

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.

BoF: The Impact of Artificial Intelligence Computing Paradigms on Science Gateways and National Compute Resources

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NSF awards
1547611
2231406

SGX3 | SGCI

Some Warmup Questions

Mentimeter Questions



The NSF-Funded Center of
Excellence for Science Gateways

- Consulting Services
 - UX
 - Architecture
 - Gap Analysis
 - Sustainability
- 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

What's a Blueprint Factory?

- An extended user discovery activity (18 months)
- It involves a group of CI professionals and a group of domain specialists
- It will pursue in-depth interviews to understand pain points relative to its domain subject
- It may pursue several focus group activities if relevant to the domain subject
- It culminates in a Gartner Group like analysis of what will be needed in 5-10 years from a Science Gateway perspective to support the domain subject

Domain Types:

- *Helping broaden access to advanced CI resources*
 - *ACCESS*
 - *PATH*
- *Analysis of a specific scientific domain to increase participation*
 - *Materials Genome Initiative*
- *Special Topics:*
 - *Sustainability*

What's a Blueprint Factory?

How does AI change the picture with how the group of users using these resources broadens and becomes deeper?

will be needed in 5-10 years from a Science Gateway perspective to support the domain subject

Domain Types:

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- *Special Topics:*
 - *Sustainability*

Kickoff: Our First Blueprint Factory Starts Right Here, Right Now

If you are interested in being more involved, visit ScienceGateways.org and use one of the forms of contact to reach us

Or email
help@ScienceGateways.org



Today's Format: 3 Roundtables



Q1: What are novel modes of computing implied by AI?
Which will have the greatest impact on CI for gateways and national compute resources?



Q2: What are the interesting aspects related to data sharing?
How do the various compute loads and modes impact how data are shared, moved, and accessed?

Q3: What are or should be the goals of broadening access to compute resources for AI purposes? Who can be brought into the community that previously was not?



Today's Format: 4 Roundtables



Q1: What are novel modes of computing implied by AI? Which will have the greatest impact on CI for gateways and national compute resources?



Q2: What are the interesting aspects related to data sharing? How do the various compute loads and modes impact how data are shared, moved, and accessed?

Q3: What are or should be the goals of broadening access to compute resources for AI purposes? Who can be brought into the community that previously was not?



Q4: How can AI be used in a science gateway to make it more effective, efficient, or otherwise better?



Think Creatively

AI/ML is not “just another compute job”

Conjecture: it changes just about everything we conventionally think about relative to computing:

- Where data are stored and how they are moved
- Training & recall are not like traditional loads
- Ethics have never been as important
- New concerns related to cybersecurity
- An entirely new audience of users
- A soup of special purpose processors
- It's about the end users, not so much the compute providers

Roundtable Process & Schedule

- Pick a roundtable to start
- Participate
- Move to a different roundtable during transitions
- Try to level out the size of the groups at each roundtable
- 2 mins – facilitator will restate the question and answer clarifications
- 5 mins – rapid fire ideation on post-its (no self censoring!)
- 5 mins – place post-its on a grid (next slide)
- 3 mins – transition while BoF team saves results

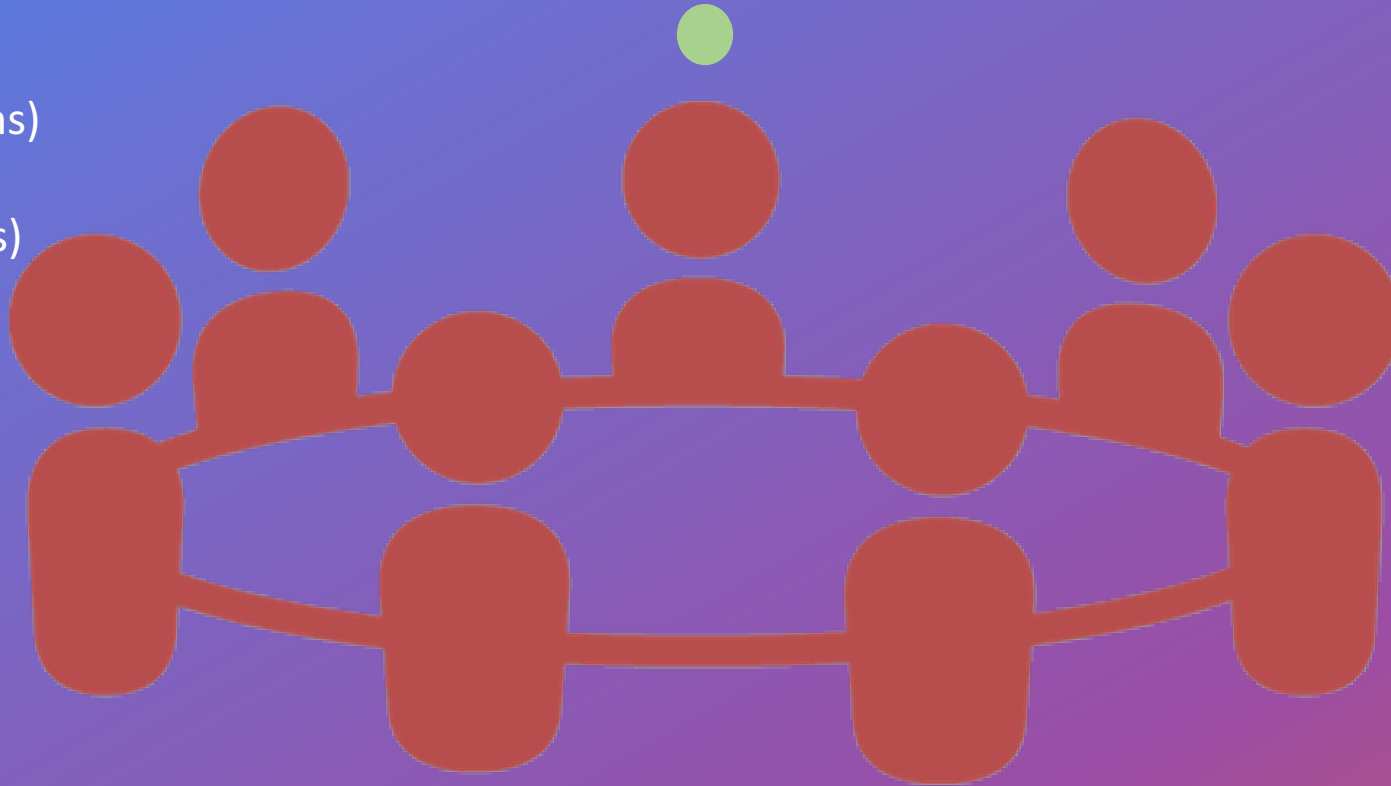
Categorization Grid



Example Timer

Timers will run for:

- Question review (2 mins)
- Ideation (5 mins)
- Grid placement (5 mins)
- Transition (3 mins)



Find and move to a
group to start

AI & Compute Resources Blueprint Factory

- To participate...
contact us at help@sciencegateways.org
- To receive a summary of todays activities...
contact us at help@sciencegateways.org
- For any other service...
contact us at help@sciencegateways.org