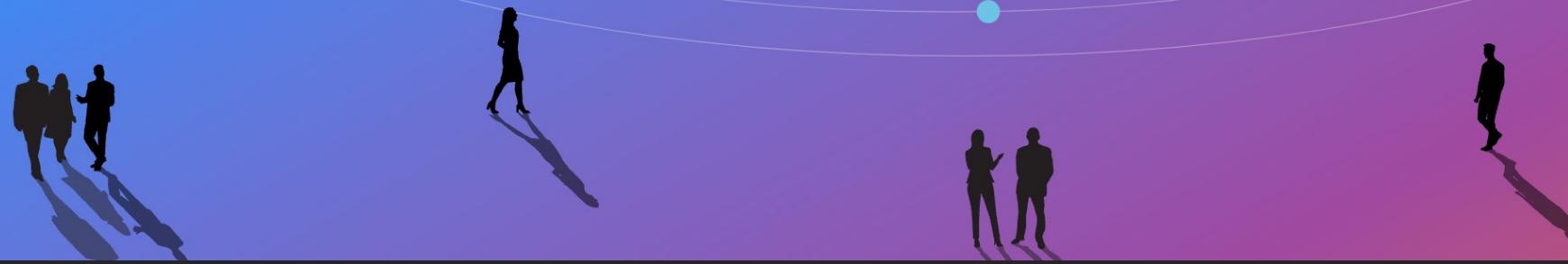


# Extend. Expand. Exemplify.

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.

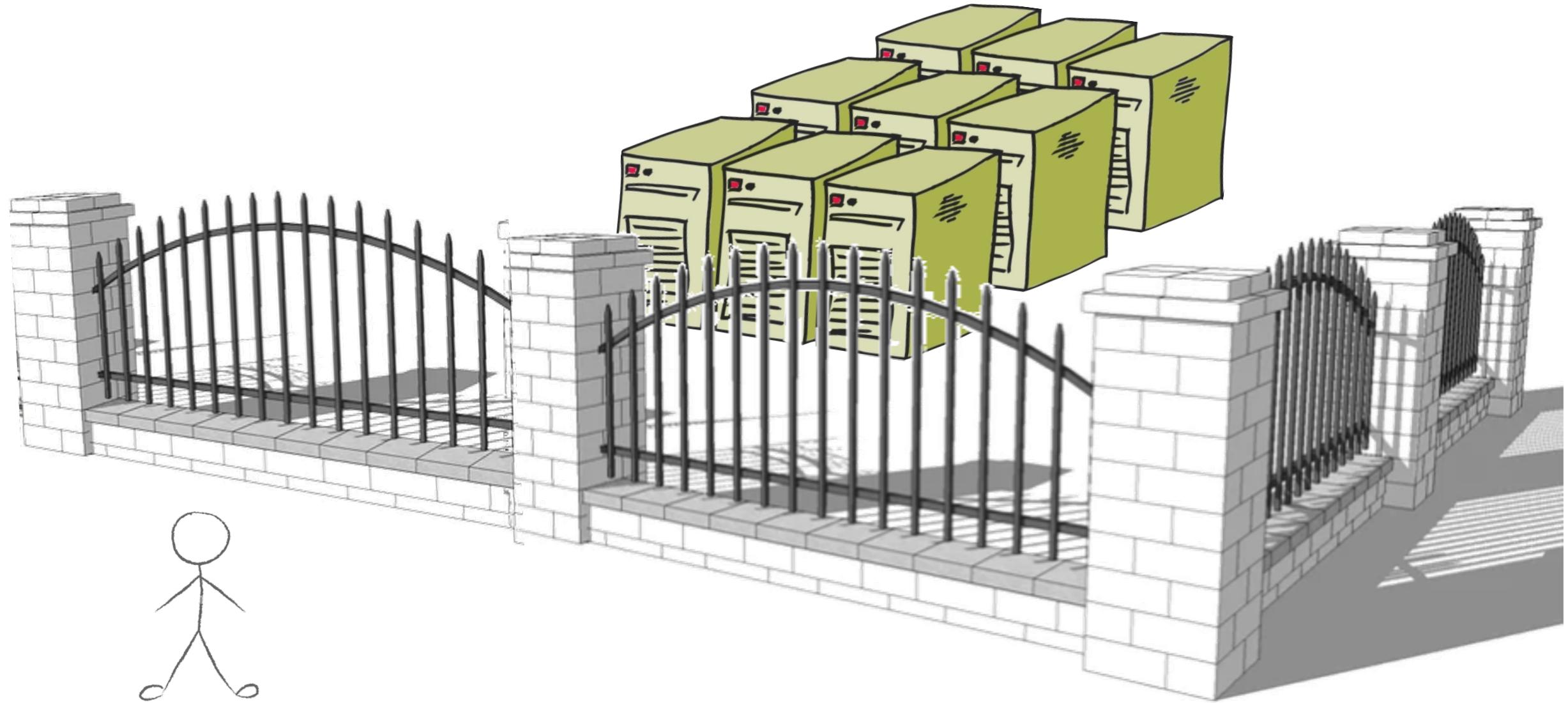


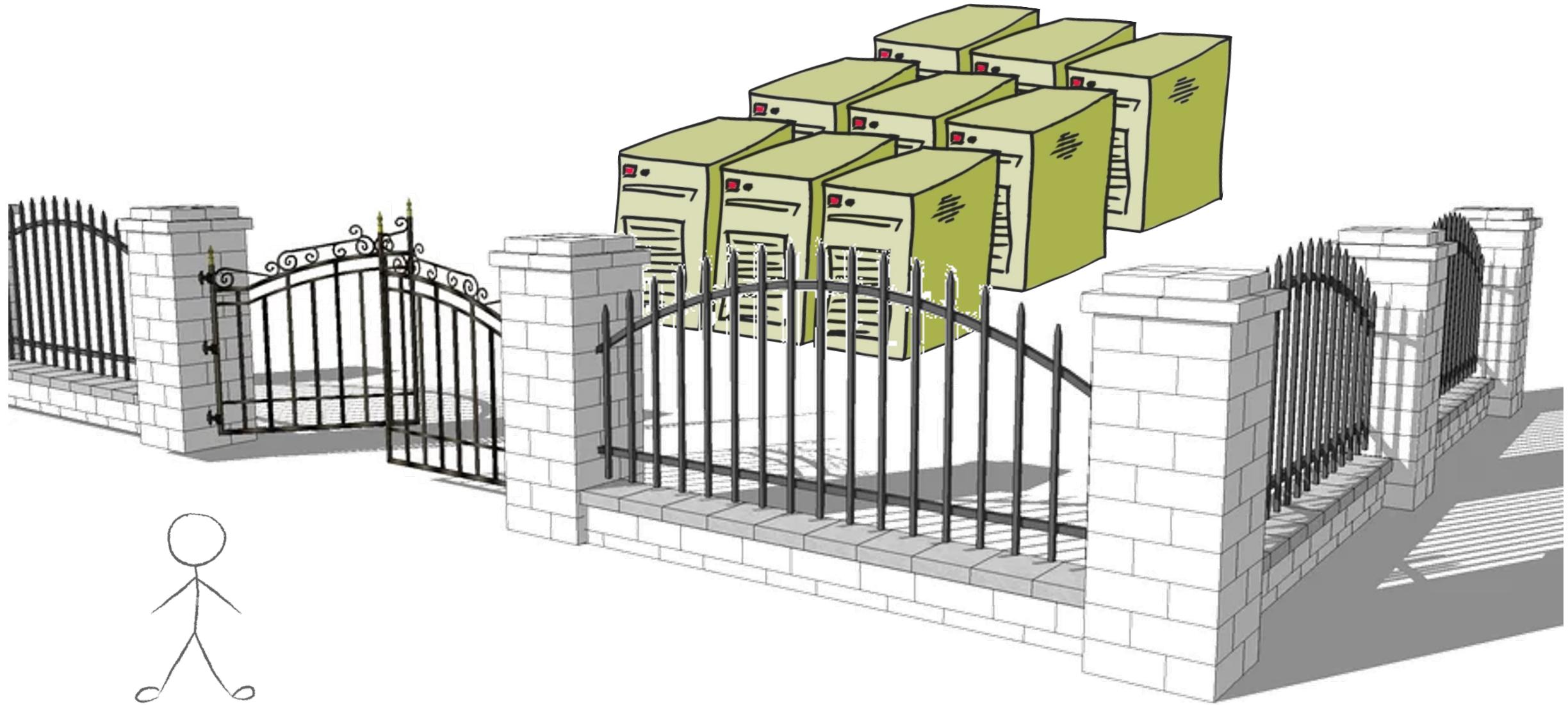
## Impact of (Geo)AI on National Compute Resources

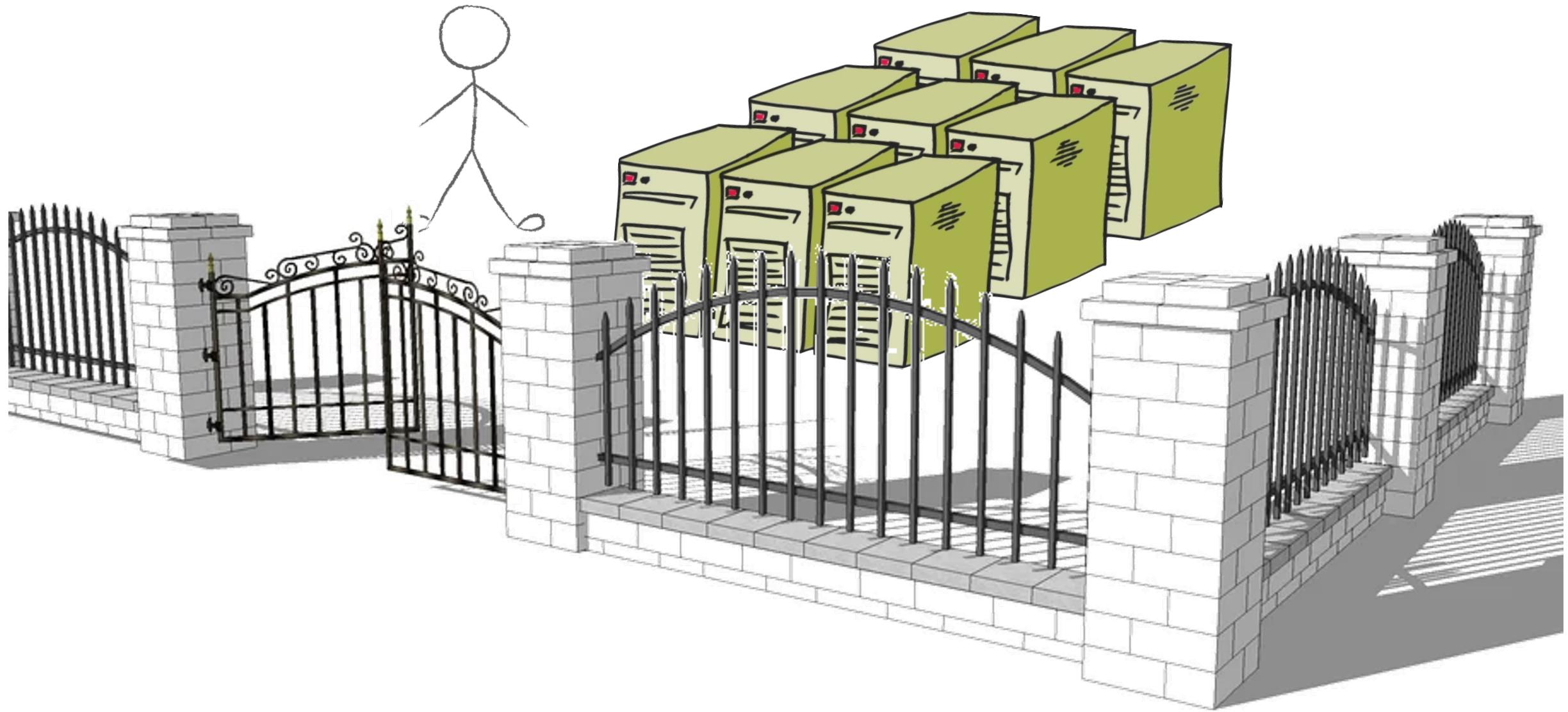
Michael Zentner  
Division Director, Sustainable Scientific Software  
Director, SGX3 Center of Excellence for Science Gateways  
San Diego Supercomputer Center  
University of California, San Diego



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](mailto:help@sciencegateways.org)

Schrödinger

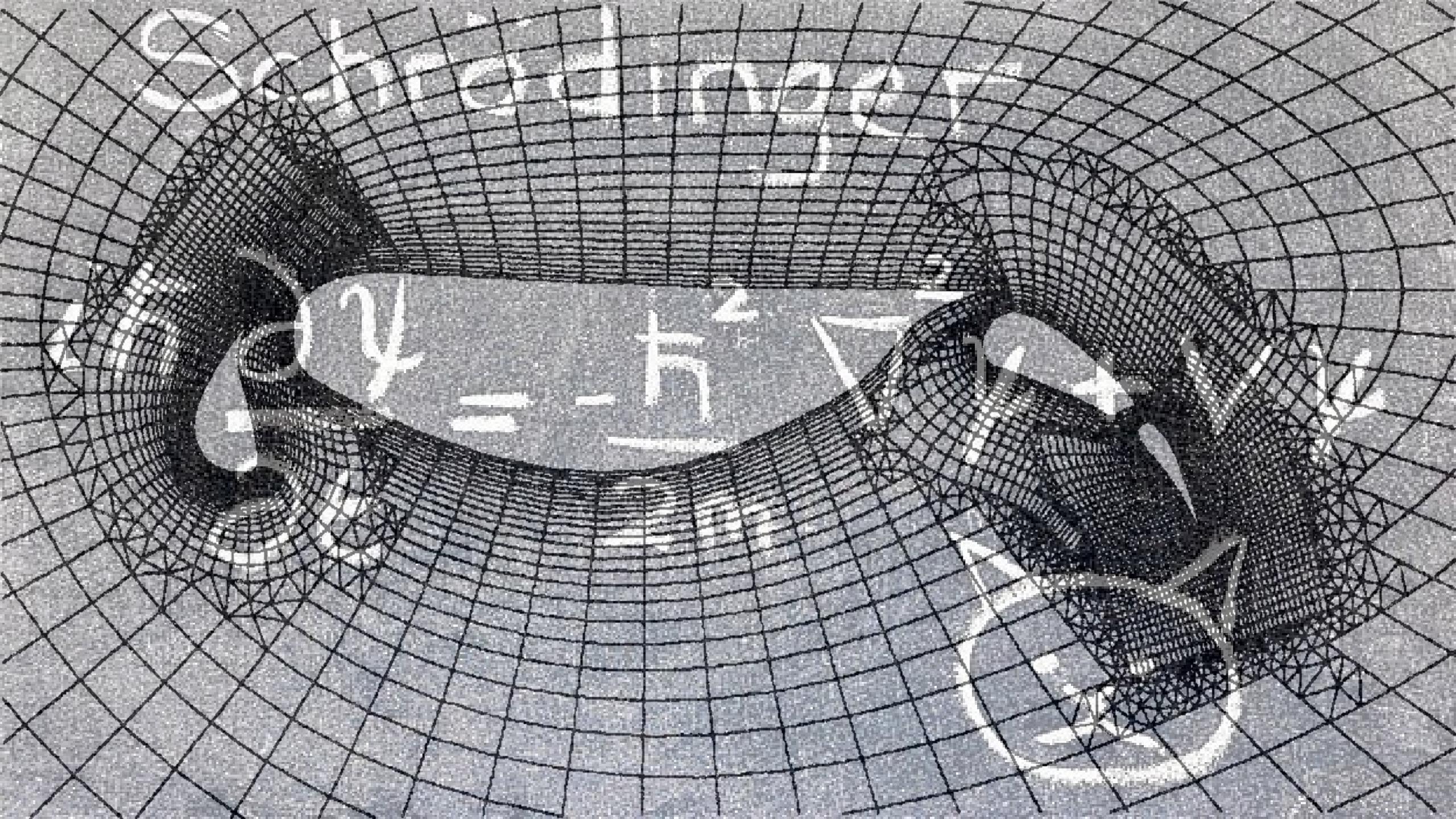
$$\frac{i\hbar\partial\psi}{\partial t} = -\frac{\hbar^2}{2m} \nabla^2 \psi + V\psi$$



# Schrödinger

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





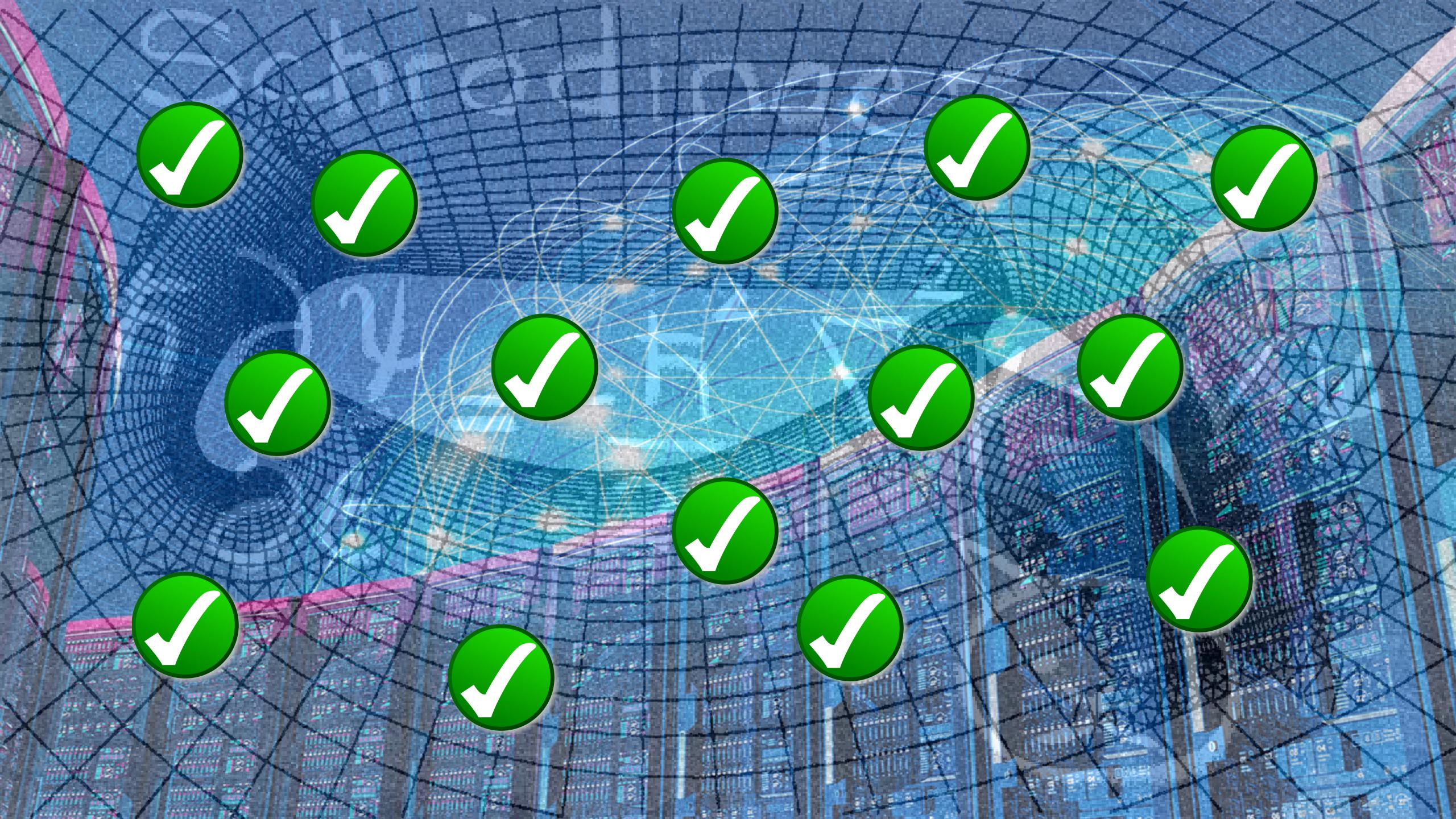


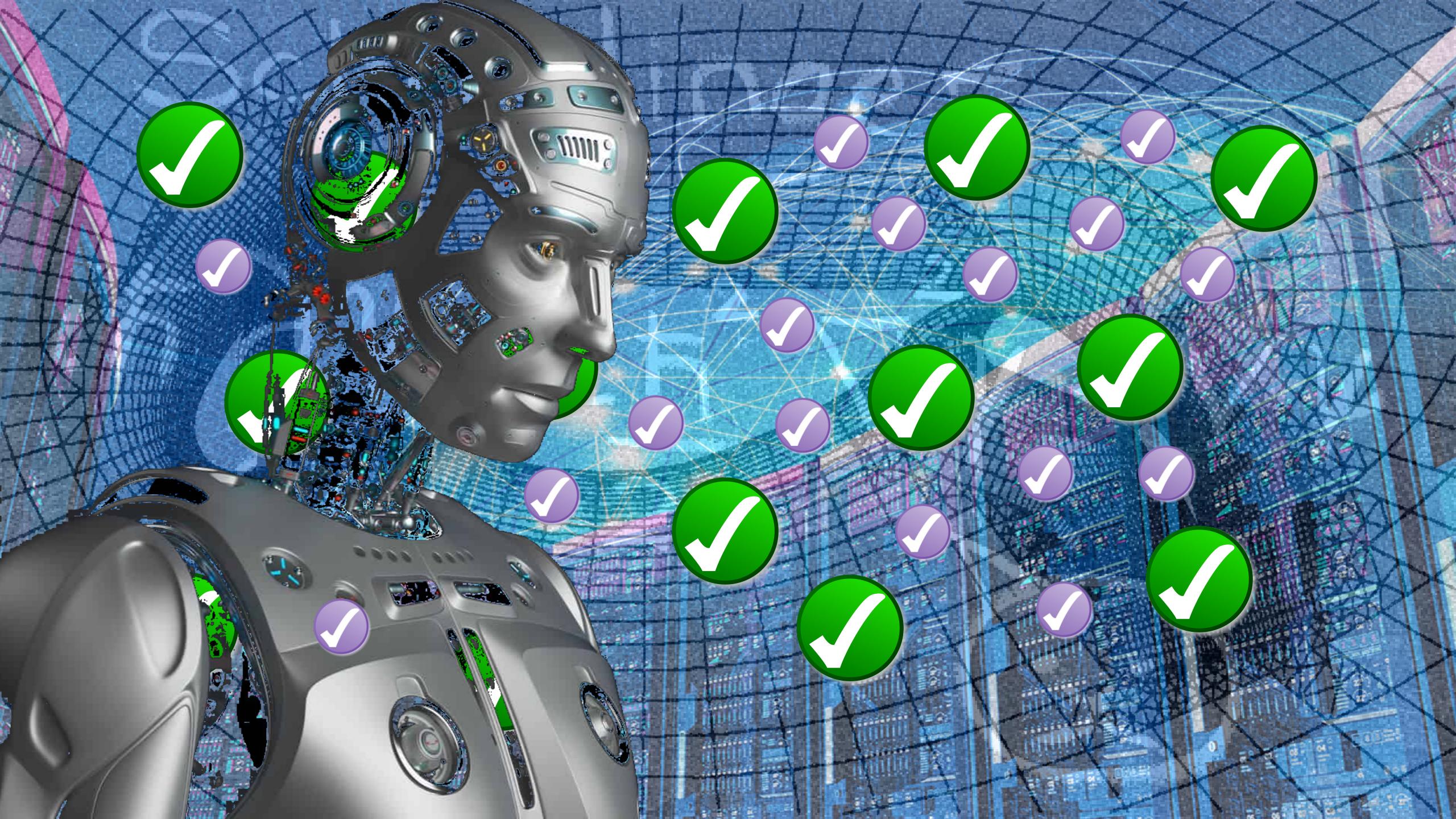


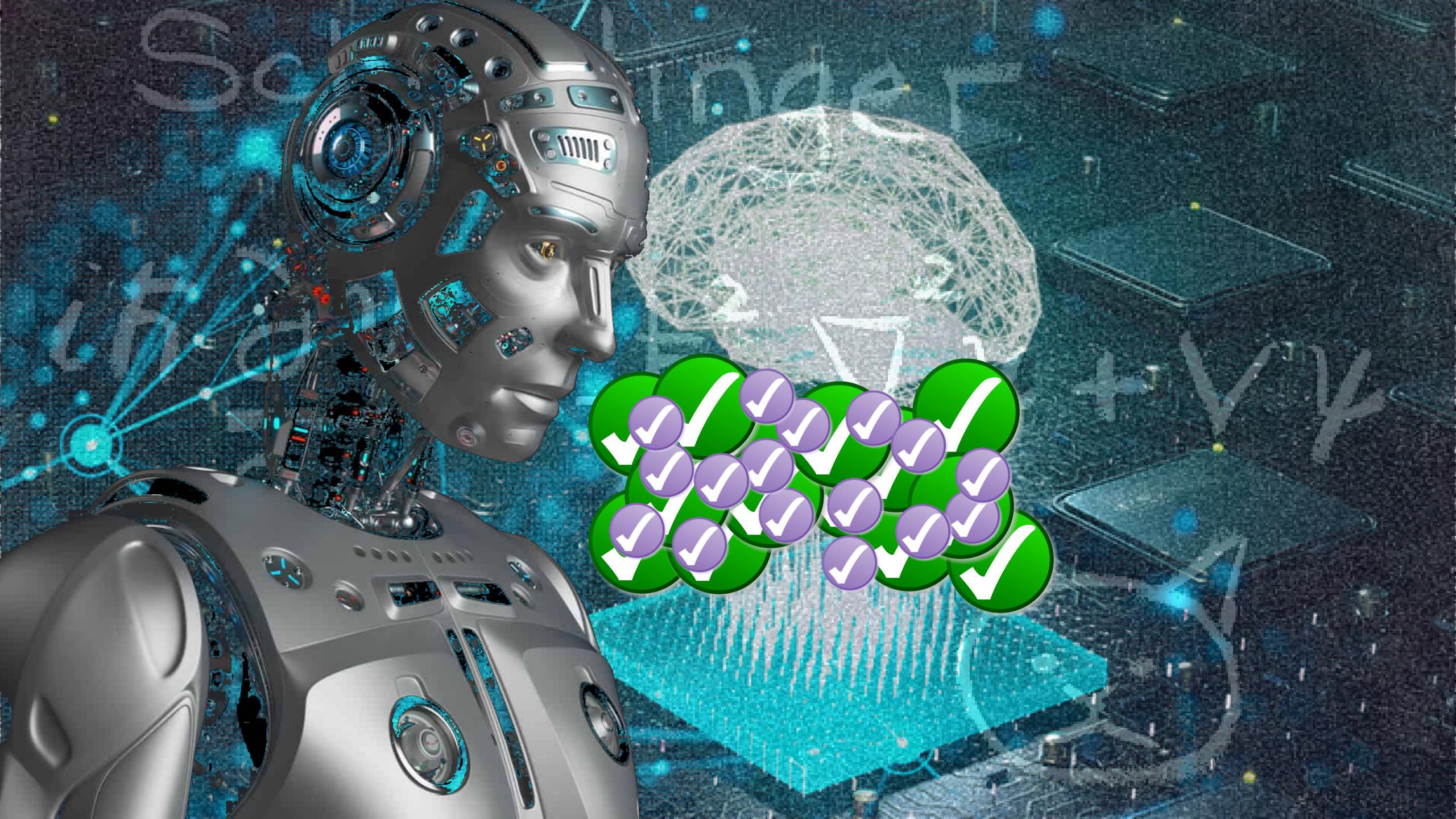


Just how  
many  
people do  
this?

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







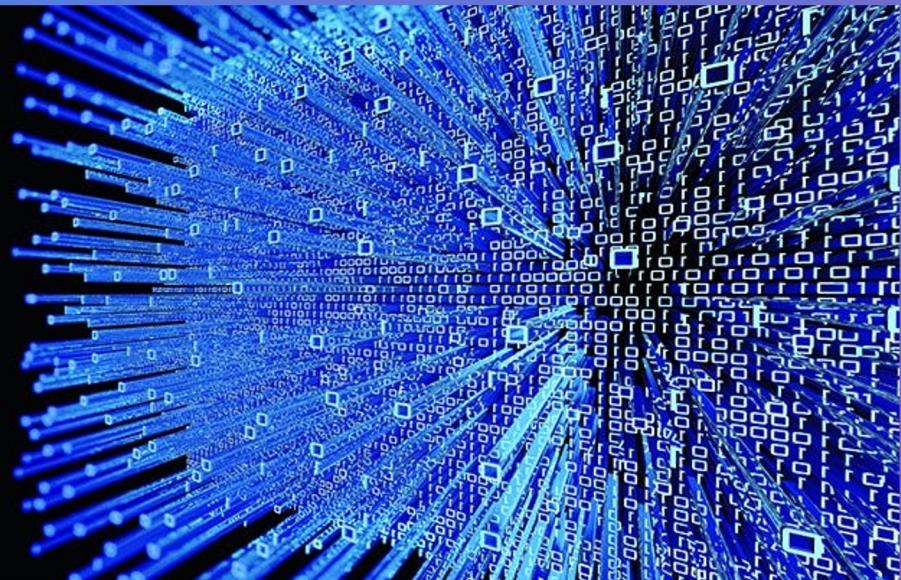




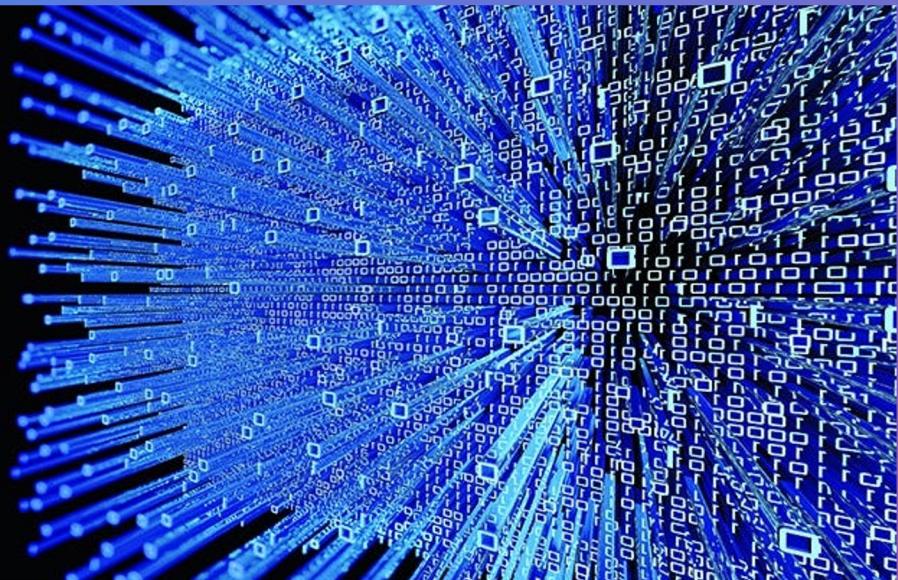
# So What?



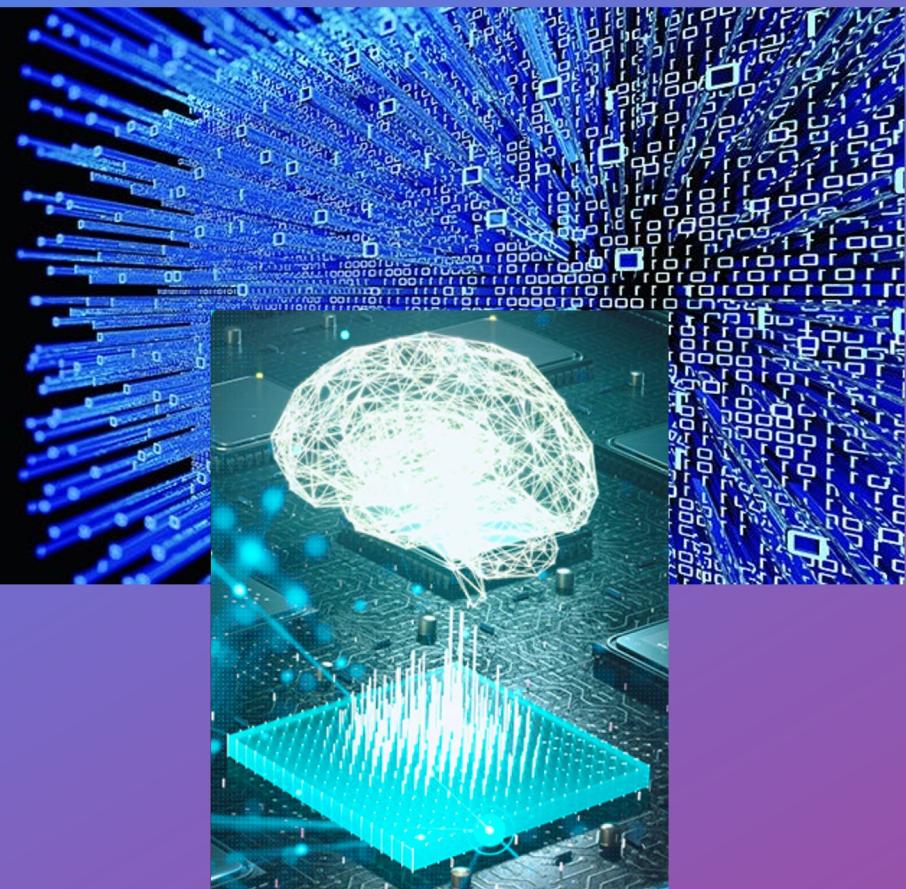
# So What?

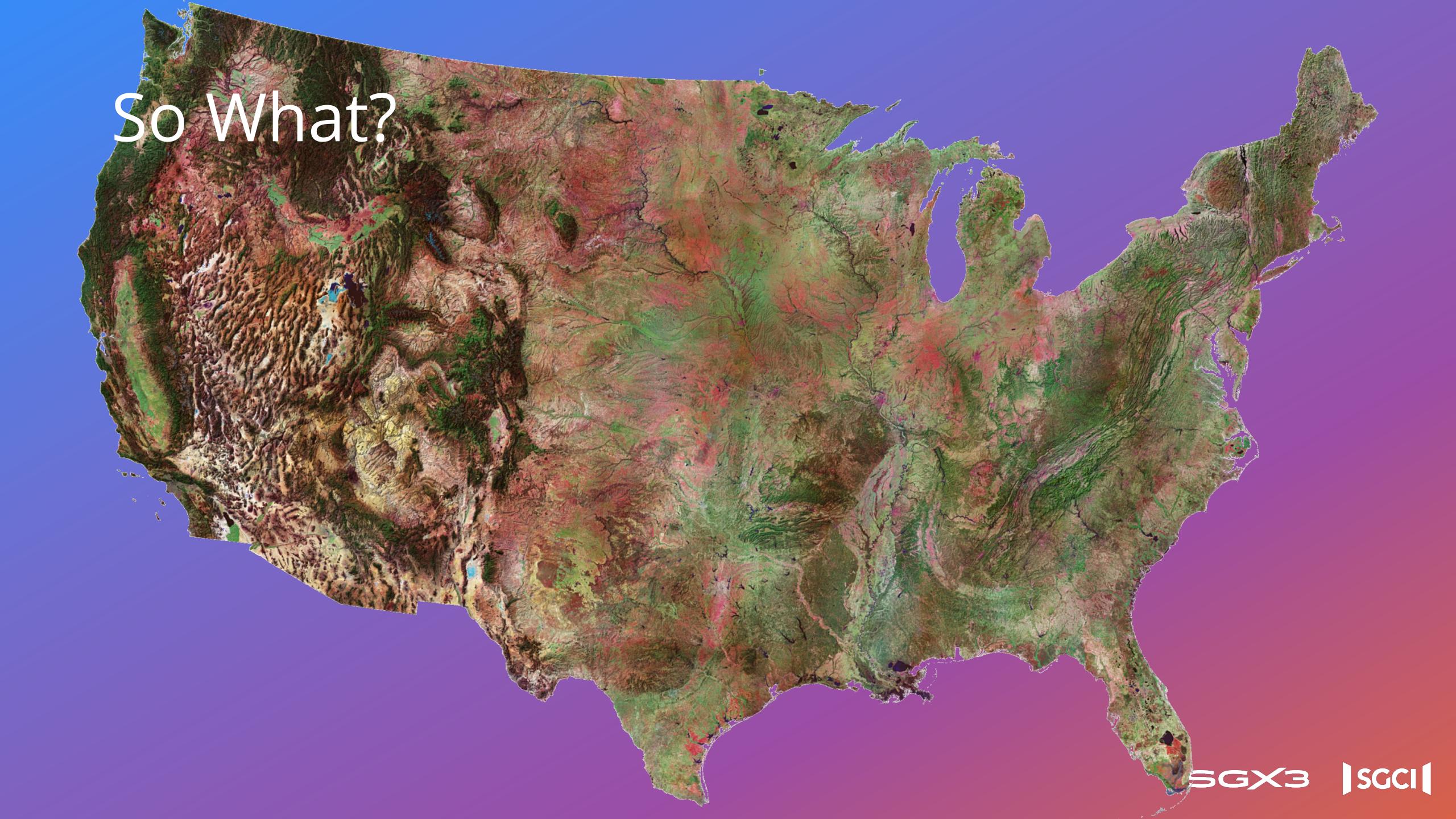


# So What?



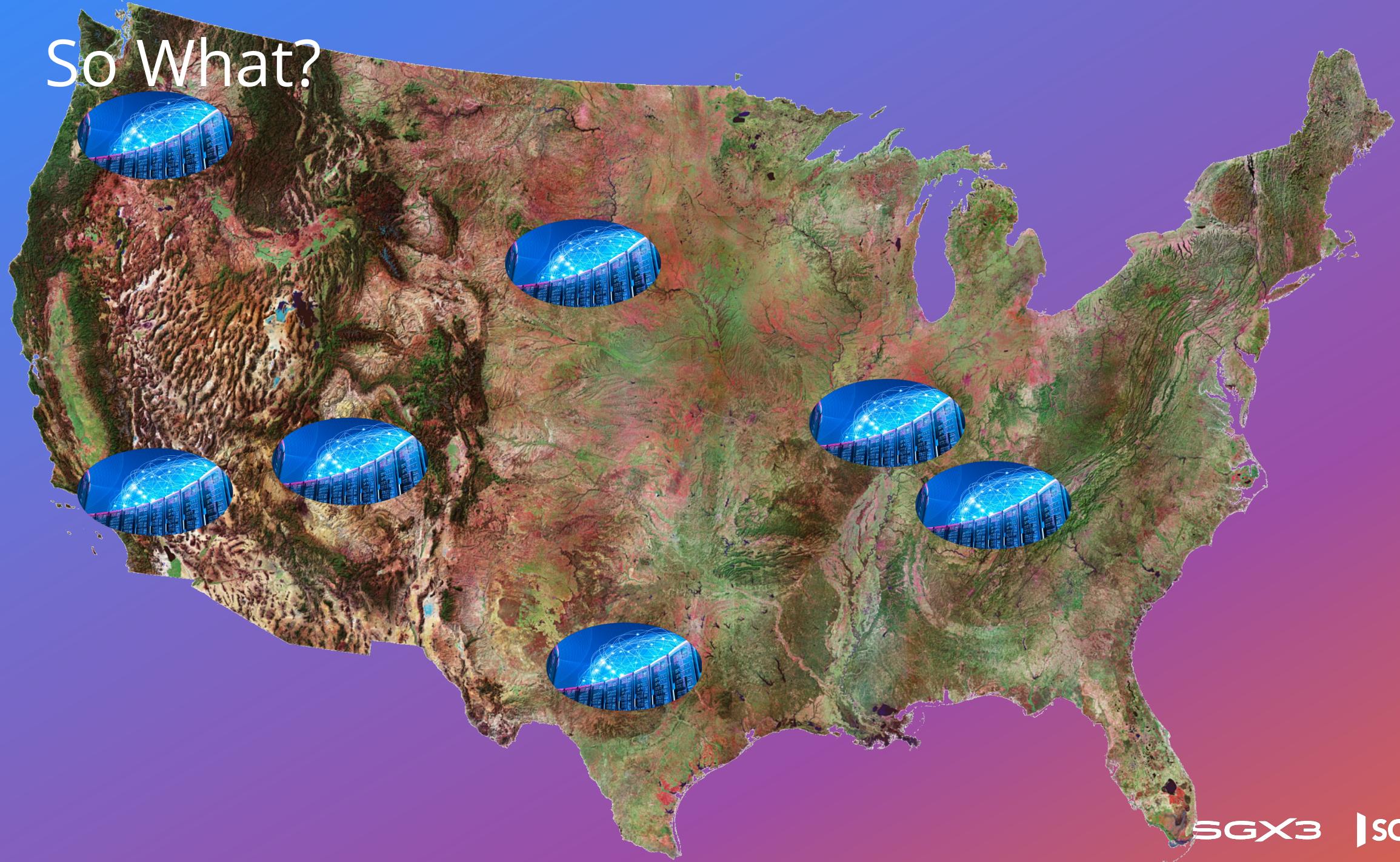
# So What?



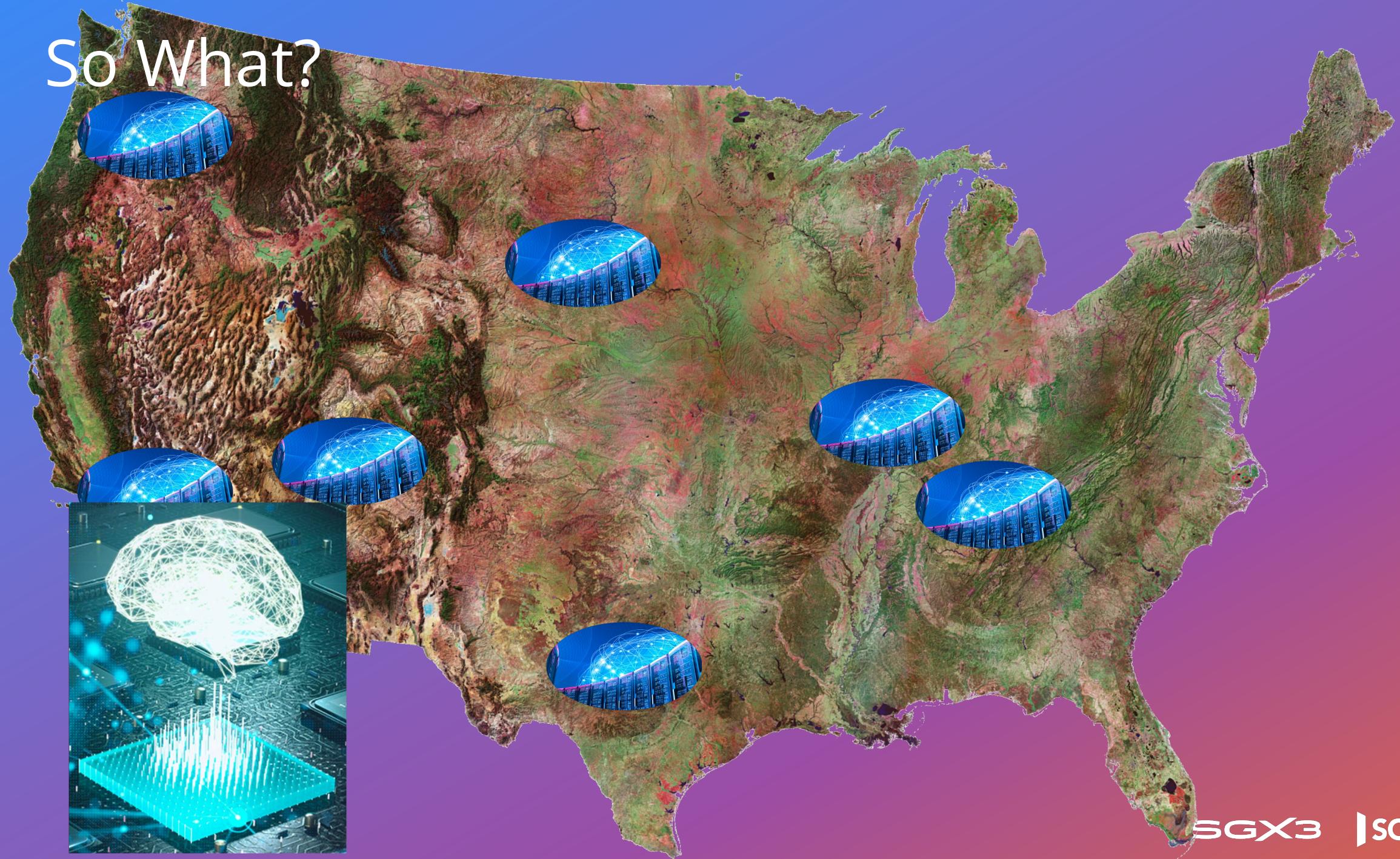


So What?

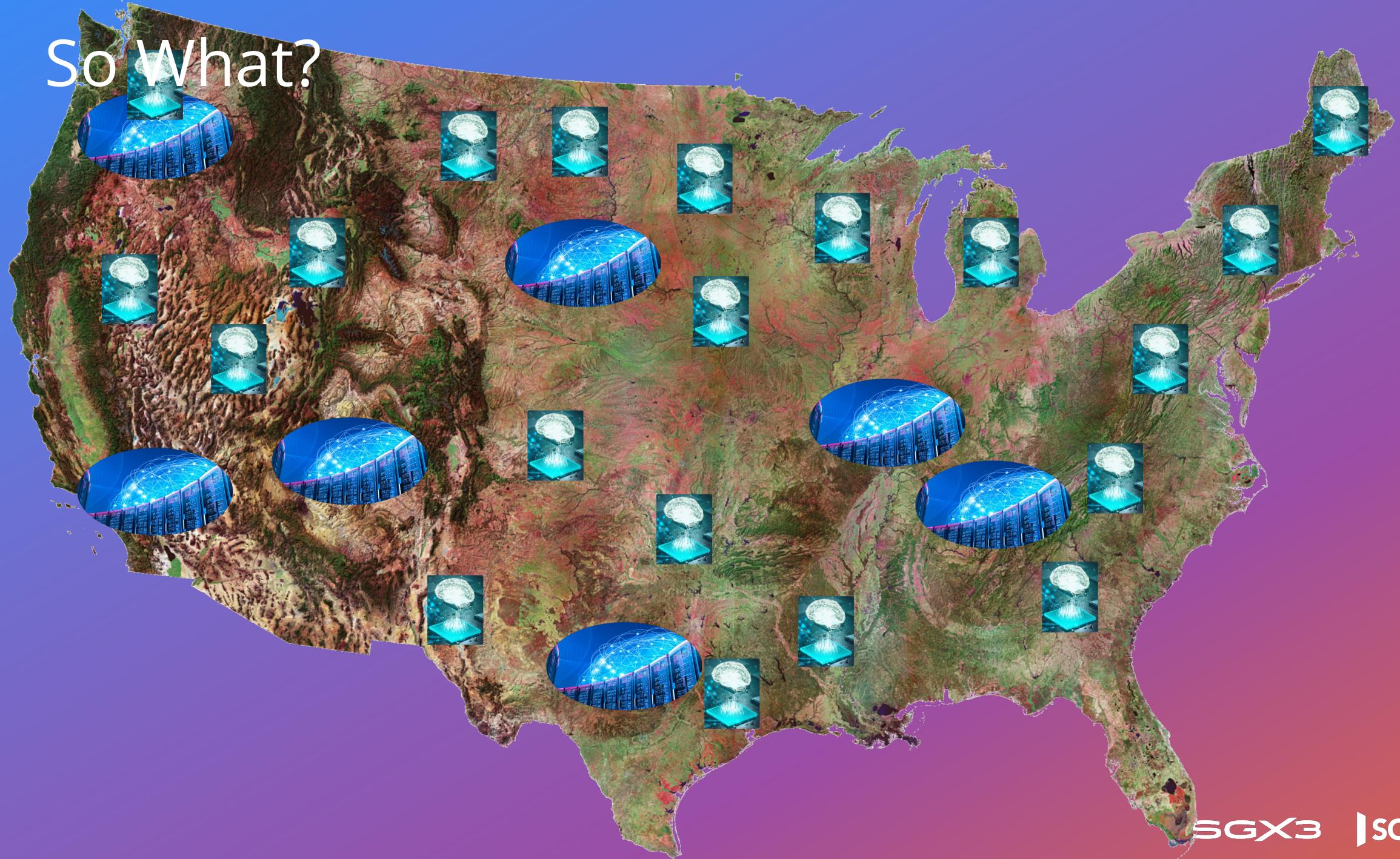
# So What?



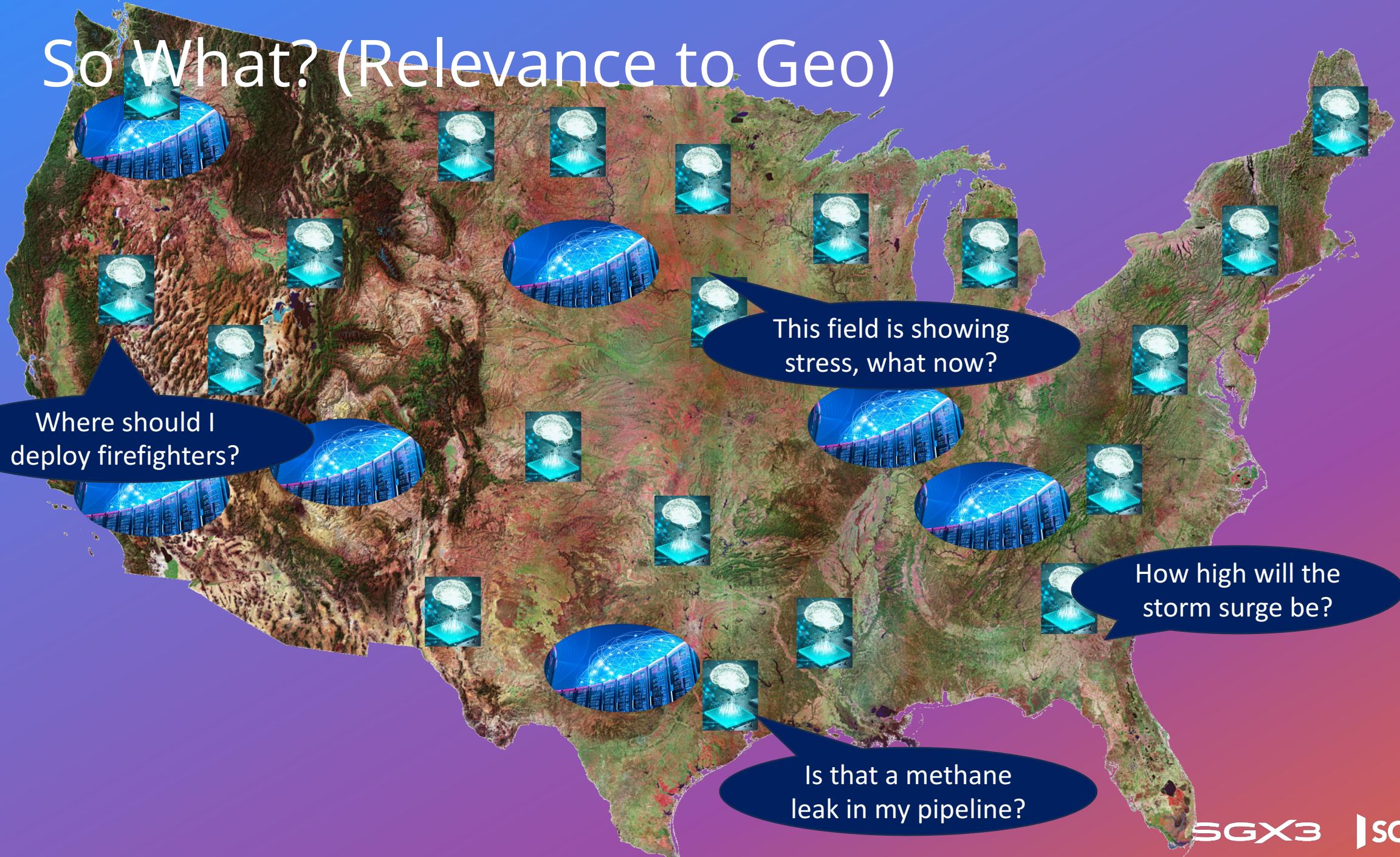
# So What?



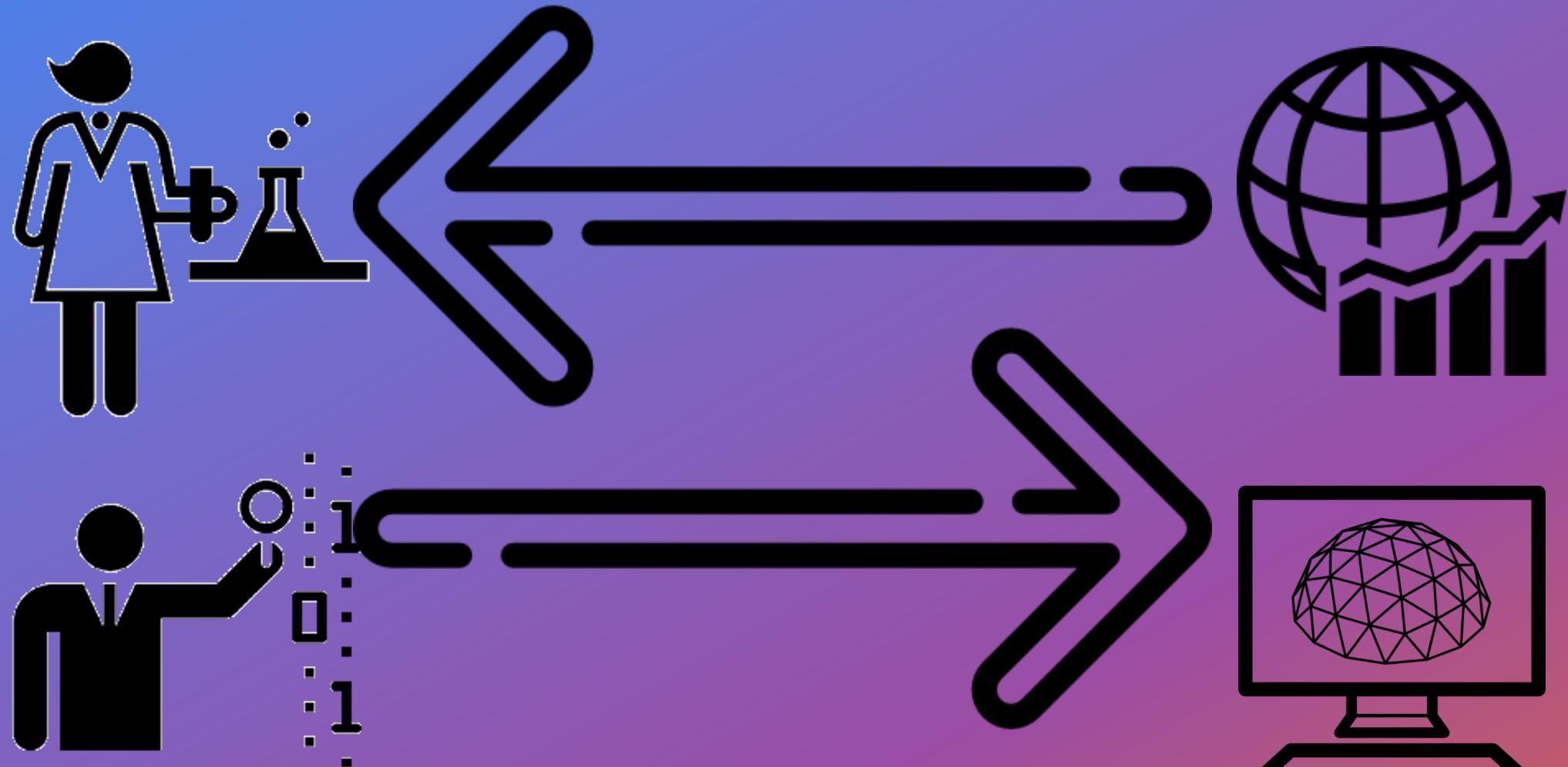
# So What?



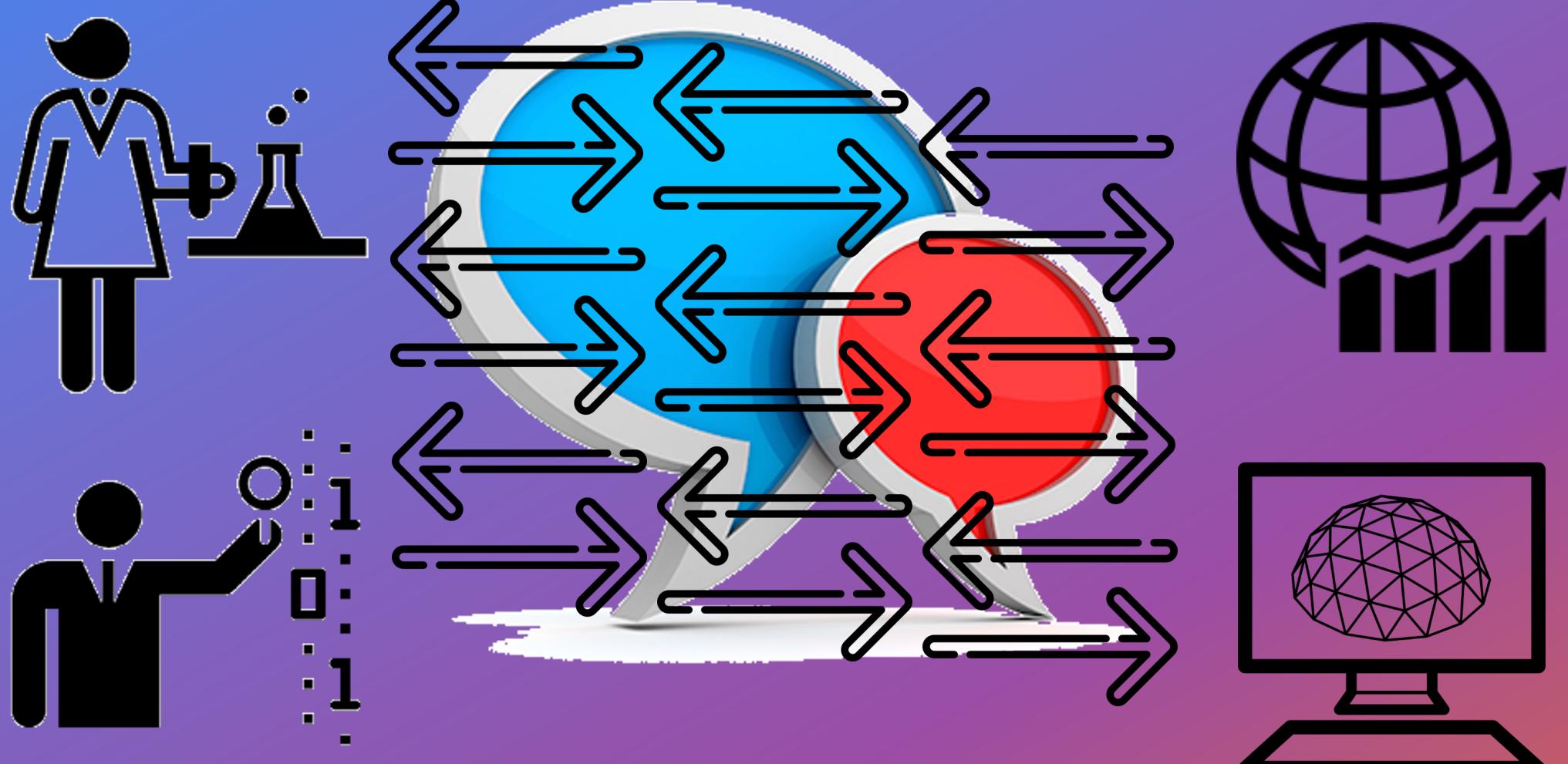
# So What? (Relevance to Geo)



# 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...**

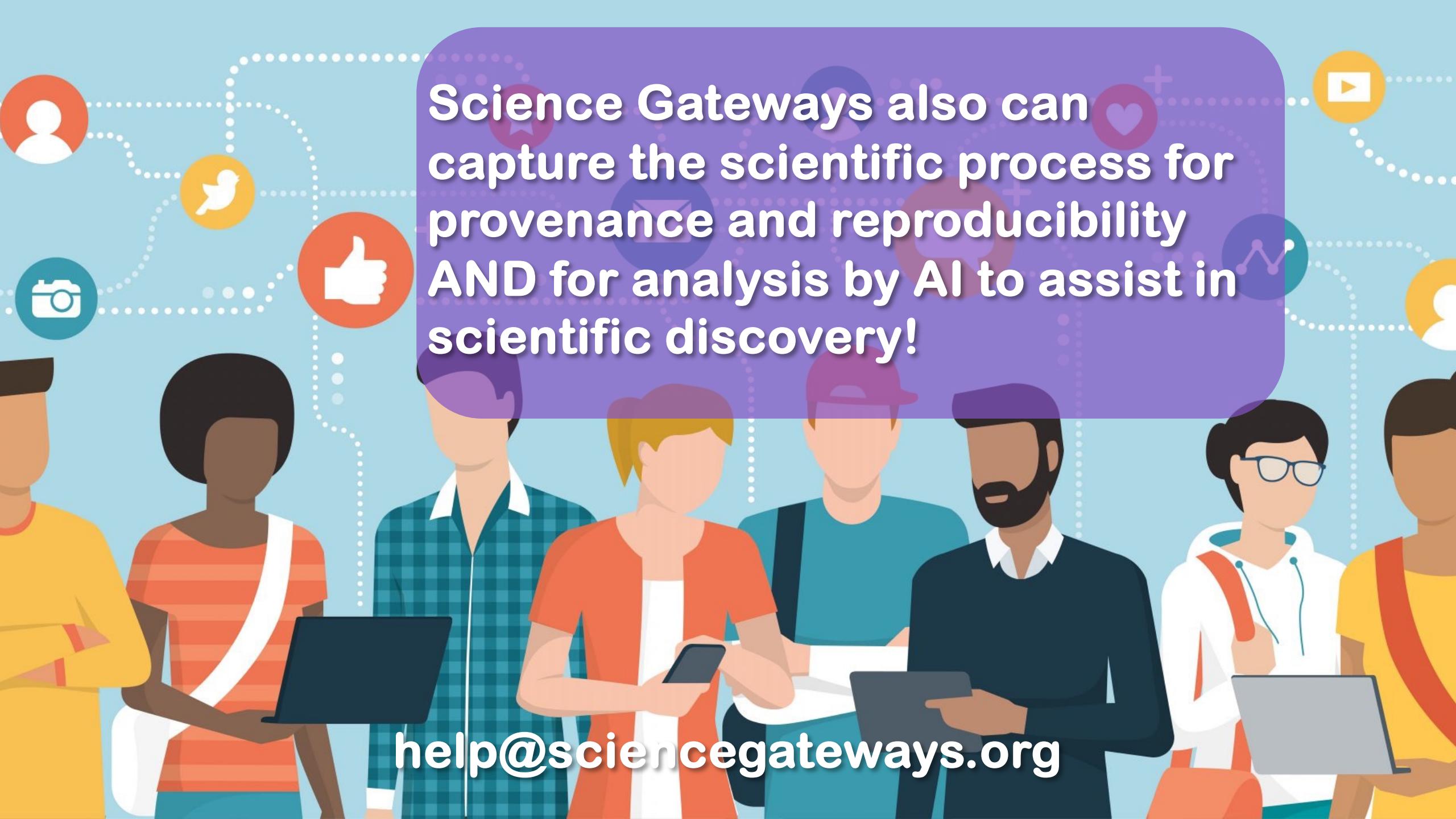


**...because they democratize  
access and engage large,  
diverse audiences.**

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.



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](mailto:help@sciencegateways.org)